APPROVED BY U.S. COAST GUARD	APPROVED BY BUREAU OF EXPLOSIVES
DATE 10-7-82	SUPERVISOR, MILITARY & INTERMODAL SERVICES DATE 5/27/82

REVISION NO.1
SIGNED
DATE 8/2/85

LOADING AND BRACING◑ IN MILVAN CONTAINERS● OF BOXED AMMUNITION AND COMPONENTS ON 4-WAY ENTRY PALLETS AND SKID BASES

◑ LOADING AND BRACING SPECIFICATIONS SET FORTH WITHIN THIS DRAWING ARE APPLICABLE TO LOADS THAT ARE TO BE SHIPPED BY TRAILER/CONTAINER-ON-FLAT-CAR (T/COFC) RAIL CARRIER SERVICE. THESE SPECIFICATIONS MAY ALSO BE USED FOR LOADS THAT ARE TO BE MOVED BY MOTOR OR WATER CARRIERS.

● ONLY MILVAN CONTAINERS WHICH HAVE BEEN MODIFIED TO INCLUDE A MECHANICAL LOAD-BRACING SYSTEM THAT SATISFIES THE REQUIREMENTS OF THE BUREAU OF EXPLOSIVES PAMPHLET 6C WILL BE USED FOR THE MOVEMENT OF AMMUNITION BY T/COFC SERVICE. CAUTION: OTHER REQUIREMENTS OF PAMPHLET 6C ALSO APPLY.

INDEX

REVISIONS				DRAFTSMAN PG	PROJ ENG WRF/WRF	
				CHECKER GRG	LOG ENGRG OFFICER W & Smith	
1	OCT 89	WRF		APPROVED, U. S. ARMY ARMAMENT MATERIEL READINESS COMMAND		
				APPROVED BY ORDER OF COMMANDING GENERAL, U. S. ARMY MATERIEL DEVELOPMENT AND READINESS COMMAND (DARCOM)		
				U.S. ARMY DEFENSE AMMUNITION CENTER AND SCHOOL		
				U. S. ARMY DARCOM DRAWING		
				NOVEMBER 1982		
				CLASS	DIVISION	DRAWING	FILE
				19	48	4166	15PA 1003

DO NOT SCALE

PROJECT FSA 121-71

GENERAL NOTES

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 SPECIFIED HEREIN ARE APPLICABLE TO LOADS OF BOXED AMMUNITION AND COMPONENTS ON 4-WAY ENTRY PALLETS AND SKIDDED BASES. SUBSEQUENT REFERENCE TO A PALLET UNIT OR SKIDDED UNIT MEANS A UNIT WITH AMMUNITION ITEMS. SEE PAGES 4 AND 5 FOR "TYPICAL UNIT DETAILS". CAUTION: REGARDLESS OF THE QUANTITY OF UNITS TO BE SHIPPED, THE "MAXIMUM GROSS WEIGHT" OF 44,800 POUNDS MUST NOT BE EXCEEDED.

C. THE LOADS AS SHOWN ARE BASED ON A 20' LONG BY 8' WIDE BY 8' HIGH MILVAN CONTAINER WITH INSIDE DIMENSIONS OF 19'-4" LONG BY 92" WIDE BY 87" HIGH. THE LOADS ARE DESIGNED FOR TRAILER/CONTAINER-ON-FLAT-CAR (T/COFC) SHIPMENT.

D. THE SPECIFIED OUTLOADING PROCEDURES ARE FOR CONTAINERS EQUIPPED WITH SELF-CONTAINED MECHANICAL BRACING DEVICES AS DESCRIBED WITHIN BUREAU OF EXPLOSIVES PAMPHLET 6C. CROSS MEMBER ATTACHMENT FACILITIES WITHIN THESE CONTAINERS MUST PROVIDE FOR THE INSTALLATION OF LOAD BLOCKING CROSS MEMBERS AT THE HEIGHTS SPECIFIED. THE HEIGHT DIMENSIONS SPECIFIED WITHIN THIS DRAWING FOR THE INSTALLATION OF CROSS MEMBERS CONFORM WITH BUREAU OF EXPLOSIVES PAMPHLET 6C, WITH THE EXCEPTION THAT TWO (2) ADDITIONAL BELT RAILS HAVE BEEN SHOWN: ONE AT 72" AND ONE AT 83" HEIGHT FROM THE CONTAINER FLOOR. VOIDS LENGTHWISE WITHIN THE 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 END OF THE CONTAINER). CROSS MEMBERS IN EMPTY CONTAINERS MUST REMAIN THEREWITH EVEN THOUGH UNUSED DURING SOME SHIPMENTS. SEE THE "FILL DETAIL" ON PAGE 24 FOR THE DUNNAGING METHOD REQUIRED TO ELIMINATE AN EXCESSIVE LENGTHWISE VOID WITHIN A LOAD. THE LOAD BLOCKING COMPONENT DESIGNATED AS "CROSS MEMBER" HEREIN, IS IDENTIFIED AS "BEAM ASSEMBLY" WITHIN TM 55-8115-200-24, DATED SEPTEMBER 1972. THE BEAM ASSEMBLY IS FURTHER IDENTIFIED AS NSN-8115-00-165-6623.

E. DUNNAGE LUMBER SPECIFIED IS OF A NOMINAL SIZE. FOR EXAMPLE, 2" X 4" MATERIAL IS ACTUALLY 1-1/2" THICK BY 3-1/2" WIDE AND 4" X 4" MATERIAL IS ACTUALLY 3-1/2" THICK BY 3-1/2" WIDE.

F. CAUTION: DO NOT NAIL DUNNAGE MATERIAL TO THE CONTAINER WALLS OR FLOOR. ALL NAILING WILL BE WITHIN THE DUNNAGE.

G. THE TYPICAL SPACER ASSEMBLY AS DETAILED ON PAGE 24 NEED NOT BE FABRICATED FOR A DRIVE FIT. THE ASSEMBLY SHOULD BE FABRICATED SO THAT IT CAN BE EASILY INSTALLED. HOWEVER, IT MUST FIT TIGHT ENOUGH SO AS TO NOT ALLOW MORE THAN A 1/2" VOID ACROSS THE WIDTH OF A BRACED LOAD.

H. 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.

J. PORTIONS OF THE CONTAINER DEPICTED WITHIN THIS DRAWING, SUCH AS ONE OF THE SIDE WALLS, HAVE NOT BEEN SHOWN IN THE LOAD VIEWS FOR CLARITY PURPOSES.

K. MAXIMUM LOAD WEIGHT CRITERIA:

THE ITEMIZED LOAD WEIGHTS ARE CONTROLLED BY EQUIPMENT CAPABILITY FACTORS. ALSO, THESE LISTED LOAD WEIGHTS IDENTIFY THE MAXIMUM COMBINED WEIGHT OF AMMUNITION LADING UNITS AND DUNNAGE THAT CAN BE PLACED INTO ONE (1) MILVAN CONTAINER WITHOUT VIOLATING ONE OR MORE OF THE "CAPABILITY FACTORS". SEE NOTES 1. AND 2.

39,100 LBS IN 20-FT CONTAINER (W/O CHASSIS) ABOARD CONTAINERSHIP.
39,100 LBS IN CONTAINER ON 20-FT CHASSIS WITH DOUBLE BOGIE. SEE NOTE 3.
25,300 LBS IN CONTAINER ON 20-FT CHASSIS WITH SINGLE BOGIE. SEE NOTE 4.
21,300 LBS IN EACH CONTAINER ON 40-FT CHASSIS (COUPLED WITH DOUBLE BOGIE), SEE NOTE 3.

NOTE 1: DUNNAGE INCLUDES MATERIALS, OTHER THAN COMPONENTS OF THE MECHANICAL LOAD-BRACING SYSTEM, USED TO BLOCK AND BRACE A LOAD.

NOTE 2: ALTHOUGH THE HEAVIEST MAXIMUM LOAD IS DELINEATED ON PAGES 12 AND 13, PROVISIONS ARE INCLUDED WITHIN THIS DRAWING SO THAT THE BASIC LOAD CAN BE ADJUSTED TO SATISFY A LESSER QUANTITY OF LADING UNITS. ADDITIONAL INSTRUCTIONS ARE UNDER THE "REDUCED-LOAD PROVISIONS" SECTION AT RIGHT AND IN THE "SPECIAL NOTES" SECTION ON THE PAGE OPPOSITE THE LOAD VIEWS.

(CONTINUED AT RIGHT)

MATERIAL SPECIFICATIONS

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

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

WIRE ---------- : FED SPEC QQ-W-461.

STAPLE, STRAP------ : COMMERCIAL GRADE.

(GENERAL NOTES CONTINUED)

NOTE 3: 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 MILVAN SYSTEM.

NOTE 4: BY SPECIAL AUTHORITY, IT MAY BE POSSIBLE TO MOVE HEAVIER LOADS ON SINGLE BOGIE CHASSIS WITHIN AN INSTALLATION.

L. SPECIAL T/COFC NOTES:

1. CAUTION: LOADED CONTAINERS MUST BE ON CHASSIS EQUIPPED WITH TWO BOGIE ASSEMBLIES WHEN BEING MOVED IN TOFC SERVICE, REGARDLESS OF LOAD WEIGHT WITHIN THE CONTAINERS.

2. LOAD LIMITS OF T/COFC RAIL CARS 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.

3. CHASSIS CONTAINERS COUPLED INTO A 40-FOOT TRAILER CONFIGURATION MUST PLACED AT THE B-END OF A TOFC RAIL CAR. THE REAR END OF THE 40-FOOT UNIT WILL OVER-HANG THE END OF THE CAR IF IT IS PLACED AT THE A-END. TWENTY-FOOT AND 40-FOOT UNITS CAN BE LOADED ON THE SAME CAR.

M. TO MAKE LOADING EASIER, TO HELP ACHIEVE A TIGHT LOAD ACROSS A CONTAINER AND TO PREVENT UNACCEPTABLE DAMAGE TO LADING UNITS WHEN LOADING A MILVAN, A SLIP-SHEET CAN BE USED EFFECTIVELY AS A "SHOEHORN" TYPE DEVICE, PARTICULARLY IN THOSE LOADS WHICH HAVE A MINIMAL LATERAL VOID BETWEEN UNITS. THE SLIP-SHEET WILL PROVIDE A SMOOTH SURFACE THAT WILL PREVENT UNIT STRAPS AND/OR BOX CLEATS FROM INTERLOCKING OR CATCHING ON OTHER PROJECTIONS WHEN LATERALLY ADJACENT LADING UNITS ARE BEING LOADED. A SLIP-SHEET WILL BE USED AFTER ONE-HALF OF A STACK IS LOADED WITH ONE OF ITS SIDES IN TIGHT CONTACT AT ONE SIDE OF THE MILVAN. THE SLIP-SHEET IS TO BE PLACED AGAINST THE OTHER SIDE OF THE HALF-STACK BEFORE THE LAST HALF OF THE STACK IS LOADED. AFTER A STACK IS COMPLETED, THE SLIP-SHEET IS TO BE REMOVED FOR SUBSEQUENT USE WITH THE NEXT STACK. A SLIP-SHEET OF SUITABLE SIZE CAN BE MADE FROM A SHEET OF 1/8" TEMPERED HARDBOARD (MASONITE) OR FROM A SHEET OF ANY OTHER MATERIAL THAT WILL SATISFY THE REQUIREMENT.

N. CAUTION: REGARDLESS OF THE LADING WEIGHT, A LOAD BLOCKING CROSS MEMBER WILL NOT BE RELIED UPON TO RETAIN MORE THAN 3,000 POUNDS OF LADING WEIGHT. THE CROSS MEMBERS ARE NORMALLY PLACED AT THE FRONT AND REAR OF THE LOAD. HOWEVER, IF THE LOAD IS OF SUCH A WEIGHT AND CONFIGURATION THAT A SUFFICIENT NUMBER OF CROSS MEMBERS CANNOT BE PLACED AT THE ENDS OF IT, TWO OR MORE LOAD BAYS MUST BE USED. EACH BAY WILL BE BLOCKED SEPARATELY SO THAT THE 3,000 POUND CROSS MEMBER LIMITATION IS NOT EXCEEDED. FOR ADDITIONAL GUIDANCE SEE THE TYPICAL LOAD DETAILS ON PAGES 18 AND 19.

REDUCED-LOAD PROVISIONS

WHEN A CONTAINER IS TO BE LOADED WITH A REDUCED QUANTITY OF LADING UNITS, THE LENGTHWISE CENTER OF GRAVITY OF A LOAD MUST MUST BE WITHIN 12", IN EITHER DIRECTION, OF THE MID-POINT IN A MILVAN, AND THE FOLLOWING CRITERIA WILL APPLY.

A. IF A LOAD IS REDUCED BY ONLY A SMALL AMOUNT, LADING UNITS NORMALLY MAY BE ELIMINATED FROM THE REAR OF THE LOAD. SEE THE "ALTERNATIVE LOADING PATTERN" PROCEDURES FOR EACH SPECIFIC LOAD SHOWN FOR ADDITIONAL GUIDANCE.

B. IF A LOAD IS REDUCED BY A LARGE AMOUNT, LADING UNITS SHOULD BE ELIMINATED FROM LOCATIONS WITHIN THE LOAD OR LADING UNITS SHOULD BE ELIMINATED AS REQUIRED AND THE TOTAL LOAD SHIFTED AS NECESSARY FORE OR AFT, 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.

C. COMBINATIONS OF THE VARIOUS DEPICTED LOADING PATTERNS MAY BE USED TO SATISFY THE NUMBER OF UNITS TO BE SHIPPED. HOWEVER, EACH LOAD BAY WILL BE INDEPENDENTLY BLOCKED AS A SEPARATE LOAD BAY IN ACCORDANCE WITH THE DEPICTED PROCEDURES FOR THAT SPECIFIC LOADING PATTERN.

REVISION

REVISION NO. 1, DATED OCTOBER 1980 CONSISTS OF:

1. CHANGING WEIGHT OF UNIT NO. 3 FROM 1,681 LBS TO 1,500 LBS (SKIDDED UNIT ON PAGE 4).

CHART NO. 1

UNITS IN WIDTH OF MILVAN CONTAINER

CONTAINER WIDTH INSIDE DIMENSION	LOAD PATTERN	UNIT SIZE RANGE			
		PALLETIZED OR SKIDDED UNITS (LENGTH ACROSS CONTAINER)		PALLETIZED OR SKIDDED UNITS (WIDTH ACROSS CONTAINER)	
		UNIT LENGTH	LOAD PAGE	UNIT WIDTH	LOAD PAGE
91-1/2"	2-WIDE	25"-45-1/4"	6, 12, 16	27"-45-1/4"	20
	3-WIDE	25"-30-1/8"		27"-30-1/8"	14

CHART NO. 2

UNITS IN LENGTH OF 20' MILVAN CONTAINER (19'-4" INSIDE CONTAINER LENGTH)

NUMBER UNITS LONG	UNIT SIZE RANGE
8	25"-28-1/4"
7	28-1/2"-32-1/4"
6	32-1/2"-37-1/2"
5	37-3/4"-45"
4	45-1/4"-56-1/2"
3	56-3/4"-75"

CHART NO. 3

TIERS IN HEIGHT OF MILVAN CONTAINER

NO. OF TIERS	UNIT HEIGHT RANGE
	87" INSIDE HEIGHT CONTAINER
3	21-3/4"-28-3/4"
2	29"-43-1/4"
1	OVER 43-1/4"

CHART NO. 4

MAXIMUM NUMBER OF UNITS PER CONTAINER BY WEIGHT

UNIT WEIGHT IN POUNDS	NO. OF UNITS (39,100 LB LADING LIMIT)
300	130
400	97
500	78
600	65
700	55
800	48
900	43
1000	39
1100	35
1200	32
1300	30
1400	27
1500	26
1600	24
1700	23
1800	21
1900	20
2000	19
2100	18
2200	17
2300	17
2400	16
2500	15

CHART NO. 5

UNIT LENGTH	MILVAN CONTAINER WIDTH 91-1/2" (INSIDE DIMENSION) PALLETIZED OR SKIDDED UNIT LENGTH/WIDTH COMBINATIONS MINIMUM TO MAXIMUM UNIT WIDTH
44"	37" - 47"
43"	38" - 48"
42"	39" - 49"
41"	40" - 50"
40"	41" - 51"
39"	42" - 52"
38"	43" - 53"
37"	44" - 54"
36"	45" - 55"
35"	46" - 56"
34"	47" - 57"
33"	48" - 58"
32"	49" - 59"
31"	50" - 60"
30"	51" - 61"
29"	52" - 62"
28"	53" - 63"
27"	54" - 64"

SPECIAL NOTES:

1. THE FOLLOWING SPECIAL NOTES AND THE FIVE CHARTS ABOVE ARE PRESENTED AS GUIDANCE IN THE SELECTION OF A LOAD PATTERN, AND IN DETERMINING THE QUANTITY OF UNITS WHICH CAN BE LOADED IN A 20' LONG BY 8' WIDE BY 8' HIGH MILVAN CONTAINER, BASED ON THE SIZE AND WEIGHT OF THE PALLETIZED OR SKIDDED UNIT TO BE LOADED.

2. CHART NO. 1 MAY BE USED IN SELECTING A LOAD PATTERN FOR A CONTAINER HAVING AN INSIDE WIDTH OF 91-1/2". THE LOAD PATTERN WILL BE BASED EITHER ON THE UNIT LENGTH ACROSS THE CONTAINER OR ON THE UNIT WIDTH ACROSS THE CONTAINER, DEPENDENT UPON THE LENGTH OR WIDTH DIMENSIONS OF THE UNIT TO BE LOADED. CONTAINERS OF OTHER WIDTHS MAY BE USED, HOWEVER, THE SIZE RANGE OF THE UNITS WHICH CAN BE LOADED IN THE TWO LOAD PATTERNS WILL HAVE TO BE CALCULATED. THE SMALLER FIGURE SHOWN FOR UNIT SIZE RANGE IS BASED ON THE MINIMUM UNIT LENGTH OR WIDTH, AS APPLICABLE, AND THE LARGER FIGURE IS CALCULATED ON THERE BEING NO MORE THAN 1-1/2" EXCESS LATERAL SPACE REMAINING IN THE CONTAINER AFTER THE UNITS ARE POSITIONED.

3. CHART NO. 2 MAY BE USED IN DETERMINING THE QUANTITY OF UNITS WHICH CAN BE POSITIONED WITHIN ONE ROW IN THE LENGTH OF A CONTAINER. THE UNIT SIZE RANGE FOR A 20' CONTAINER IS BASED ON THE INSIDE LENGTH OF THE CONTAINER BEING 19'-4".

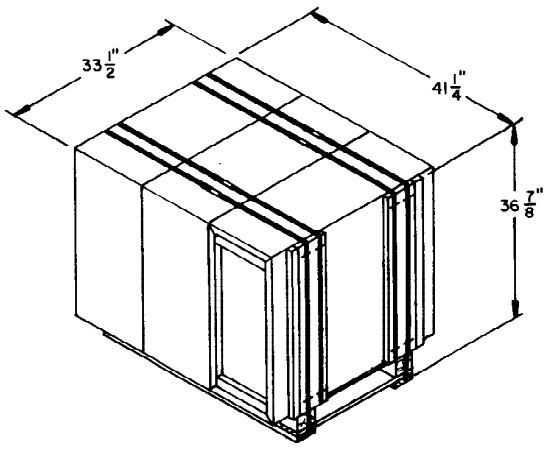
4. CHART NO. 3 MAY BE USED IN DETERMINING THE NUMBER OF TIERS WHICH CAN BE LOADED IN A CONTAINER HAVING AN INSIDE HEIGHT OF 87", BASED ONLY ON THE HEIGHT OF THE UNIT. THE HEIGHT RANGE OF UNITS SPECIFIED ALLOWS APPROXIMATELY 1" CLEARANCE AT THE ROOF. NO ALLOWANCE HAS BEEN MADE FOR DOOR OPENING HEIGHT CLEARANCE. FOR LOADS WHICH ARE OF SUCH A HEIGHT AS TO EXTEND TO WITHIN 3" OR 4" OF THE ROOF, IT MAY NOT BE POSSIBLE TO PLACE THE TOP UNITS IN THE REARMOST LOAD BAY. THE ACTUAL NUMBER OF TIERS WHICH CAN BE LOADED WILL BE BASED ON SEVERAL FACTORS SUCH AS THE WEIGHT OF THE UNITS AND THE QUANTITY THAT IS TO BE SHIPPED.

5. CHART NO. 4 MAY BE USED AS GUIDANCE IN DETERMINING THE QUANTITY OF UNITS WHICH CAN BE LOADED IN A CONTAINER, BASED ONLY UPON THE WEIGHT OF THE UNIT. THE "UNIT WEIGHT IN LBS" COLUMN SPECIFIES WEIGHTS RANGING FROM 300 POUNDS, THE APPROXIMATE MINIMUM, TO 2,500 POUNDS, THE APPROXIMATE MAXIMUM, BY 100 POUND INCREMENTS. THE QUANTITY REQUIRED TO MAKE A SPECIFIED LOAD WEIGHT FOR A UNIT WHICH WEIGHS SOMEWHERE BETWEEN THE FIGURES GIVEN WILL HAVE TO BE CALCULATED BASED ON THE 39,100 POUND MAXIMUM LADING WEIGHT RESTRICTION. FOR EXAMPLE, A TOTAL OF 24 PALLETIZED OR SKIDDED UNITS WEIGHING 1,629 POUNDS EACH CAN BE LOADED IN A CONTAINER WITHOUT EXCEEDING THE 39,100 POUND LIMITATION. THE ACTUAL QUANTITY WHICH CAN BE LOADED IN A CONTAINER MAY BE ONE OR MORE UNITS ABOVE THE SPECIFIED QUANTITY PROVIDING THE TOTAL WEIGHT OF THE LADING DOES NOT EXCEED 39,100 POUNDS.

(CONTINUED AT RIGHT)

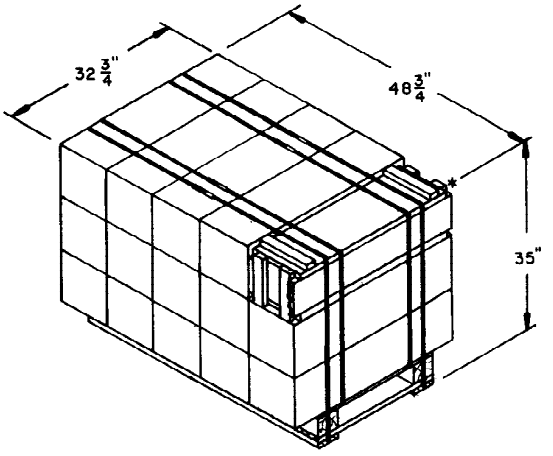
(SPECIAL NOTES CONTINUED)

6. CHART NO. 5 MAY BE USED FOR GUIDANCE IN DETERMINING THE COMBINATION OF LENGTHS AND WIDTHS WHICH ARE ACCEPTABLE FOR CHIMNEY-PATTERN LOADS. NOTE: REGARDLESS OF THE LADING WEIGHT, SIDE BLOCKING MUST BE USED WHEN THE UNBLOCKED SPACE ACROSS THE WIDTH OF A LOAD BAY IS GREATER THAN 1-1/2". IF THE UNBLOCKED SPACE IS LESS THAN 1-1/2", SIDE BLOCKING IS NOT REQUIRED.



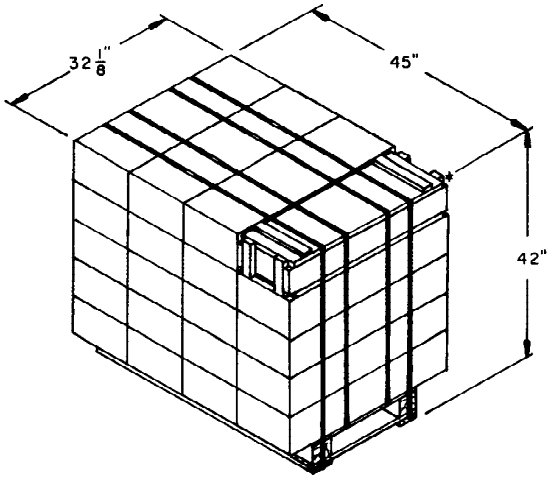
UNIT NO. 1

UNIT WEIGHT----------398 POUNDS (APPROX)
CUBE----------29.5 CUBIC FEET



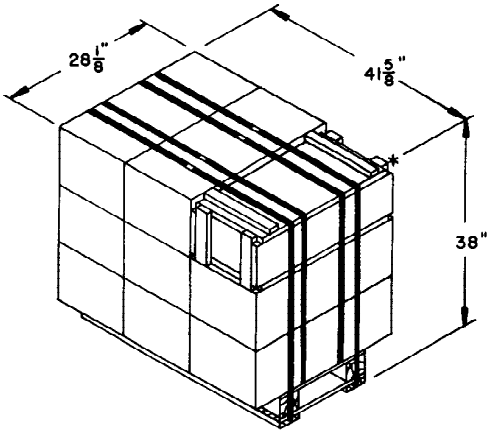
UNIT NO. 2

UNIT WEIGHT----------1,787 POUNDS (APPROX)
CUBE----------32.3 CUBIC FEET



UNIT NO. 3

UNIT WEIGHT----------1,500 POUNDS (APPROX)
CUBE----------35.1 CUBIC FEET



UNIT NO. 4

UNIT WEIGHT----------531 POUNDS (APPROX)
CUBE----------25.7 CUBIC FEET

TYPICAL SKIDDED UNIT DETAILS

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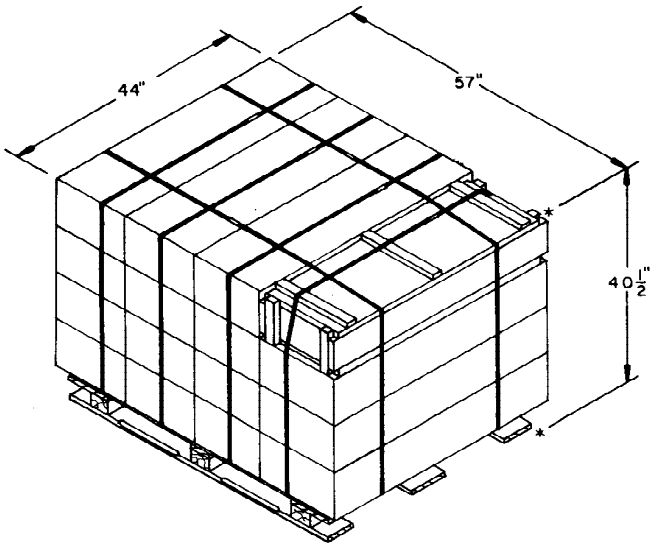
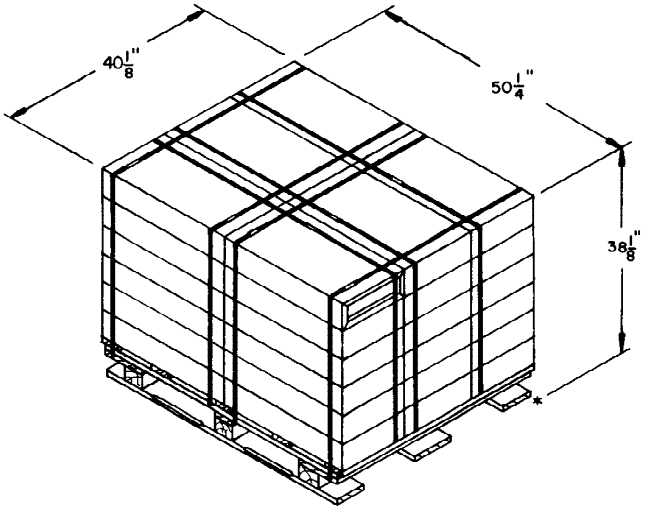


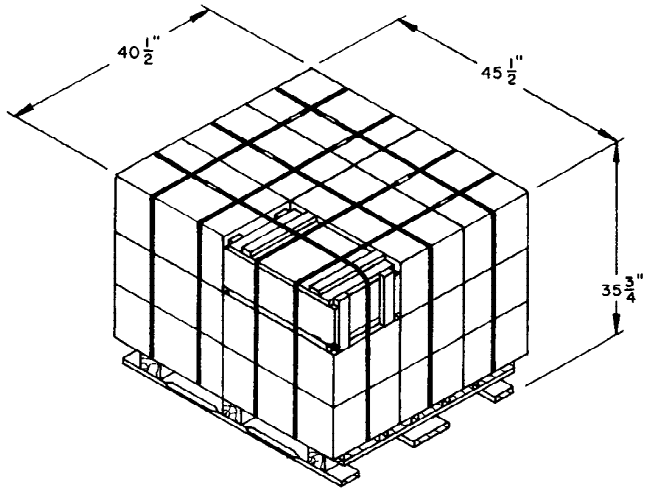
UNIT NO. 1

UNIT WEIGHT----------2,385 POUNDS (APPROX)
CUBE----------58.8 CUBIC FEET



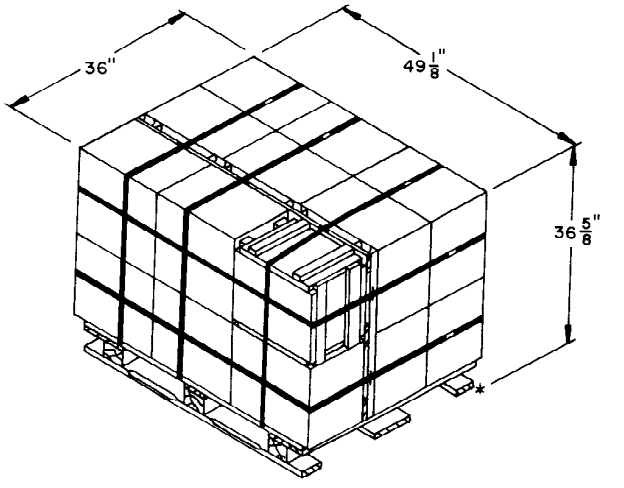
UNIT NO. 2

UNIT WEIGHT----------1,863 POUNDS (APPROX)
CUBE----------44.5 CUBIC FEET



UNIT NO. 3

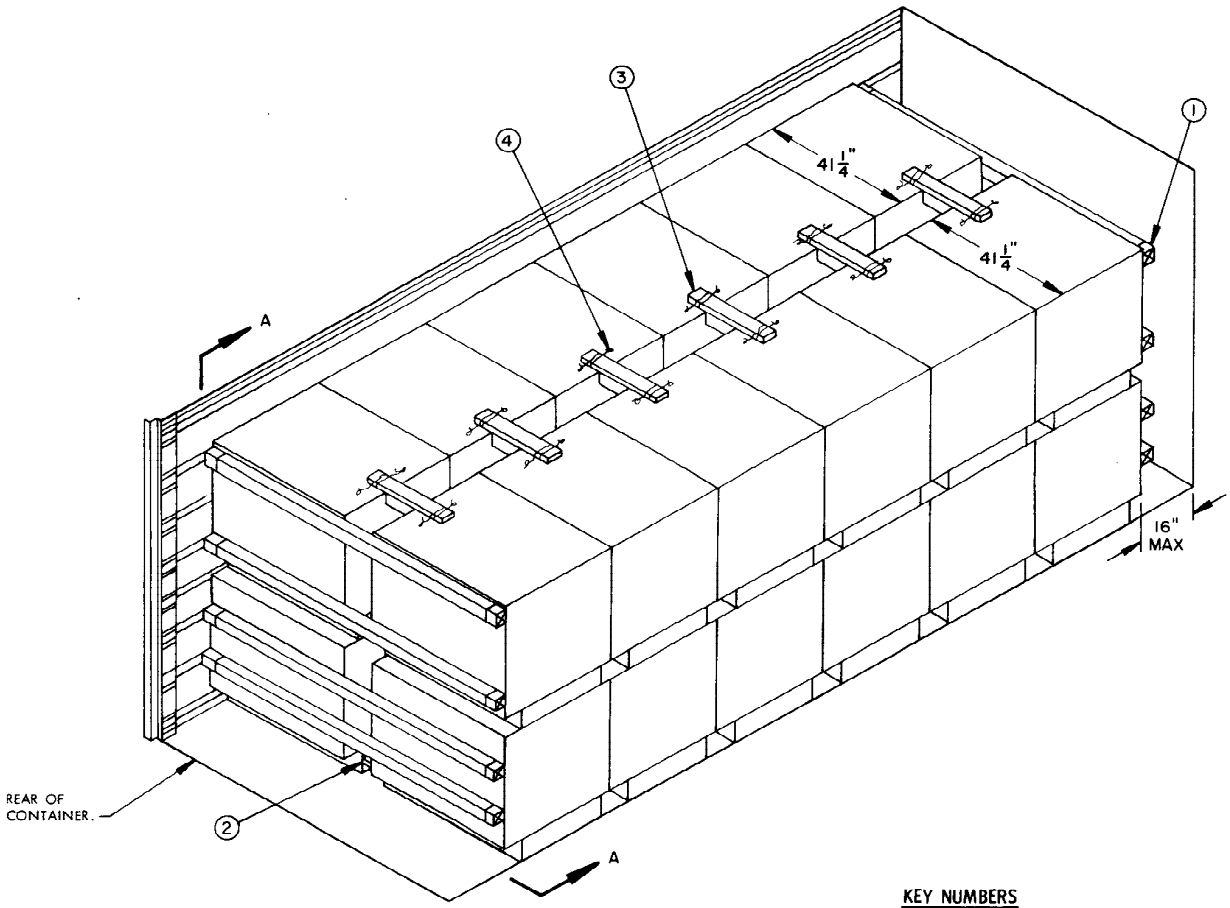
UNIT WEIGHT----------1,116 POUNDS (APPROX)
CUBE----------38.1 CUBIC FEET



UNIT NO. 4

UNIT WEIGHT----------1,082 POUNDS (APPROX)
CUBE----------37.5 CUBIC FEET

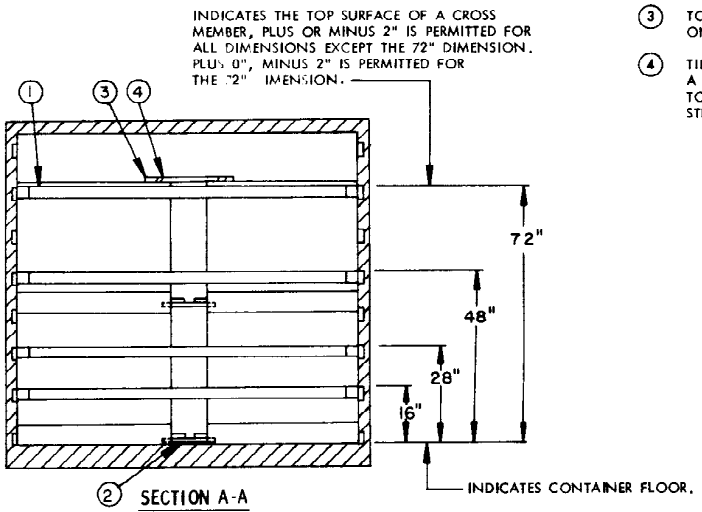
TYPICAL PALLET UNIT DETAILS



ISOMETRIC VIEW

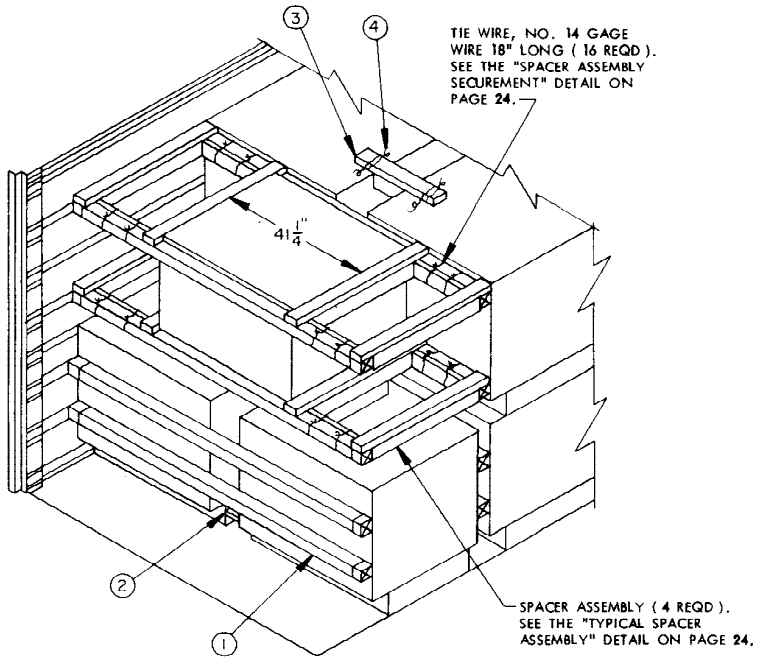
KEY NUMBERS

1. CROSS MEMBER (8 REQD). POSITION AT THE HEIGHTS SPECIFIED IN THE "SECTION A-A" VIEW. SEE THE "FILL DETAIL" ON PAGE 24.
2. LOWER ANTI-SWAY BRACE C (12 REQD). SEE THE "TYPICAL LOWER ANTI-SWAY BRACE C" DETAIL ON PAGE 26.
3. TOP ANTI-SWAY BRACE (6 REQD). SEE THE "TOP ANTI-SWAY BRACE" DETAIL ON PAGE 7.
4. TIE WIRE, NO. 14 GAGE WIRE 30" LONG (12 REQD). ATTACH ONE END TO A SKIDDED UNIT TIEDOWN STRAP, FORM A COMPLETE LOOP AROUND THE TOP ANTI-SWAY BRACE, AND ATTACH THAT END TO A SECOND TIEDOWN STRAP.



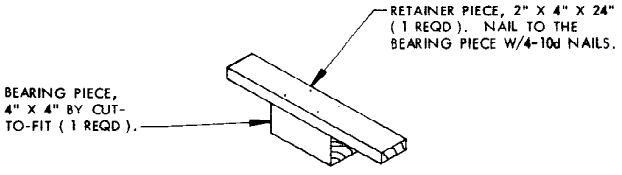
SECTION A-A

SKIDDED UNIT NO. 1 CONTAINER LOAD



ALTERNATIVE LOADING PATTERN A

THE DETAIL ABOVE DEPICTS A BLOCKING METHOD TO BE USED IN A "REDUCED-LOAD" CONTAINER LOAD.



TOP ANTI-SWAY BRACE

SEE SPECIAL NOTE 5 ABOVE.

SPECIAL NOTES:

1. THE LOAD VIEWS AND THE "LOAD AS SHOWN" ON PAGES 6 AND 7 ARE BASED ON THE 3-BOX, SKIDDED UNIT NO. 1 SHOWN ON PAGE 4, WITH A UNIT WEIGHT OF 398 POUNDS. SEE SPECIAL NOTES 2 AND 3 FOR THE PROCEDURES THAT MUST BE USED TO CONFORM TO THE "CAPABILITY FACTORS" AS DIRECTED BY GENERAL NOTE "K" ON PAGE 2. A TOTAL GROSS WEIGHT OF 44,800 POUNDS MUST NOT BE EXCEEDED.
2. IF A CONTAINER IS TO BE LOADED WITH LESS UNITS THAN SHOWN, SKIDDED UNITS SHOULD BE ELIMINATED FROM THE REAR OF THE LOAD. FOR EXAMPLE, IF ONLY TWENTY-THREE UNITS ARE TO BE LOADED, THE METHOD SPECIFIED BY THE "ALTERNATIVE LOADING PATTERN A" DETAIL AT THE LEFT MUST BE APPLIED. SEE THE "REDUCED-LOAD PROVISIONS" ON PAGE 2.
3. SPECIFICATIONS FOR THE "BASIC LOAD" AND THE PROVISIONS OF SPECIAL NOTE 2 WILL BE APPLIED SEPARATELY OR IN COMBINATION TO BLOCK AND BRACE OTHER THAN TWENTY-FOUR UNIT LOADS.
4. CAUTION: EXERCISE CARE WHEN POSITIONING THE SKIDDED UNITS IN THE CONTAINER TO INSURE THAT THE UNITS ARE PLACED AS CLOSE AS POSSIBLE AGAINST THE SIDEWALLS OF THE CONTAINER.
5. IF THE SPECIFIED 4" X 4" MATERIAL IS NOT AVAILABLE, SUITABLE BLOCKING DUNNAGE CAN BE MADE BY LAMINATING TWO PIECES OF 2" X 4" MATERIAL TOGETHER WITH A 10d NAIL EVERY FOUR INCHES (4").

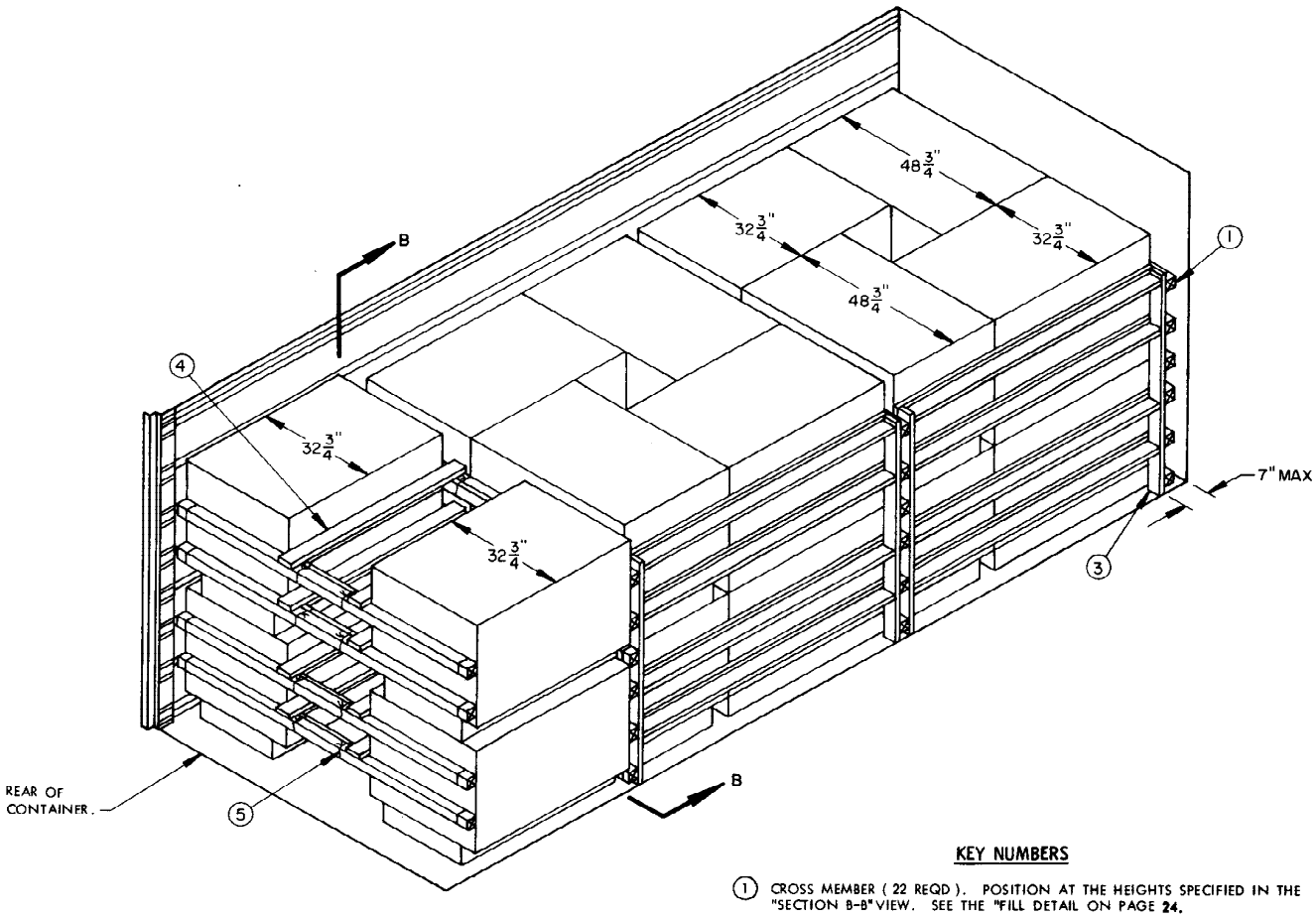
BILL OF MATERIAL		
LUMBER	LINEAR FEET	BOARD FEET
2" X 4" 4" X 4"	102 5	68 7
NAILS	NO. REQD	POUNDS
10d (3")	192	3
WIRE, NO. 14 GAGE---------30' REQD----------1/2 LB		
CROSS MEMBER----------8 REQD		

LOAD AS SHOWN

ITEM	QUANTITY	WEIGHT (APPROX)
SKIDDED UNIT	24	9,552 LBS
DUNNAGE		184 LBS
CONTAINER		5,700 LBS

TOTAL GROSS WEIGHT----15,406 LBS

SKIDDED UNIT NO. 1 CONTAINER LOAD



ISOMETRIC VIEW

KEY NUMBERS

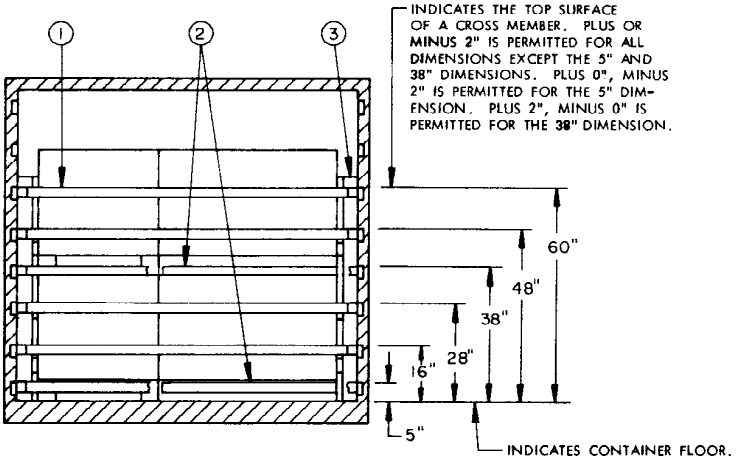
(1) CROSS MEMBER (22 REQD). POSITION AT THE HEIGHTS SPECIFIED IN THE "SECTION B-B" VIEW. SEE THE "FILL DETAIL ON PAGE 24.

(2) FILL ASSEMBLY (8 REQD). SEE THE "FILL ASSEMBLY" DETAIL, "FILL ASSEMBLY SECUREMENT" DETAIL, AND THE SPECIAL NOTES ON PAGE 10.

(3) SIDE FILL GATE (4 REQD). SEE THE "SIDE FILL GATE" DETAIL ON PAGE 10 AND SPECIAL NOTE 4 ON PAGE 9.

(4) SPACER ASSEMBLY (4 REQD). SEE THE "TYPICAL SPACER ASSEMBLY" DETAIL ON PAGE 24.

(5) TIE WIRE, NO. 14 GAGE WIRE 18" LONG (16 REQD). SEE THE "SPACER ASSEMBLY SECUREMENT" DETAIL ON PAGE 24.



SECTION B-B

SKIDDED UNIT NO. 2 CONTAINER LOAD

SPECIAL NOTES:

1. THE LOAD VIEWS AND THE "LOAD AS SHOWN" ON PAGES 8 AND 9 ARE BASED ON THE 15-BOX, SKIDDED UNIT NO. 2 SHOWN ON PAGE 4, WITH A UNIT WEIGHT OF 1,787 POUNDS. SEE SPECIAL NOTES 2 AND 3 FOR THE PROCEDURES THAT MUST BE USED TO CONFORM TO THE "CAPABILITY FACTORS" AS DIRECTED BY GENERAL NOTE "K" ON PAGE 2. A TOTAL GROSS WEIGHT OF 44,800 POUNDS MUST NOT BE EXCEEDED.

2. IF A CONTAINER IS TO BE LOADED WITH LESS UNITS THAN SHOWN, SKIDDED UNITS SHOULD BE ELIMINATED FROM THE REAR OF THE LOAD. FOR EXAMPLE, IF ONLY NINETEEN UNITS ARE TO BE LOADED, THE METHOD SPECIFIED BY THE "ALTERNATIVE LOADING PATTERN B" DETAIL ON PAGE 11 MUST BE APPLIED. SEE THE "REDUCED-LOAD PROVISIONS" ON PAGE 2.

3. SPECIFICATIONS FOR THE "BASIC LOAD" AND THE PROVISIONS OF SPECIAL NOTE 2 WILL BE APPLIED SEPARATELY OR IN COMBINATION TO BLOCK AND BRACE OTHER THAN TWENTY-UNIT LOADS.

4. THE THICKNESS OF THE SIDE FILL GATES AS DEPICTED ON EACH SIDE OF THE LOAD MUST BE ADJUSTED, AS REQUIRED, TO COMPLY WITH THE DIMENSIONAL VARIANCE OF THE SKIDDED UNIT, SO AS TO NOT ALLOW MORE THAN ONE AND ONE-HALF INCHES (1-1/2") VOID ACROSS THE WIDTH OF A BRACED LOAD. ADJUSTMENTS CAN BE MADE BY USING A DIFFERENT THICKNESS BEARING PIECE OR BY LAMINATING ADDITIONAL PIECES TO THE BEARING PIECES ON ONE OR BOTH SIDES OF THE LOAD W/1 APPROPRIATELY SIZED NAIL EVERY 12". ADJUSTMENTS CAN ALSO BE MADE BY ADJUSTING THE WIDTH OF THE VERTICAL AND FILLER PIECES.

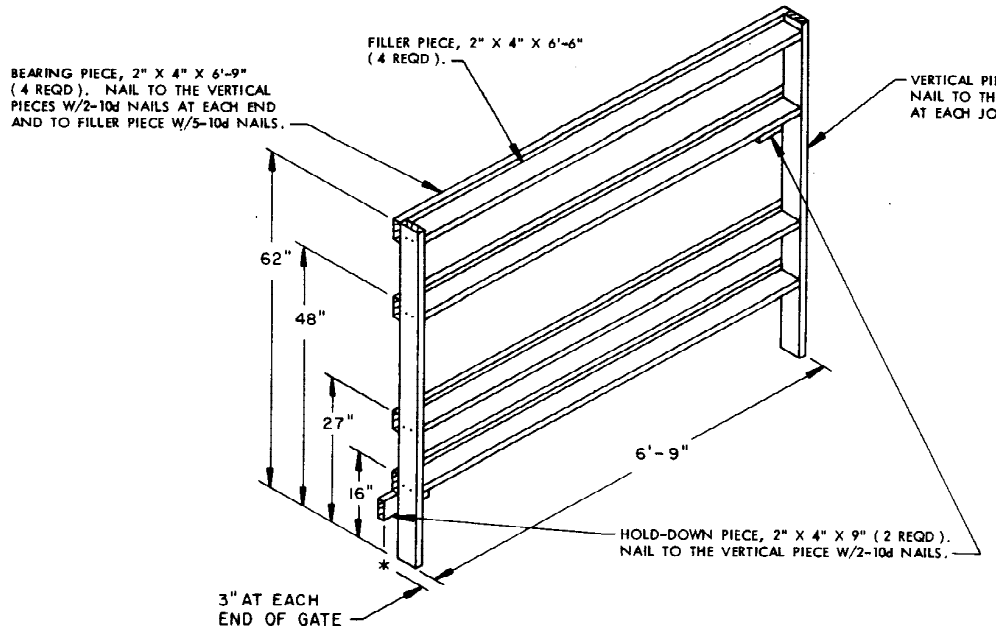
BILL OF MATERIAL

LUMBER	LINEAR FEET	BOARD FEET
2" X 4" 2" X 6"	343 44	229 44
NAILS	NO. REQD	POUNDS
10d (3")	480	7-1/2
WIRE, NO. 14 GAGE----------48' REQD----------1 LB		
CROSS MEMBER----------22 REQD		

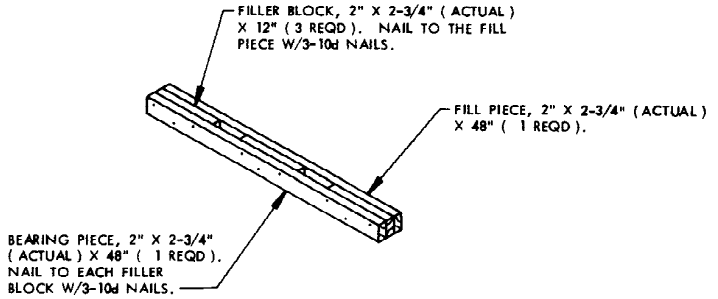
LOAD AS SHOWN

ITEM	QUANTITY	WEIGHT (APPROX)
SKIDDED UNIT	20	35,740 LBS
DUNNAGE		555 LBS
CONTAINER		5,700 LBS
TOTAL GROSS WEIGHT		41,995 LBS

SKIDDED UNIT NO. 2 CONTAINER LOAD



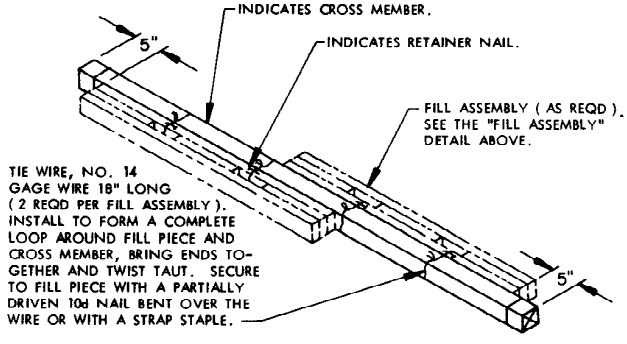
SIDE FILL GATE



FILL ASSEMBLY
SEE THE SPECIAL NOTES AT RIGHT.

SPECIAL NOTES:

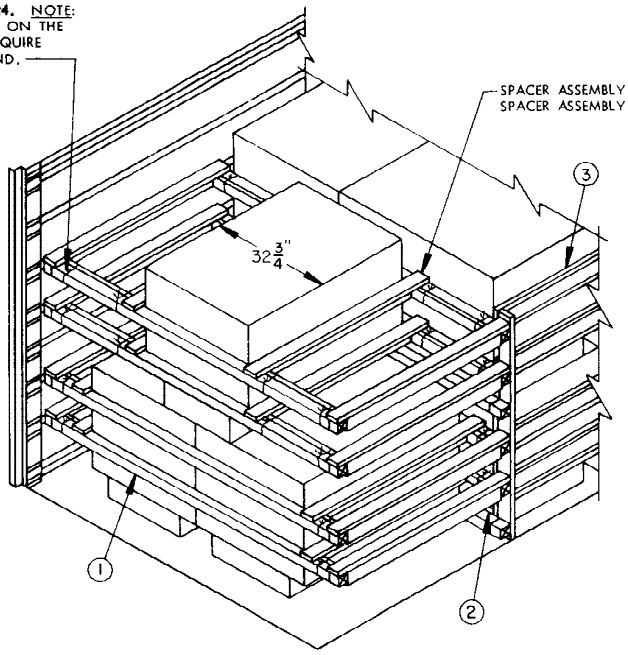
1. THE FILL ASSEMBLY DEPICTED AT LEFT WILL BE REQUIRED ON THE 5" AND 38" HIGH CROSS MEMBERS TO FILL THE VOID BETWEEN CROSS MEMBER AND SKID BASE WHEN THE UNIT IS POSITIONED WITH THE SKIDDED UNIT LENGTH PARALLEL TO THE CROSS MEMBER.
2. THE 2-3/4" ACTUAL WIDTH PIECES SPECIFIED FOR THE FILL ASSEMBLY CAN BE MADE BY RIPPING (SAWING) A PIECE OF NOMINAL SIZE 2" X 6" LUMBER ON THE CENTER LINE OF ITS WIDTH.



FILL ASSEMBLY SECUREMENT
SEE THE SPECIAL NOTES AT RIGHT.

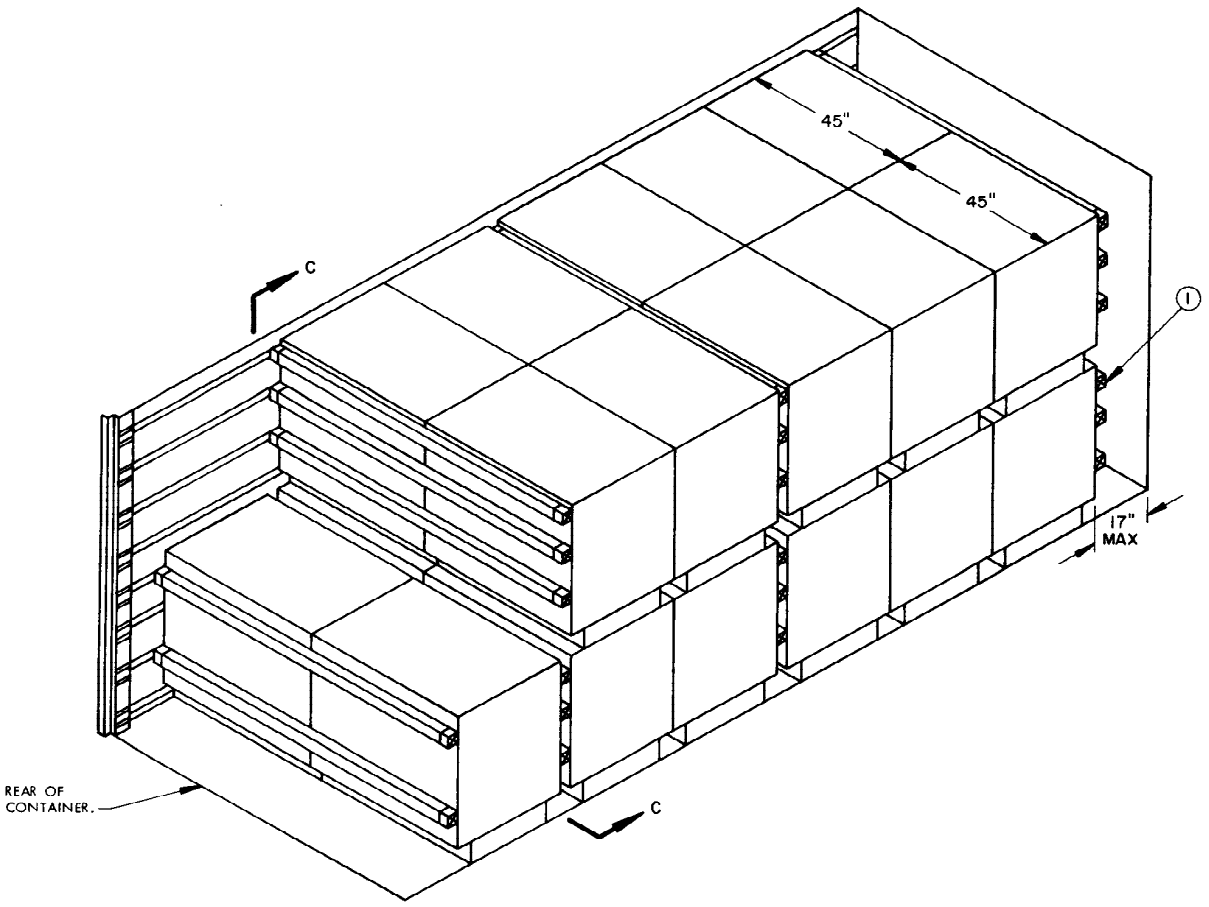
TIE WIRE, NO. 14 GAGE WIRE 18" LONG (24 REQD). SEE THE "SPACER ASSEMBLY SECUREMENT" DETAIL ON PAGE **24.** NOTE: THE SPACER ASSEMBLIES LOCATED ON THE 16" AND 28" HIGH BELT RAILS REQUIRE ONLY ONE TIE WIRE AT EACH END.

SPACER ASSEMBLY (8 REQD). SEE THE "TYPICAL SPACER ASSEMBLY" DETAIL ON PAGE **24.**



ALTERNATIVE LOADING PATTERN B

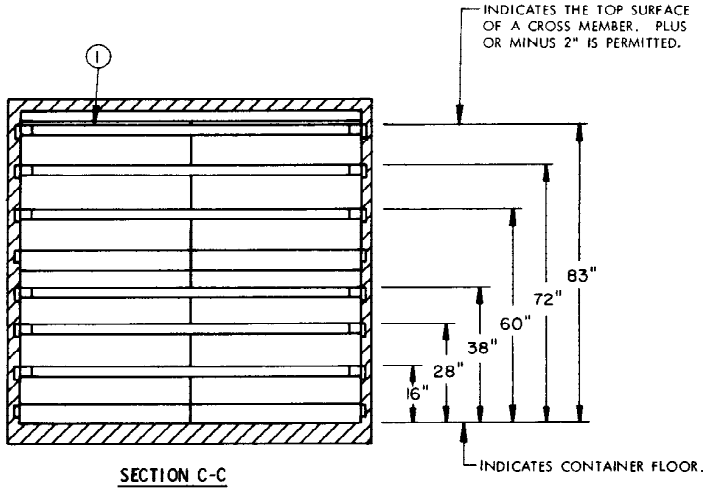
THE DETAIL ABOVE SPECIFIES A BLOCKING METHOD TO BE USED IN A "REDUCED-LOAD CONTAINER LOAD.



ISOMETRIC VIEW

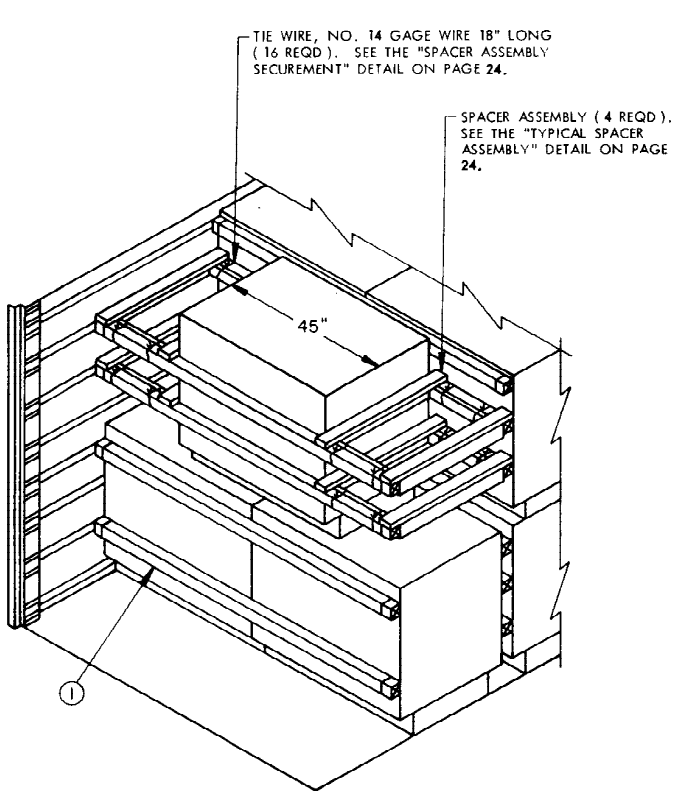
KEY NUMBERS

(1) CROSS MEMBER (20 REQD). POSITION AT THE HEIGHTS SPECIFIED IN THE "SECTION C-C" VIEW. SEE THE "FILL DETAIL" ON PAGE 24.



SECTION C-C

SKIDDED UNIT NO. 3 CONTAINER LOAD



ALTERNATIVE LOADING PATTERN C

THE DETAIL ABOVE DEPICTS A BLOCKING METHOD TO BE USED IN A "REDUCED-LOAD" CONTAINER LOAD.

SPECIAL NOTES:

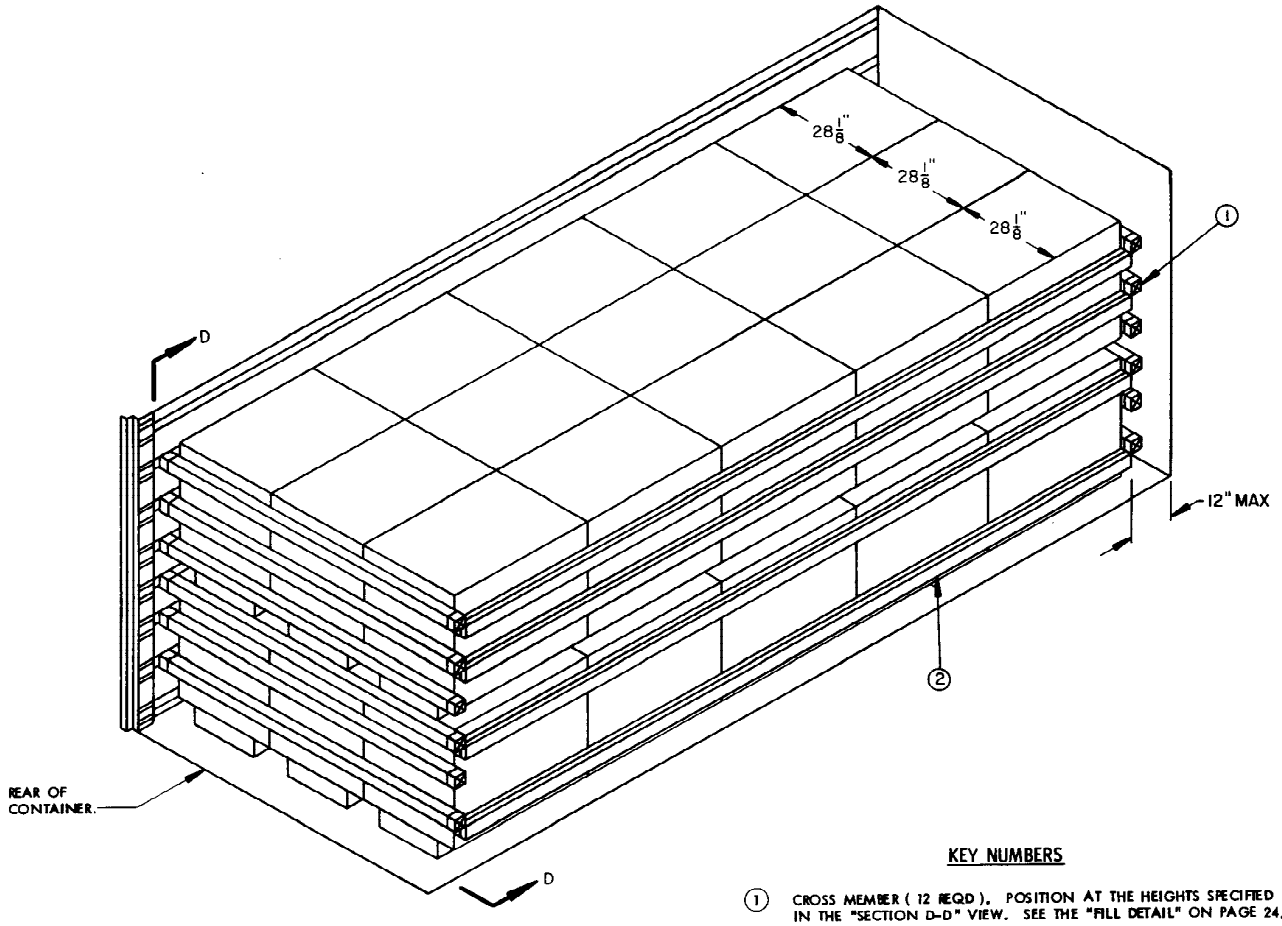
1. THE LOAD VIEWS AND THE "LOAD AS SHOWN" ON PAGES 12 AND 13 ARE BASED ON THE 20-BOX, SKIDDED UNIT NO. 3 SHOWN ON PAGE 4, WITH A UNIT WEIGHT OF 1,500 POUNDS. SEE SPECIAL NOTES 2 AND 3 FOR THE PROCEDURES THAT MUST BE USED TO CONFORM TO THE "CAPABILITY FACTORS" AS DIRECTED BY GENERAL NOTE "K" ON PAGE 2. A TOTAL GROSS WEIGHT OF 44,800 POUNDS MUST NOT BE EXCEEDED.
2. IF A CONTAINER IS TO BE LOADED WITH LESS UNITS THAN SHOWN, SKIDDED UNITS SHOULD BE ELIMINATED FROM THE REAR OF THE LOAD. FOR EXAMPLE, IF ONLY NINETEEN UNITS ARE TO BE LOADED, THE METHOD SPECIFIED BY THE "ALTERNATIVE LOADING PATTERN C" DETAIL AT THE LEFT MUST BE APPLIED. SEE THE "REDUCED-LOAD PROVISIONS" ON PAGE 2.
3. SPECIFICATIONS FOR THE "BASIC LOAD" AND THE PROVISIONS OF SPECIAL NOTE 2 WILL BE APPLIED SEPARATELY OR IN COMBINATION TO BLOCK AND BRACE OTHER THAN TWENTY-TWO UNIT LOADS.

BILL OF MATERIAL	
CROSS MEMBER	20 REQD

LOAD AS SHOWN

ITEM	QUANTITY	WEIGHT (APPROX)
SKIDDED UNIT	22	33,000 LBS
CONTAINER		5,700 LBS
TOTAL GROSS WEIGHT		38,700 LBS

SKIDDED UNIT NO. 3 CONTAINER LOAD

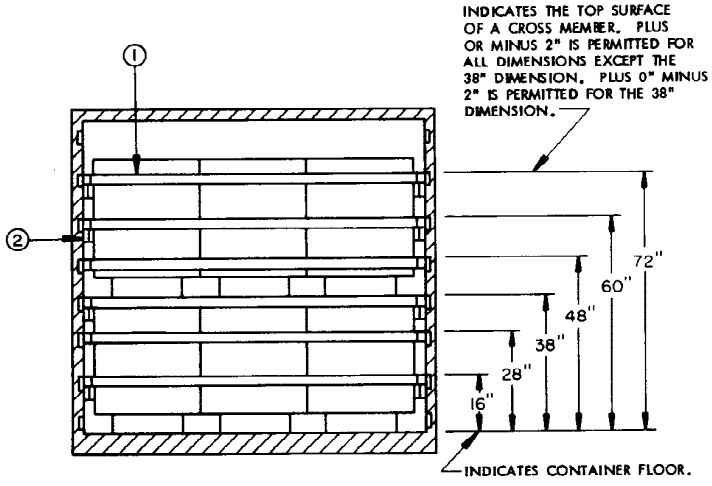


ISOMETRIC VIEW

KEY NUMBERS

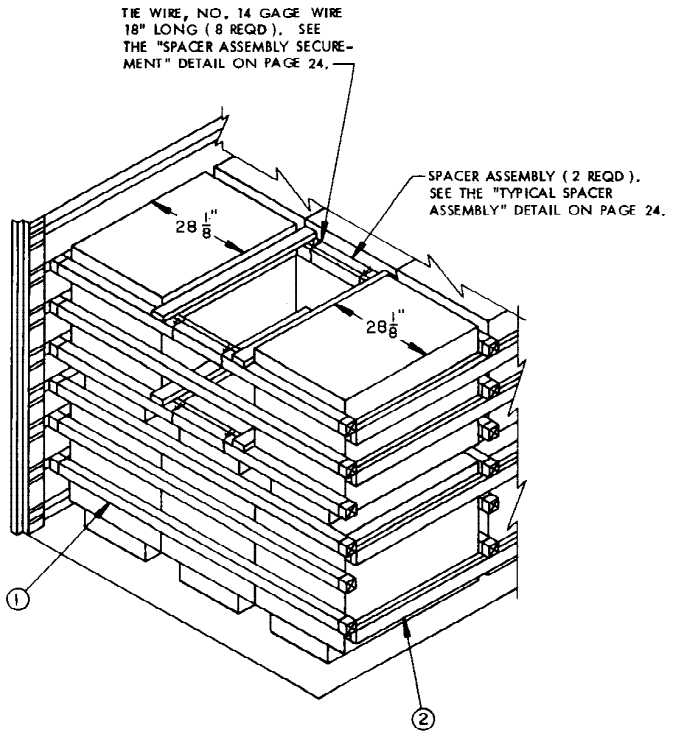
(1) CROSS MEMBER (12 REQD). POSITION AT THE HEIGHTS SPECIFIED IN THE "SECTION D-D" VIEW. SEE THE "FILL DETAIL" ON PAGE 24.

(2) SIDE FILL, 2" X 4" BY LADING LENGTH (DOUBLED) (8 REQD). LAMINATE W/1-10d NAIL EVERY 12". INSTALL IN RANDOM LENGTH PIECES AND WIRE-TIE TO THE 16", 38", 60", AND 72" HIGH BELT RAILS ON EACH SIDE OF THE CONTAINER. SEE THE "SIDE FILL DETAIL" ON PAGE 24 AND SPECIAL NOTE 4 ON PAGE 15.



SECTION D-D

SKIDDED UNIT NO. 4 CONTAINER LOAD



ALTERNATIVE LOADING PATTERN D

THE DETAIL ABOVE SPECIFIES A BLOCKING METHOD TO BE USED IN A "REDUCED LOAD" CONTAINER LOAD.

SPECIAL NOTES:

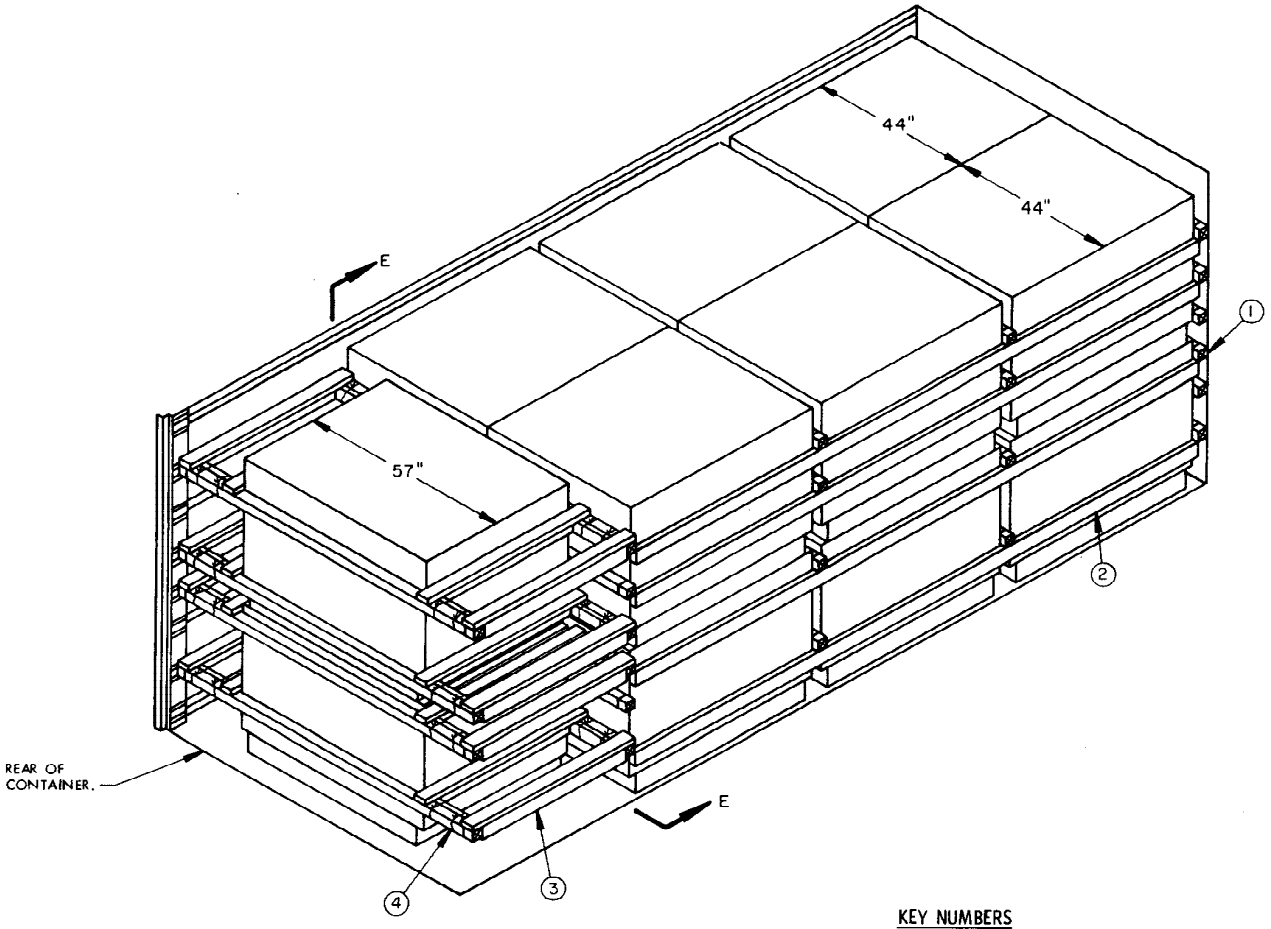
1. THE LOAD VIEWS AND THE "LOAD AS SHOWN" ON PAGES 14 AND 15 ARE BASED ON THE 9-BOX, SKIDDED UNIT NO. 4 SHOWN ON PAGE 4, WITH A UNIT WEIGHT OF 531 POUNDS. SEE SPECIAL NOTES 2 AND 3 FOR THE PROCEDURES THAT MUST BE USED TO CONFORM TO THE "CAPABILITY FACTORS" AS DIRECTED BY GENERAL NOTE "K " ON PAGE 2. A TOTAL GROSS WEIGHT OF 44,800 POUNDS MUST NOT BE EXCEEDED.
2. IF A CONTAINER IS TO BE LOADED WITH LESS UNITS THAN SHOWN, SKIDDED UNITS SHOULD BE ELIMINATED FROM THE REAR OF THE LOAD. FOR EXAMPLE, IF ONLY TWENTY-NINE UNITS ARE TO BE LOADED, THE METHOD SPECIFIED BY THE "ALTERNATIVE LOADING PATTERN D" DETAIL AT THE LEFT MUST BE APPLIED.
3. SPECIFICATIONS FOR THE "BASIC LOAD" AND THE PROVISIONS OF SPECIAL NOTE 2 WILL BE APPLIED SEPARATELY OR IN COMBINATION TO BLOCK AND BRACE OTHER THAN THIRTY-UNIT LOADS.
4. THE THICKNESS OF THE SIDE FILL PIECES AS DEPICTED ON EACH SIDE OF THE LOAD MUST BE ADJUSTED, AS REQUIRED, TO COMPLY WITH THE DIMENSIONAL VARIANCE OF THE SKIDDED UNIT, SO AS TO NOT ALLOW MORE THAN ONE AND ONE-HALF INCHES (1-1/2") VOID ACROSS THE WIDTH OF A BRACED LOAD. ADJUSTMENTS CAN BE MADE BY USING DIFFERENT THICKNESS FILL PIECES OR BY LAMINATING ADDITIONAL PIECES TO THE SPECIFIED FILL PIECES ON ONE OR BOTH SIDES OF THE LOAD W/1 APPROPRIATELY SIZED NAIL EVERY 12".

BILL OF MATERIAL		
LUMBER	LINEAR FEET	BOARD FEET
2" X 4"	278	186
NAILS	NO. REQD	POUNDS
10d (3")	144	2-1/4
WIRE, NO. 14 GAGE ---------- 84' REQD---------- 1-1/2 LBS		
CROSS MEMBER ---------- 12 REQD		

LOAD AS SHOWN

ITEM	QUANTITY	WEIGHT (APPROX)
SKIDDED UNIT	30	15,930 LBS
DUNNAGE		375 LBS
CONTAINER		5,700 LBS
	TOTAL WEIGHT	22,005 LBS

SKIDDED UNIT NO. 4 CONTAINER LOAD



ISOMETRIC VIEW

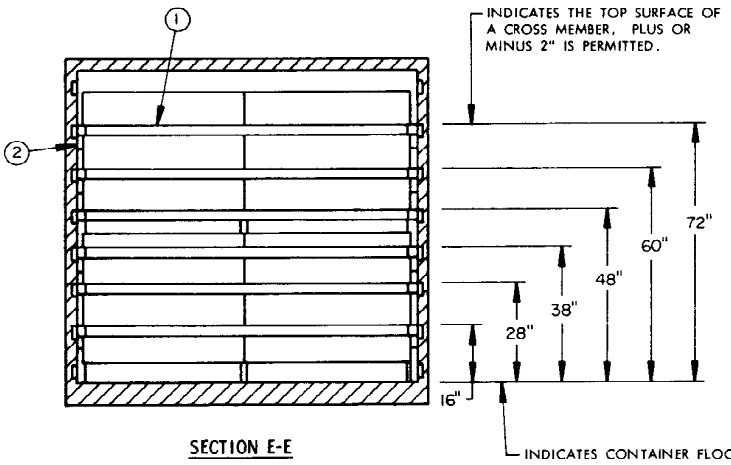
KEY NUMBERS

(1) CROSS MEMBER (24 REQD). POSITION AT THE HEIGHTS SPECIFIED IN THE "SECTION E-E" VIEW. SEE THE "FILL DETAIL" ON PAGE 24.

(2) SIDE FILL, 2" X 4" BY LADING LENGTH (8 REQD). INSTALLATION MAY BE MADE FROM RANDOM LENGTH PIECES. WIRE TIE TO THE 16", 38", 60", AND 72" HIGH BELT RAILS ON EACH SIDE OF THE CONTAINER. SEE THE "SIDE FILL DETAIL" ON PAGE 24 AND SPECIAL NOTE 4 ON PAGE 17.

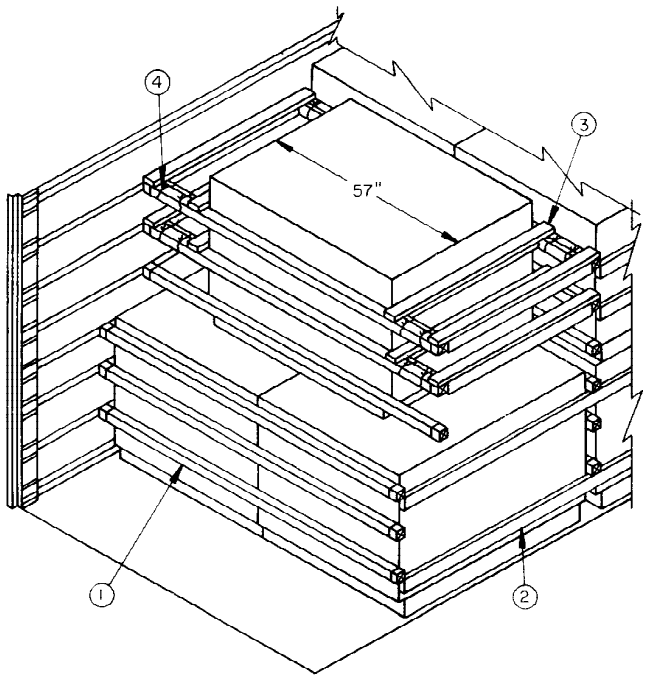
(3) SPACER ASSEMBLY (8 REQD). SEE THE "TYPICAL SPACER ASSEMBLY" DETAIL ON PAGE 24.

(4) TIE WIRE, NO. 14 GAGE WIRE 18" LONG (32 REQD). SEE THE "SPACER ASSEMBLY SECUREMENT" DETAIL ON PAGE 24.



SECTION E-E

PALLET UNIT NO. 1 CONTAINER LOAD



ALTERNATIVE LOADING PATTERN E

THE DETAIL ABOVE DEPICTS A BLOCKING METHOD TO BE USED IN A "REDUCED-LOAD" CONTAINER LOAD.

SPECIAL NOTES:

1. THE LOAD VIEWS AND THE "LOAD AS SHOWN" ON PAGES 16 AND 17 ARE BASED ON THE 16-BOX, PALLET UNIT NO. 1 SHOWN ON PAGE 5, WITH A UNIT WEIGHT OF 2,385 POUNDS. SEE SPECIAL NOTES 2 AND 3 FOR THE PROCEDURES THAT MUST BE USED TO CONFORM TO THE "CAPABILITY FACTORS" AS DIRECTED BY GENERAL NOTE "K" ON PAGE 2. A TOTAL GROSS WEIGHT OF 44,800 POUNDS MUST NOT BE EXCEEDED.

2. IF A CONTAINER IS TO BE LOADED WITH LESS UNITS THAN SHOWN, PALLET UNITS SHOULD BE ELIMINATED FROM THE REAR OF THE LOAD. FOR EXAMPLE, IF ONLY ELEVEN UNITS ARE TO BE LOADED, THE METHOD SPECIFIED BY THE "ALTERNATIVE LOADING PATTERN E" DETAIL AT THE LEFT MUST BE APPLIED. SEE THE "REDUCED-LOAD PROVISIONS" ON PAGE 2.

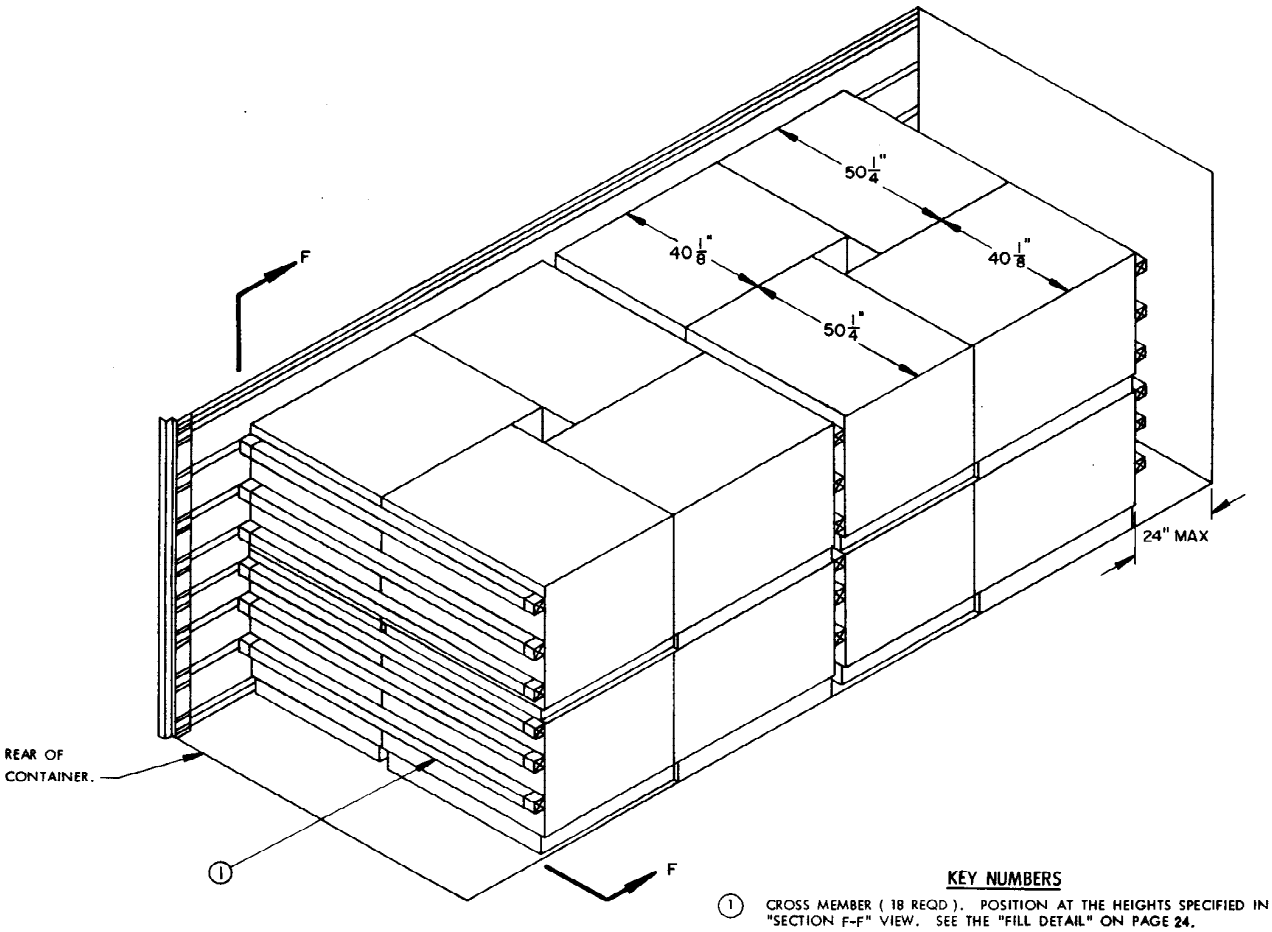
3. SPECIFICATIONS FOR THE "BASIC LOAD" AND THE PROVISIONS OF SPECIAL NOTE 2 WILL BE APPLIED SEPARATELY OR IN COMBINATION TO BLOCK AND BRACE OTHER THAN FOURTEEN-UNIT LOADS.

4. THE THICKNESS OF THE SIDE FILL PIECES AS DEPICTED ON EACH SIDE OF THE LOAD MUST BE ADJUSTED, AS REQUIRED, TO COMPLY WITH THE DIMENSIONAL VARIANCE OF THE PALLET UNIT, SO AS TO NOT ALLOW MORE THAN ONE AND ONE-HALF INCHES (1-1/2") VOID ACROSS THE WIDTH OF A BRACED LOAD. ADJUSTMENTS CAN BE MADE BY USING A DIFFERENT THICKNESS FILL PIECE OR BY LAMINATING ADDITIONAL PIECES TO THE SPECIFIED FILL PIECES ON ONE OR BOTH SIDES OF THE LOAD W/1 APPROPRIATELY SIZED NAIL EVERY 12".

BILL OF MATERIAL		
LUMBER	LINEAR FEET	BOARD FEET
2" X 4"	261	174
NAILS	NO. REQD	POUNDS
10d (3")	192	3
WIRE, NO. 14 GAGE----------108' REQD----------2 LBS		
CROSS MEMBER----------24 REQD		

LOAD AS SHOWN

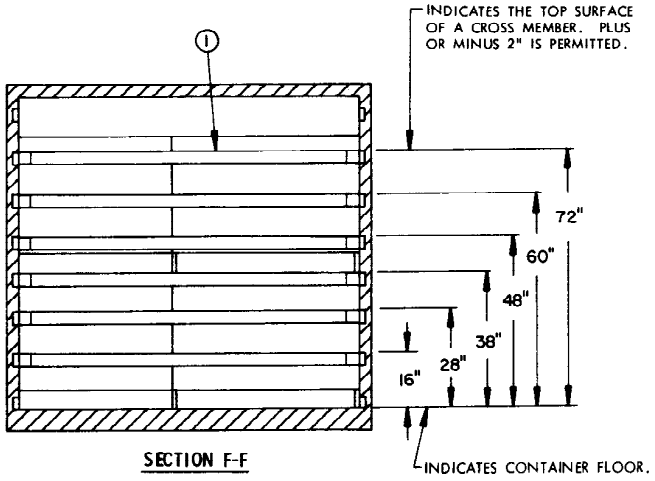
ITEM	QUANTITY	WEIGHT (APPROX)
PALLET UNIT	14	33,390 LBS
DUNNAGE		353 LBS
CONTAINER		5,700 LBS
TOTAL GROSS WEIGHT		39,443 LBS



ISOMETRIC VIEW

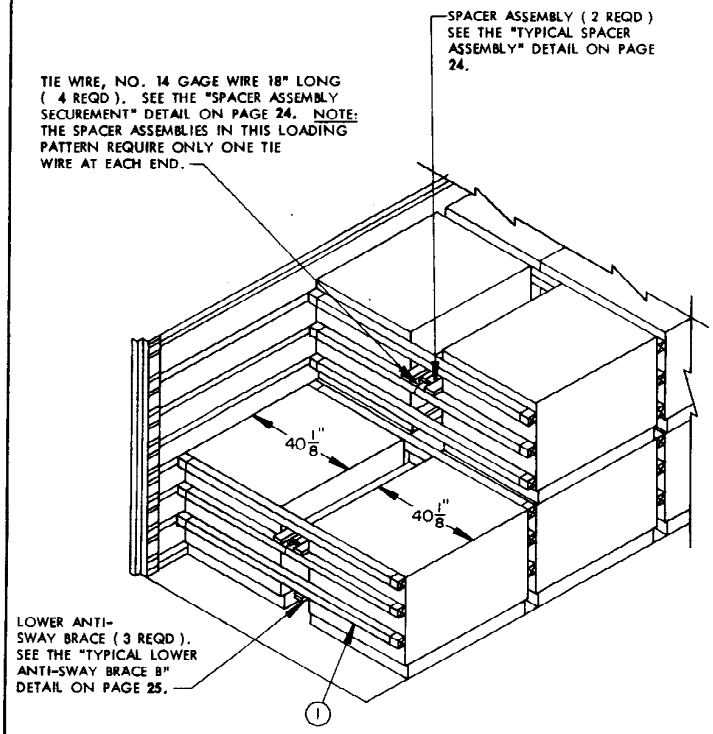
KEY NUMBERS

① CROSS MEMBER (18 REQD). POSITION AT THE HEIGHTS SPECIFIED IN THE "SECTION F-F" VIEW. SEE THE "FILL DETAIL" ON PAGE 24.



SECTION F-F

PALLET UNIT NO. 2 CONTAINER LOAD



ALTERNATIVE LOADING PATTERN F

THE DETAIL ABOVE SPECIFIES A BLOCKING METHOD TO BE USED IN A "REDUCED-LOAD" CONTAINER LOAD.

SPECIAL NOTES:

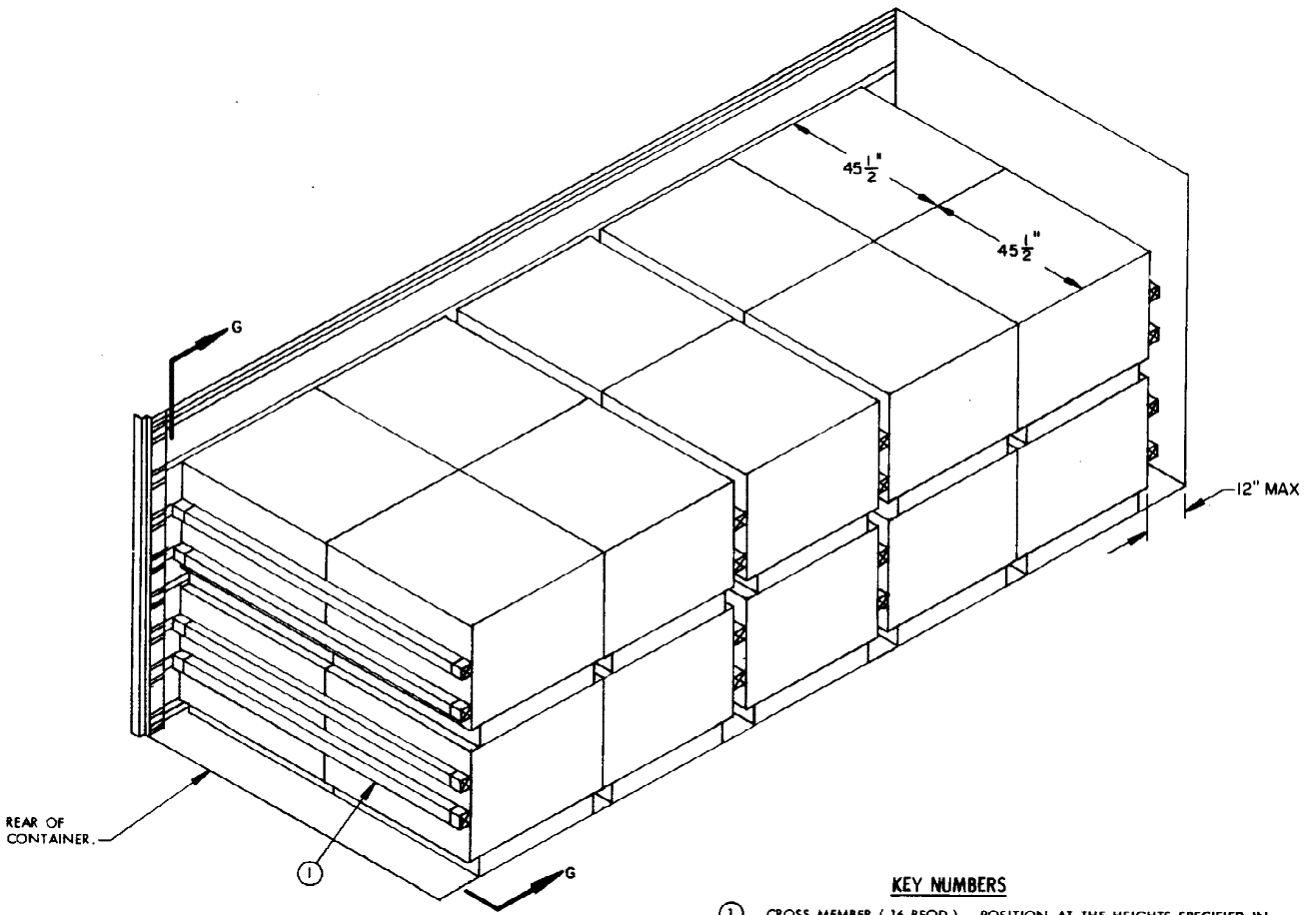
1. THE LOAD VIEWS AND THE "LOAD AS SHOWN" ON PAGES 18 AND 19 ARE BASED ON THE 36-BOX, PALLET UNIT NO. 2 SHOWN ON PAGE 5, WITH A UNIT WEIGHT OF 1,863 POUNDS. THE PALLET UNIT IS SHOWN IN A TYPICAL CHIMNEY-PATTERN LOAD. THE DEPICTED PROCEDURES ARE ALSO APPLICABLE FOR UNITS OF OTHER LENGTHS AND WIDTHS, PROVIDING THE TOTAL OF THE LENGTH AND THE WIDTH IS LESS THAN THE INSIDE WIDTH OF THE MILVAN CONTAINER BY AT LEAST 1/2" BUT NOT MORE THAN 10". SEE THE "PALLETIZED OR SKIDDED UNIT LENGTH/WIDTH COMBINATIONS" CHART ON PAGE 3 FOR GUIDANCE AS TO THE COMBINATIONS OF LENGTHS AND WIDTHS WHICH ARE ACCEPTABLE FOR CHIMNEY-PATTERN LOADS. NOTE: REGARDLESS OF THE LOADING WEIGHT, SIDE BLOCKING MUST BE USED WHEN THE UNBLOCKED SPACE ACROSS THE WIDTH OF A LOAD BAY IS GREATER THAN 1-1/2". IF THE UNBLOCKED SPACE IS LESS THAN 1-1/2", SIDE BLOCKING IS NOT REQUIRED. SEE SPECIAL NOTES 2 AND 3 FOR THE PROCEDURES THAT MUST BE USED TO CONFORM TO THE "CAPABILITY FACTORS" AS DIRECTED BY GENERAL NOTE "K" ON PAGE 2. A TOTAL GROSS WEIGHT OF 44,800 POUNDS MUST NOT BE EXCEEDED.
2. IF A CONTAINER IS TO BE LOADED WITH LESS UNITS THAN SHOWN, PALLET UNITS SHOULD BE ELIMINATED FROM THE REAR OF THE LOAD. FOR EXAMPLE, IF ONLY FOURTEEN UNITS ARE TO BE LOADED, THE METHOD SPECIFIED BY THE "ALTERNATIVE LOADING PATTERN F" DETAIL AT THE LEFT MUST BE APPLIED. SEE THE "REDUCED-LOAD PROVISIONS" ON PAGE 2.
3. SPECIFICATIONS FOR THE "BASIC LOAD" AND THE PROVISIONS OF SPECIAL NOTE 2 WILL BE APPLIED SEPARATELY OR IN COMBINATION TO BLOCK AND BRACE OTHER THAN SIXTEEN-UNIT LOADS.

BILL OF MATERIAL	
CROSS MEMBER	18 REQD

LOAD AS SHOWN

ITEM	QUANTITY	WEIGHT (APPROX)
PALLET UNIT	16	29,808 LBS
CONTAINER		5,700 LBS
TOTAL GROSS WEIGHT		35,508 LBS

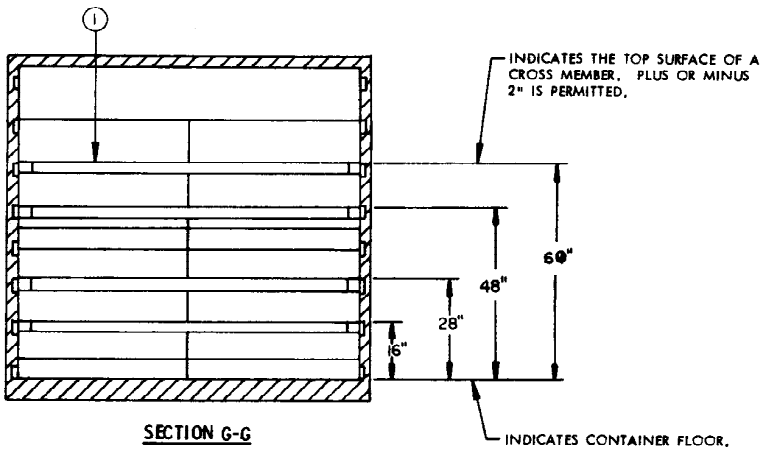
PALLET UNIT NO. 2 CONTAINER LOAD



ISOMETRIC VIEW

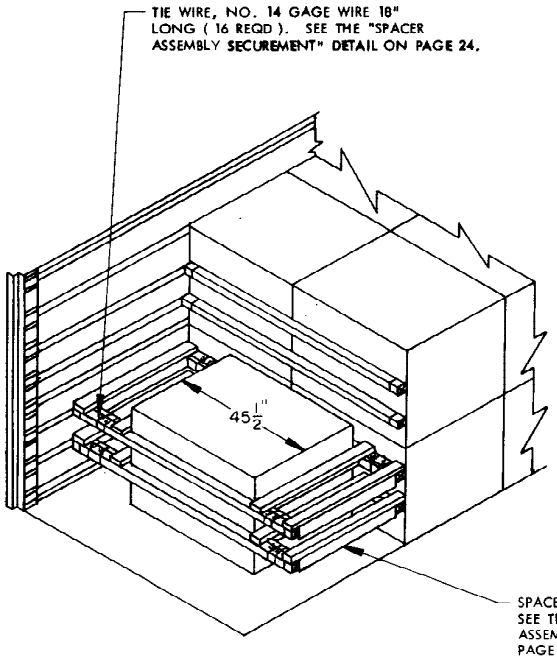
KEY NUMBERS

(1) CROSS MEMBER (16 REQD). POSITION AT THE HEIGHTS SPECIFIED IN THE "SECTION G-G" VIEW. SEE THE "FILL DETAIL" ON PAGE 24.



SECTION G-G

PALLET UNIT NO. 3 CONTAINER LOAD



ALTERNATIVE LOADING PATTERN G

THE DETAIL ABOVE SPECIFIES A BLOCKING METHOD TO BE USED IN A "REDUCED-LOAD" CONTAINER LOAD.

SPECIAL NOTES:

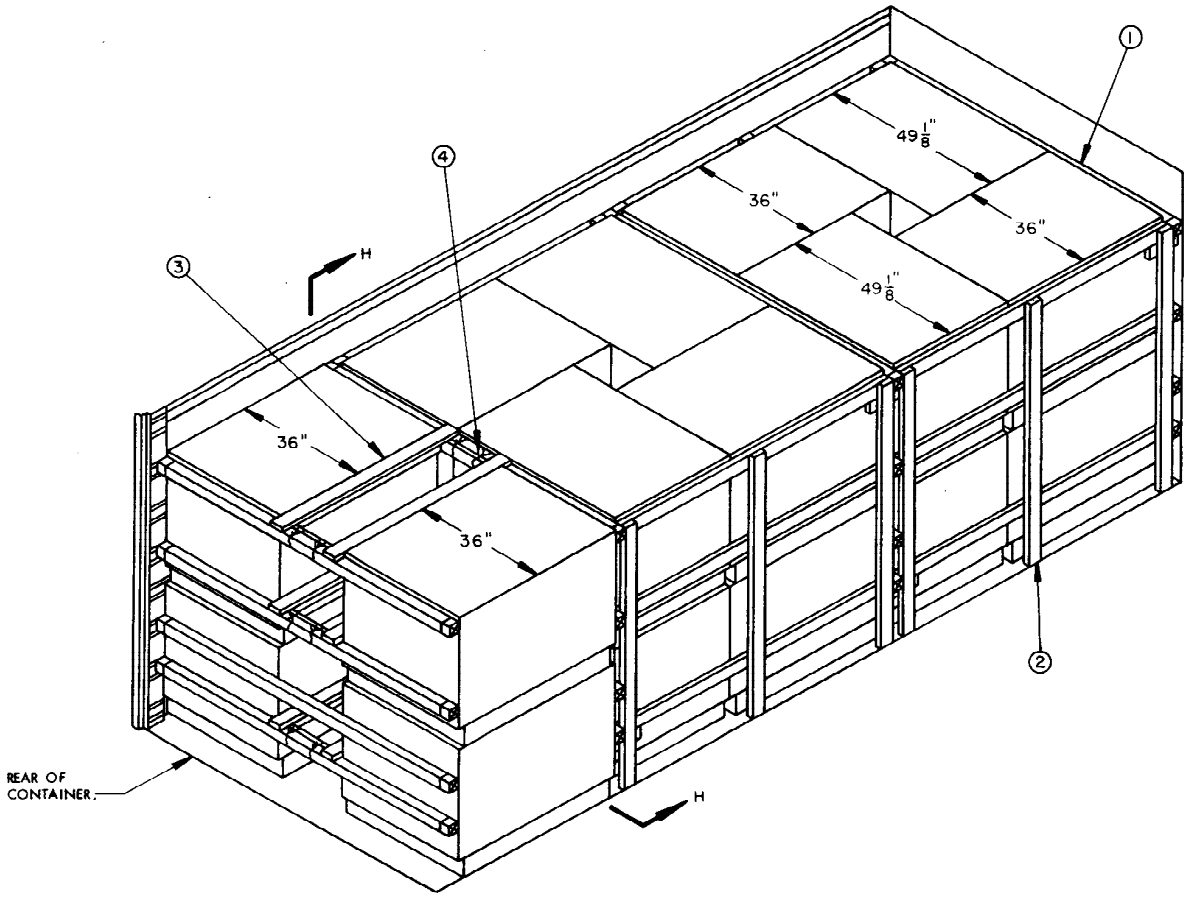
1. THE LOAD VIEWS AND THE "LOAD AS SHOWN" ON PAGES 20 AND 21 ARE BASED ON THE 18-BOX, PALLET UNIT NO. 3 SHOWN ON PAGE 5, WITH A UNIT WEIGHT OF 1,116 POUNDS. SEE SPECIAL NOTES 2 AND 3 FOR THE PROCEDURES THAT MUST BE USED TO CONFORM TO THE "CAPABILITY FACTORS" AS DIRECTED BY GENERAL NOTE "K" ON PAGE 2. A TOTAL GROSS WEIGHT OF 44,800 POUNDS MUST NOT BE EXCEEDED.
2. IF A CONTAINER IS TO BE LOADED WITH LESS UNITS THAN SHOWN, PALLET UNITS SHOULD BE ELIMINATED FROM THE REAR OF THE LOAD. FOR EXAMPLE, IF ONLY SEVENTEEN UNITS ARE TO BE LOADED, THE METHOD SPECIFIED BY THE "ALTERNATIVE LOADING PATTERN G" DETAIL AT THE LEFT MUST BE APPLIED. SEE THE "REDUCED-LOAD PROVISIONS" ON PAGE 2.
3. SPECIFICATIONS FOR THE "BASIC LOAD" AND THE PROVISIONS OF SPECIAL NOTE 2 WILL BE APPLIED SEPARATELY OR IN COMBINATION TO BLOCK AND BRACE OTHER THAN TWENTY-UNIT LOADS.

BILL OF MATERIAL	
CROSS MEMBER	16 REQD

LOAD AS SHOWN

ITEM	QUANTITY	WEIGHT (APPROX)
PALLET UNIT	20	22,320 LBS
CONTAINER		5,700 LBS
TOTAL GROSS WEIGHT		28,020 LBS

PALLET UNIT NO. 3 CONTAINER LOAD



ISOMETRIC VIEW

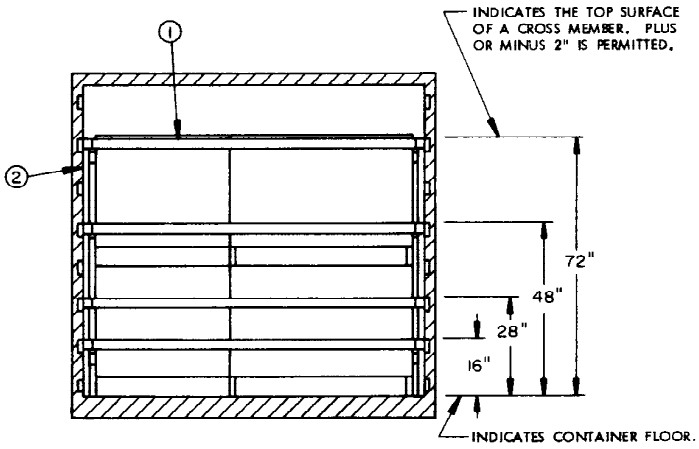
KEY NUMBERS

① CROSS MEMBER (16 REQD). POSITION AT THE HEIGHTS SPECIFIED IN THE "SECTION H-H" VIEW. SEE THE "FILL DETAIL" ON PAGE 24.

② SIDE FILL GATE (4 REQD). SEE THE "SIDE FILL GATE" DETAIL AND SPECIAL NOTE 4 ON PAGE 23.

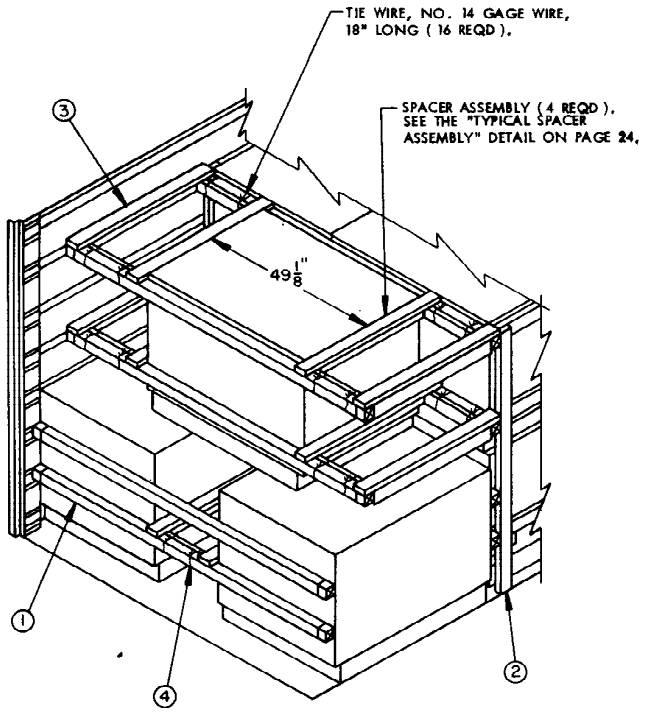
③ SPACER ASSEMBLY (3 REQD). SEE THE "TYPICAL SPACER ASSEMBLY" DETAIL ON PAGE 24.

④ TIE WIRE, NO. 14 GAGE WIRE 18" LONG (12 REQD). SEE THE "SPACER ASSEMBLY SECUREMENT" DETAIL ON PAGE 24.



SECTION H-H

PALLET UNIT NO. 4 CONTAINER LOAD

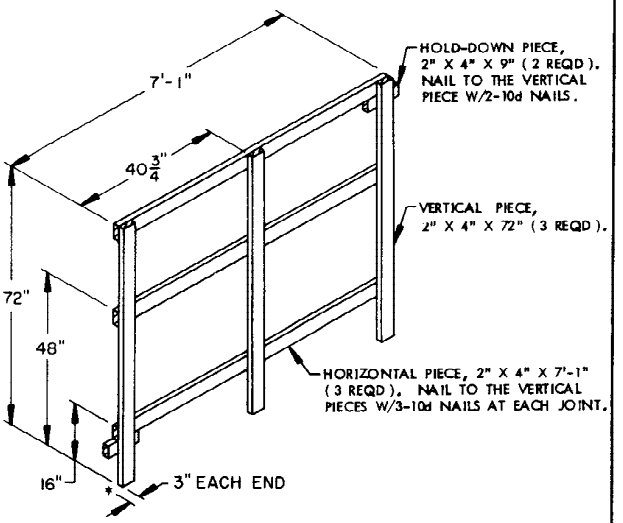


ALTERNATIVE LOADING PATTERN H

THE DETAIL ABOVE SPECIFIES A BLOCKING METHOD TO BE USED IN A "REDUCED-LOAD" CONTAINER LOAD.

SPECIAL NOTES:

1. THE LOAD VIEWS AND THE "LOAD AS SHOWN" ON PAGES 22 AND 23 ARE BASED ON THE 18-BOX, PALLET UNIT NO. 4 SHOWN ON PAGE 5, WITH A UNIT WEIGHT OF 1,082 POUNDS. SEE SPECIAL NOTES 2 AND 3 FOR THE PROCEDURES THAT MUST BE USED TO CONFORM TO THE "CAPABILITY FACTORS" AS DIRECTED BY GENERAL NOTE "K " ON PAGE 2. A TOTAL GROSS WEIGHT OF 44,800 POUNDS MUST NOT BE EXCEEDED.
2. IF A CONTAINER IS TO BE LOADED WITH LESS UNITS THAN SHOWN, PALLET UNITS SHOULD BE ELIMINATED FROM THE REAR OF THE LOAD. FOR EXAMPLE, IF ONLY NINETEEN UNITS ARE TO BE LOADED, THE METHOD SPECIFIED BY THE "ALTERNATIVE LOADING PATTERN H" DETAIL AT THE LEFT MUST BE APPLIED.
3. SPECIFICATIONS FOR THE "BASIC LOAD" AND THE PROVISIONS OF SPECIAL NOTE 2 WILL BE APPLIED SEPARATELY OR IN COMBINATION TO BLOCK AND BRACE OTHER THAN TWENTY-UNIT LOADS.
4. THE THICKNESS OF THE SIDE FILL GATES AS DEPICTED ON EACH SIDE OF THE LOAD MUST BE ADJUSTED, AS REQUIRED, TO COMPLY WITH THE DIMENSIONAL VARIANCE OF THE PALLET UNIT, SO AS TO NOT ALLOW MORE THAN ONE AND ONE-HALF INCHES (1-1/2") VOID ACROSS THE WIDTH OF A BRACED LOAD. ADJUSTMENTS CAN BE MADE BY USING A DIFFERENT THICKNESS HORIZONTAL PIECE OR BY LAMINATING ADDITIONAL PIECES TO THE HORIZONTAL PIECES ON ONE OR BOTH SIDES OF THE LOAD W/1 APPROPRIATELY SIZED NAIL EVERY 12". ADJUSTMENTS CAN ALSO BE MADE BY ADJUSTING THE THICKNESS OF THE VERTICAL PIECES.

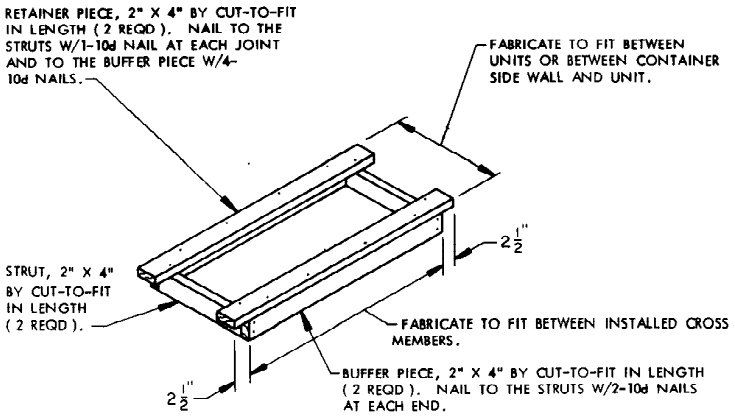


SIDE FILL GATE

BILL OF MATERIAL		
LUMBER	LINEAR FEET	BOARD FEET
2" X 4"	223	149
NAILS	NO. REQD	POUNDS
10d (3")	196	3
WIRE, NO. 14 GAGE	18' REQD	1/2 LB
CROSS MEMBER		16 REQD

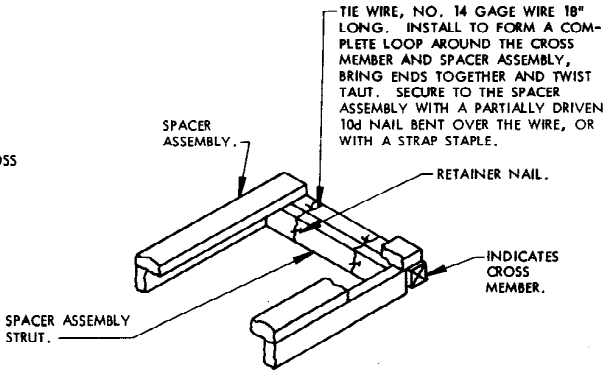
LOAD AS SHOWN

ITEM	QUANTITY	WEIGHT (APPROX)
PALLET UNIT	20	21,640 LBS
DUNNAGE		302 LBS
CONTAINER		5,700 LBS
TOTAL GROSS WEIGHT		27,642 LBS

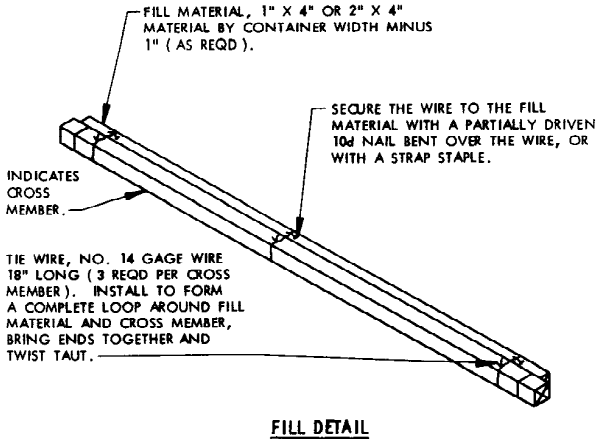


TYPICAL SPACER ASSEMBLY

SEE GENERAL NOTE "G" ON PAGE 2.

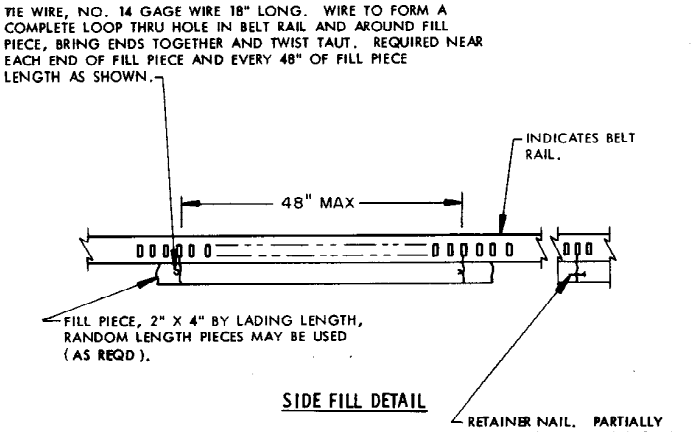


SPACER ASSEMBLY SECUREMENT

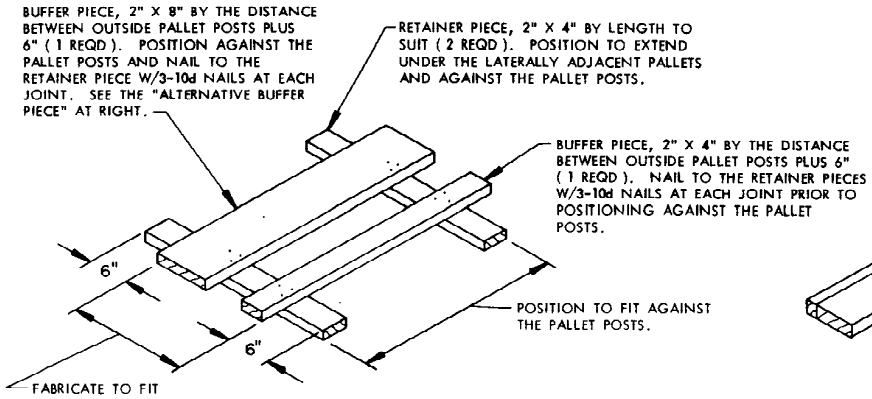


FILL DETAIL

THIS DETAIL DEPICTS THE METHOD OF POSITIONING FILL MATERIAL BETWEEN CROSS MEMBER AND LADING, WHEN THE VOID BETWEEN THE TWO IS GREATER THAN ONE INCH (1").



SIDE FILL DETAIL



TYPICAL ANTI-SWAY BRACE A

SEE THE SPECIAL NOTES BELOW.

SPECIAL NOTES (FOR TYPICAL ANTI-SWAY BRACE A):

1. THE "TYPICAL ANTI-SWAY BRACE A" SHOWN ABOVE IS FOR USE BETWEEN PALLETIZED UNITS THAT ARE POSITIONED WITH THE PALLET LENGTH PARALLEL TO THE CONTAINER SIDEWALL.

2. THE ASSEMBLY MUST BE FABRICATED IN PLACE BETWEEN PALLETS.

   A. POSITION THE FIRST RETAINER PIECE BETWEEN THE CENTER PALLET POST AND THE PALLET POST WHICH IS FURTHEST AWAY. THE RETAINER PIECE IS TO SPAN THE VOID BETWEEN LATERALLY ADJACENT PALLETS.

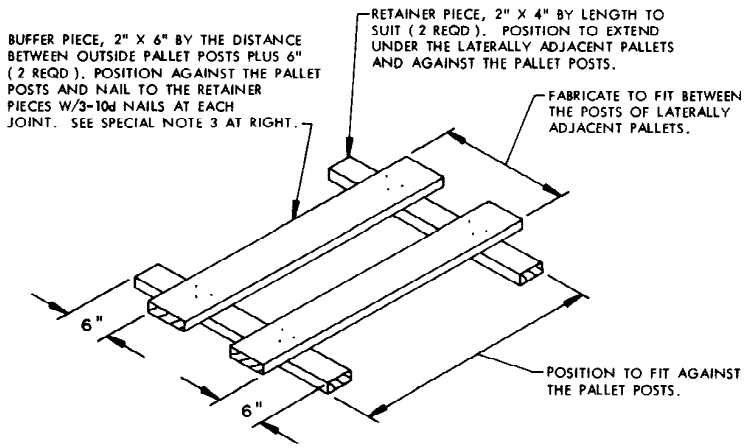
   B. POSITION THE SECOND RETAINER PIECE AGAINST THE INSIDE OF THE NEAREST PALLET POST SO AS TO SPAN THE VOID BETWEEN LATERALLY ADJACENT PALLETS.

   C. POSITION THE 2" X 4" BUFFER PIECE 6" FROM THE END OF THE FIRST RETAINER PIECE AND EXTENDING BEYOND THE RETAINER PIECE. NAIL TO THE RETAINER PIECE W/3-10d NAILS.

   D. PUSH THE PARTIAL ASSEMBLY FORWARD UNTIL THE FIRST RETAINER PIECE CONTACTS THE PALLET POST ON THE FAR SIDE OF THE PALLET. NAIL THE BUFFER PIECE TO THE SECOND RETAINER PIECE W/3-10d NAILS.

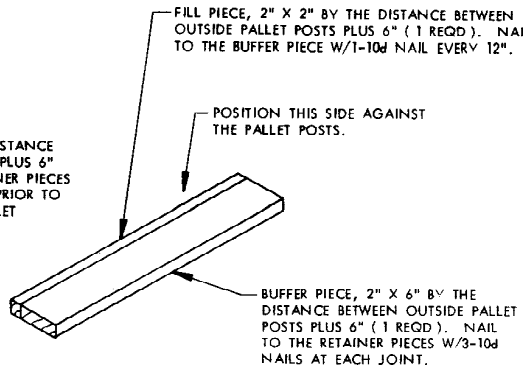
   E. PUSH THE PARTIAL ASSEMBLY SIDEWAYS UNTIL THE 2" X 4" BUFFER PIECE IS AGAINST THE PALLET POSTS AND RESTING ON THE BOTTOM SUPPORT BOARDS OF THE PALLET.

   F. POSITION THE 2" X 8" BUFFER PIECE AGAINST THE PALLET POSTS ON THE OPPOSITE SIDE OF THE VOID AND NAIL TO THE RETAINER PIECES W/3-10d NAILS AT EACH JOINT. NOTE: IF 2" X 8" MATERIAL IS NOT AVAILABLE, USE THE "ALTERNATIVE BUFFER PIECE" WHICH IS DETAILED ABOVE.



TYPICAL ANTI-SWAY BRACE B

SEE THE SPECIAL NOTES AT RIGHT.



ALTERNATIVE BUFFER PIECE

SEE SPECIAL NOTE "2.F" AT LEFT.

SPECIAL NOTES (FOR TYPICAL ANTI-SWAY BRACE B):

1. THE"TYPICAL ANTI-SWAY BRACE B" IS FOR USE BETWEEN PALLET UNITS THAT ARE POSITIONED WITH THE PALLET WIDTH PARALLEL TO THE CONTAINER SIDEWALL.

2. THE ASSEMBLY MUST BE FABRICATED IN PLACE BETWEEN PALLETS.

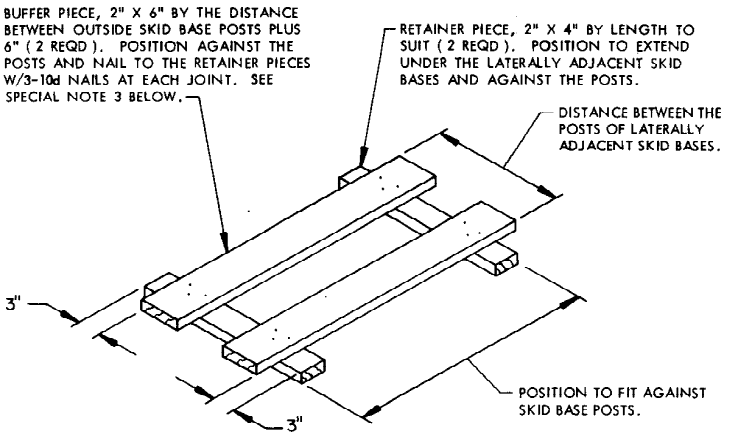
   A. POSITION THE FIRST RETAINER PIECE BETWEEN THE CENTER PALLET POST AND THE PALLET POST WHICH IS FURTHEST AWAY. THE RETAINER PIECE IS TO SPAN THE VOID BETWEEN LATERALLY ADJACENT PALLETS.

   B. POSITION THE SECOND RETAINER PIECE AGAINST THE INSIDE OF THE NEAREST PALLET POST SO AS TO SPAN THE VOID BETWEEN LATERALLY ADJACENT PALLETS.

   C. POSITION THE FIRST BUFFER PIECE AGAINST THE PALLET POSTS AND EXTENDING 3" BEYOND THE FURTHEST RETAINER PIECE. NAIL TO THE RETAINER PIECE W/3-10d NAILS. POSITION THE SECOND BUFFER PIECE AGAINST THE PALLET POSTS ON THE OPPOSITE SIDE AND EXTENDING 3" BEYOND THE FURTHEST RETAINER PIECE. NAIL TO THE RETAINER PIECE W/3-10d NAILS.

   D. PUSH THE PARTIAL ASSEMBLY FORWARD UNTIL THE FIRST RETAINER PIECE CONTACTS THE PALLET POST ON THE FAR SIDE OF THE PALLET. NAIL THE BUFFER PIECES TO THE SECOND RETAINER PIECE W/3-10d NAILS AT EACH JOINT.

3. IF THE VOID BETWEEN LATERALLY ADJACENT PALLETS IS LESS THAN 11-1/4", THE BUFFER PIECES MAY BE 2" X 4" MATERIAL IN LIEU OF 2" X 6" MATERIAL. THE NAILING OF THE 2" X 4" BUFFER PIECES WILL BE THE SAME AS THAT SPECIFIED FOR 2" X 6" PIECES.



TYPICAL ANTI-SWAY BRACE C

SEE THE SPECIAL NOTES BELOW AND AT RIGHT.

SPECIAL NOTES (FOR TYPICAL ANTI-SWAY BRACE C):

1. THE "TYPICAL ANTI-SWAY BRACE C" SHOWN ABOVE IS FOR USE BETWEEN SKIDDED UNITS ASSEMBLED ON THE TYPE I, TYPE IA AND TYPE II SKID BASE WHEN THE UNITS ARE POSITIONED WITH THE SKIDDED UNIT WIDTH PARALLEL TO THE CONTAINER SIDEWALL.

2. THE ASSEMBLY MUST BE FABRICATED IN PLACE BETWEEN THE SKID BASES.

   A. POSITION THE TWO RETAINER PIECES BETWEEN THE SKID POSTS. THE RETAINER PIECES ARE TO SPAN THE VOID BETWEEN LATERALLY ADJACENT SKIDS.

   B. POSITION THE FIRST BUFFER PIECE AGAINST THE SKID POSTS AND EXTENDING 3" BEYOND THE FURTHEST RETAINER PIECE. NAIL TO THE RETAINER PIECE W/3-10d NAILS. POSITION THE SECOND BUFFER PIECE AGAINST THE SKID POSTS ON THE OPPOSITE SIDE AND EXTENDING 3" BEYOND THE FURTHEST RETAINER PIECE. NAIL TO THE RETAINER PIECE W/3-10d NAILS.

   C. PUSH THE PARTIAL ASSEMBLY FORWARD UNTIL THE FIRST RETAINER PIECE CONTACTS THE SKID POSTS ON THE FAR SIDE OF THE SKID. NAIL THE BUFFER PIECES TO THE SECOND RETAINER PIECE W/3-10d NAILS AT EACH JOINT.

3. IF THE LATERAL VOID IN A CONTAINER IS SUCH THAT IT PRECLUDES THE USE OF TWO 2" X 6" BUFFER PIECES, ONE OR BOTH PIECES MAY BE REPLACED WITH 2" X 4" PIECES. THE NAILING OF THE 2" X 4" BUFFER PIECES TO THE RETAINER PIECES WILL BE DONE USING 3-10d NAILS AT EACH JOINT IN THE SAME MANNER AS THAT SPECIFIED FOR THE 2" X 6" BUFFER PIECES.

SPECIAL NOTES (FOR TYPICAL ANTI-SWAY BRACE C):

1. THE "TYPICAL ANTI-SWAY BRACE C" SHOWN AT LEFT IS FOR USE BETWEEN SKIDDED UNITS ASSEMBLED ON THE TYPE II SKID BASE WHEN THE UNITS ARE POSITIONED WITH THE SKIDDED UNIT LENGTH PARALLEL TO THE CONTAINER SIDEWALL.

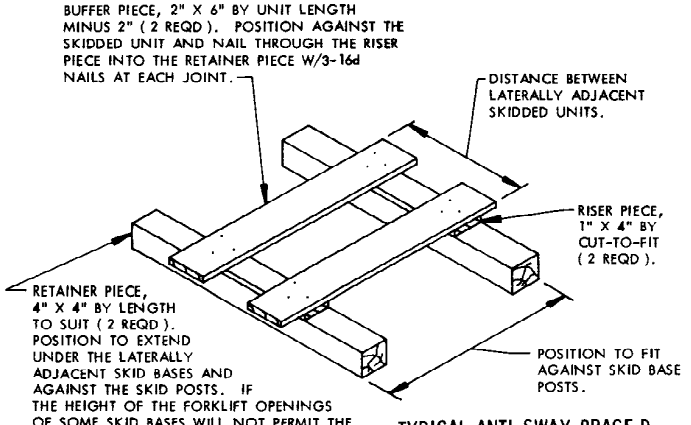
2. THE ASSEMBLY MUST BE FABRICATED IN PLACE BETWEEN THE SKID BASES.

   A. POSITION THE FIRST RETAINER PIECE BETWEEN THE CENTER SKID POST AND THE SKID POST WHICH IS FURTHEST AWAY. THE RETAINER PIECE IS TO SPAN THE VOID BETWEEN LATERALLY ADJACENT SKIDS.

   B. POSITION THE SECOND RETAINER PIECE AGAINST THE INSIDE OF THE NEAREST SKID POST SO AS TO SPAN THE VOID BETWEEN LATERALLY ADJACENT SKIDS.

   C. POSITION THE FIRST BUFFER PIECE AGAINST THE SKID POSTS AND EXTENDING 3" BEYOND THE FURTHEST RETAINER PIECE. NAIL TO THE RETAINER PIECE W/3-10d NAILS. POSITION THE SECOND BUFFER PIECE AGAINST THE SKID POSTS ON THE OPPOSITE SIDE AND EXTENDING 3" BEYOND THE FURTHEST RETAINER PIECE. NAIL TO THE RETAINER PIECE W/3-10d NAILS.

   D. PUSH THE PARTIAL ASSEMBLY FORWARD UNTIL THE FIRST RETAINER PIECE CONTACTS THE SKID POSTS ON THE FAR SIDE OF THE SKID. NAIL THE BUFFER PIECES TO THE SECOND RETAINER PIECE W/3-10d NAILS AT EACH JOINT.



TYPICAL ANTI-SWAY BRACE D

SEE THE SPECIAL NOTES AT RIGHT.

SPECIAL NOTES (FOR TYPICAL ANTI-SWAY BRACE D):

1. THE "TYPICAL ANTI-SWAY BRACE D" SHOWN AT LEFT IS FOR USE BETWEEN SKIDDED UNITS ASSEMBLED ON THE TYPE I OR IA SKID BASE WHEN THE UNITS ARE POSITIONED WITH THE SKIDDED UNIT LENGTH PARALLEL TO THE CONTAINER SIDEWALL.

2. THE ASSEMBLY MUST BE FABRICATED IN PLACE BETWEEN THE SKID BASES.

   A. POSITION THE FIRST RETAINER PIECE BETWEEN THE CENTER SKID POST AND THE SKID POST WHICH IS FURTHEST AWAY. THE RETAINER PIECE IS TO SPAN THE VOID BETWEEN LATERALLY ADJACENT SKIDS.

   B. POSITION THE SECOND RETAINER PIECE AGAINST THE INSIDE OF THE NEAREST SKID POST SO AS TO SPAN THE VOID BETWEEN LATERALLY ADJACENT SKIDS.

   C. POSITION A RISER PIECE ON THE FURTHEST AWAY RETAINER PIECE. POSITION THE FIRST BUFFER PIECE AGAINST THE BOXES OF THE SKIDDED UNIT AND EXTENDING 3" BEYOND THE FURTHEST RETAINER PIECE. NAIL THROUGH THE RISER PIECE INTO THE RETAINER PIECE W/3-16d NAILS. POSITION THE SECOND BUFFER PIECE AGAINST THE BOXES OF THE SKIDDED UNIT AND EXTENDING 3" BEYOND THE FURTHEST RETAINER PIECE. NAIL THROUGH THE RISER PIECE INTO THE RETAINER PIECE W/3-16d NAILS.

   D. PUSH THE PARTIAL ASSEMBLY FORWARD UNTIL THE FIRST RETAINER PIECE CONTACTS THE SKID POSTS ON THE FAR SIDE OF THE SKID. POSITION A RISER PIECE ON THE NEAREST RETAINER PIECE AND NAIL THE BUFFER PIECES THROUGH THE RISER PIECE INTO THE RETAINER PIECE W/3-16d NAILS AT EACH JOINT.

   E. IF THE SPECIFIED 4" X 4" MATERIAL IS NOT AVAILABLE, SUITABLE BLOCKING DUNNAGE CAN BE MADE BY LAMINATING TWO PIECES OF 2" X 4" MATERIAL TOGETHER WITH ONE 10d NAIL EVERY 4".

THIS DRAWING SUPERSEDES INTERIM PROCEDURAL DRAWINGS:

D-AMXAC-4252, REVISION 1, DATED APRIL 1974.
D-AMXAC-4253, REVISION 1, DATED APRIL 1974.
D-AMXAC-4254, REVISION 2, DATED JUNE 1974.
D-AMXAC-4255, REVISION 2, DATED JUNE 1974.
D-AMXAC-4256, REVISION 1, DATED APRIL 1974.
D-AMXAC-4260, REVISION 1, DATED APRIL 1974.
D-AMXAC-4261, REVISION 1, DATED APRIL 1974.
D-AMXAC-4262, REVISION 1, DATED APRIL 1974.
D-AMXAC-4263, REVISION 1, DATED APRIL 1974.
D-AMXAC-4264, REVISION 1, DATED APRIL 1974.
D-AMXAC-4265, REVISION 1, DATED MARCH 1974.
D-AMXAC-4266, REVISION 2, DATED JUNE 1974.
D-AMXAC 4267, REVISION 2, DATED JUNE 1974.
D-AMXAC-4268, REVISION 2, DATED JUNE 1974.
D-AMXAC-4269, REVISION 1, DATED MARCH 1974.
D-AMXAC-4270, REVISION 1, DATED MARCH 1974.
D-AMXAC-4272, REVISION 1, DATED APRIL 1974.
D-AMXAC-4273, REVISION 2, DATED JUNE 1974.
D-AMXAC-4294, REVISION 1, DATED APRIL 1974.
D-AMXAC-4295, REVISION 1, DATED APRIL 1974.
D-AMXAC-4296, REVISION 1, DATED APRIL 1974.
D-AMXAC-4297, REVISION 1, DATED APRIL 1974.
D-AMXAC-4298, REVISION 1, DATED APRIL 1974.
D-AMXAC-4299, REVISION 1, DATED MAY 1974.
D-AMXAC-4300, REVISION 1, DATED APRIL 1974.
D-AMXAC-4301, REVISION 1, DATED APRIL 1974.
D-AMXAC-4308, REVISION 2, DATED FEBRUARY 1974.
D-AMXAC-4309, DATED JANUARY 1972.
D-AMXAC-4310, REVISION 1, DATED APRIL 1974.
D-AMXAC-4313, REVISION 1, DATED APRIL 1974.
D-AMXAC-4315, REVISION 1, DATED MARCH 1974.
D-AMXAC-4316, REVISION 2, DATED JUNE 1974.
D-AMXAC-4317, REVISION 1, DATED MARCH 1974.
D-AMXAC-4319, REVISION 1, DATED MAY 1974.
D-AMXAC-4324, REVISION 2, DATED JUNE 1974.
D-AMXAC-4344, REVISION 2, DATED JUNE 1974.
D-AMXAC-4345, DATED DECEMBER 1973.
D-AMXAC-4346, REVISION 1, DATED JULY 1974.
D-SARAC-4361, DATED SEPTEMBER 1975.
D-SARAC-4362, REVISION 1, DATED DECEMBER 1975.
D-SARAC-4363, DATED AUGUST 1975.
D-SARAC-4375, DATED SEPTEMBER 1975.
D-SARAC-4376, DATED SEPTEMBER 1975.
D-SARAC-4377, DATED SEPTEMBER 1975.
D-SARAC-4378, DATED SEPTEMBER 1975.
D-SARAC-4379, DATED OCTOBER 1975.
D-SARAC-4380, DATED OCTOBER 1975.
D-SARAC-4381, DATED NOVEMBER 1975.
D-SARAC-4382, DATED SEPTEMBER 1975.
D-SARAC-4383, DATED NOVEMBER 1975.
D-SARAC-4384, DATED NOVEMBER 1975.
D-SARAC-4385, DATED NOVEMBER 1975.
D-SARAC-4386, DATED OCTOBER 1975.
D-SARAC-4387, DATED OCTOBER 1975.
D-SARAC-4397, DATED JUNE 1978.
D-SARAC-4398, DATED JUNE 1978.
D-SARAC-4401, DATED JANUARY 1979.