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LOADING AND BRACING¹ WITH WOODEN DUNNAGE IN COMMERCIAL CONTAINERS OF MIXED LOADS OF PALLETIZED AMMUNITION OR COMPONENTS

¹LOADING 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. SEE GENERAL NOTE "L" ON PAGE 2.

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U. S. ARMY AMC DRAWING AUGUST 1984					
	CLASS	DIVISION	DRAWING	FILE	
	19	48	4189	15PM 1005	

DO NOT SCALE

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 MIXED LOADS OF UNITIZED AMMUNITION AND COMPONENTS. SUBSEQUENT REFERENCE TO A PALLET UNIT OR SKIDDED UNIT MEANS THE UNIT WITH AMMUNITION ITEMS. SEE PAGES 6 THROUGH 11 FOR "PALLET 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 4,700 POUND 20' LONG BY 8' WIDE BY 8' HIGH COMMERCIAL INTERMODAL FREIGHT CONTAINER WITH INSIDE DIMENSIONS OF 19'-4" LONG BY 92" WIDE BY 89" HIGH. THE LOADS ARE DESIGNED FOR TRAILER/CONTAINER-ON-FLAT-CAR (T/COFC) SHIPMENT, HOWEVER, THE LOADS AS DESIGNED CAN ALSO BE MOVED BY OTHER SURFACE MODES OF TRANSPORT (MOTOR AND WATER). NOTICE: OTHER CONTAINERS OF THE SAME DESIGN CONFIGURATION CAN BE USED.
- D. WHEN LOADING THE UNITS, THEY ARE TO BE POSITIONED SO AS TO ACHIEVE A TIGHT LOAD (TIGHT AGAINST THE FORWARD AND SIDE DUNNAGE ASSEMBLIES OR TIGHT AGAINST THE FORWARD ASSEMBLY AND SIDE WALL OF THE CONTAINER). ALTHOUGH A TOTAL OF ONE AND ONE-HALF INCHES (1-1/2") OF UNBLOCKED SPACE ACROSS THE WIDTH OF A LOAD BAY IS PERMITTED, LATERAL VOIDS WITHIN THE LOAD ARE TO BE HELD TO A MINIMUM. EXCESSIVE SLACK CAN BE ELIMINATED FROM A LOAD BY LAMINATING ADDITIONAL PIECES OF APPROPRIATE THICKNESS TO THE SIDE FILL ASSEMBLIES ON ONE OR BOTH SIDES OF THE CONTAINER OR TO THE SEPARATOR OR CENTER FILL ASSEMBLIES. NAIL EACH ADDITIONAL PIECE W/1" APPROPRIATELY SIZED NAIL EVERY 12". ADDITIONALLY, THE NUMBER AND/OR THICKNESS OF THE DUNNAGE LUMBER USED MAY BE ADJUSTED AS REQUIRED TO FACILITATE VARIANCE IN THE UNIT SIZE. SEE THE "SPECIAL NOTES" FOR EACH TYPICAL LOAD FOR ADDITIONAL GUIDANCE.
- E. DUNNAGE LUMBER SPECIFIED IS OF A 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. NOTE: ALL SPECIFIED DUNNAGE LUMBER IS SOFT-WOOD EXCEPT THAT REQUIRED FOR THE TWO DOOR POST VERTICALS USED IN A ONE-HIGH UNIT LOAD CONFIGURATION WHEN THE TOTAL WEIGHT OF THE UNITS TO BE SHIPPED EXCEEDS 26,000 POUNDS. THE 4" X 4" DOOR POST VERTICALS MUST BE HARDWOOD, SUCH AS OAK. IF DESIRED, PILOT HOLES FOR THE NAILS TO BE DRIVEN INTO THE DOOR POST VERTICALS MAY BE PREDRILLED.
- F. 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.
- G. IN SOME CONTAINERS, SUCH AS SOME ALL STEEL CONTAINERS, THERE IS A SLOT AT THE CORNERS OF THE FORWARD WALL. ONE OR MORE PIECES OF DUNNAGE MATERIAL MUST BE LAMINATED TO THE BUFFER PIECES ON THE FORWARD BLOCKING ASSEMBLY OR FORWARD STRUT ASSEMBLY TO PROVIDE A FLAT SURFACE FOR THE 2" X 6" BUFFER PIECES. PIECES OF 2" X 4", 2" X 3", OR SPECIAL WIDTH PIECES CUT-TO-FIT CAN BE USED. THESE FILL PIECES WILL BE NAILED WITH ONE APPROPRIATELY SIZED NAIL EVERY 12". THESE PIECES ARE NOT REQUIRED WHEN THE FRONT WALL OF THE CONTAINER IS SMOOTH AND FLAT.
- H. CAUTION: DO NOT NAIL DUNNAGE MATERIAL TO THE CONTAINER WALLS OR FLOOR. ALL NAILING WILL BE WITHIN THE DUNNAGE.
- J. PORTIONS OF THE CONTAINERS DEPICTED WITHIN THIS DRAWING, SUCH AS ONE OF THE SIDE WALLS, HAVE NOT BEEN SHOWN IN THE LOAD VIEWS FOR CLARITY PURPOSES.

(CONTINUED AT RIGHT)

MATERIAL SPECIFICATIONS

- LUMBER ----- : TM 743-200-1 (DUNNAGE LUMBER) AND FED SPEC MM-L-751.
- PLYWOOD ----- : FED SPEC NN-P-530; GROUP B, CONSTRUCTION AND INDUSTRIAL PLYWOOD, INTERIOR WITH EXTERIOR GLUE, GRADE C-D. IF SPECIFIED GRADE IS NOT AVAILABLE, A BETTER INTERIOR OR AN EXTERIOR GRADE MAY BE SUBSTITUTED.
- NAILS ----- : FED SPEC FF-N-105; COMMON.
- STEEL, STRUCTURAL ---- : FED SPEC QQ-S-741; SQUARE STRUCTURAL TUBING AND HOT-ROLLED STRIP.
- WIRE ----- : FED SPEC QQ-W-461.

(GENERAL NOTES CONTINUED)

- K. TO MAKE LOADING EASIER, TO HELP ACHIEVE A TIGHT LOAD ACROSS A CONTAINER AND TO PREVENT UNACCEPTABLE DAMAGE TO LADING UNITS WHEN LOADING A CONTAINER, A SLIP-SHEET CAN BE USED EFFECTIVELY AS A "SHOEHORN" TYPE DEVICE. THE SLIP-SHEET WILL PROVIDE A SMOOTH SURFACE THAT WILL PREVENT UNIT STRAPS AND/OR BOXES 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 CONTAINER. 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.
- L. REQUIREMENTS CITED WITHIN THE BUREAU OF EXPLOSIVES PAMPHLET 6C APPLY WHEN THE SHIPMENT MOVES BY TRAILER/CONTAINER-ON-FLAT-CAR (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 RAIL CAR 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.
- M. DURING INTRASTATE AND/OR INTERSTATE MOVES BY MOTOR CARRIER, A PROPER CHASSIS/MODIFIED FLAT BED TRAILER MUST BE USED TO PRECLUDE VIOLATION OF ONE OR MORE "WEIGHT LAWS" APPLICABLE TO THE STATE OR STATES INVOLVED.
- N. 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 0.454KG.
- O. THE BLOCKING AND BRACING PROCEDURES DELINEATED WITHIN THIS DRAWING ARE TYPICAL PROCEDURES. THE PRINCIPLES OF THE DELINEATED BLOCKING AND BRACING PROCEDURES WILL BE APPLIED WHEN THE AMMUNITION ITEMS TO BE SHIPPED ARE UNITIZED IN A DIFFERENT MANNER THAN THAT DEPICTED. FOR ADDITIONAL GUIDANCE IN THE PLANNING OF A COMMERCIAL CONTAINER MIXED LOAD, REFER TO DARCOM DRAWINGS 19-48-4153-15PA1002, 19-48-4154-15PM1002 AND 19-48-4155-15PE1001. ALTHOUGH THE AFOREMENTIONED DRAWINGS DO NOT CONTAIN MIXED LOAD PROCEDURES, THEY DO DEPICT VARIOUS LOAD PATTERNS THAT CAN BE COMBINED OR PARTIALLY USED IN THE OUTLOADING AND SHIPMENT OF A SPECIFIC MIXED LOAD.
- P. CAUTION: CARE MUST BE EXERCISED TO INSURE THAT THE MIX OF AMMUNITION ITEMS TO BE LOADED INTO A COMMERCIAL CONTAINER IS COMPATIBLE.
- Q. ALL LOADS SHOWN WITHIN THIS DRAWING, EXCEPT MIXED LOAD NUMBER 2, ARE FULL LAYER LOADS. FOR ADDITIONAL REDUCED-LOAD PROCEDURAL GUIDANCE, REFER TO THE "TYPICAL REDUCED-LOAD PROCEDURES" ON PAGES 44 AND 45.
- R. ANTI-SWAY BRACING SHOWN THROUGHOUT THIS DRAWING IS TYPICAL. FOR ADDITIONAL INFORMATION/APPLICATION GUIDANCE, REFER TO THE TYPICAL DETAILS AND GUIDANCE CONTAINED ON PAGES 42 AND 43.

SPECIAL NOTES:

1. THE FOLLOWING SPECIAL NOTES AND THE FIVE CHARTS ON PAGE 5 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 COMMERCIAL INTERMODAL FREIGHT 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 THE WIDTH OF THE CONTAINER WHICH IS TO BE LOADED. 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. UNIT SIZE RANGES AND LOAD PATTERNS FOR THREE COMMERCIAL CONTAINER WIDTHS ARE GIVEN. 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 AT LEAST 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" LONG AND ALSO ON A REQUIRED AVERAGE TOTAL INSIDE BLOCKING THICKNESS OF 23-1/2".
4. CHART NO. 3 MAY BE USED IN DETERMINING THE NUMBER OF TIERS WHICH CAN BE LOADED IN A CONTAINER, BASED ONLY ON THE HEIGHT OF THE UNIT. THE HEIGHT RANGE OF UNITS SPECIFIED UNDER THE 89" HIGH CONTAINER 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 200 POUNDS, THE APPROXIMATE MINIMUM, TO 4,000 POUNDS, THE APPROXIMATE MAXIMUM, BY 200 POUND INCREMENTS. THE QUANTITY REQUIRED TO MAKE A SPECIFIED LOAD WEIGHT FOR A UNIT WHICH WEIGHS SOMEWHERE BETWEEN THE FIGURES GIVEN WILL BE CALCULATED. CALCULATIONS WILL BE BASED UPON THE GROSS CONTAINER WEIGHT NOT EXCEEDING 44,800 POUNDS. THE QUANTITIES SPECIFIED WITHIN THE CHART WERE CALCULATED BASED UPON THE COMMERCIAL CONTAINER WEIGHING APPROXIMATELY 4,700 POUNDS AND THE DUNNAGE WEIGHING APPROXIMATELY 1,200 POUNDS. ACTUAL UNIT LOAD QUANTITIES MAY VARY FROM WHAT IS SPECIFIED DUE TO VARIATIONS IN CONTAINER AND/OR DUNNAGE WEIGHTS.
6. CHART NO. 5 MAY BE USED AS GUIDANCE IN DETERMINING THE NUMBER OF 2" X 6" BEAMS REQUIRED, THE NUMBER OF BEAM ASSEMBLIES REQUIRED, AND THE NUMBER OF 2" X 6" BEAMS PER BEAM ASSEMBLY REQUIRED IN THE FABRICATION OF THE FORWARD AND REAR BLOCKING ASSEMBLIES FOR A SPECIFIED CONTAINER LOAD WEIGHT AND NUMBER OF TIERS. THE BEAM ASSEMBLIES WILL BE ARRANGED IN SUCH A MANNER SO AS TO PROVIDE MAXIMUM SUPPORT FOR EACH TIER BEING BLOCKED. ADDITIONALLY, THE BEAM ASSEMBLIES WILL BE ARRANGED IN A SYMMETRICAL PATTERN FOR EACH TIER. ALTHOUGH THE CHART IS BASED ONLY ON USING 2" X 6" MATERIAL FOR THE BEAMS, 4" X 4" MATERIAL CAN BE USED BY REPLACING THE SPECIFIED NUMBER OF 2" X 6" BEAMS WITH A LIKE NUMBER OF 4" X 4" BEAMS. THE 4" X 4" BEAMS WILL THEN BE EVENLY DISTRIBUTED AND SPACED FOR EACH TIER, SO THAT MAXIMUM SUPPORT IS OBTAINED. SEE PAGE 46 FOR A "TYPICAL FORWARD/REAR BLOCKING ASSEMBLY UTILIZING 4" X 4" MATERIAL FOR BEAMS RATHER THAN 2" X 6" MATERIAL. IF DEEMED MORE ECONOMICAL OR CONDUCTIVE TO OUTLOADING OPERATIONS, 2" X 8" OR 2" X 10" MATERIAL CAN BE USED TO CONSTRUCT THE BEAM ASSEMBLIES FOR THE FORWARD/REAR BLOCKING ASSEMBLIES. THE QUANTITY OF BEAMS REQUIRED WILL BE CALCULATED BASED UPON ONE 2" X 8" BEAM BEING CAPABLE OF RESTRAINING 3,600 POUNDS OF LADING AND ONE 2" X 10" BEAM BEING CAPABLE OF RESTRAINING 6,000 POUNDS OF LADING. BEAMS WILL BE EVENLY DISTRIBUTED BETWEEN BEAM ASSEMBLIES AND BEAM ASSEMBLIES WILL BE ARRANGED IN A SYMMETRICAL PATTERN FOR EACH TIER, SO AS TO PROVIDE MAXIMUM SUPPORT FOR EACH TIER BEING BLOCKED.
7. WHEN EACH BEAM ASSEMBLY OF THE FORWARD BLOCKING ASSEMBLY CONSISTS OF ONLY ONE 2" THICK MATERIAL BEAM AND FORWARD STRUT ASSEMBLIES ARE INSTALLED AT THE FRONT OF THE LOAD, IT WILL BE NECESSARY TO DOUBLE THE NUMBER OF BEAMS PER BEAM ASSEMBLY. THIS WILL ENABLE THE PROPER ATTACHMENT OF THE FORWARD STRUT ASSEMBLIES TO THE FORWARD BLOCKING ASSEMBLY TO BE ACCOMPLISHED.

(CONTINUED AT RIGHT)

(SPECIAL NOTES CONTINUED)

8. THE LOAD BEARING PIECES OF THE FORWARD AND REAR BLOCKING ASSEMBLIES SHOULD BE CUT APPROXIMATELY 6" LONGER THAN THE LOAD HEIGHT. ADDITIONALLY, THE LOAD BEARING PIECES SHOULD BE SPACED TO PROVIDE MAXIMUM SUPPORT TO THE UNITS BEING BLOCKED, AND GENERALLY SHOULD NOT BE LOCATED DIRECTLY AT THE CENTER OF THE FORWARD OR REAR BLOCKING ASSEMBLY.
9. WHENEVER THE GROSS WEIGHT OF THE LADING BEING LOADED IN A CONTAINER EXCEEDS 26,800 POUNDS (60% OF THE MAXIMUM GROSS WEIGHT OF THE CONTAINER), ADDITIONAL SIDEWALL STRENGTHENING MUST BE PROVIDED. THIS ADDITIONAL SIDEWALL STRENGTHENING IS USUALLY FABRICATED IN THE FORM OF SIDE FILL ASSEMBLIES. FOR ADDITIONAL GUIDANCE, SEE THE TYPICAL SIDE FILL ASSEMBLIES ON PAGE 37. WHENEVER THE GROSS WEIGHT OF THE LADING IS LESS THAN 26,800 POUNDS AND THERE IS MORE THAN 1-1/2" OF UNBLOCKED SPACE ACROSS THE WIDTH OF THE LOAD BAY, THIS UNBLOCKED SPACE MUST BE FILLED OUT BY EITHER PLACING SIDE FILL ASSEMBLIES AT THE SIDES OF THE LOAD OR ANTI-SWAY BRACING OR CENTER FILL ASSEMBLIES IN THE CENTER OF THE LOAD. FOR ADDITIONAL GUIDANCE, SEE THE ANTI-SWAY BRACING ASSEMBLIES ON PAGE 29 AND THE CENTER FILL ASSEMBLIES ON PAGE 33. WHENEVER THE GROSS WEIGHT OF THE LADING IS LESS THAN 26,800 POUNDS AND THE UNBLOCKED SPACE ACROSS THE WIDTH OF THE LOAD BAY IS 1-1/2" OR LESS, NEITHER SIDE BLOCKING NOR CENTER BLOCKING WILL BE REQUIRED.

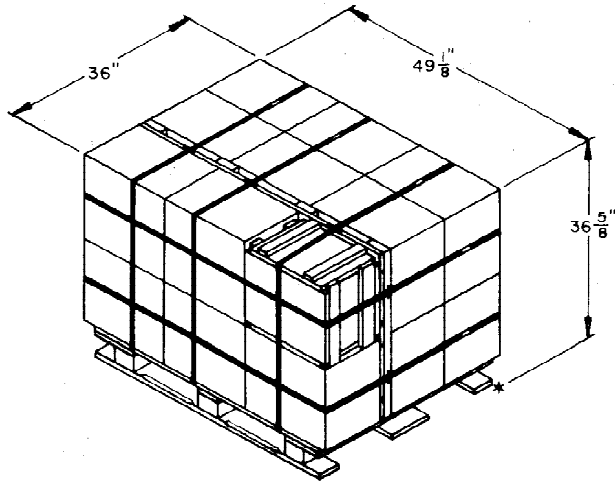
CHART NO. 1					
UNITS IN WIDTH OF COMMERCIAL CONTAINER					
CONTAINER WIDTH	LOAD PATTERN	UNIT SIZE RANGE			
		PALLETIZED OR SKIDDED UNITS (LENGTH ACROSS CONTAINERS)		PALLETIZED OR SKIDDED UNITS (WIDTH ACROSS CONTAINERS)	
		UNIT LENGTH	LOAD PAGE	UNIT WIDTH	LOAD PAGE
90"	2-WIDE	25"-44-1/4"	_____	27"-44-1/4"	_____
	3-WIDE	25"-29-1/2"	_____	27"-29-1/2"	_____
91"	2-WIDE	25"-44-3/4"	_____	27"-44-3/4"	_____
	3-WIDE	25"-29-3/4"	_____	27"-29-3/4"	_____
92"	2-WIDE	25"-45-1/4"	12, 16, 22, 26	27"-45-1/4"	_____
	3-WIDE	25"-30-1/4"	30	27"-30-1/4"	34

CHART NO. 3	
TIERS IN HEIGHT OF COMMERCIAL CONTAINER	
NO. OF TIERS	UNIT HEIGHT RANGE
89" INSIDE HEIGHT CONTAINER	
3	22-1/4" - 29-1/2"
2	29-3/4" - 44-1/4"
1	OVER 44-1/4"

CHART NO. 2	
UNITS IN LENGTH OF 20' COMMERCIAL CONTAINER	
NUMBER UNITS LONG	UNIT SIZE RANGE
15	13-3/4"-14-1/2"
14	14-3/4"-15-3/4"
13	16" - 17"
12	17-1/4"-18-1/2"
11	18-3/4"-20-1/2"
10	20-3/4"-22-3/4"
9	23" - 24-3/4"
8	25" - 26"
7	26-1/4"-29-3/4"
6	30"-34-3/4"
5	35"-41-3/4"
4	42"-52-1/4"
3	52-1/2"-69-1/2"

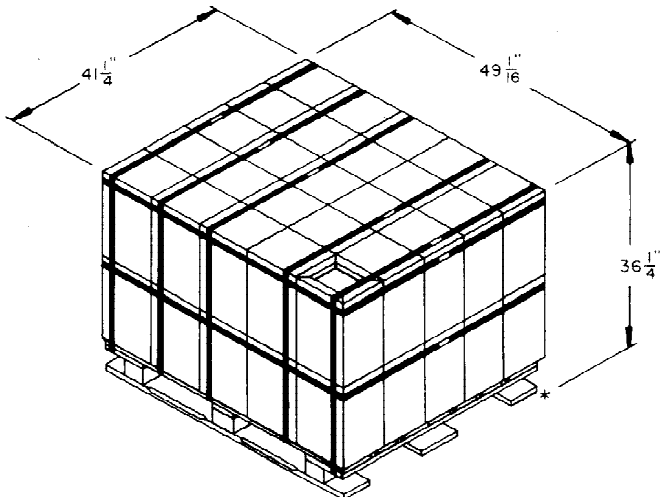
CHART NO. 4	
MAXIMUM NUMBER OF UNITS PER CONTAINER BY WEIGHT	
UNIT WEIGHT IN LBS	NO. OF UNITS
200	195
400	97
600	65
800	48
1,000	39
1,200	32
1,400	27
1,600	24
1,800	21
2,000	19
2,200	17
2,400	16
2,600	15
2,800	13
3,000	13
3,200	12
3,400	11
3,600	10
3,800	10
4,000	9

CHART NO. 5									
REQUIRED BEAMS/BEAM ASSEMBLIES FOR FORWARD/REAR BLOCKING ASSEMBLY									
LOAD WEIGHT IN LBS	LOAD CONFIGURATION								
	1-TIER			2-TIER			3-TIER		
	NO. 2" X 6" BEAMS REQD	NO. BEAM ASSY REQD	NO. BEAMS PER ASSY	NO. 2" X 6" BEAMS REQD	NO. BEAM ASSY REQD	NO. BEAMS PER ASSY	NO. 2" X 6" BEAMS REQD	NO. BEAM ASSY REQD	NO. BEAMS PER ASSY
6,100 - 8,000	4	2	2	4	4	1	6	6	1
8,100-12,000	6	2	3	6	6	1	6	6	1
12,100-16,000	8	2	4	8	4	2	9	9	1
16,100-20,000	10	2	5	12	4	3	12	6	2
20,100-24,000	12	3	4	12	4	3	12	6	2
24,100-28,000	14	2	7	16	4	4	18	6	3
28,100-32,000	16	2	8	16	4	4	18	6	3
32,100-34,000	18	2	9	20	4	5	18	6	3
34,100-36,000	18	3	6	18	6	3	18	6	3
36,100-38,000	20	2	10	20	4	5	24	6	4
38,100-40,000	20	2	10	20	4	5	24	6	4



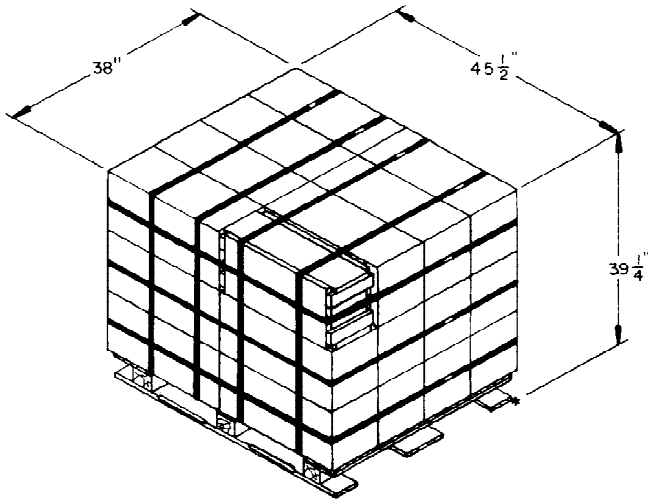
UNIT NO. 1

UNIT WEIGHT ----- 822 LBS (APPROX)
 UNIT CUBE ----- 37.5 CU FT (APPROX)



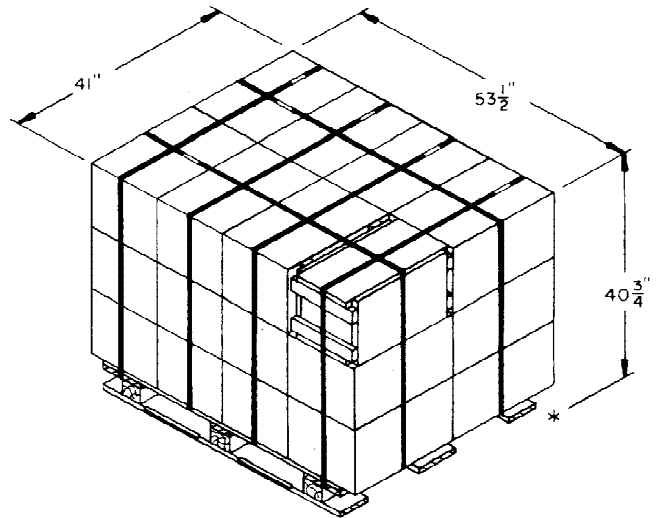
UNIT NO. 2

UNIT WEIGHT ----- 2,037 LBS (APPROX)
 UNIT CUBE ----- 42.5 CU FT (APPROX)



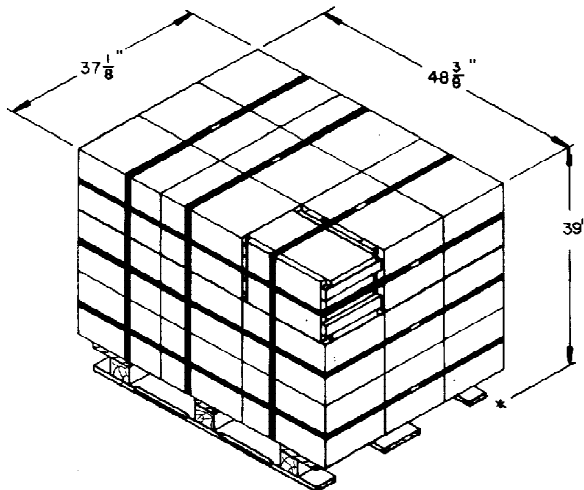
UNIT NO. 1

UNIT WEIGHT ----- 1,704 LBS (APPROX)
 UNIT CUBE ----- 39.3 CU FT (APPROX)



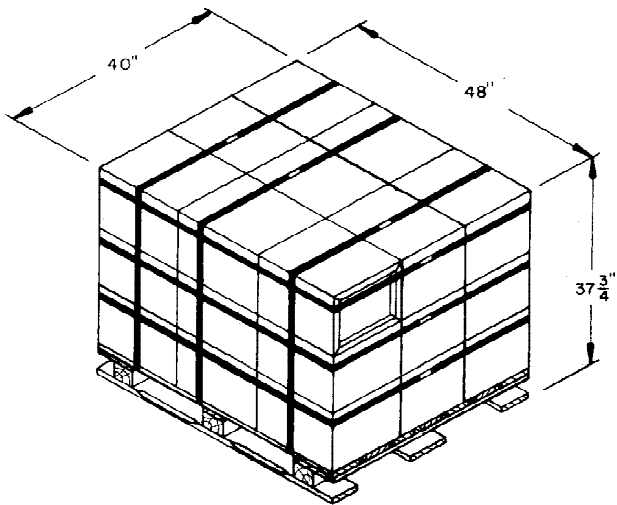
UNIT NO. 2

UNIT WEIGHT ----- 1,911 LBS (APPROX)
 UNIT CUBE ----- 51.7 CU FT (APPROX)



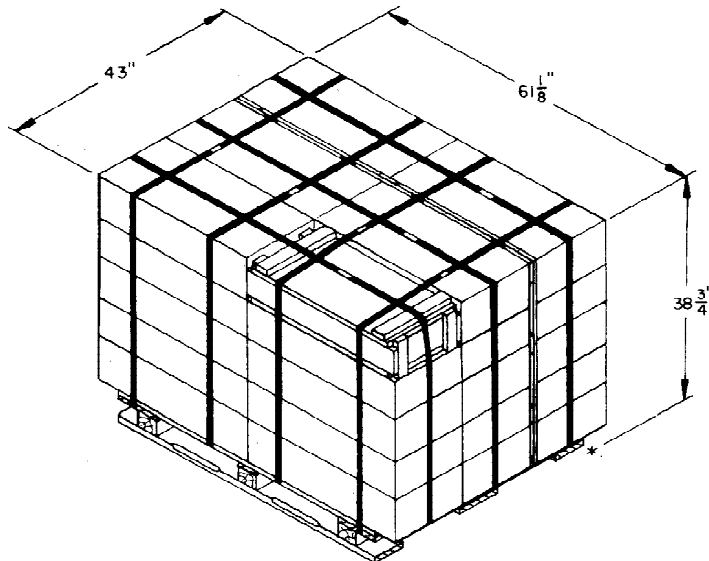
UNIT NO. 3

UNIT WEIGHT ----- 1,611 LBS (APPROX)
 UNIT CUBE ----- 40.5 CU FT (APPROX)



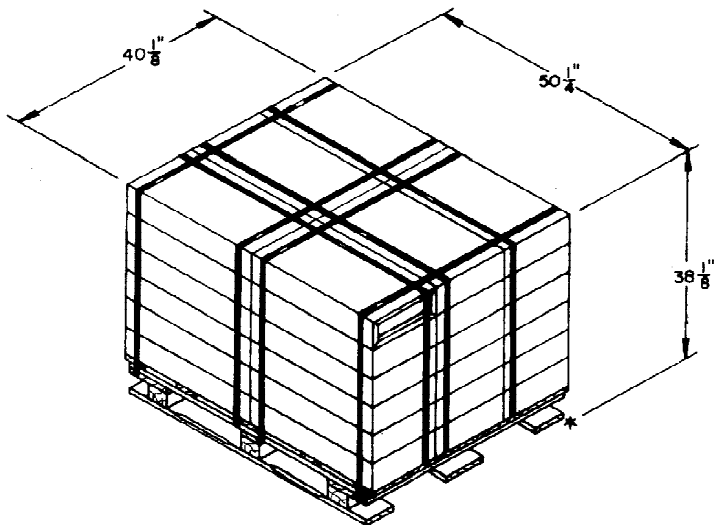
UNIT NO. 1

UNIT WEIGHT ----- 1,518 LBS (APPROX)
 UNIT CUBE ----- 41.9 CU FT (APPROX)



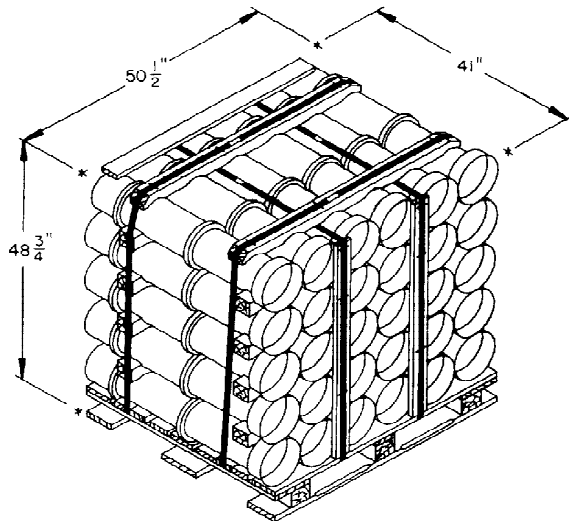
UNIT NO. 2

UNIT WEIGHT ----- 1,917 LBS (APPROX)
 UNIT CUBE ----- 58.9 CU FT (APPROX)



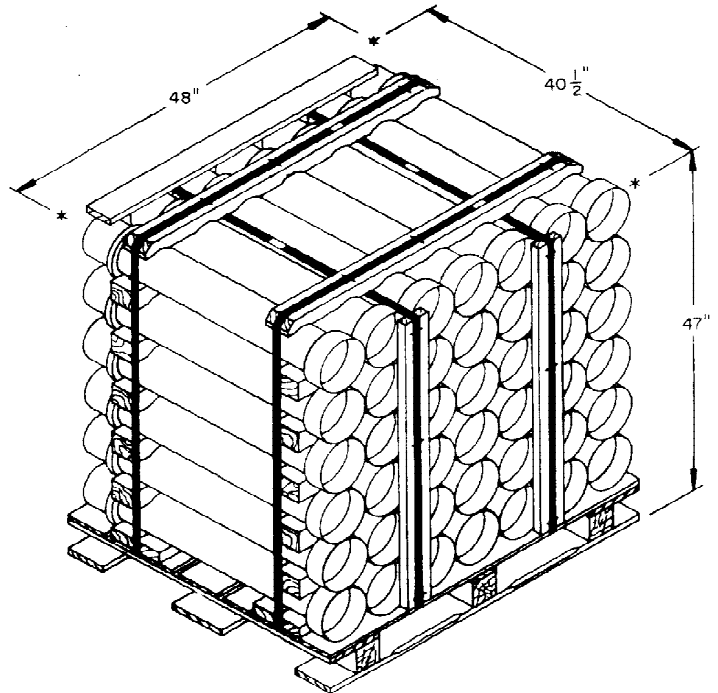
UNIT NO. 3

UNIT WEIGHT ----- 1,863 LBS (APPROX)
 UNIT CUBE ----- 44.5 CU FT (APPROX)



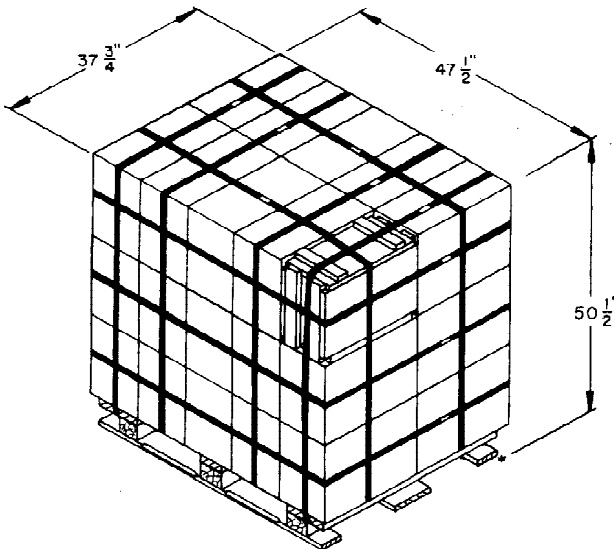
UNIT NO. 1

UNIT WEIGHT ----- 1,710 LBS (APPROX)
 UNIT CUBE ----- 58.4 CU FT (APPROX)



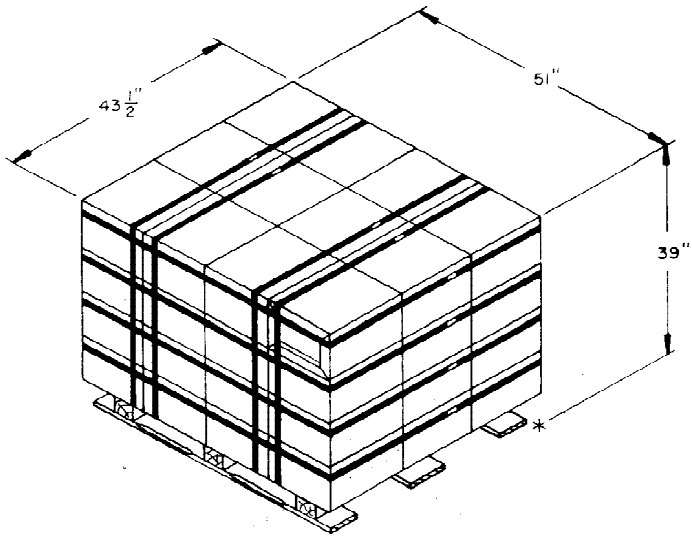
UNIT NO. 2

UNIT WEIGHT ----- 1,439 LBS (APPROX)
 UNIT CUBE ----- 52.9 CU FT (APPROX)



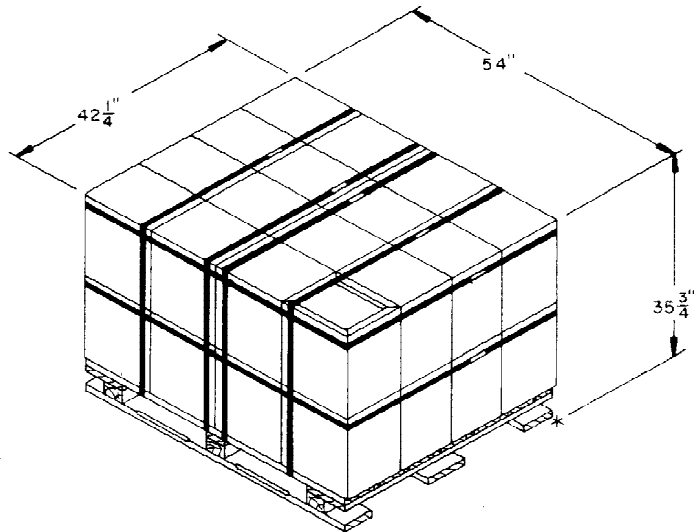
UNIT NO. 3

UNIT WEIGHT ----- 1,684 LBS (APPROX)
 UNIT CUBE ----- 52.4 CU FT (APPROX)



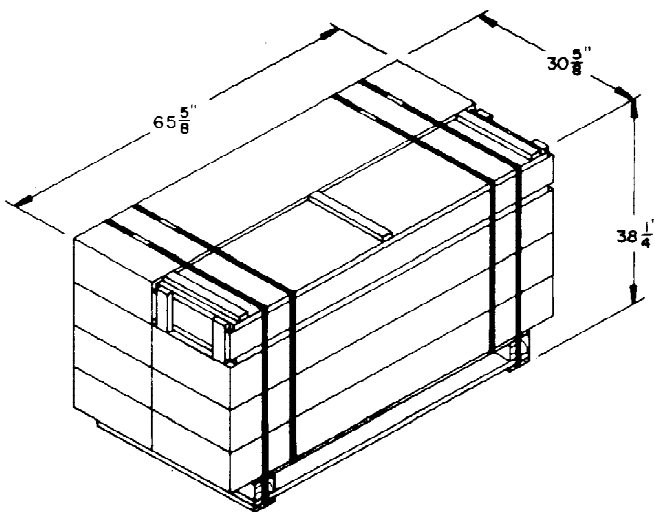
UNIT NO. 1

UNIT WEIGHT ----- 2,346 LBS (APPROX)
 UNIT CUBE ----- 50.1 CU FT (APPROX)



UNIT NO. 2

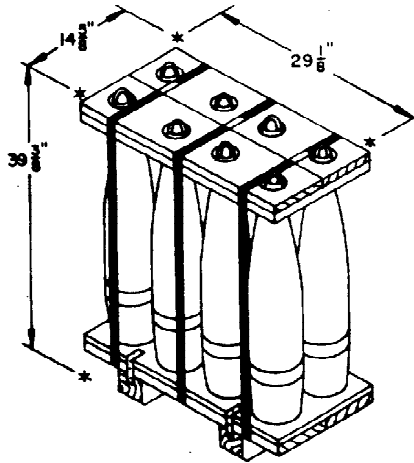
UNIT WEIGHT ----- 1,793 LBS (APPROX)
 UNIT CUBE ----- 47.2 CU FT (APPROX)



UNIT NO. 3

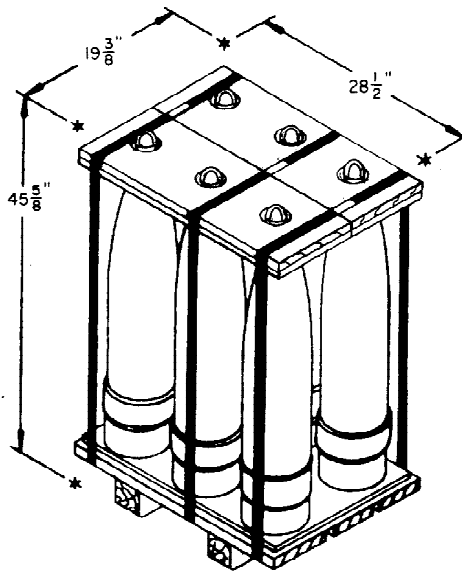
UNIT WEIGHT ----- 2,014 LBS (APPROX)
 UNIT CUBE ----- 44.5 CU FT (APPROX)

MIXED LOAD NO. 5 PALLET UNIT DETAILS



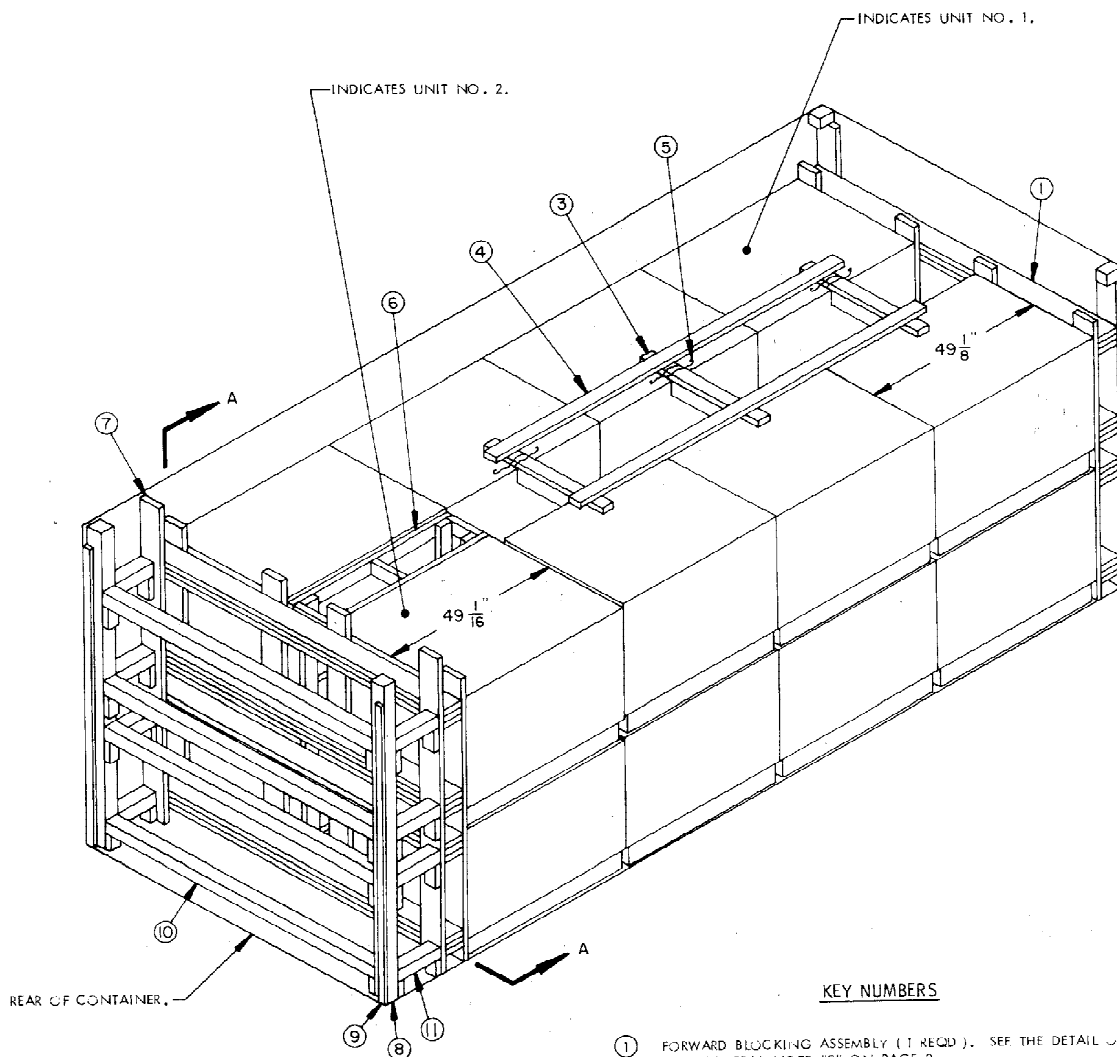
UNIT NO. 1

UNIT WEIGHT ----- 830 LBS (APPROX)
 UNIT CUBE ----- 9.7 CU FT (APPROX)

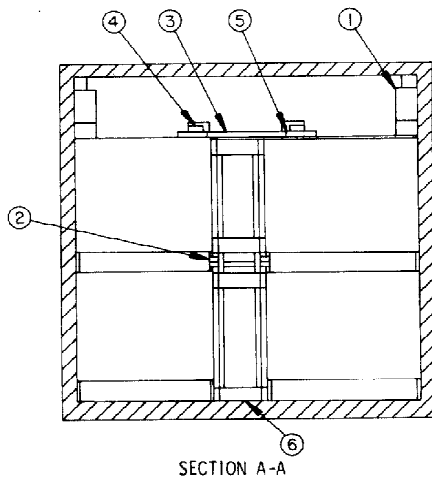


UNIT NO. 2

UNIT WEIGHT ----- 1,253 LBS (APPROX)
 UNIT CUBE ----- 14.6 CU FT (APPROX)



ISOMETRIC VIEW



SECTION A-A

KEY NUMBERS

- ① FORWARD BLOCKING ASSEMBLY (1 REQD.). SEE THE DETAIL ON PAGE 14 AND GENERAL NOTE "F" ON PAGE 2.
- ② LOWER ANTI-SWAY BRACE (6 REQD.). SEE THE DETAIL ON PAGE 15.
- ③ TOP ANTI-SWAY BRACE (3 REQD.). SEE THE DETAIL ON PAGE 15.
- ④ TIE PIECE, 2" X 4" X 9'-0" (2 REQD.). NAIL TO THE TOP ANTI-SWAY BRACE W/2-10d NAILS AT EACH JOINT.
- ⑤ TIE WIRE, NO. 14 GAGE WIRE, 30" LONG (6 REQD.). ATTACH ONE END TO A PALLET UNIT UNITIZING STRAP, FORM A COMPLETE LOOP AROUND THE TOP ANTI-SWAY BRACE AND ATTACH THE OTHER END TO A SECOND UNITIZING STRAP.
- ⑥ CENTER FILL ASSEMBLY (1 REQD.). SEE THE DETAIL ON PAGE 15.
- ⑦ REAR BLOCKING ASSEMBLY (1 REQD.). SEE THE DETAIL ON PAGE 14 AND GENERAL NOTE "F" ON PAGE 2.
- ⑧ DOOR POST VERTICAL (2 REQD.). SEE THE "DOOR POST VERTICAL" DETAIL ON PAGE 15 AND "TYPICAL DETAIL A" ON PAGE 41.
- ⑨ DOOR POST VERTICAL RETAINER (2 REQD.). SEE THE DETAIL AND "VIEW A" ON PAGE 40. NAIL THROUGH THE HOLES INTO THE DOOR POST VERTICAL W/4-10d NAILS.
- ⑩ DOOR SPANNER, 4" X 4" MATERIAL, CUT TO A LENGTH THAT WILL PROVIDE FOR A DRIVE FIT (REF: 7'-1-3/8") (4 REQD.). TOENAIL TO THE 4" X 4" DOOR POST VERTICAL PIECES W/2-12d NAILS AT EACH END. SEE THE "BEVEL-CUT" DETAIL ON PAGE 41. AFTER INSTALLING THE BOTTOM AND TOP DOOR SPANNERS, THE STRUTS, PIECES MARKED ⑪, ARE TO BE INSTALLED.
- ⑪ STRUT, 4" X 4" BY CUT-TO-FIT (8 REQD.). TOENAIL TO THE BUFFER PIECES OF THE REAR BLOCKING ASSEMBLY AND THE DOOR POST VERTICAL W/2-12d NAILS AT EACH END. SEE THE "BEVEL-CUT" DETAIL ON PAGE 41.

RECOMMENDED SEQUENTIAL LOADING PROCEDURES:

1. PREFABRICATE ONE FORWARD BLOCKING ASSEMBLY, THREE TOP ANTI-SWAY BRACES, ONE CENTER FILL ASSEMBLY, ONE REAR BLOCKING ASSEMBLY, AND NAIL A DOOR POST VERTICAL RETAINER TO EACH DOOR POST VERTICAL, ONE RIGHT HAND AND ONE LEFT HAND.
2. INSTALL FORWARD BLOCKING ASSEMBLY.
3. LOAD FOUR PALLET UNITS (UNIT NO. 1).
4. INSTALL ONE TOP ANTI-SWAY BRACE WITH TIE WIRES.
5. INSTALL TWO LOWER ANTI-SWAY BRACES (THESE ASSEMBLIES MUST BE FABRICATED IN PLACE, BETWEEN THE PALLET UNITS).
6. REPEAT STEPS 3, 4, AND 5.
7. REPEAT STEPS 3, 4, AND 5.
8. INSTALL THE TWO TIE PIECES.
9. LOAD TWO PALLET UNITS (UNIT NO. 1).
10. INSTALL ONE CENTER FILL ASSEMBLY AND LOAD TWO PALLET UNITS (UNIT NO. 2).
11. INSTALL REAR BLOCKING ASSEMBLY.
12. INSTALL THE TWO DOOR POST VERTICAL ASSEMBLIES (ONE RIGHT HAND AND ONE LEFT HAND).
13. INSTALL TWO DOOR SPANNER PIECES (ONE AT THE LOWEST POSITION AND ONE AT THE UPPERMOST POSITION).
14. INSTALL THE STRUTS BETWEEN THE REAR BLOCKING ASSEMBLY AND THE DOOR POST VERTICALS.
15. INSTALL THE REMAINING TWO DOOR SPANNER PIECES.

SPECIAL NOTES:

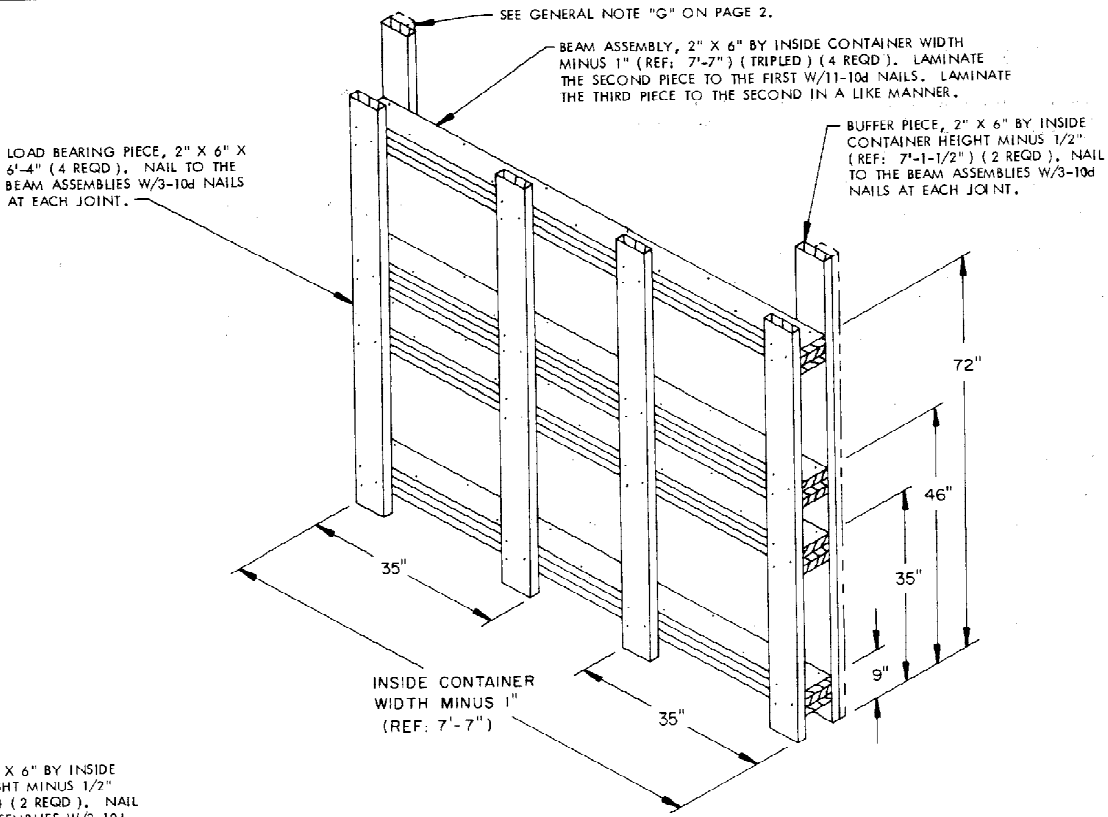
1. THE PALLETIZED UNITS SHOWN IN THE TYPICAL LOAD ON PAGE 12 ARE BASED ON UNIT NUMBERS 1 AND 2 SHOWN ON PAGE 6. THE DEPICTED LOADING PROCEDURES ARE ALSO APPLICABLE FOR PALLETIZED UNITS OF OTHER DIMENSIONS. REFER TO THE "LOAD PLANNING GUIDANCE" AND "LOAD PLANNING CHARTS" FOR ADDITIONAL GUIDANCE.
2. EXCESSIVE SLACK ACROSS THE WIDTH OF A LOAD CAN BE ELIMINATED BY INCREASING THE LENGTH OF THE LATERAL PIECES OF THE "CENTER FILL ASSEMBLY" OR BY INCREASING THE SWAY BRACING SIZES, AS APPROPRIATE.
3. THE STRUT LEDGERS CAN ONLY BE PRE-NAILED TO THE DOOR POST VERTICAL ON ONE SIDE OF THE CONTAINER FOR THE DOOR SPANNER PIECES. ALSO, THE STRUT LEDGERS FOR THE STRUTS CAN ONLY BE PRE-NAILED TO THE REAR BLOCKING ASSEMBLY OR THE DOOR POST VERTICAL AT THE LOWEST DIMENSION.

BILL OF MATERIAL

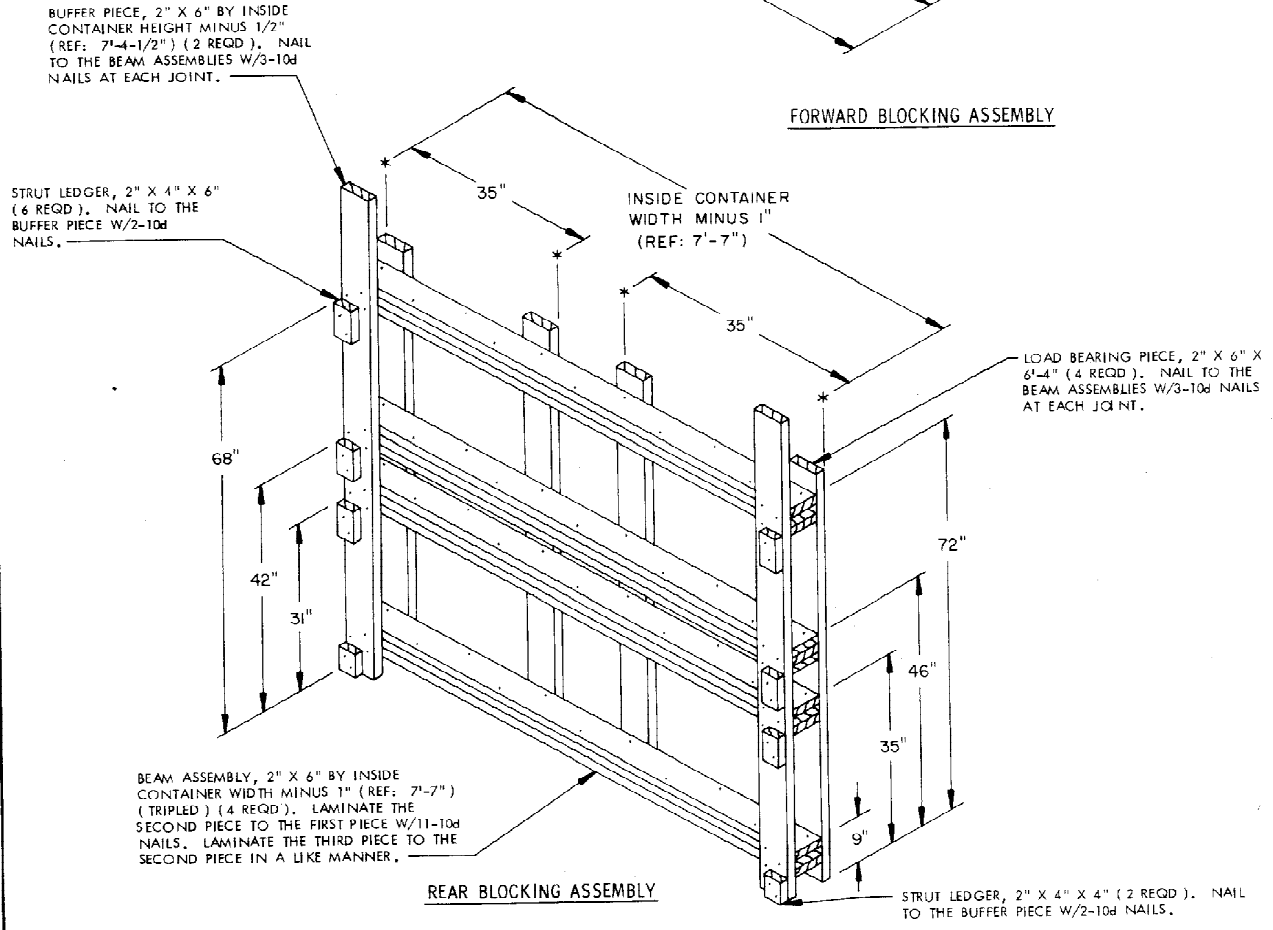
LUMBER	LINEAR FEET	BOARD FEET
2" X 3"	2	1
2" X 4"	175	117
2" X 6"	262	262
4" X 4"	58	77
NAILS	NO. REQD	POUNDS
10d (3")	580	9
12d (3-1/4")	48	1
DOOR POST VERTICAL RETAINER-----2 REQD-----64 LBS		
WIRE, NO. 14 GAGE-----15' REQD-----1/4 LB		

LOAD AS SHOWN

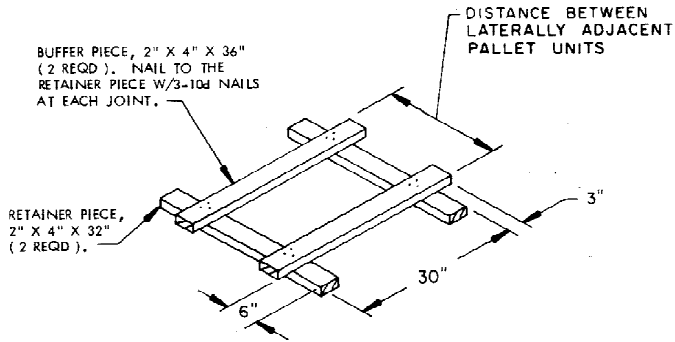
ITEM	QUANTITY	WEIGHT (APPROX)
UNIT NO. 1-----	14-----	11,508 LBS
UNIT NO. 2-----	2-----	4,074 LBS
DUNNAGE-----		989 LBS
CONTAINER-----		4,700 LBS
TOTAL WEIGHT-----		21,271 LBS



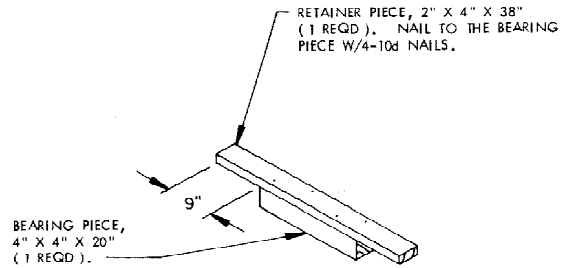
FORWARD BLOCKING ASSEMBLY



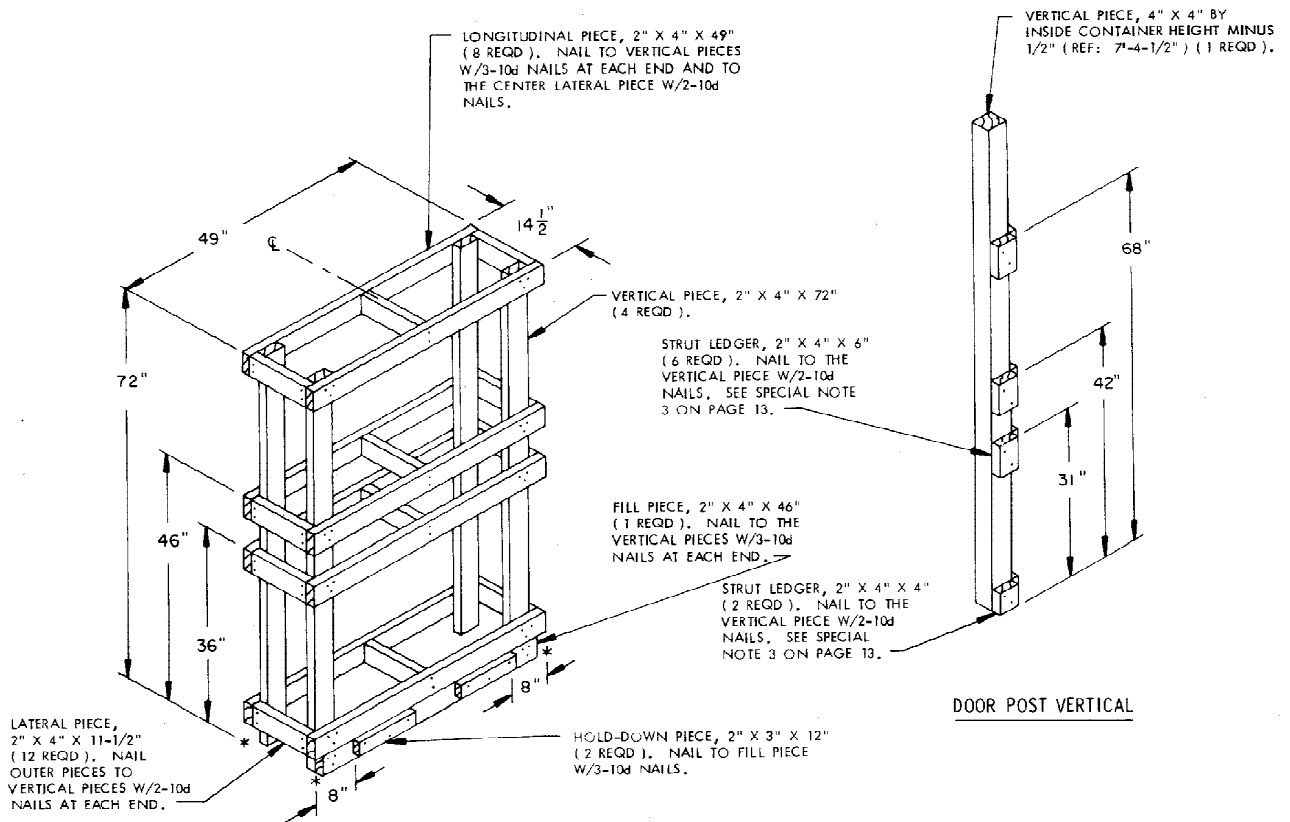
REAR BLOCKING ASSEMBLY



LOWER ANTI-SWAY BRACE



TOP ANTI-SWAY BRACE

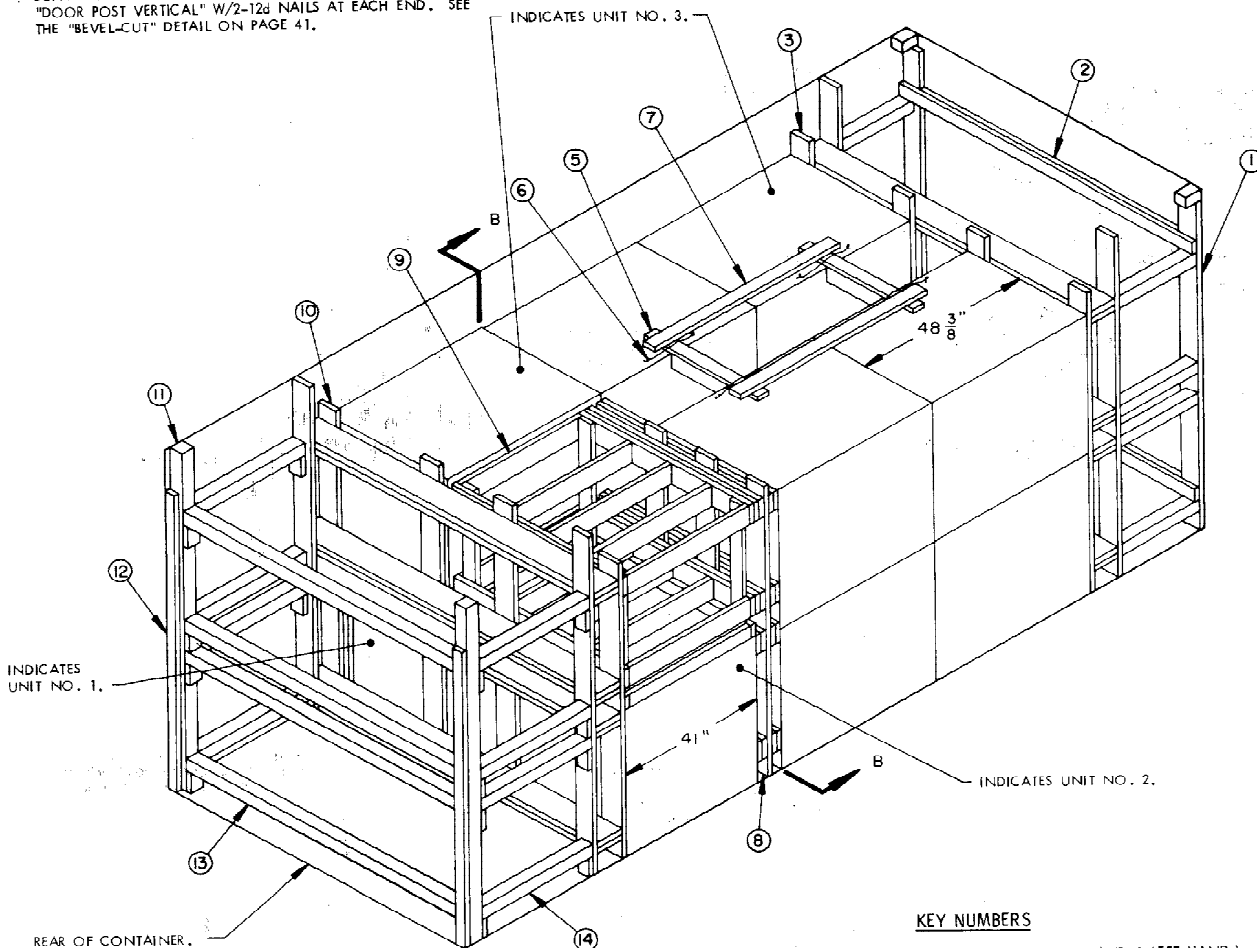


CENTER FILL ASSEMBLY

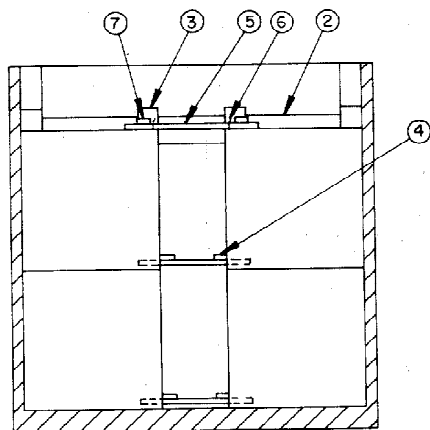
DOOR POST VERTICAL

(KEY NUMBERS CONTINUED)

- 14 STRUT, 4" X 4" BY CUT-TO-FIT (8 REQD), TOENAIL TO THE BUFFER PIECES OF THE "REAR BLOCKING ASSEMBLY" AND THE "DOOR POST VERTICAL" W/2-12d NAILS AT EACH END. SEE THE "BEVEL-CUT" DETAIL ON PAGE 41.



ISOMETRIC VIEW



SECTION B-B

MIXED CONTAINER LOAD NO. 2

KEY NUMBERS

- ① FORWARD STRUT ASSEMBLY (2 REQD) (1 RIGHT HAND AND 1 LEFT HAND). SEE THE DETAIL ON PAGE 18. POSITION THE ASSEMBLY WITH THE 4" X 4" STRUTS AGAINST THE CONTAINER SIDEWALL, AS SHOWN ABOVE. AFTER PIECE MARKED ③ IS INSTALLED AND CENTERED ON THE WIDTH OF THE CONTAINER, NAIL THROUGH THE REAR BUFFER PIECE OF EACH FORWARD STRUT ASSEMBLY INTO EACH BEAM ASSEMBLY OF PIECE MARKED ③ W/2-12d NAILS AT EACH JOINT.
- ② SPREADER ASSEMBLY (2 REQD). SEE THE DETAIL ON PAGE 20. POSITION AS SHOWN, IMMEDIATELY ABOVE TOP AND BOTTOM STRUTS AND NAIL TO THE FORWARD STRUT ASSEMBLY W/2-10d NAILS AT EACH JOINT.
- ③ FORWARD BLOCKING ASSEMBLY (1 REQD). SEE THE DETAIL ON PAGE 18 AND GENERAL NOTE "F" ON PAGE 2.
- ④ LOWER ANTI-SWAY BRACE (4 REQD). SEE THE DETAIL ON PAGE 19.
- ⑤ TOP ANTI-SWAY BRACE (2 REQD). SEE THE DETAIL ON PAGE 19.
- ⑥ TIE WIRE, NO. 14 GAGE WIRE 30" LONG (4 REQD). ATTACH ONE END TO A PALLET UNIT UNITIZING STRAP, FORM A COMPLETE LOOP AROUND THE TOP ANTI-SWAY BRACE AND ATTACH THE OTHER END TO A SECOND UNITIZING STRAP.
- ⑦ TIE PIECE, 2" X 4" X 54" (2 REQD). NAIL TO THE TOP ANTI-SWAY BRACES W/2-10d NAILS AT EACH JOINT.
- ⑧ FILLER ASSEMBLY (1 REQD). SEE THE DETAIL ON PAGE 21.
- ⑨ UPPER FILLER ASSEMBLY (1 REQD). SEE THE DETAIL ON PAGE 20. NAIL TO THE FILLER ASSEMBLY W/4-10d NAILS.
- ⑩ REAR BLOCKING ASSEMBLY (1 REQD). SEE THE DETAIL ON PAGE 19 AND GENERAL NOTE "F" ON PAGE 2.
- ⑪ DOOR POST VERTICAL (2 REQD). SEE THE DETAIL ON PAGE 21 AND "TYPICAL DETAIL A" ON PAGE 41.
- ⑫ DOOR POST VERTICAL RETAINER (2 REQD). SEE THE DETAIL AND "VIEW A" ON PAGE 40. NAIL THROUGH THE HOLES INTO THE DOOR POST VERTICAL W/4-10d NAILS.
- ⑬ DOOR SPANNER, 4" X 4" MATERIAL, CUT TO A LENGTH THAT WILL PROVIDE FOR A DRIVE FIT (REF: 7"-1-3/8") (4 REQD). TOENAIL TO THE 4" X 4" DOOR POST VERTICAL PIECES W/2-12d NAILS AT EACH END. SEE THE "BEVEL-CUT" DETAIL ON PAGE 41. AFTER INSTALLING THE BOTTOM AND TOP DOOR SPANNERS, THE STRUTS, PIECES MARKED ⑬ ARE TO BE INSTALLED. (CONTINUED ABOVE)

RECOMMENDED SEQUENTIAL LOADING PROCEDURES:

1. PREFABRICATE ONE RIGHT HAND AND ONE LEFT HAND FORWARD STRUT ASSEMBLY, TWO SPREADER ASSEMBLIES, ONE FORWARD BLOCKING ASSEMBLY, TWO TOP ANTI-SWAY BRACES, ONE FILLER ASSEMBLY, ONE UPPER FILLER ASSEMBLY, ONE REAR BLOCKING ASSEMBLY, AND NAIL A DOOR POST VERTICAL RETAINER TO EACH DOOR POST VERTICAL, ONE RIGHT HAND AND ONE LEFT HAND.
2. INSTALL THE TWO FORWARD STRUT ASSEMBLIES (ONE RIGHT HAND AND ONE LEFT HAND) AND TWO SPREADER ASSEMBLIES.
3. INSTALL FORWARD BLOCKING ASSEMBLY.
4. LOAD FOUR PALLET UNITS (UNIT NO. 3).
5. INSTALL ONE TOP ANTI-SWAY BRACE WITH TIE WIRES.
6. INSTALL TWO LOWER ANTI-SWAY BRACES (THESE ASSEMBLIES MUST BE FABRICATED IN PLACE, BETWEEN THE PALLET UNITS).
7. REPEAT STEPS 4, 5 AND 6.
8. INSTALL THE TWO TIE PIECES.
9. INSTALL ONE PALLET UNIT (UNIT NO. 1).
10. INSTALL ONE PALLET UNIT (UNIT NO. 3) ON TOP OF UNIT LOADED IN STEP 9.
11. INSTALL FILLER ASSEMBLY.
12. INSTALL ONE PALLET UNIT (UNIT NO. 2).
13. INSTALL UPPER FILLER ASSEMBLY.
14. INSTALL REAR BLOCKING ASSEMBLY.
15. INSTALL THE TWO DOOR POST VERTICAL ASSEMBLIES (ONE RIGHT HAND AND ONE LEFT HAND).
16. INSTALL TWO DOOR SPANNER PIECES (ONE AT THE LOWEST POSITION AND ONE AT THE UPPERMOST POSITION).
17. INSTALL THE STRUTS BETWEEN THE REAR BLOCKING ASSEMBLY AND THE DOOR POST VERTICALS.
18. INSTALL THE REMAINING TWO DOOR SPANNER PIECES.

SPECIAL NOTES:

1. THE PALLETIZED UNITS SHOWN IN THE TYPICAL LOAD ON PAGE 16 ARE BASED ON UNIT NUMBERS 1, 2, AND 3 SHOWN ON PAGE 7. THE DEPICTED LOADING PROCEDURES ARE ALSO APPLICABLE FOR PALLETIZED UNITS OF OTHER DIMENSIONS. REFER TO THE "LOAD PLANNING GUIDANCE" AND "LOAD PLANNING CHARTS" ON PAGES 4 AND 5 FOR ADDITIONAL GUIDANCE.
2. **NOTICE:** WHEN THE QUANTITY OF PALLET UNITS TO BE SHIPPED IS GREATER THAN THAT SHOWN IN THE LOAD ON PAGE 16, IT MAY BE ACCOMPLISHED BY ELIMINATING THE FORWARD STRUT ASSEMBLIES AND REPLACING THE REAR STRUTS WITH FILL MATERIAL OR BY SHORTENING THE REAR STRUTS AS APPROPRIATE. REFER TO THE OTHER TYPICAL LOADS CONTAINED WITHIN THIS DRAWING FOR ADDITIONAL GUIDANCE.
3. EXCESSIVE SLACK ACROSS THE WIDTH OF A LOAD CAN BE ELIMINATED BY INCREASING THE SWAY BRACING SIZES OR UPPER FILLER ASSEMBLY SIZE, AS APPROPRIATE.
4. THE STRUT LEDGERS CAN ONLY BE PRE-NAILED TO THE DOOR POST VERTICAL ON ONE SIDE OF THE CONTAINER FOR THE DOOR SPANNER PIECES. ALSO, THE STRUT LEDGERS FOR THE STRUTS CAN ONLY BE PRE-NAILED TO THE REAR BLOCKING ASSEMBLY OR THE DOOR POST VERTICAL AT THE LOWEST DIMENSION.

BILL OF MATERIAL		
LUMBER	LINEAR FEET	BOARD FEET
2" X 4"	157	105
2" X 6"	223	223
2" X 8"	122	162
4" X 4"	87	115
NAILS	NO. REQD	POUNDS
10d (3")	592	9-1/4
12d (3-1/4")	64	1-1/4
DOOR POST VERTICAL RETAINER -----2 REQD-----64 LBS		
WIRE, NO. 14 GAGE -----10' REQD-----1/4 LB		

LOAD AS SHOWN

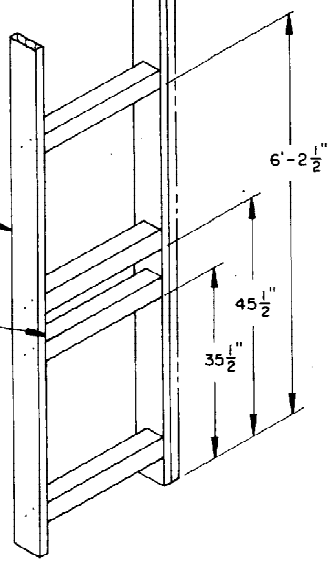
ITEM	QUANTITY	WEIGHT (APPROX)
UNIT NO. 1-----	1-----	1,704 LBS
UNIT NO. 2-----	1-----	1,911 LBS
UNIT NO. 3-----	9-----	14,499 LBS
DUNNAGE-----		1,285 LBS
CONTAINER-----		4,700 LBS
TOTAL WEIGHT-----		24,099 LBS

FORWARD BUFFER PIECE, 2" X 6" BY
INSIDE CONTAINER HEIGHT MINUS
1/2" (REF: 7'-1-1/2") (1 REQD).
NAIL TO THE STRUTS W/2-10d NAILS
AT EACH JOINT.

SEE GENERAL NOTE "G" ON PAGE 2.

REAR BUFFER PIECE, 2" X 6"
BY INSIDE CONTAINER
HEIGHT MINUS 1/2"
(REF: 7'-4-1/2") (1 REQD).
NAIL TO THE STRUTS W/2-10d
NAILS AT EACH JOINT.

STRUT, 4" X 4" X 24"
(4 REQD).

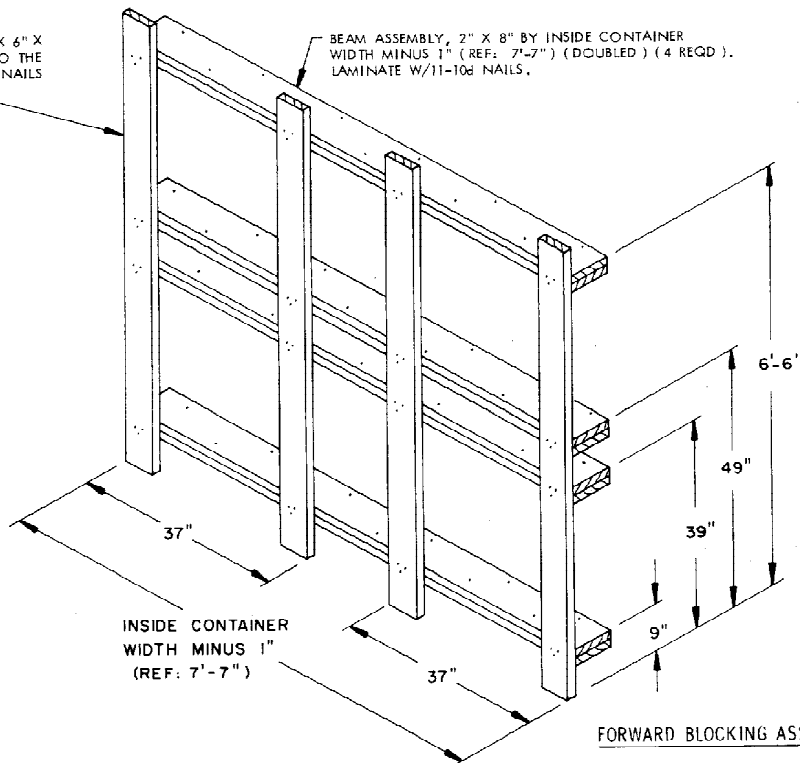


FORWARD STRUT ASSEMBLY

A "RIGHT HAND" FORWARD STRUT ASSEMBLY IS DEPICTED. A "LEFT HAND" ASSEMBLY IS ALSO REQUIRED AND WILL BE THE SAME AS THE ASSEMBLY DEPICTED ABOVE, EXCEPT THE 4" X 4" STRUTS ARE ALIGNED ON THE OPPOSITE SIDE OF THE BUFFER PIECES.

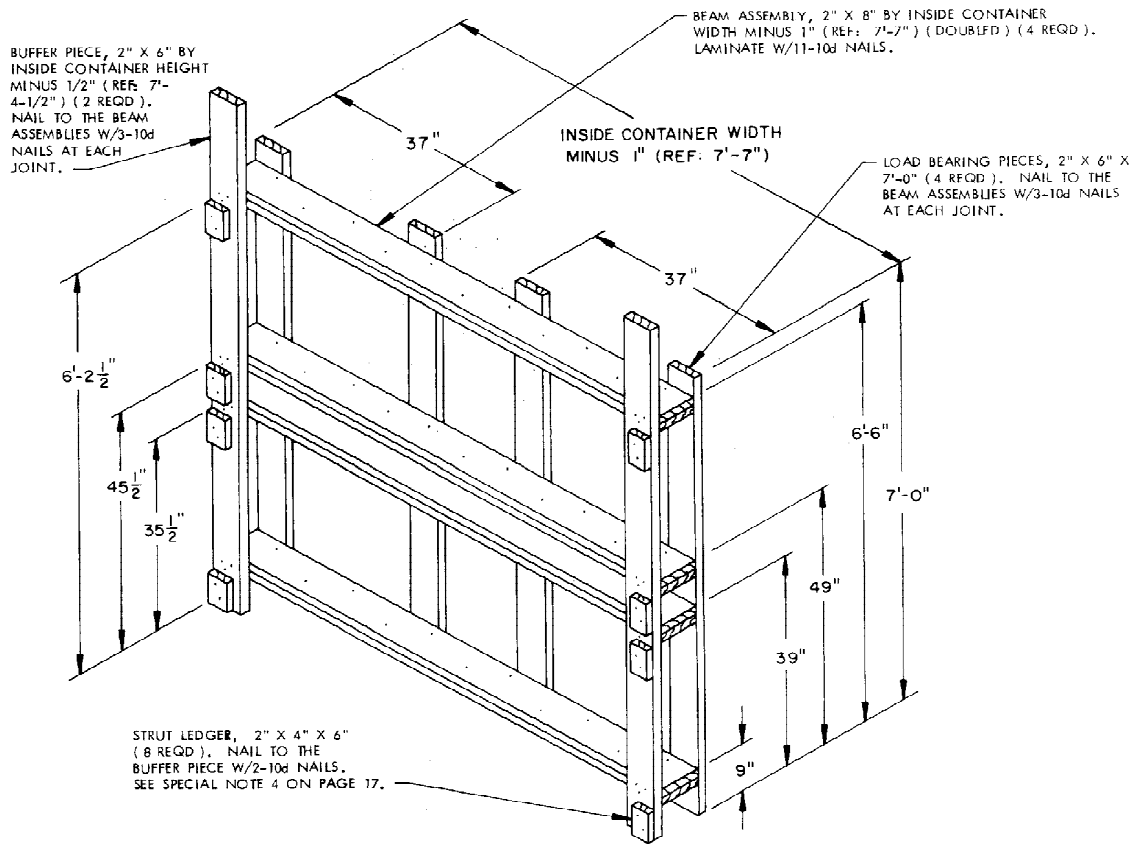
LOAD BEARING PIECE, 2" X 6" X
7'-0" (4 REQD). NAIL TO THE
BEAM ASSEMBLIES W/3-10d NAILS
AT EACH JOINT.

BEAM ASSEMBLY, 2" X 8" BY INSIDE CONTAINER
WIDTH MINUS 1" (REF: 7'-7") (DOUBLED) (4 REQD).
LAMINATE W/11-10d NAILS.

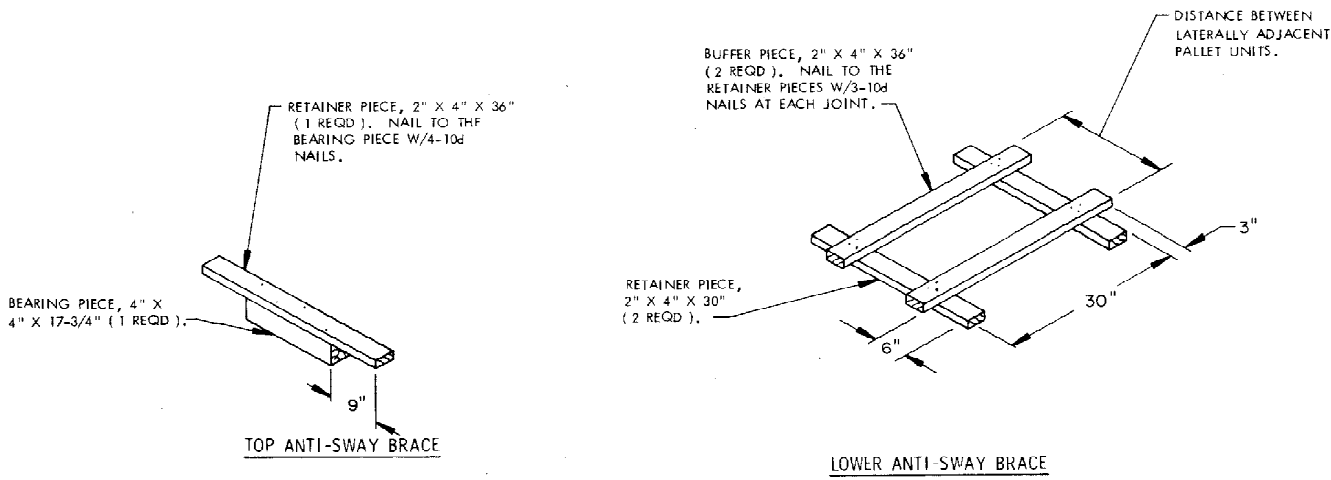


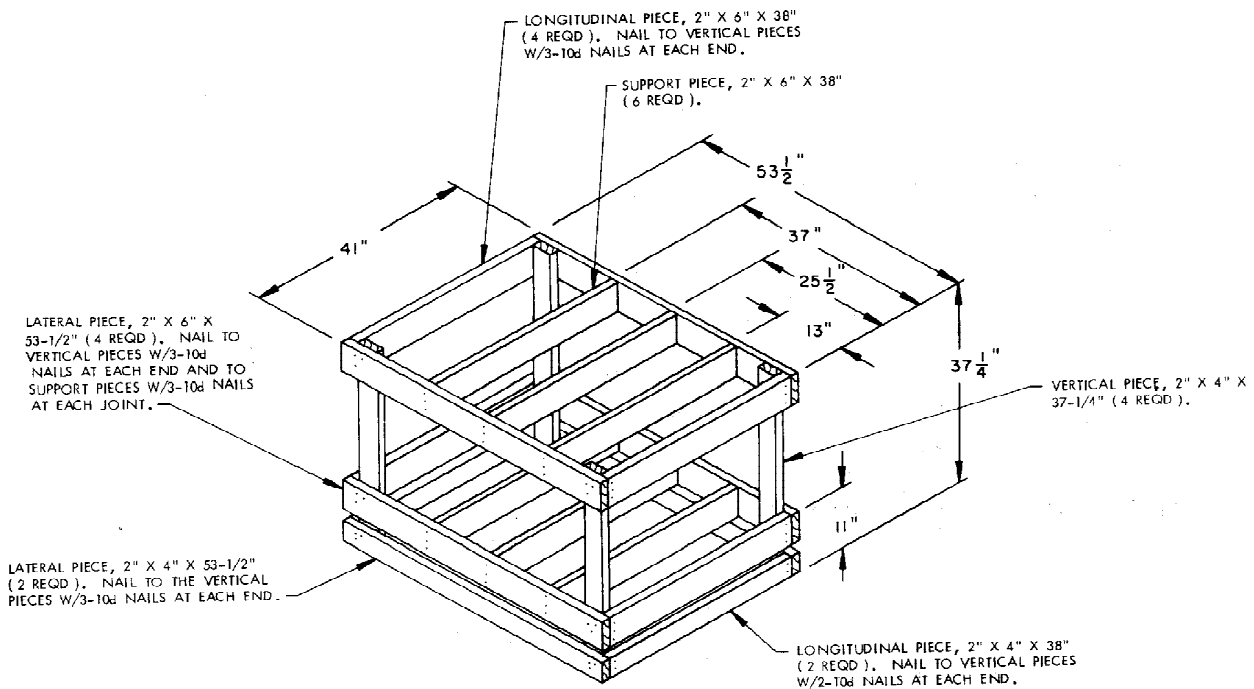
INSIDE CONTAINER
WIDTH MINUS 1"
(REF: 7'-7")

FORWARD BLOCKING ASSEMBLY

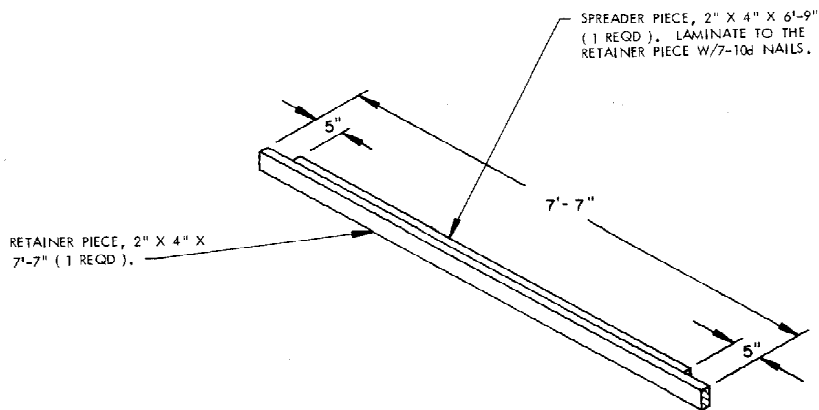


REAR BLOCKING ASSEMBLY

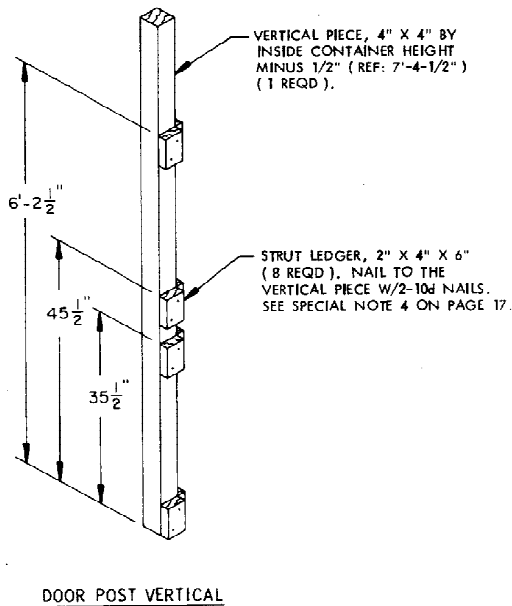
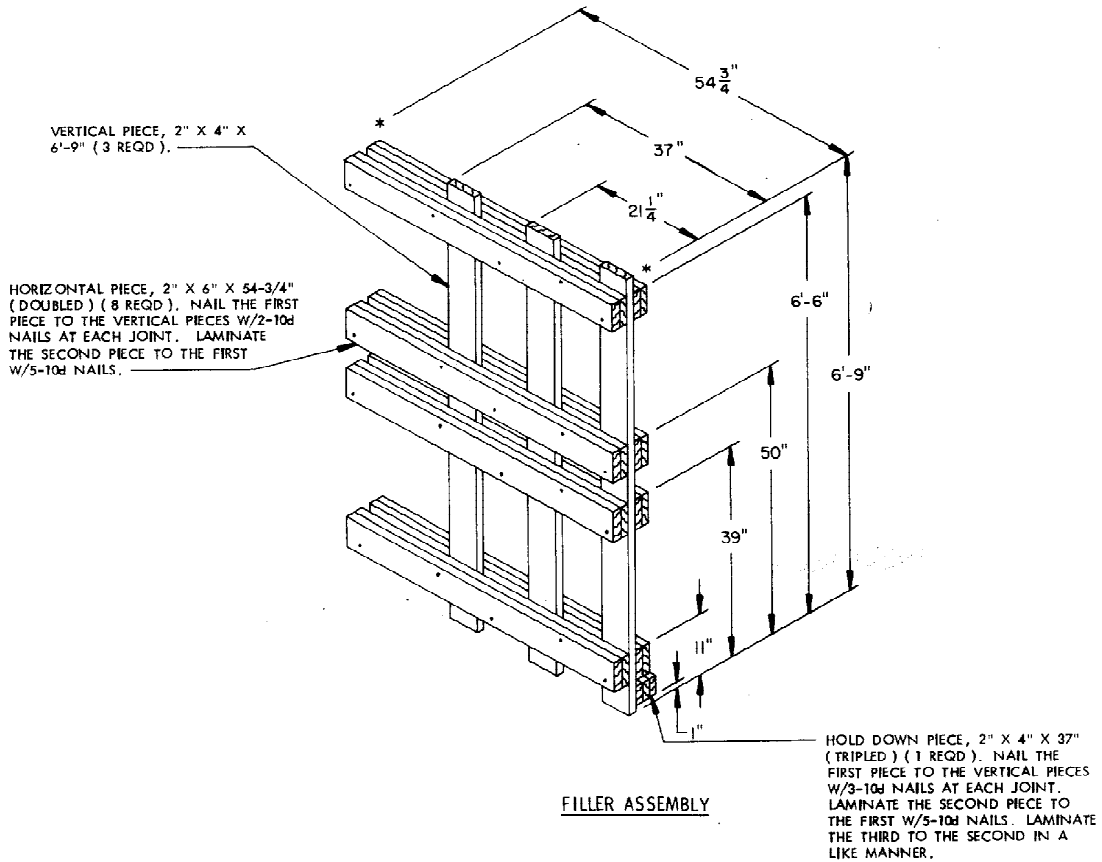


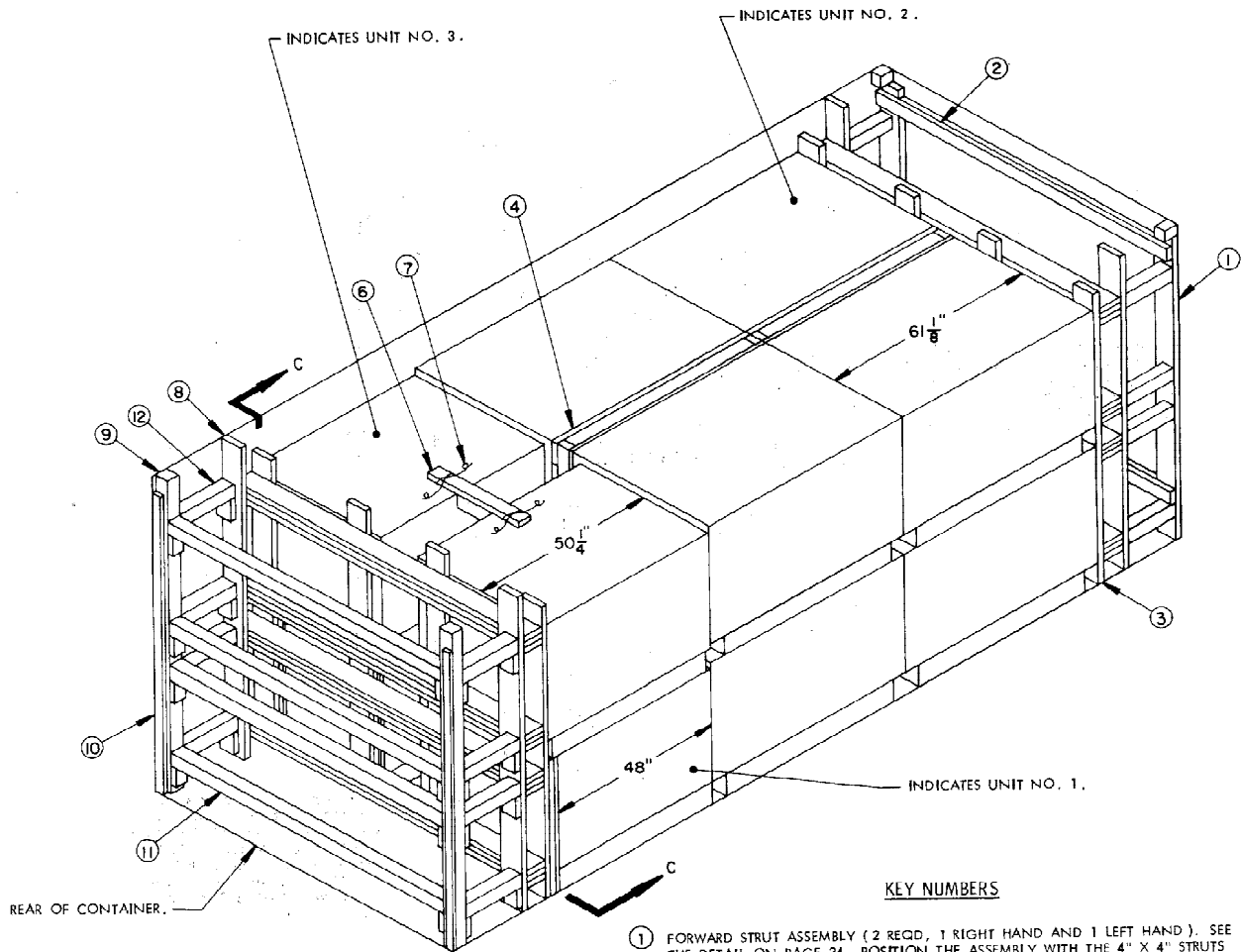


UPPER FILLER ASSEMBLY



SPREADER ASSEMBLY

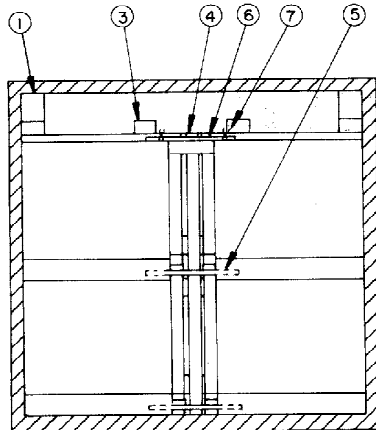




ISOMETRIC VIEW

KEY NUMBERS

- ① FORWARD STRUT ASSEMBLY (2 REQD, 1 RIGHT HAND AND 1 LEFT HAND). SEE THE DETAIL ON PAGE 24. POSITION THE ASSEMBLY WITH THE 4" X 4" STRUTS AGAINST THE CONTAINER SIDEWALL, AS SHOWN ABOVE. AFTER PIECE MARKED ③ IS INSTALLED AND CENTERED ON THE WIDTH OF THE CONTAINER, NAIL THROUGH THE REAR BUFFER PIECE OF EACH FORWARD STRUT ASSEMBLY INTO EACH BEAM ASSEMBLY OF PIECE MARKED ③ W/2-12d NAILS AT EACH JOINT.
- ② SPREADER ASSEMBLY (2 REQD). SEE THE DETAIL ON PAGE 24. POSITION AS SHOWN, ABOVE TOP AND BOTTOM STRUTS AND NAIL TO THE FORWARD STRUT ASSEMBLY W/2-10d NAILS AT EACH JOINT.
- ③ FORWARD BLOCKING ASSEMBLY (1 REQD). SEE THE DETAIL ON PAGE 24 AND GENERAL NOTE "F" ON PAGE 2.
- ④ CENTER FILL ASSEMBLY (2 REQD). SEE THE DETAIL ON PAGE 25 AND GENERAL NOTE "D" ON PAGE 2.
- ⑤ LOWER ANTI-SWAY BRACE (2 REQD). SEE THE DETAIL ON PAGE 24.
- ⑥ TOP ANTI-SWAY BRACE (1 REQD). SEE THE DETAIL ON PAGE 24.
- ⑦ TIE WIRE, NO. 14 GAGE WIRE, 30" LONG (2 REQD). ATTACH ONE END TO A PALLET UNIT UNITIZING STRAP, FORM A COMPLETE LOOP AROUND THE TOP ANTI-SWAY BRACE AND ATTACH THE OTHER END TO A SECOND UNITIZING STRAP.
- ⑧ REAR BLOCKING ASSEMBLY (1 REQD). SEE THE DETAIL ON PAGE 25 AND GENERAL NOTE "F" ON PAGE 2.
- ⑨ DOOR POST VERTICAL (2 REQD). SEE THE DETAIL ON PAGE 25 AND "TYPICAL DETAIL A" ON PAGE 41.
- ⑩ DOOR POST VERTICAL RETAINER (2 REQD). SEE THE DETAIL AND "VIEW A" ON PAGE 40. NAIL THROUGH THE HOLES INTO THE DOOR POST VERTICAL W/4-10d NAILS.
- ⑪ DOOR SPANNER, 4" X 4" MATERIAL, CUT TO A LENGTH THAT WILL PROVIDE FOR A DRIVE FIT (REF: 7'-1-3/8") (4 REQD). TOENAIL TO THE DOOR POST VERTICALS W/2-12d NAILS AT EACH END. SEE THE "BEVEL-CUT" DETAIL ON PAGE 41. AFTER INSTALLING THE BOTTOM AND THE TOP DOOR SPANNERS, THE STRUTS, PIECES MARKED ⑫, ARE TO BE INSTALLED.
- ⑫ STRUT, 4" X 4" BY CUT-TO-FIT (8 REQD). TOENAIL TO THE BUFFER PIECES OF THE "REAR BLOCKING ASSEMBLY" AND THE "DOOR POST VERTICAL" W/2-12d NAILS AT EACH END. SEE THE "BEVEL-CUT" DETAIL ON PAGE 41.



SECTION C-C

RECOMMENDED SEQUENTIAL LOADING PROCEDURES:

1. PREFABRICATE ONE RIGHT HAND AND ONE LEFT HAND FORWARD STRUT ASSEMBLY, TWO SPREADER ASSEMBLIES, ONE FORWARD BLOCKING ASSEMBLY, TWO CENTER FILL ASSEMBLIES, ONE TOP ANTI-SWAY BRACE, ONE REAR BLOCKING ASSEMBLY, AND NAIL A DOOR POST VERTICAL RETAINER TO EACH DOOR POST VERTICAL, ONE RIGHT HAND AND ONE LEFT HAND.
2. INSTALL THE TWO FORWARD STRUT ASSEMBLIES (ONE RIGHT HAND AND ONE LEFT HAND) AND TWO SPREADER ASSEMBLIES.
3. INSTALL FORWARD BLOCKING ASSEMBLY.
4. LOAD TWO PALLET UNITS (UNIT NO. 2), INSTALL ONE CENTER FILL ASSEMBLY, AND LOAD TWO MORE PALLET UNITS (UNIT NO. 2).
5. REPEAT STEP 4.
6. LOAD TWO PALLET UNITS (UNIT NO. 1), ONE UNIT AGAINST EACH SIDE OF THE CONTAINER.
7. INSTALL ONE LOWER ANTI-SWAY BRACE (THIS ASSEMBLY MUST BE FABRICATED IN PLACE, BETWEEN THE PALLET UNITS).
8. LOAD THE TWO PALLET UNITS (UNIT NO. 3) AND INSTALL ONE LOWER ANTI-SWAY BRACE (THIS ASSEMBLY MUST BE FABRICATED IN PLACE, BETWEEN THE PALLET UNITS).
9. INSTALL A TOP ANTI-SWAY BRACE WITH TIE WIRES.
10. INSTALL REAR BLOCKING ASSEMBLY.
11. INSTALL THE TWO DOOR POST VERTICAL ASSEMBLIES (ONE RIGHT HAND AND ONE LEFT HAND).
12. INSTALL TWO DOOR SPANNER PIECES (ONE AT THE LOWEST POSITION AND ONE AT THE UPPERMOST POSITION).
13. INSTALL THE STRUTS BETWEEN THE REAR BLOCKING ASSEMBLY AND THE DOOR POST VERTICALS.
14. INSTALL THE REMAINING TWO DOOR SPANNER PIECES.

SPECIAL NOTES:

1. THE PALLETIZED UNITS SHOWN IN THE TYPICAL LOAD ON PAGE 22 ARE BASED ON UNIT NUMBERS 1, 2, AND 3 SHOWN ON PAGE 8. THE DEPICTED LOADING PROCEDURES ARE ALSO APPLICABLE FOR PALLETIZED UNITS OF OTHER DIMENSIONS. REFER TO THE "LOAD PLANNING GUIDANCE" AND "LOAD PLANNING CHARTS" ON PAGES 4 AND 5 FOR ADDITIONAL GUIDANCE.
2. EXCESSIVE SLACK ACROSS THE WIDTH OF A LOAD CAN BE ELIMINATED BY LAMINATING ADDITIONAL HORIZONTAL PIECES TO THE CENTER FILL ASSEMBLIES, OR BY INCREASING THE SWAY BRACING SIZES, AS APPROPRIATE.
3. THE STRUT LEDGERS CAN ONLY BE PRE-NAILED TO THE DOOR POST VERTICAL ON ONE SIDE OF THE CONTAINER FOR THE DOOR SPANNER PIECES. ALSO, THE STRUT LEDGERS FOR THE STRUTS CAN ONLY BE PRE-NAILED TO THE REAR BLOCKING ASSEMBLY OR THE DOOR POST VERTICAL AT THE LOWEST DIMENSION.

BILL OF MATERIAL

LUMBER	LINEAR FEET	BOARD FEET
1" X 4"	11	4
1" X 6"	41	21
2" X 3"	3	2
2" X 4"	120	80
2" X 6"	319	319
4" X 4"	69	91
NAILS	NO. REQD	POUNDS
6d (2")	72	1/2
10d (3")	534	8-1/4
12d (3-1/4")	64	1
DOOR POST VERTICAL RETAINER-----2 REQD-----64 LBS		
WIRE, NO. 14 GAGE-----5' REQD-----NIL		

LOAD AS SHOWN

ITEM	QUANTITY	WEIGHT (APPROX)
UNIT NO. 1 -----	2 -----	3,036 LBS
UNIT NO. 2 -----	8 -----	15,336 LBS
UNIT NO. 3 -----	2 -----	3,726 LBS
DUNNAGE -----		1,108 LBS
CONTAINER -----		4,700 LBS

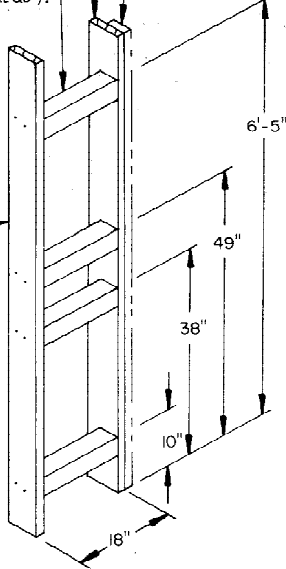
TOTAL WEIGHT ----- 27,906 LBS

FORWARD BUFFER PIECE, 2" X 6" BY INSIDE CONTAINER HEIGHT MINUS 1/2" (REF: 7'-1-1/2") (1 REQD.). NAIL TO THE STRUTS W/2-10d NAILS AT EACH JOINT.

SEE GENERAL NOTE "G" ON PAGE 2.

STRUT, 4" X 4" X 15" (4 REQD.).

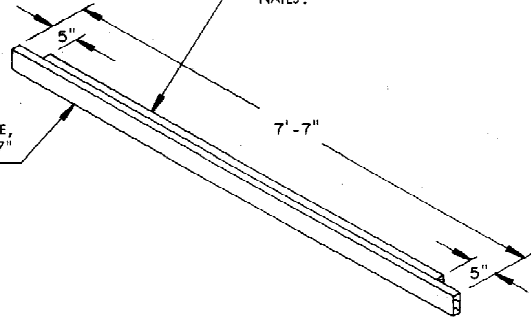
REAR BUFFER PIECE, 2" X 6" BY INSIDE CONTAINER HEIGHT MINUS 1/2" (REF: 7'-1-1/2") (1 REQD.). NAIL TO THE STRUTS W/2-10d NAILS AT EACH JOINT.



FORWARD STRUT ASSEMBLY

A "RIGHT HAND" FORWARD STRUT ASSEMBLY IS DEPICTED. A "LEFT HAND" ASSEMBLY IS ALSO REQUIRED AND WILL BE THE SAME AS THE ASSEMBLY DEPICTED ABOVE, EXCEPT THE 4" X 4" STRUTS ARE ALIGNED ON THE OPPOSITE SIDE OF THE BUFFER PIECES.

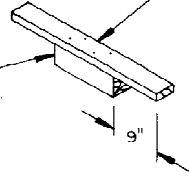
SPREADER PIECE, 2" X 4" X 6'-9" (1 REQD.). LAMINATE TO THE RETAINER PIECE W/7-10d NAILS.



RETAINER PIECE, 2" X 4" X 7'-7" (1 REQD.).

SPREADER ASSEMBLY

BEARING PIECE, 4" X 4" X 11'-3/4" (1 REQD.).

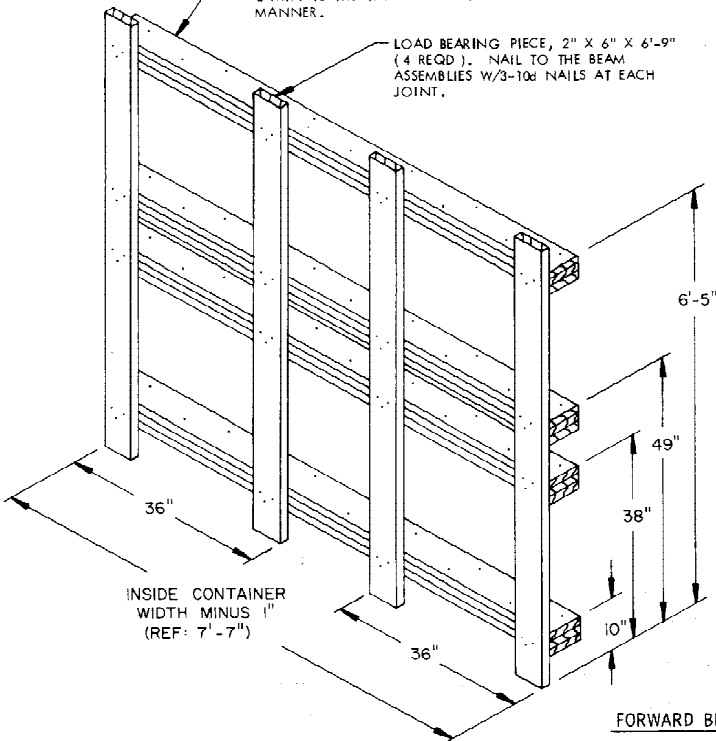


RETAINER PIECE, 2" X 4" X 30" (1 REQD.). NAIL TO THE BEARING PIECE W/4-10d NAILS.

TOP ANTI-SWAY BRACE

BEAM ASSEMBLY, 2" X 6" BY INSIDE CONTAINER WIDTH MINUS 1" (REF: 7'-7") (TRIPLED) (4 REQD.). LAMINATE THE SECOND PIECE TO THE FIRST W/11-10d NAILS. LAMINATE THE THIRD PIECE TO THE SECOND IN A LIKE MANNER.

LOAD BEARING PIECE, 2" X 6" X 6'-9" (4 REQD.). NAIL TO THE BEAM ASSEMBLIES W/3-10d NAILS AT EACH JOINT.



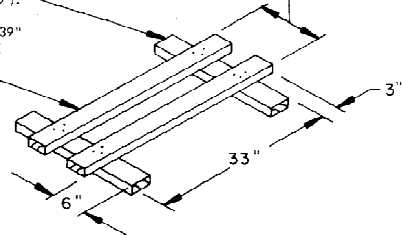
INSIDE CONTAINER WIDTH MINUS 1" (REF: 7'-7")

FORWARD BLOCKING ASSEMBLY

FABRICATE TO FIT BETWEEN THE POSTS OF LATERALLY ADJACENT PALLETS.

RETAINER PIECE, 2" X 4" X 24" (2 REQD.).

BUFFER PIECE, 2" X 4" X 39" (2 REQD.). NAIL TO THE RETAINER PIECES W/3-10d NAILS AT EACH JOINT.



LOWER ANTI-SWAY BRACE

LOAD BEARING PIECE, 2" X 6" X 61" (4 REQD). NAIL TO THE VERTICAL PIECES W/3-10d NAILS AT EACH END AND NAIL THE TOP LOAD BEARING PIECE TO THE TOP HORIZONTAL PIECE W/4-10d NAILS.

VERTICAL PIECE, 2" X 4" X 6'-5" (2 REQD). NAIL TO THE HORIZONTAL PIECES W/2-10d NAILS AT EACH END.

HORIZONTAL PIECE, 2" X 4" X 58" (2 REQD).

LOAD BEARING PIECE, 1" X 6" X 61" (4 REQD). NAIL TO THE VERTICAL PIECES W/3-6d NAILS AT EACH END AND NAIL THE TOP LOAD BEARING PIECE TO THE TOP HORIZONTAL PIECE W/4-6d NAILS.

VERTICAL PIECE, 4" X 4" BY INSIDE CONTAINER HEIGHT MINUS 1/2" (REF: 7'-4-1/2") (1 REQD).

STRUT LEDGER, 2" X 4" X 6" (8 REQD). NAIL TO THE VERTICAL PIECE W/2-10d NAILS. SEE SPECIAL NOTE 3 ON PAGE 23.

HOLD-DOWN PIECE, 2" X 3" X 9" (2 REQD). NAIL TO THE 1" X 4" LONGITUDINAL PIECE W/3-10d NAILS AND CLINCH.

LONGITUDINAL PIECE, 1" X 4" X 61" (1 REQD). NAIL TO THE VERTICAL PIECES W/2-6d NAILS AT EACH END AND TO THE BOTTOM HORIZONTAL PIECE W/4-6d NAILS.

LONGITUDINAL PIECE, 2" X 4" X 61" (1 REQD). NAIL TO THE VERTICAL PIECES W/2-10d NAILS AT EACH END AND TO THE BOTTOM HORIZONTAL PIECE W/4-10d NAILS.

CENTER FILL ASSEMBLY

DOOR POST VERTICAL

BUFFER PIECE, 2" X 6" BY INSIDE CONTAINER HEIGHT MINUS 1/2" (REF: 7'-4-1/2") (2 REQD). NAIL TO THE BEAM ASSEMBLIES W/3-10d NAILS AT EACH JOINT.

LOAD BEARING PIECE, 2" X 6" X 6'-8" (4 REQD). NAIL TO THE BEAM ASSEMBLIES W/3-10d NAILS AT EACH JOINT.

INSIDE CONTAINER WIDTH MINUS 1" (REF: 7'-7")

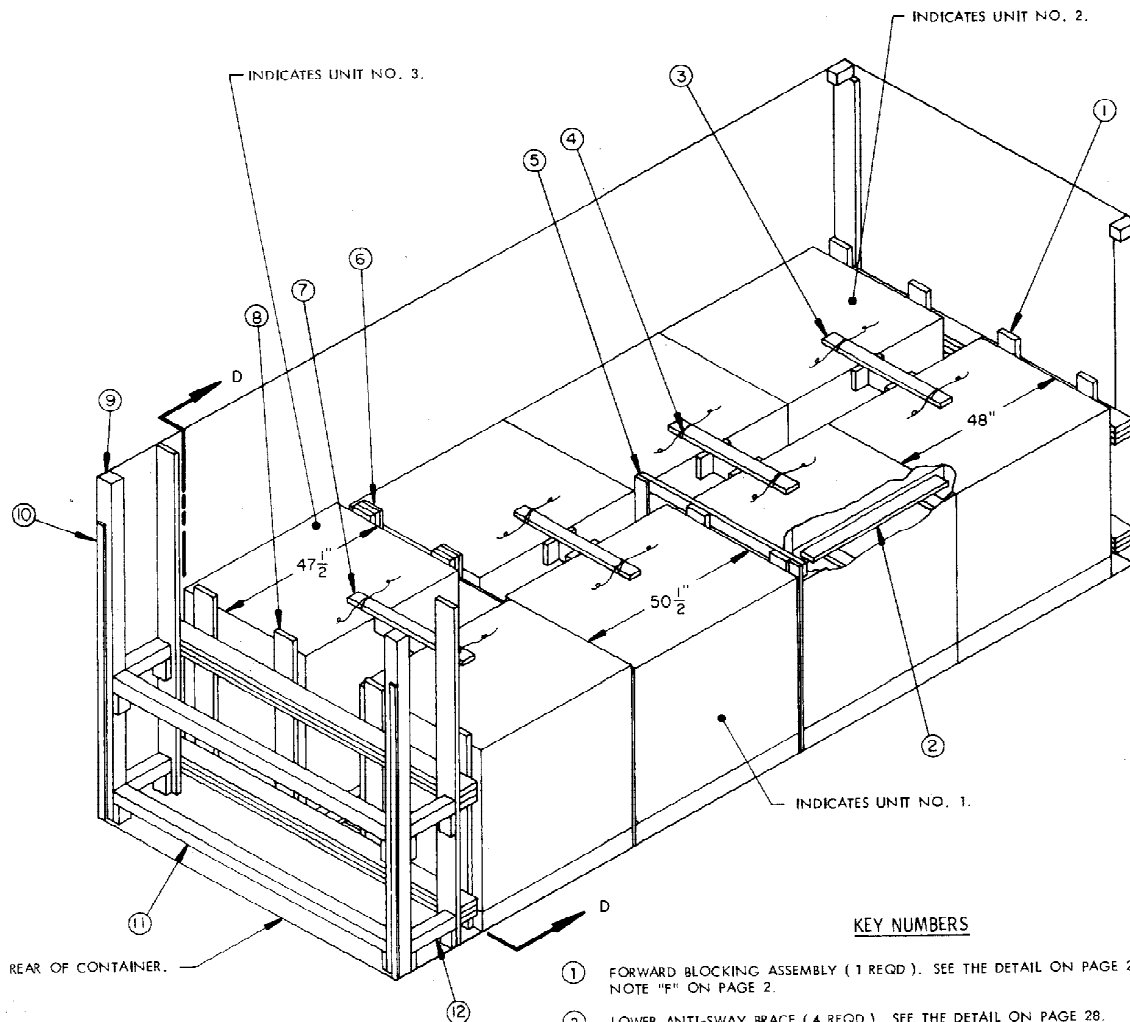
FILL PIECE, 2" X 6" X 37" (4 REQD). NAIL TO THE LOAD BEARING PIECE W/4-10d NAILS.

STRUT LEDGER, 2" X 4" X 6" (8 REQD). NAIL TO THE BUFFER PIECE W/2-10d NAILS. SEE SPECIAL NOTE 3 ON PAGE 23.

BEAM ASSEMBLY, 2" X 6" BY INSIDE CONTAINER WIDTH MINUS 1" (REF: 7'-7") (TRIPLED) (4 REQD). LAMINATE THE SECOND PIECE TO THE FIRST W/11-10d NAILS. LAMINATE THE THIRD PIECE TO THE SECOND IN A LIKE MANNER.

FILL PIECE, 1" X 6" X 37" (4 REQD). NAIL TO THE 2" X 6" FILL PIECE W/4-6d NAILS.

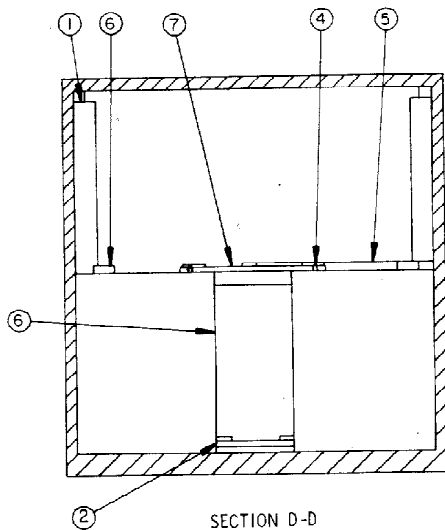
REAR BLOCKING ASSEMBLY



ISOMETRIC VIEW

KEY NUMBERS

- ① FORWARD BLOCKING ASSEMBLY (1 REQD.). SEE THE DETAIL ON PAGE 28 AND GENERAL NOTE "F" ON PAGE 2.
- ② LOWER ANTI-SWAY BRACE (4 REQD.). SEE THE DETAIL ON PAGE 28.
- ③ TOP ANTI-SWAY BRACE "A" (3 REQD.). SEE THE DETAIL ON PAGE 29.
- ④ TIE WIRE, NO. 14 GAGE WIRE 30" LONG (8 REQD.). ATTACH ONE END TO A PALLET UNITIZING STRAP, FORM A COMPLETE LOOP AROUND THE TOP ANTI-SWAY BRACE AND ATTACH THE OTHER END TO A SECOND UNITIZING STRAP.
- ⑤ SEPARATOR GATE (1 REQD.). SEE THE DETAIL ON PAGE 29.
- ⑥ LOAD BEARING GATE (1 REQD.). SEE THE DETAIL ON PAGE 29.
- ⑦ TOP ANTI-SWAY BRACE "B" (1 REQD.). SEE THE DETAIL ON PAGE 29.
- ⑧ REAR BLOCKING ASSEMBLY (1 REQD.). SEE THE DETAIL ON PAGE 28 AND GENERAL NOTE "F" ON PAGE 2.
- ⑨ DOOR POST VERTICAL (2 REQD.). SEE THE DETAIL ON PAGE 29 AND "TYPICAL DETAIL A" ON PAGE 41.
- ⑩ DOOR POST VERTICAL RETAINER (2 REQD.). SEE THE DETAIL AND "VIEW A" ON PAGE 40. NAIL THROUGH THE HOLES INTO THE DOOR POST VERTICAL W/4-10d NAILS.
- ⑪ DOOR SPANNER, 4" X 4" MATERIAL, CUT TO A LENGTH THAT WILL PROVIDE FOR A DRIVE FIT (REF: 7'-1-3/8") (2 REQD.). TOENAIL TO THE 4" X 4" DOOR POST VERTICALS W/2-12d NAILS AT EACH END. SEE THE "BEVEL-CUT" DETAIL ON PAGE 41.
- ⑫ STRUT, 4" X 4" BY CUT-TO-FIT (4 REQD.). TOENAIL TO THE BUFFER PIECE OF THE "REAR BLOCKING ASSEMBLY" AND THE "DOOR POST VERTICAL" W/2-10d NAILS AT EACH END. SEE THE "BEVEL-CUT" DETAIL ON PAGE 41.



SECTION D-D

RECOMMENDED SEQUENTIAL LOADING PROCEDURES:

1. PREFABRICATE ONE FORWARD BLOCKING ASSEMBLY, THREE TOP ANTI-SWAY BRACE "A" ASSEMBLIES, ONE SEPARATOR GATE, ONE LOAD BEARING GATE, ONE TOP ANTI-SWAY BRACE "B" ASSEMBLY, ONE REAR BLOCKING ASSEMBLY, AND NAIL A DOOR POST VERTICAL RETAINER TO EACH DOOR POST VERTICAL, ONE RIGHT HAND AND ONE LEFT HAND.
2. INSTALL THE FORWARD BLOCKING ASSEMBLY.
3. LOAD TWO PALLET UNITS (UNIT NO. 2), INSTALL ONE TOP ANTI-SWAY BRACE "A" WITH TIE WIRES, AND INSTALL ONE LOWER ANTI-SWAY BRACE (THIS ASSEMBLY MUST BE FABRICATED IN PLACE, BETWEEN THE PALLET UNITS).
4. REPEAT STEP 3.
5. LOAD ONE PALLET UNIT (UNIT NO. 2), INSTALL THE SEPARATOR GATE, AND LOAD ONE PALLET UNIT (UNIT NO. 1).
6. INSTALL ONE TOP ANTI-SWAY BRACE "A" WITH TIE WIRES, ONE LOWER ANTI-SWAY BRACE (THIS ASSEMBLY MUST BE FABRICATED IN PLACE, BETWEEN THE PALLET UNITS), AND THE LOAD BEARING GATE.
7. LOAD TWO PALLET UNITS (UNIT NO. 3), INSTALL ONE TOP ANTI-SWAY BRACE "B" WITH TIE WIRES, AND INSTALL ONE LOWER ANTI-SWAY BRACE (THIS ASSEMBLY MUST BE FABRICATED IN PLACE, BETWEEN THE PALLET UNITS).
8. INSTALL REAR BLOCKING ASSEMBLY.
9. INSTALL THE TWO DOOR POST VERTICAL ASSEMBLIES (ONE RIGHT HAND AND ONE LEFT HAND).
10. INSTALL THE DOOR SPANNER PIECES.
11. INSTALL THE STRUTS BETWEEN THE REAR BLOCKING ASSEMBLY AND THE DOOR POST VERTICALS.

SPECIAL NOTES:

1. THE PALLETIZED UNITS SHOWN IN THE TYPICAL LOAD ON PAGE 26 ARE BASED ON UNIT NUMBERS 1, 2, AND 3 SHOWN ON PAGE 9. THE DEPICTED LOADING PROCEDURES ARE ALSO APPLICABLE FOR PALLETIZED UNITS OF OTHER DIMENSIONS. REFER TO THE "LOAD PLANNING GUIDANCE" AND "LOAD PLANNING CHARTS" ON PAGES 4 AND 5 FOR ADDITIONAL GUIDANCE.
2. EXCESSIVE SLACK ACROSS THE WIDTH OF A LOAD CAN BE ELIMINATED BY INCREASING THE SWAY BRACING SIZES, AS APPROPRIATE.
3. THE BUFFER PIECES OF THE LOWER ANTI-SWAY BRACE ASSEMBLIES WILL BE CUT TO A LENGTH OF 30" WHEN USED WITH A 35" X 45-1/2" PALLET OR WILL BE CUT TO A LENGTH OF 33" WHEN USED WITH A 40" X 48" PALLET.

BILL OF MATERIAL

LUMBER	LINEAR FEET	BOARD FEET
1" X 4"	9	3
1" X 6"	9	5
2" X 3"	8	4
2" X 4"	63	42
2" X 6"	188	188
4" X 4"	36	47
NAILS	NO. REQD	POUNDS
6d (2")	22	1/4
10d (3")	258	4
12d (3-1/4")	24	1/2
DOOR POST VERTICAL RETAINER ----- 2 REQD ----- 64 LBS		
WIRE, NO. 14 GAGE ----- 20' REQD ----- 1/2 LB		

LOAD AS SHOWN

ITEM	QUANTITY	WEIGHT (APPROX)
UNIT NO. 1 -----	1 -----	1,710 LBS
UNIT NO. 2 -----	5 -----	7,195 LBS
UNIT NO. 3 -----	2 -----	3,368 LBS
DUNNAGE -----		648 LBS
CONTAINER -----		4,700 LBS

TOTAL WEIGHT ----- 17,621 LBS

SEE GENERAL NOTE "G" ON PAGE 2.

BUFFER PIECE, 2" X 6" BY INSIDE CONTAINER HEIGHT MINUS 1/2" (REF: 7'-1-1/2") (2 REQD.). NAIL TO THE BEAM ASSEMBLIES W/3-10d NAILS AT EACH JOINT.

BEAM ASSEMBLY, 2" X 6" BY INSIDE CONTAINER WIDTH MINUS 1" (REF: 7'-7") (TRIPLED) (2 REQD.). LAMINATE THE SECOND PIECE TO THE FIRST PIECE W/11-10d NAILS. LAMINATE THE THIRD PIECE TO THE SECOND IN A LIKE MANNER.

LOAD BEARING PIECE, 2" X 6" X 52" (4 REQD.). NAIL TO THE BEAM ASSEMBLIES W/3-10d NAILS AT EACH JOINT.

BUFFER PIECE, 2" X 6" BY INSIDE CONTAINER HEIGHT MINUS 1/2" (REF: 7'-4-1/2") (2 REQD.). NAIL TO THE BEAM ASSEMBLIES W/3-10d NAILS AT EACH JOINT.

LOAD BEARING PIECE, 2" X 6" X 52" (4 REQD.). NAIL TO THE BEAM ASSEMBLIES W/3-10d NAILS AT EACH JOINT.

BEAM ASSEMBLY, 2" X 6" BY INSIDE CONTAINER WIDTH MINUS 1" (REF: 7'-7") (TRIPLED) (2 REQD.). LAMINATE THE SECOND PIECE TO THE FIRST PIECE W/11-10d NAILS. LAMINATE THE THIRD PIECE TO THE SECOND IN A LIKE MANNER.

INSIDE CONTAINER WIDTH MINUS 1" (REF: 7'-7")

FORWARD BLOCKING ASSEMBLY

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

INSIDE CONTAINER WIDTH MINUS 1" (REF: 7'-7")

FABRICATE TO FIT BETWEEN LATERALLY ADJACENT PALLETS.

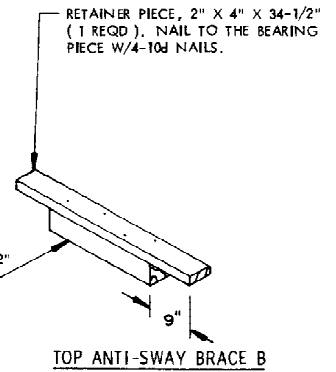
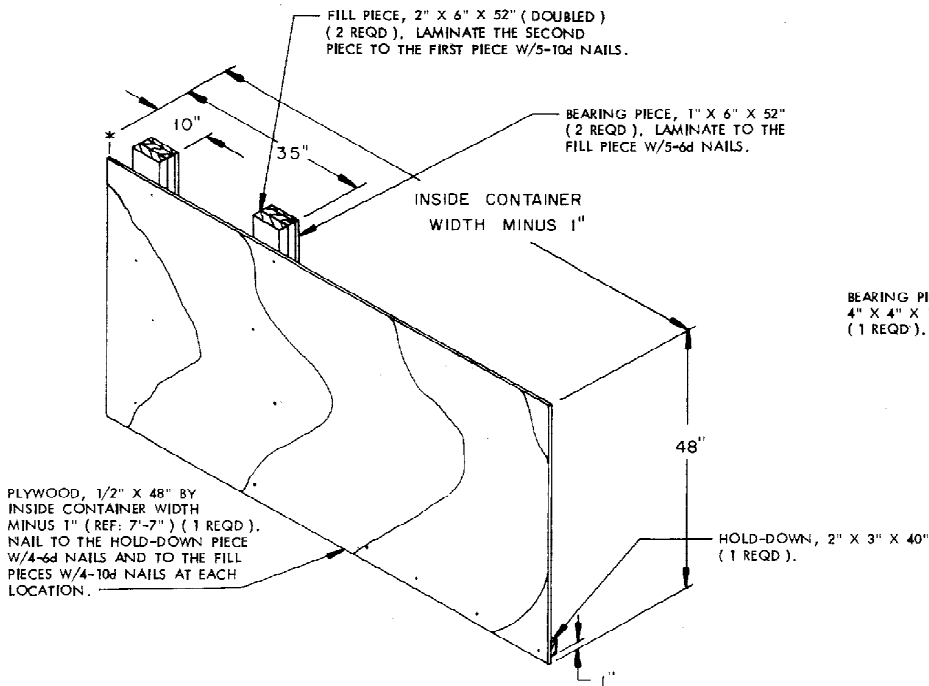
BUFFER PIECE, 2" X 4" BY LENGTH-TO-SUIT (2 REQD.). NAIL TO THE RETAINER PIECES W/3-10d NAILS AT EACH JOINT.

RETAINER PIECE, 2" X 4" BY LENGTH-TO-SUIT (2 REQD.).

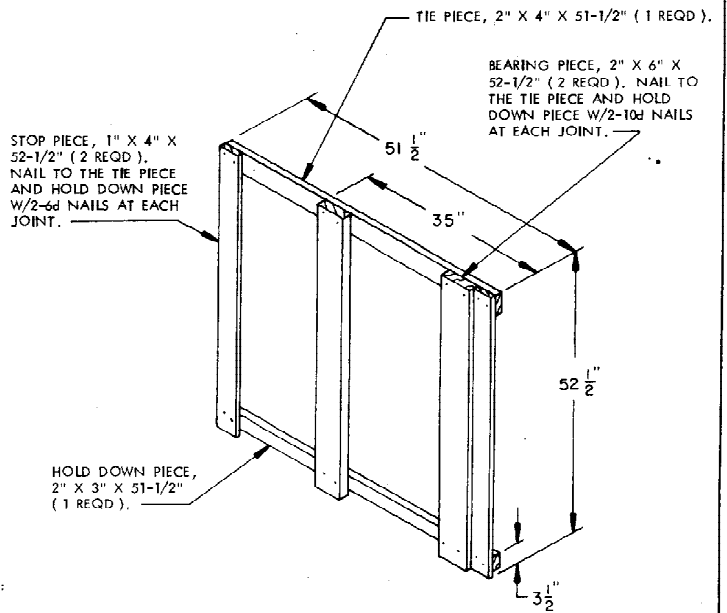
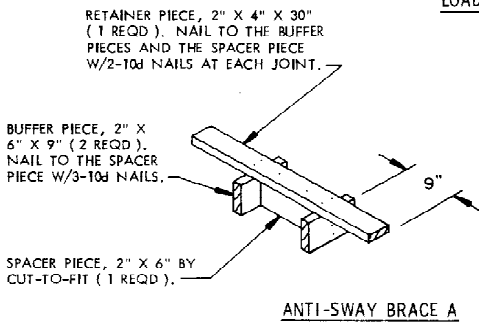
DISTANCE BETWEEN PALLET POSTS

LOWER ANTI-SWAY BRACE

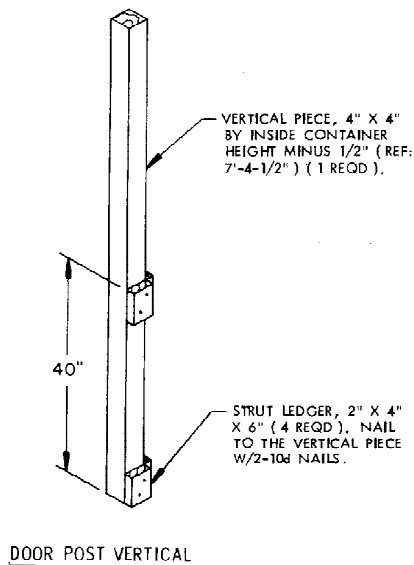
THIS ASSEMBLY MUST BE FABRICATED IN PLACE BETWEEN THE PALLET UNITS. SEE SPECIAL NOTE 3 ON PAGE 27.

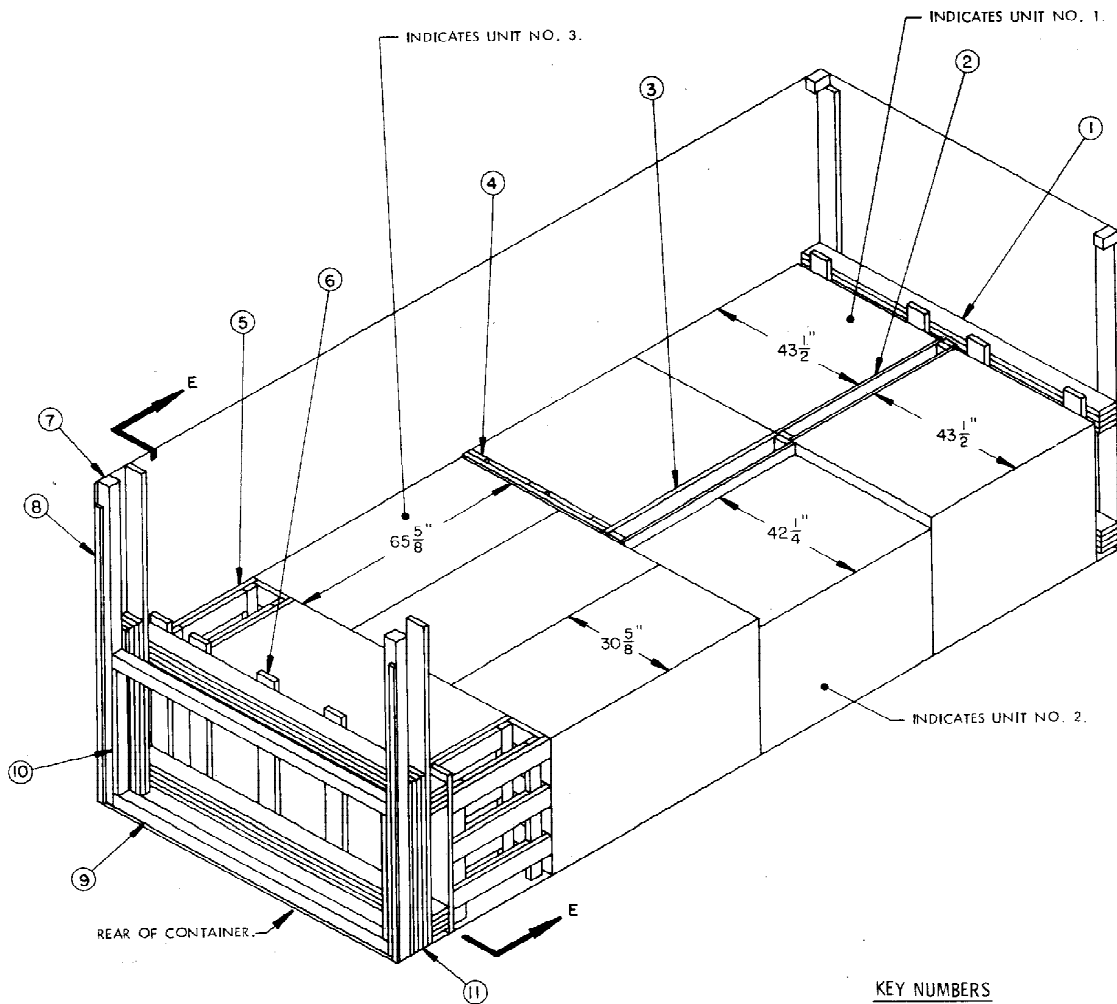


LOAD BEARING GATE

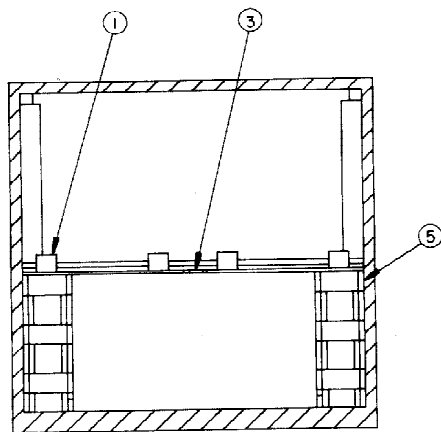


SEPARATOR GATE





ISOMETRIC VIEW



SECTION E-E

KEY NUMBERS

- ① FORWARD BLOCKING ASSEMBLY (1 REQD). SEE THE DETAIL ON PAGE 32 AND GENERAL NOTE "F" ON PAGE 2.
- ② CENTER FILL ASSEMBLY A (1 REQD). SEE THE DETAIL ON PAGE 33 AND GENERAL NOTE "D" ON PAGE 2.
- ③ CENTER FILL ASSEMBLY B (1 REQD). SEE THE DETAIL ON PAGE 33 AND GENERAL NOTE "D" ON PAGE 2.
- ④ SEPARATOR GATE (1 REQD). SEE THE DETAIL ON PAGE 33.
- ⑤ FILLER ASSEMBLY (2 REQD). SEE THE DETAIL ON PAGE 33 AND GENERAL NOTE "D" ON PAGE 2.
- ⑥ REAR BLOCKING ASSEMBLY (1 REQD). SEE THE DETAIL ON PAGE 32 AND GENERAL NOTE "F" ON PAGE 2.
- ⑦ DOOR POST VERTICAL, 4" X 4" BY INSIDE CONTAINER HEIGHT MINUS 1/2" (REF: 7'-4-1/2") (2 REQD). SEE TYPICAL DETAILS "B" AND "C" ON PAGE 41.
- ⑧ DOOR POST VERTICAL RETAINER (2 REQD). SEE THE DETAIL AND "VIEW A" ON PAGE 40. NAIL THROUGH THE HOLES INTO THE DOOR POST VERTICAL W/4-10d NAILS.
- ⑨ DOOR SPANNER, 4" X 4" MATERIAL, CUT TO A LENGTH THAT WILL PROVIDE FOR A DRIVE FIT (REF: 7'-1-3/8") (2 REQD). TOENAIL TO THE 4" X 4" DOOR POST VERTICALS W/2-12d NAILS AT EACH END. SEE THE "BEVEL-CUT" DETAIL ON PAGE 41.
- ⑩ DOOR SPANNER SUPPORT PIECE, 2" X 4" X 31" (2 REQD). NAIL TO THE DOOR POST VERTICAL W/3-10d NAILS AFTER THE LOWER DOOR SPANNER PIECE IS IN POSITION.
- ⑪ FILL MATERIAL, 6" WIDE BY 48" LONG MATERIAL (AS REQD). NAIL EACH PIECE TO THE REAR BLOCKING ASSEMBLY AND/OR LAMINATE TOGETHER W/5 NAILS OF A SUITABLE SIZE (10d FOR 2" MATERIAL). CAUTION: DO NOT NAIL TO THE DOOR POST VERTICALS, PIECES MARKED ⑦.

RECOMMENDED SEQUENTIAL LOADING PROCEDURES:

1. PREFABRICATE ONE FORWARD BLOCKING ASSEMBLY, ONE CENTER FILL ASSEMBLY "A", ONE CENTER FILL ASSEMBLY "B", ONE SEPARATOR GATE, TWO FILLER ASSEMBLIES, ONE REAR BLOCKING ASSEMBLY, AND NAIL A DOOR POST VERTICAL RETAINER TO EACH DOOR POST VERTICAL, ONE RIGHT HAND AND ONE LEFT HAND.
2. INSTALL THE FORWARD BLOCKING ASSEMBLY.
3. LOAD ONE PALLET UNIT (UNIT NO. 1), INSTALL ONE CENTER FILL ASSEMBLY "A", AND LOAD ONE PALLET UNIT (UNIT NO. 1).
4. LOAD ONE PALLET UNIT (UNIT NO. 1), INSTALL ONE CENTER FILL ASSEMBLY "B", AND LOAD ONE PALLET UNIT (UNIT NO. 2).
5. INSTALL SEPARATOR GATE AND LOAD THREE SKIDDED UNITS (UNIT NO. 3) LENGTHWISE IN THE CONTAINER.
6. LOAD ONE SKIDDED UNIT (UNIT NO. 3) CROSSWISE IN THE CONTAINER AND INSTALL TWO FILLER ASSEMBLIES.
7. INSTALL THE REAR BLOCKING ASSEMBLY.
8. INSTALL THE TWO DOOR POST VERTICAL ASSEMBLIES (ONE RIGHT HAND AND ONE LEFT HAND).
9. INSTALL THE LOWER DOOR SPANNER PIECE, THE TWO DOOR SPANNER SUPPORT PIECES, AND THE UPPER DOOR SPANNER PIECE.
10. INSTALL THE SOLID FILL TYPE LOAD-BLOCKING MATERIAL.

SPECIAL NOTES:

1. THE PALLETIZED AND SKIDDED UNITS SHOWN IN THE TYPICAL LOAD ON PAGE 30 ARE BASED ON UNIT NUMBERS 1, 2, AND 3 SHOWN ON PAGE 10. THE DEPICTED LOADING PROCEDURES ARE ALSO APPLICABLE FOR UNITS OF OTHER DIMENSIONS. REFER TO THE "LOAD PLANNING GUIDANCE" AND "LOAD PLANNING CHARTS" ON PAGES 4 AND 5 FOR ADDITIONAL GUIDANCE.
2. EXCESSIVE SLACK ACROSS THE WIDTH OF A LOAD CAN BE ELIMINATED BY LAMINATING ADDITIONAL BEARING PIECES TO THE CENTER FILL ASSEMBLIES, OR BY INCREASING THE LATERAL PIECE LENGTH OF THE FILLER ASSEMBLIES, AS APPROPRIATE.

BILL OF MATERIAL

LUMBER	LINEAR FEET	BOARD FEET
1" X 4"	5	2
1" X 6"	47	24
2" X 3"	4	2
2" X 4"	58	39
2" X 6"	323	323
4" X 4"	29	39
NAILS	NO. REQD	POUNDS
6d (2")	74	1/2
10d (3")	531	8-1/4
12d (3-1/4")	8	1/4
DOOR POST VERTICAL RETAINER ----- 2 REQD ----- 64 LBS		

LOAD AS SHOWN

ITEM	QUANTITY	WEIGHT (APPROX)
UNIT NO. 1 -----	3 -----	7,038 LBS
UNIT NO. 2 -----	1 -----	1,793 LBS
UNIT NO. 3 -----	4 -----	8,056 LBS
DUNNAGE -----		931 LBS
CONTAINER -----		4,700 LBS
TOTAL WEIGHT -----		22,518 LBS

BUFFER PIECE, 2" X 6" BY INSIDE
CONTAINER HEIGHT MINUS 1/2"
(REF: 7'-4-1/2") (2 REQD).
NAIL TO THE BEAM ASSEMBLIES
W/3-10d NAILS AT EACH JOINT.

BEAM ASSEMBLY, 2" X 6" BY
INSIDE CONTAINER WIDTH
MINUS 1" (REF: 7'-7")
(QUADRUPLED) (2 REQD).
LAMINATE THE SECOND PIECE
TO THE FIRST W/11-10d NAILS.
LAMINATE EACH ADDITIONAL
PIECE IN A LIKE MANNER.

REAR BLOCKING ASSEMBLY

BUFFER PIECE, 2" X 6" BY INSIDE
CONTAINER HEIGHT MINUS 1/2"
(REF: 7'-1-1/2") (2 REQD). NAIL
TO THE BEAM ASSEMBLIES W/3-10d
NAILS AT EACH JOINT.

SEE GENERAL NOTE "G"
ON PAGE 2.

LOAD BEARING PIECE, 2" X 6" X
44" (4 REQD). NAIL TO
THE BEAM ASSEMBLIES W/3-10d
NAILS AT EACH JOINT.

BEAM ASSEMBLY, 2" X 6" BY INSIDE
CONTAINER WIDTH MINUS 1" (REF:
7'-7") (QUADRUPLED) (2 REQD).
LAMINATE THE SECOND PIECE TO
THE FIRST W/11-10d NAILS. LAMINATE
EACH ADDITIONAL PIECE IN A LIKE
MANNER.

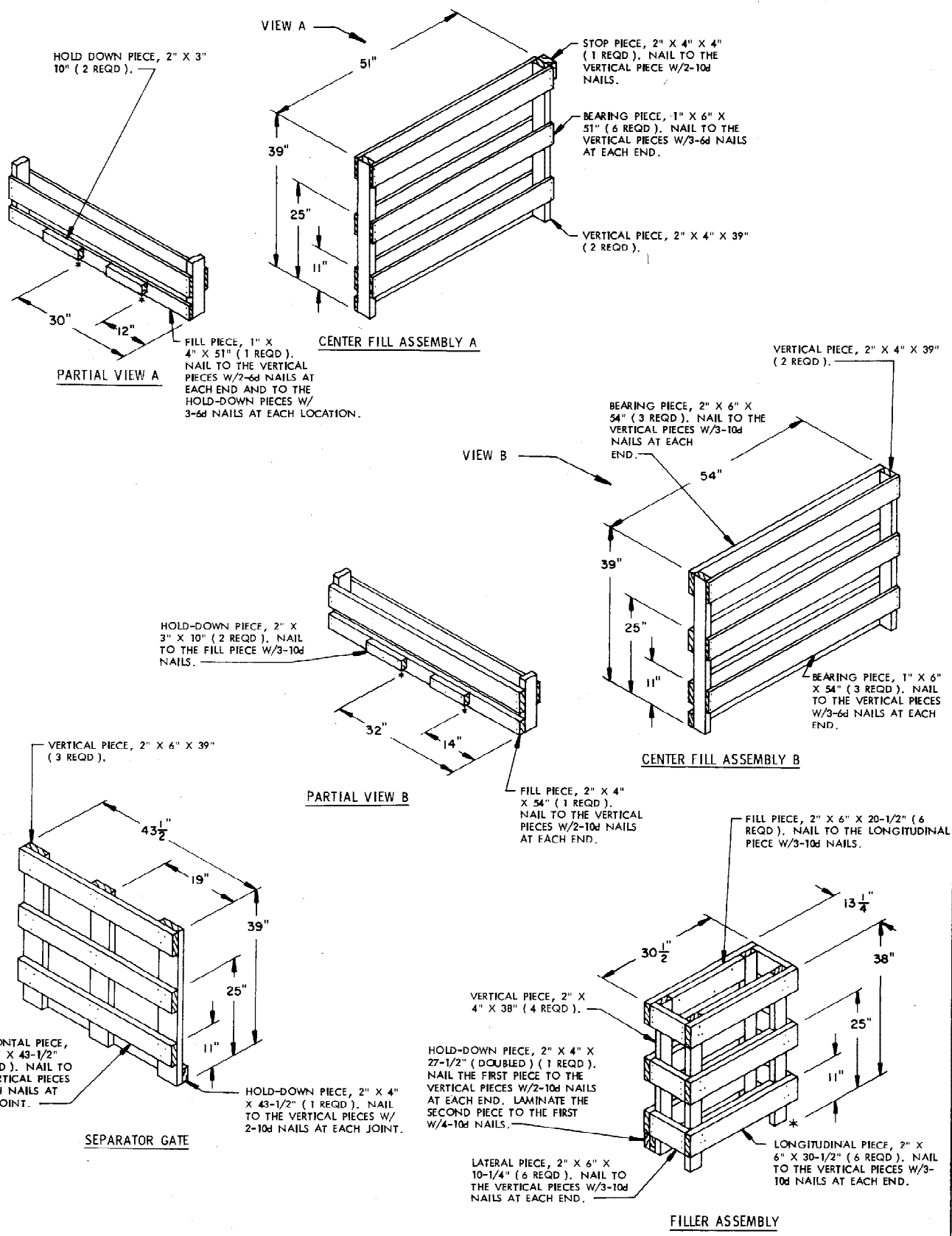
INSIDE CONTAINER,
HEIGHT MINUS 1/2"
(REF: 7'-1-1/2")

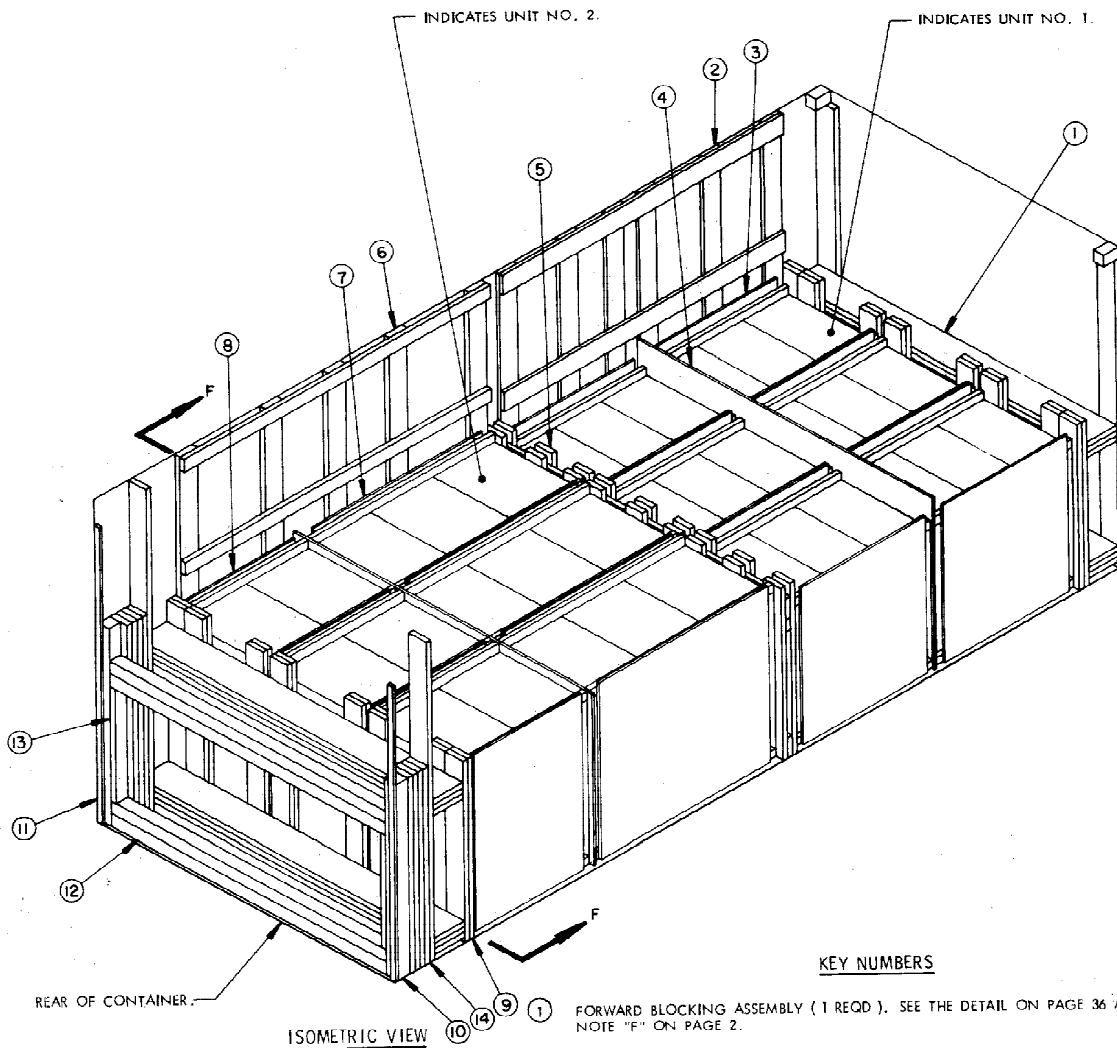
LOAD BEARING PIECE, 2" X 6" X
44" (6 REQD). NAIL TO THE
BEAM ASSEMBLIES W/3-10d NAILS
AT EACH JOINT.

INSIDE CONTAINER
WIDTH MINUS 1"
(REF: 7'-7")

FORWARD BLOCKING ASSEMBLY

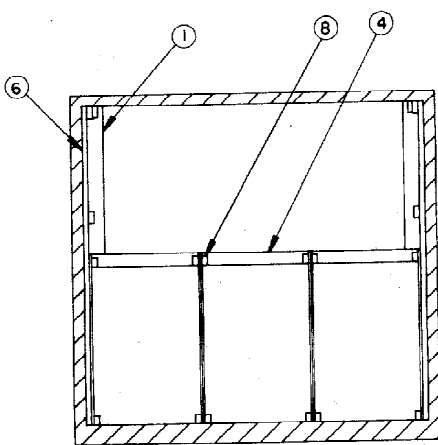
MIXED CONTAINER LOAD NO. 5 DETAILS





KEY NUMBERS

- 1 FORWARD BLOCKING ASSEMBLY (1 REQD). SEE THE DETAIL ON PAGE 36 AND GENERAL NOTE "F" ON PAGE 2.
- 2 SIDE FILL ASSEMBLY A (2 REQD). SEE THE DETAIL ON PAGE 37 AND GENERAL NOTE "D" ON PAGE 2.
- 3 SEPARATOR ASSEMBLY A (12 REQD). SEE THE DETAIL ON PAGE 38 AND GENERAL NOTE "D" ON PAGE 2.
- 4 LOAD BEARING GATE A (2 REQD). SEE THE DETAIL ON PAGE 39.
- 5 LOAD BEARING GATE B (1 REQD). SEE THE DETAIL ON PAGE 39.
- 6 SIDE FILL ASSEMBLY B (2 REQD). SEE THE DETAIL ON PAGE 37 AND GENERAL NOTE "D" ON PAGE 2.
- 7 SEPARATOR ASSEMBLY B (6 REQD). SEE THE DETAIL ON PAGE 38 AND GENERAL NOTE "D" ON PAGE 2.
- 8 SEPARATOR ASSEMBLY C (6 REQD). SEE THE DETAIL ON PAGE 38 AND GENERAL NOTE "D" ON PAGE 2.
- 9 REAR BLOCKING ASSEMBLY (1 REQD). SEE THE DETAIL ON PAGE 36 AND GENERAL NOTE "F" ON PAGE 2.
- 10 DOOR POST VERTICAL, HARDWOOD, 4" X 4" X 60" (2 REQD). SEE THE TYPICAL DETAILS "B" AND "C" ON PAGE 41 AND GENERAL NOTE "E" ON PAGE 2.
- 11 DOOR POST VERTICAL RETAINER (2 REQD). SEE THE DETAIL AND "VIEW A" ON PAGE 40. NAIL THROUGH THE TWO LOWER HOLES INTO THE DOOR POST VERTICAL W/2-10d NAILS.
- 12 DOOR SPANNER, 4" X 4" MATERIAL, CUT TO A LENGTH THAT WILL PROVIDE FOR A DRIVE FIT (REF: 7'-1-3/8") (4 REQD). TOENAIL TO THE 4" X 4" DOOR POST VERTICALS W/2-12d NAILS AT EACH END. SEE THE "BEVEL-CUT" DETAIL ON PAGE 41.
- 13 DOOR SPANNER SUPPORT PIECE, 2" X 4" X 32" (2 REQD). NAIL TO THE DOOR POST VERTICAL W/3-10d NAILS AFTER THE LOWER DOOR SPANNER PIECES ARE IN POSITION.
- 14 FILL MATERIAL, 6" WIDE BY 60" LONG MATERIAL (AS REQD). NAIL EACH PIECE TO THE REAR BLOCKING ASSEMBLY AND/OR LAMINATE TOGETHER W/6 NAILS OF A SUITABLE SIZE (10d FOR 2" MATERIAL). CAUTION: DO NOT NAIL TO THE DOOR POST VERTICALS, PIECES MARKED 10.



SECTION F-F

RECOMMENDED SEQUENTIAL LOADING PROCEDURES:

1. PREFABRICATE ONE FORWARD BLOCKING ASSEMBLY, TWO SIDE FILL ASSEMBLIES "A", TWO SIDE FILL ASSEMBLIES "B", TWELVE SEPARATOR ASSEMBLIES "A", SIX SEPARATOR ASSEMBLIES "B", SIX SEPARATOR ASSEMBLIES "C", TWO LOAD BEARING GATES "A", ONE LOAD BEARING GATE "B", ONE REAR BLOCKING ASSEMBLY, AND NAIL A DOOR POST VERTICAL RETAINER TO EACH DOOR POST VERTICAL, ONE RIGHT HAND AND ONE LEFT HAND.
2. INSTALL THE FORWARD BLOCKING ASSEMBLY, TWO SIDE FILL ASSEMBLIES "A", AND TWO SEPARATOR ASSEMBLIES "A".
3. LOAD NINE PALLET UNITS (UNIT NO. 1) AND INSTALL FOUR SEPARATOR ASSEMBLIES "A".
4. INSTALL ONE LOAD BEARING GATE "A" AND TWO SEPARATOR ASSEMBLIES "A".
5. REPEAT STEP 3.
6. INSTALL ONE LOAD BEARING GATE "B", TWO SIDE FILL ASSEMBLIES "B", AND TWO SEPARATOR ASSEMBLIES "B".
7. LOAD NINE PALLET UNITS (UNIT NO. 2) AND INSTALL FOUR SEPARATOR ASSEMBLIES "B".
8. INSTALL ONE LOAD BEARING GATE "A" AND TWO SEPARATOR ASSEMBLIES "C", LOAD SIX PALLET UNITS (UNIT NO. 2), AND INSTALL FOUR SEPARATOR ASSEMBLIES "C".
9. INSTALL THE REAR BLOCKING ASSEMBLY.
10. INSTALL THE TWO DOOR POST VERTICAL ASSEMBLIES (ONE RIGHT HAND AND ONE LEFT HAND).
11. INSTALL THE TWO LOWER DOOR SPANNER PIECES, THE DOOR SPANNER SUPPORT PIECES, AND THE TWO UPPER DOOR SPANNER PIECES.
12. INSTALL THE SOLID FILL TYPE LOAD-BLOCKING MATERIAL.

SPECIAL NOTES:

1. THE PALLETIZED SEPARATE LOADING PROJECTILE UNITS SHOWN IN THE TYPICAL LOAD ON PAGE 34 ARE BASED ON UNIT NUMBERS 1 AND 2 SHOWN ON PAGE 11. THE DEPICTED LOADING PROCEDURES ARE ALSO APPLICABLE FOR UNITS OF OTHER DIMENSIONS. REFER TO THE "LOAD PLANNING GUIDANCE" AND "LOAD PLANNING CHARTS" ON PAGES 4 AND 5 FOR ADDITIONAL GUIDANCE.
2. EXCESSIVE SLACK ACROSS THE WIDTH OF A LOAD CAN BE ELIMINATED BY LAMINATING ADDITIONAL VERTICAL PIECES TO THE SEPARATOR ASSEMBLIES.

BILL OF MATERIAL

LUMBER	LINEAR FEET	BOARD FEET
1" X 6"	118	59
2" X 3"	190	95
2" X 4"	45	30
2" X 6"	379	379
2" X 10"	91	152
4" X 4"	39	52
NAILS	NO. REQD	POUNDS
6d (2")	84	1/2
8d (2-1/2")	288	3-1/4
10d (3")	588	9-1/4
12d (3-1/4")	16	1/4
DOOR POST VERTICAL RETAINER----- 2 REQD ----- 64 LBS		
PLYWOOD, 1/2" ----- 482 SQ FT REQD ----- 663 LBS		

LOAD AS SHOWN

ITEM	QUANTITY	WEIGHT (APPROX)
UNIT NO. 1 -----	18 -----	14,940 LBS
UNIT NO. 2 -----	15 -----	18,795 LBS
DUNNAGE -----		2,275 LBS
CONTAINER -----		4,700 LBS

TOTAL WEIGHT ----- 40,710 LBS

BUFFER PIECE, 2" X 6" BY INSIDE CONTAINER HEIGHT MINUS 1/2" (REF: 7'-4-1/2") (2 REQD.). NAIL TO THE BEAM ASSEMBLIES W/3-10d NAILS AT EACH JOINT.

BEAM ASSEMBLY, 2" X 10" BY INSIDE CONTAINER WIDTH MINUS 1" (REF: 7'-7") (TRIPLED) (2 REQD.). LAMINATE THE SECOND PIECE TO THE FIRST W/11-10d NAILS. LAMINATE THE THIRD PIECE TO THE SECOND PIECE IN A LIKE MANNER.

REAR BLOCKING ASSEMBLY

INSIDE CONTAINER WIDTH MINUS 1" (REF: 7'-7")

INSIDE CONTAINER HEIGHT MINUS 1/2" (REF: 7'-4-1/2")

BUFFER PIECE, 2" X 6" BY INSIDE CONTAINER HEIGHT MINUS 1/2" (REF: 7'-1-1/2") (2 REQD.). NAIL TO THE BEAM ASSEMBLIES W/3-10d NAILS AT EACH JOINT.

SEE GENERAL NOTE "G" ON PAGE 2.

LOAD BEARING PIECE, 2" X 6" X 46" (DOUBLED) (8 REQD.). NAIL THE FIRST PIECE TO THE BEAM ASSEMBLIES W/3-10d NAILS AT EACH JOINT. LAMINATE THE SECOND PIECE TO THE FIRST W/4-10d NAILS.

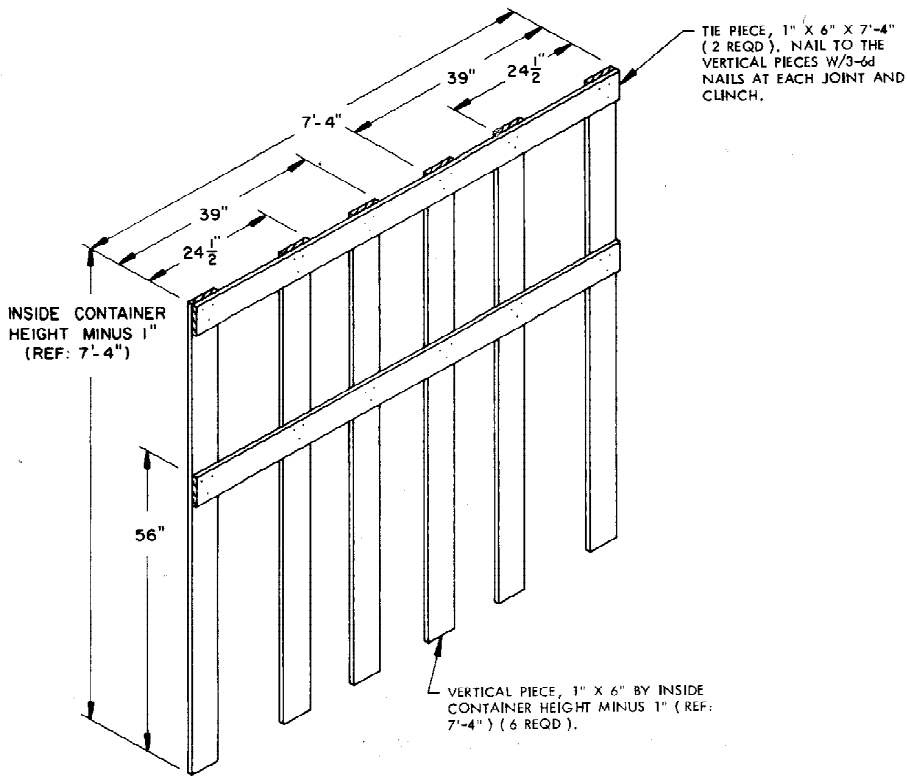
BEAM ASSEMBLY, 2" X 10" BY INSIDE CONTAINER WIDTH MINUS 1" (REF: 7'-7") (TRIPLED) (2 REQD.). LAMINATE THE SECOND PIECE TO THE FIRST W/11-10d NAILS. LAMINATE THE THIRD PIECE TO THE SECOND IN A LIKE MANNER.

LOAD BEARING PIECE, 2" X 6" X 51" (DOUBLED) (8 REQD.). NAIL THE FIRST PIECE TO THE BEAM ASSEMBLIES W/3-10d NAILS AT EACH JOINT. LAMINATE THE SECOND PIECE TO THE FIRST W/4-10d NAILS.

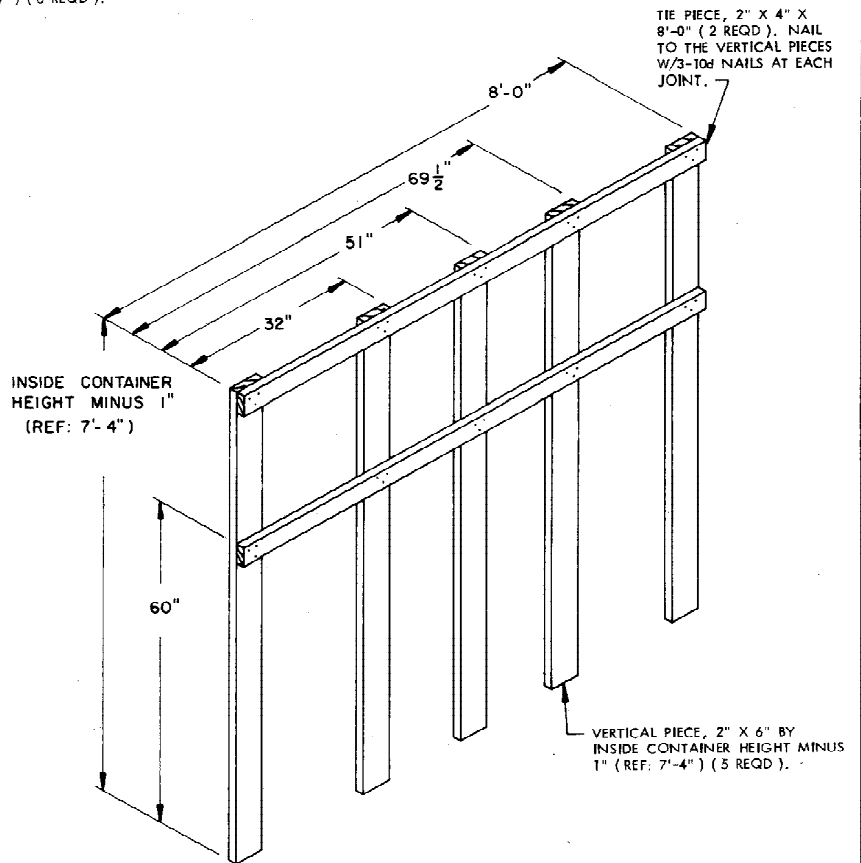
INSIDE CONTAINER HEIGHT MINUS 1/2" (REF: 7'-1-1/2")

INSIDE CONTAINER WIDTH MINUS 1" (REF: 7'-7")

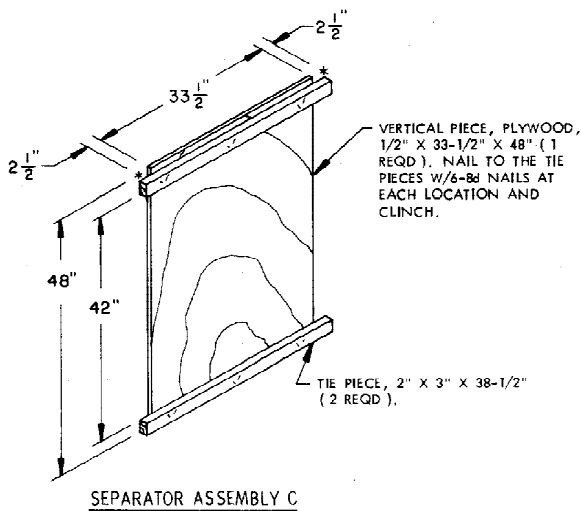
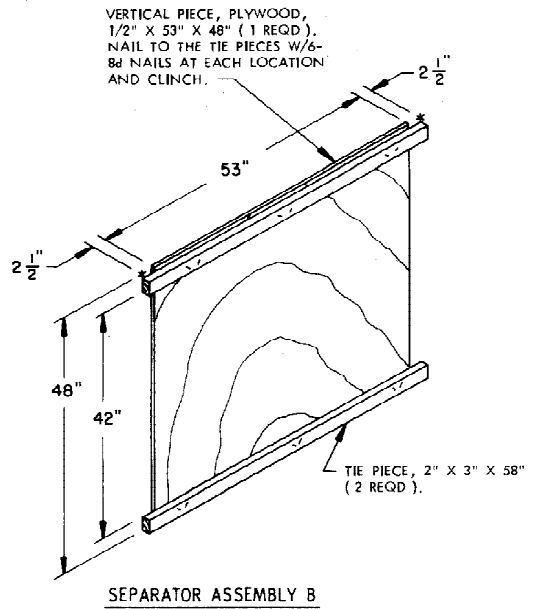
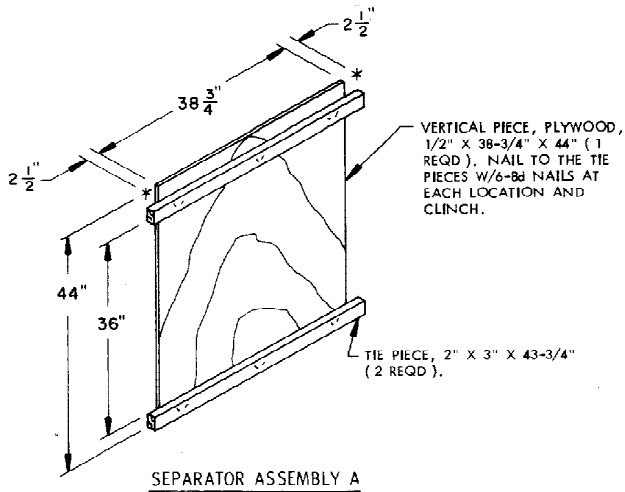
FORWARD BLOCKING ASSEMBLY

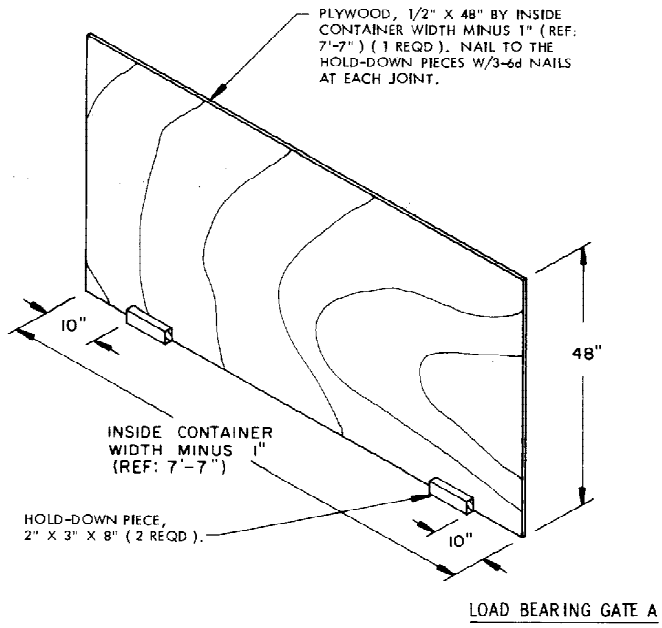
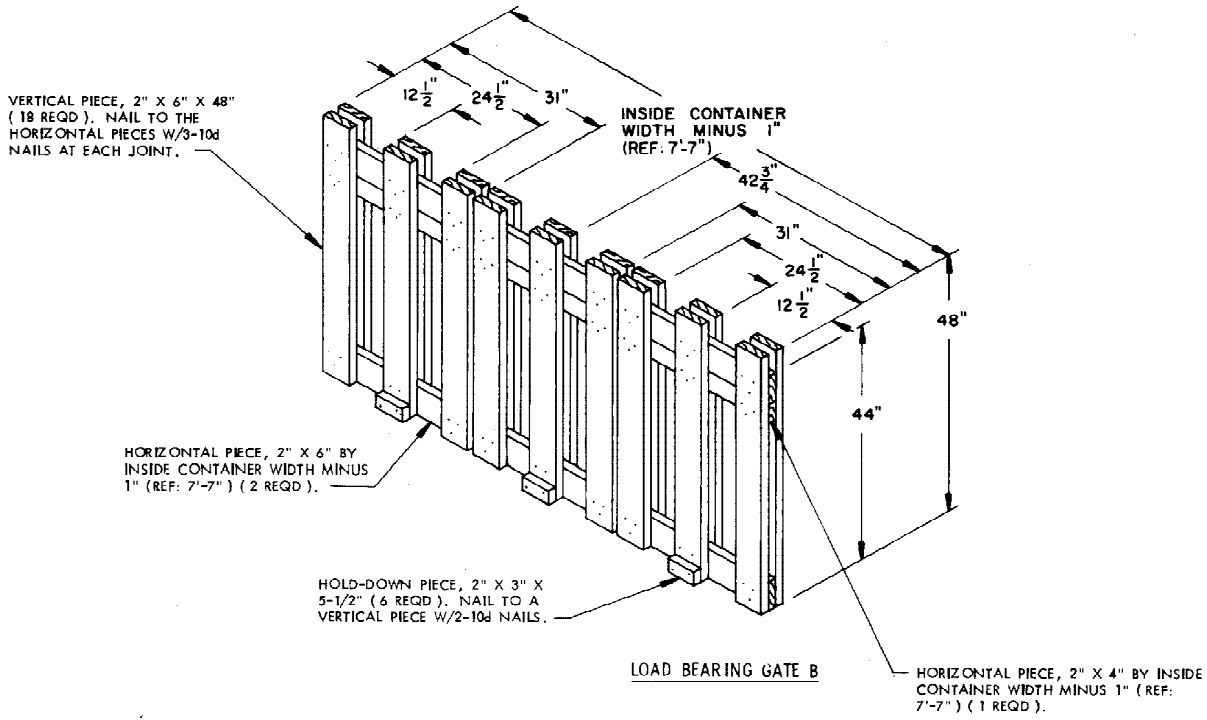


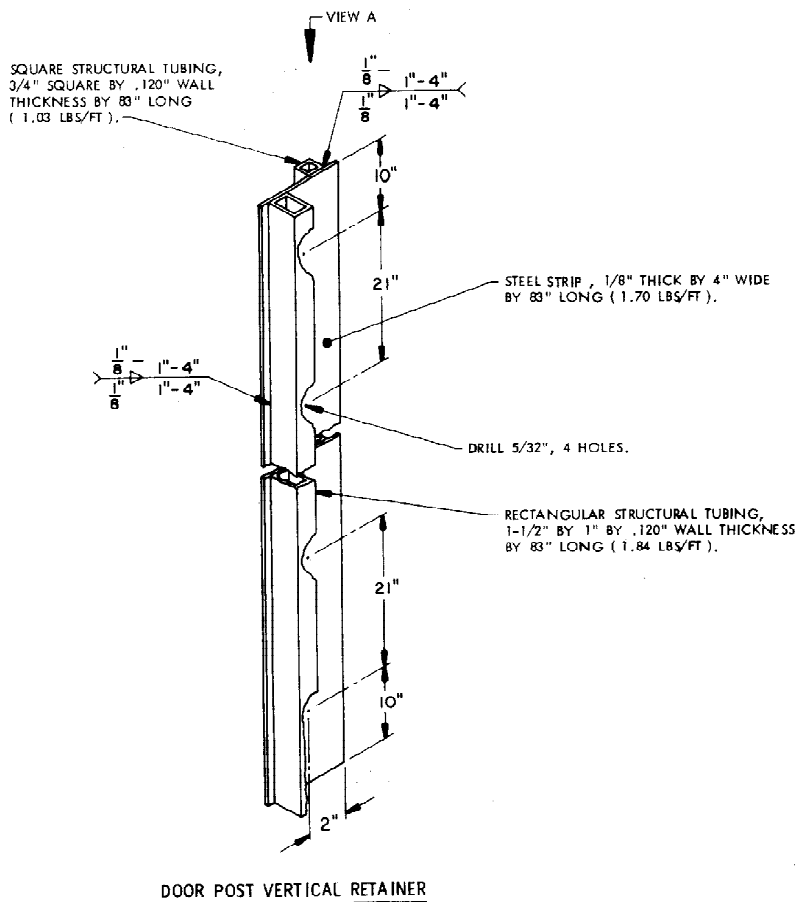
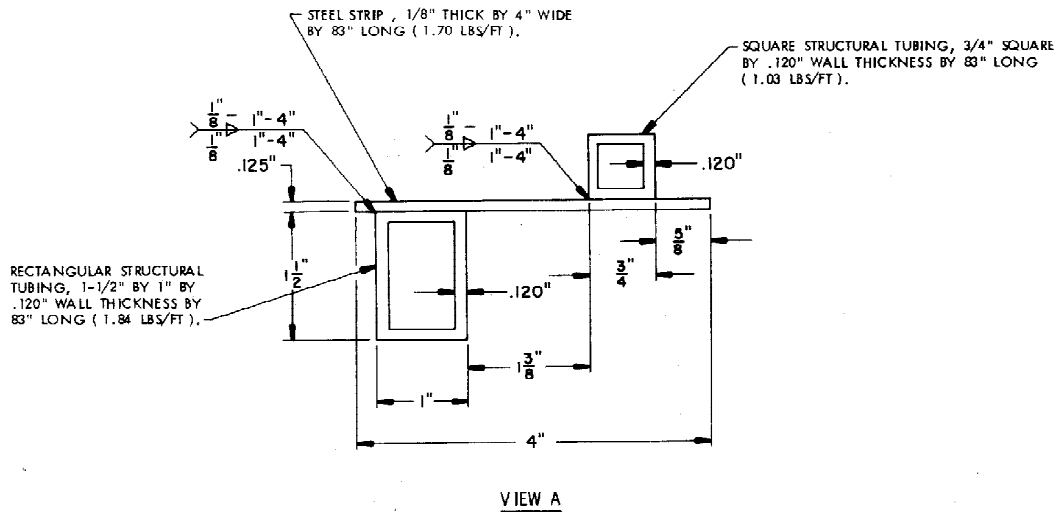
SIDE FILL ASSEMBLY A

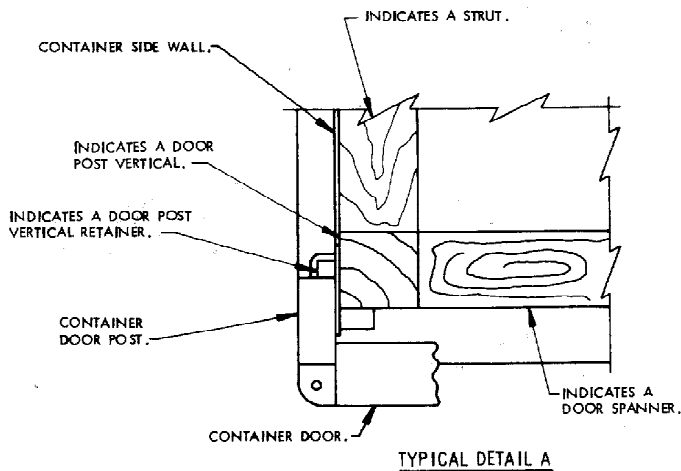


SIDE FILL ASSEMBLY B

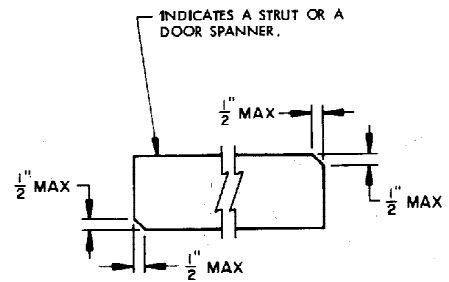






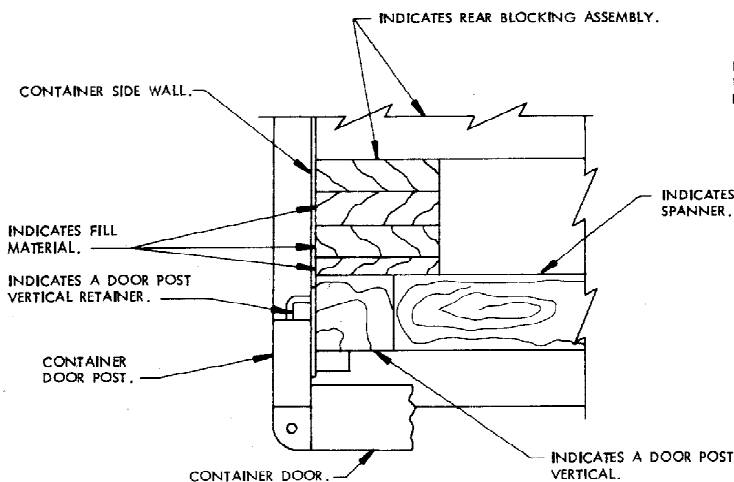


A PARTIAL PLAN VIEW OF THE LEFT REAR PORTION OF THE CONTAINER IS SHOWN DEPICTING THE PROPER POSITION OF THE DOOR POST VERTICAL AND ADJACENT DUNNAGE PIECES.



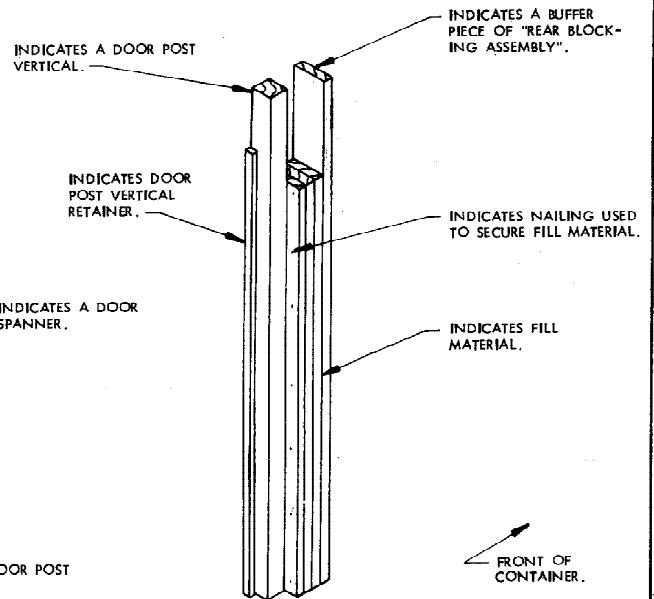
BEVEL-CUT

IF DESIRED, EACH END OF A DOOR SPANNER PIECE OR A STRUT MAY BE BEVEL-CUT AS SHOWN ABOVE TO FACILITATE THE ACHIEVEMENT OF A TIGHT DOOR-POST-TO-DOOR-POST FIT OR A TIGHT REAR-OF-LOAD FIT.



TYPICAL DETAIL B

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



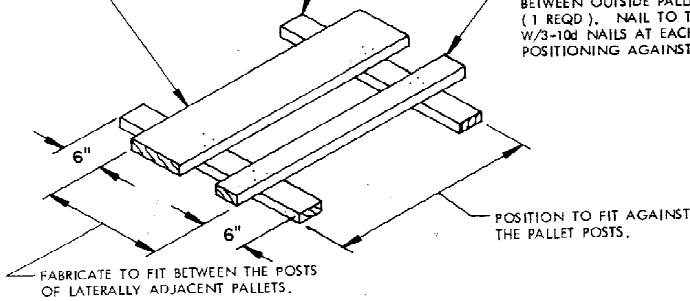
TYPICAL DETAIL C

DOOR SPANNERS AND STRUT LEDGERS HAVE BEEN OMITTED FOR CLARITY PURPOSES.

BUFFER PIECE, 2" X 8" BY THE DISTANCE BETWEEN OUTSIDE PALLET POSTS PLUS 6" (1 REQD.). POSITION AGAINST THE PALLET POSTS AND NAIL TO THE RETAINER PIECE W/3-10d NAILS AT EACH JOINT. SEE THE "ALTERNATIVE BUFFER PIECE" AT RIGHT.

RETAINER PIECE, 2" X 4" BY LENGTH TO SUIT (2 REQD.). POSITION TO EXTEND UNDER THE LATERALLY ADJACENT PALLET AND AGAINST THE PALLET POSTS.

BUFFER PIECE, 2" X 4" BY THE DISTANCE BETWEEN OUTSIDE PALLET POSTS PLUS 6" (1 REQD.). NAIL TO THE RETAINER PIECES W/3-10d NAILS AT EACH JOINT PRIOR TO POSITIONING AGAINST THE PALLET POSTS.

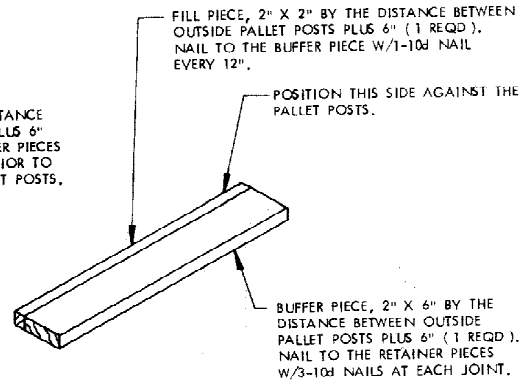


TYPICAL ANTI-SWAY BRACE A

SEE THE SPECIAL NOTES BELOW.

ALTERNATIVE BUFFER PIECE

SEE SPECIAL NOTE "2.F" BELOW.

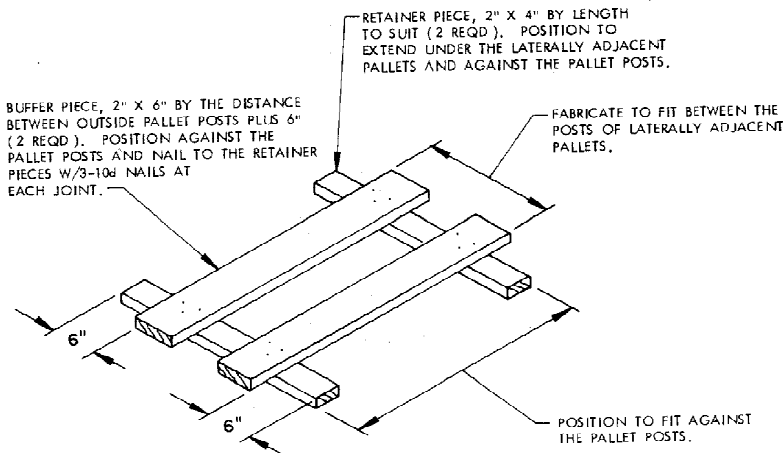


SPECIAL NOTES (FOR TYPICAL ANTI-SWAY BRACE A):

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

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 PALLET.
 - A. POSITION THE FIRST RETAINER PIECE BETWEEN THE CENTER PALLET POST AND THE PALLET WHICH IS FURTHEST AWAY. THE RETAINER PIECE IS TO SPAN THE VOID BETWEEN LATERALLY ADJACENT PALLET.
 - B. POSITION THE SECOND RETAINER PIECE AGAINST THE INSIDE OF THE NEAREST PALLET POST SO AS TO SPAN THE VOID BETWEEN LATERALLY ADJACENT PALLET.
 - 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 PALLET IS LESS THAN 11-1/4", THE BUFFER PIECES MAY BE 2" X 4" MATERIAL IN LIEU OF 2" X 6" MATERIAL.



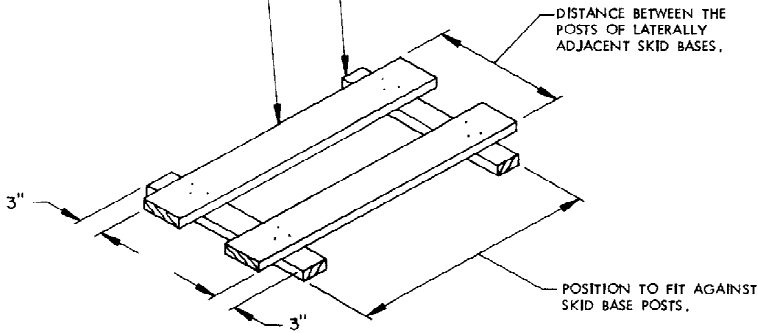
TYPICAL ANTI-SWAY BRACE B

SEE THE SPECIAL NOTES AT RIGHT.

BUFFER PIECE, 2" X 6" BY THE DISTANCE BETWEEN OUTSIDE SKID BASE POSTS PLUS 6" (2 REQD.). POSITION AGAINST THE POSTS AND NAIL TO THE RETAINER PIECES W/3-10d NAILS AT EACH JOINT.

RETAINER PIECE, 2" X 4" BY LENGTH TO SUIT (2 REQD.). POSITION TO EXTEND UNDER THE LATERALLY ADJACENT SKID BASES AND AGAINST THE POSTS.

DISTANCE BETWEEN THE POSTS OF LATERALLY ADJACENT SKID BASES.



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.

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

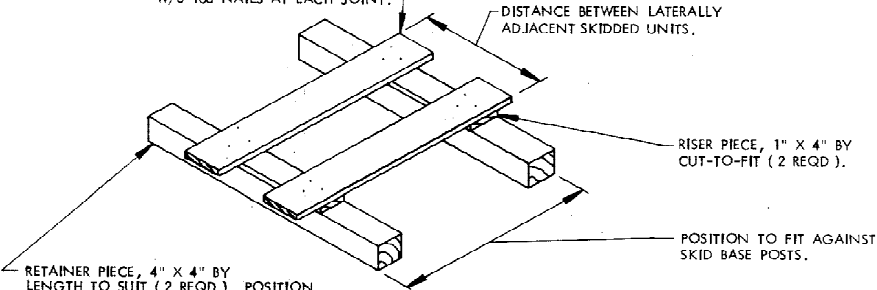
1. THE "TYPICAL ANTI-SWAY BRACE C" SHOWN AT LEFT IS FOR USE BETWEEN SKIDDED UNITS ASSEMBLED ON THE TYPE II SKID BASE WHEN THE UNITS ARE POSITIONED WITH THE SKIDDED UNIT LENGTH PARALLEL TO THE CONTAINER SIDEWALL.
2. THE ASSEMBLY MUST BE FABRICATED IN PLACE BETWEEN THE SKID BASES.
 - A. POSITION THE FIRST 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.

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".

BUFFER PIECE, 2" X 6" BY UNIT LENGTH MINUS 2" (2 REQD.). POSITION AGAINST THE SKIDDED UNIT AND NAIL THROUGH THE RISER PIECE INTO THE RETAINER PIECE W/3-16d NAILS AT EACH JOINT.

DISTANCE BETWEEN LATERALLY ADJACENT SKIDDED UNITS.

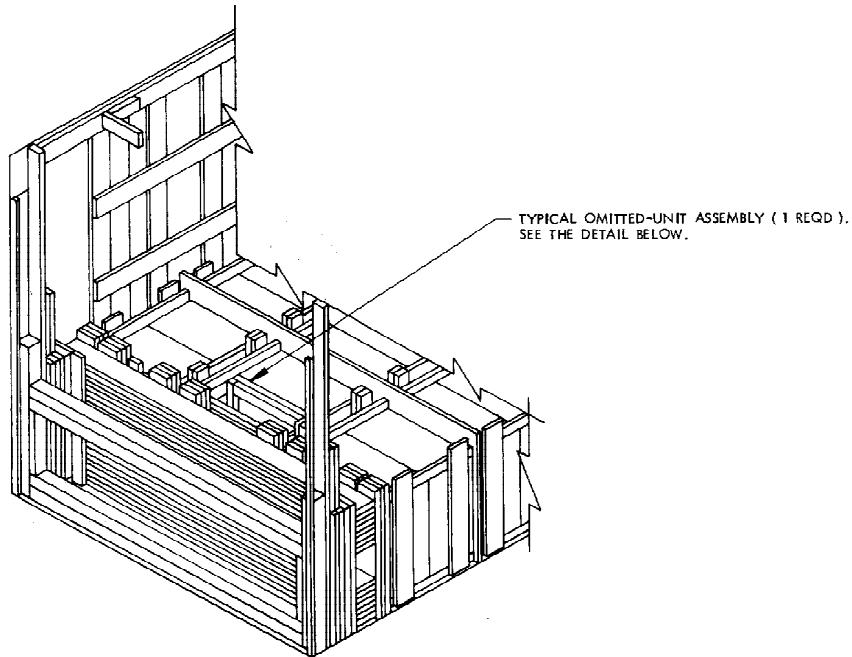


RISER PIECE, 1" X 4" BY CUT-TO-FIT (2 REQD.).

POSITION TO FIT AGAINST SKID BASE POSTS.

RETAINER PIECE, 4" X 4" BY LENGTH TO SUIT (2 REQD.). POSITION TO EXTEND UNDER THE LATERALLY ADJACENT SKID BASES AND AGAINST THE SKID POSTS. IF THE HEIGHT OF THE FORKLIFT OPENINGS OF SOME SKID BASES WILL NOT PERMIT THE USE OF 4" X 4" MATERIAL, 3" X 4" MATERIAL MAY BE SUBSTITUTED.

TYPICAL ANTI-SWAY BRACE D
SEE THE SPECIAL NOTES AT RIGHT.

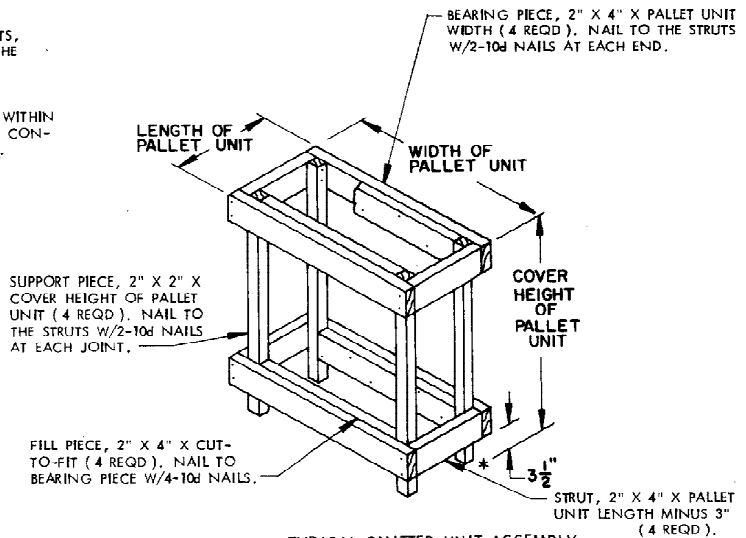


TYPICAL REDUCED LOAD

REDUCED LOAD PROVISIONS

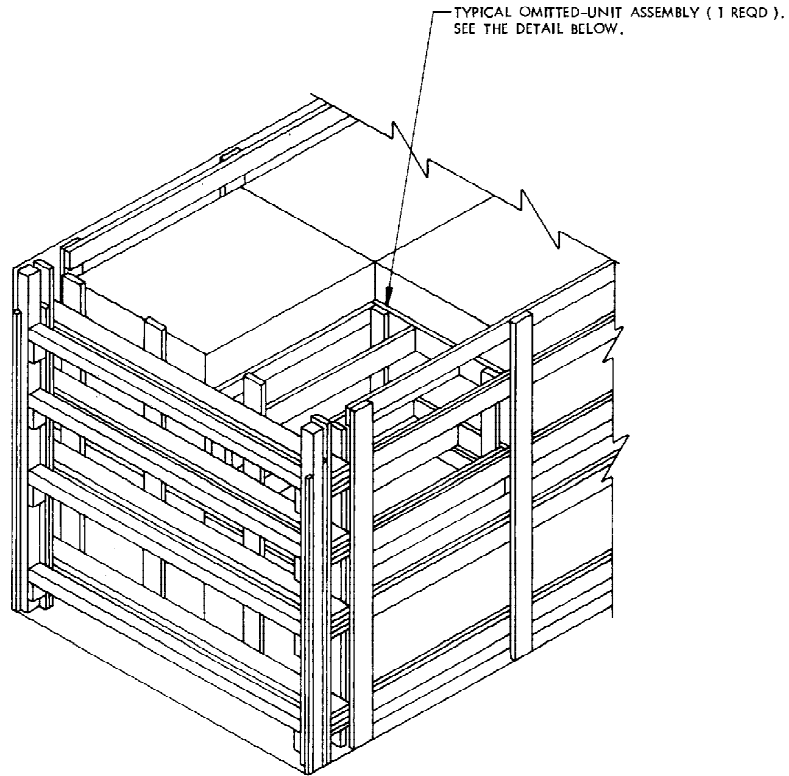
WHEN A CONTAINER IS TO BE LOADED WITH A REDUCED QUANTITY OF LADING UNITS, THE LENGTHWISE CENTER OF GRAVITY OF A LOAD MUST BE WITHIN 12", IN EITHER DIRECTION, OF THE MIDPOINT IN A COMMERCIAL INTERMODAL CONTAINER, AND THE FOLLOWING CRITERIA WILL APPLY:

- A. IF A LOAD IS REDUCED BY ONLY A SMALL QUANTITY OF LADING UNITS, THE UNITS NORMALLY MAY BE ELIMINATED FROM THE REAR OF THE LOAD AS SHOWN ABOVE.
- B. IF A LOAD IS REDUCED BY A LARGE QUANTITY OF LADING UNITS, THE UNITS SHOULD BE ELIMINATED FROM THE MIDDLE ROW IN THE CONTAINER, AS REQUIRED, SO THAT A SYMMETRICAL WEIGHT DISTRIBUTION IS ACHIEVED.
- C. LADING UNITS WILL ONLY BE OMITTED FROM THE MIDDLE ROW WITHIN THE CONTAINER. LADING UNITS IN THE OUTSIDE ROWS OF THE CONTAINER ARE NOT TO BE REPLACED BY OMITTED-UNIT ASSEMBLIES.



TYPICAL OMITTED-UNIT ASSEMBLY

THE ASSEMBLY DEPICTED ABOVE IS FOR USE IN PLACE OF AN OMITTED PALLET UNIT. CAUTION: AN ASSEMBLY MUST ONLY BE PLACED WITHIN THE MIDDLE ROW OF A LOAD BAY. SEE THE "TYPICAL REDUCED-LOAD" DETAIL ABOVE.



TYPICAL REDUCED LOAD

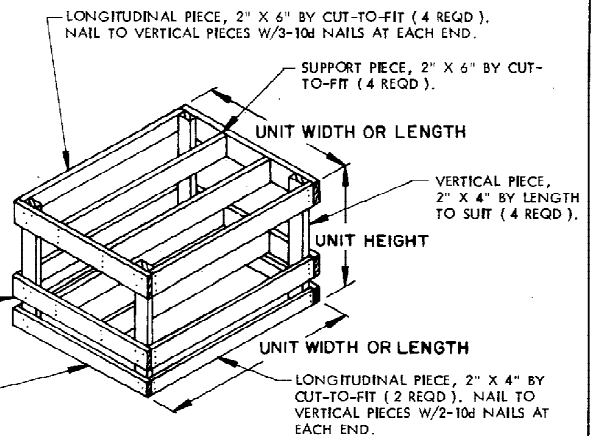
REDUCED LOAD PROVISIONS

WHEN A CONTAINER IS TO BE LOADED WITH A REDUCED QUANTITY OF LADING UNITS, THE LENGTHWISE CENTER OF GRAVITY OF A LOAD MUST BE WITHIN 12", IN EITHER DIRECTION, OF THE MIDPOINT IN A CONTAINER, 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, AS SHOWN ABOVE.
- 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.

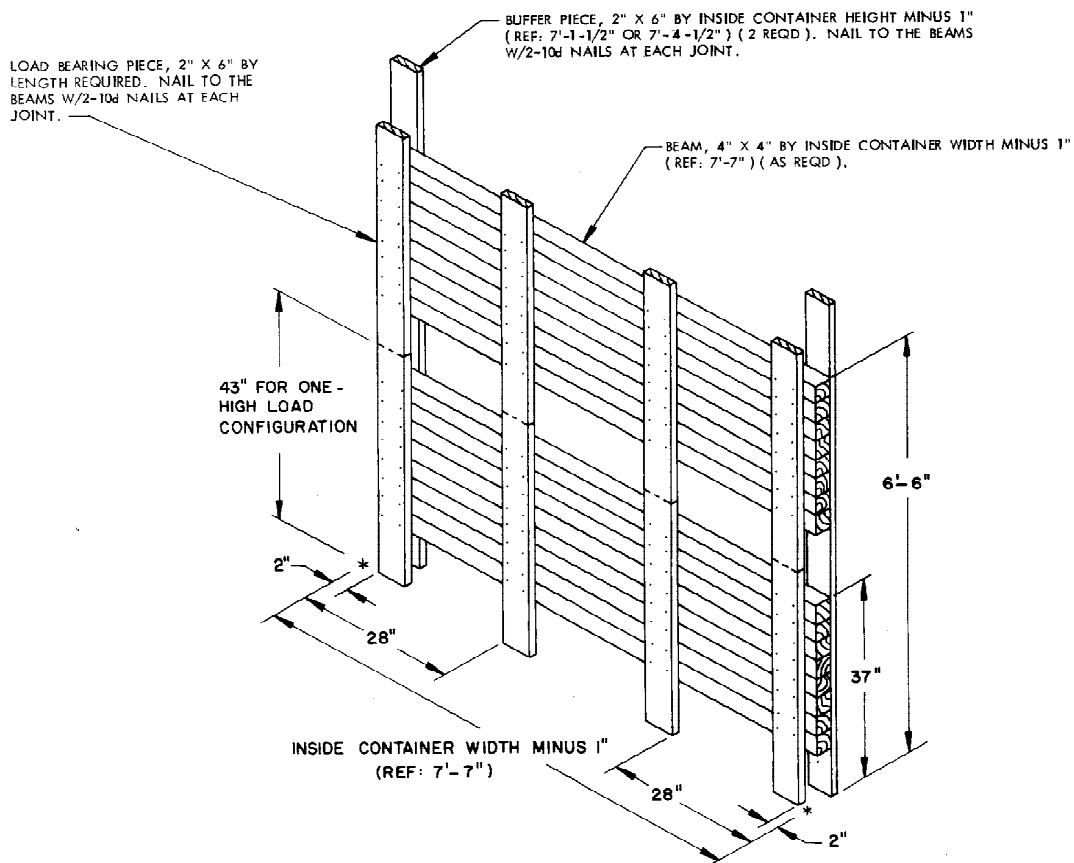
LATERAL PIECE, 2" X 6" BY CUT-TO-FIT (4 REQD). NAIL TO VERTICAL PIECES W/3-10d NAILS AT EACH END AND TO THE SUPPORT PIECES W/3-10d NAILS AT EACH JOINT.

LATERAL PIECE, 2" X 4" BY CUT-TO-FIT (2 REQD). NAIL TO THE VERTICAL PIECES W/2-10d NAILS AT EACH END.



TYPICAL OMITTED-UNIT ASSEMBLY

THE ASSEMBLY AS SPECIFIED ABOVE IS FOR USE IN PLACE OF AN OMITTED PALLET OR SKIDDED UNIT, AND WILL BE REQUIRED FOR SOME LOADS TO PROVIDE A TWO OR THREE-WIDE LOADING PATTERN THROUGHOUT THE LENGTH OF THESE LOADS.



TYPICAL ALTERNATIVE FORWARD/REAR BLOCKING ASSEMBLY

SEE SPECIAL NOTES BELOW.

SPECIAL NOTES:

1. IN SOME CONTAINER LOADS USING FILL MATERIAL FOR THE ACHIEVEMENT OF A TIGHT REAR-OF-LOAD FIT, VARIANCE IN THE PALLET OR SKIDDED UNIT DIMENSIONS MAY NECESSITATE THE USE OF TYPICAL ALTERNATIVE FORWARD AND/OR REAR BLOCKING ASSEMBLIES. THESE ALTERNATIVE BLOCKING ASSEMBLIES, AS DEPICTED ABOVE, UTILIZE NOMINAL 4" X 4" MATERIAL FOR THE BEAMS INSTEAD OF THE 2" X 6" MATERIAL ELSEWHERE SPECIFIED WITHIN THIS DOCUMENT.
2. DIMENSIONS SHOWN IN THE DETAIL ABOVE ARE TYPICAL DIMENSIONS. ACTUAL DIMENSIONS AND PIECE PLACEMENT ARE DEPENDENT UPON THE SPECIFIC PALLET OR SKIDDED UNIT BEING LOADED INTO A CONTAINER WITH THE ABOVE BLOCKING ASSEMBLIES. SEE SPECIAL NOTES ON PAGE 4 FOR ADDITIONAL GUIDANCE.
3. THE BLOCKING ASSEMBLY DEPICTED ABOVE IS DESIGNED TO BE USED WITH A TWO-LAYER LOAD CONFIGURATION. THE ASSEMBLY CAN BE USED WITH A ONE-LAYER LOAD CONFIGURATION BY DELETING THE UPPER EIGHT BEAMS AND CUTTING THE LOAD BEARING PIECES TO A HEIGHT OF 6" ABOVE THE TOP OF THE PALLET OR SKIDDED UNIT.
4. THE BLOCKING ASSEMBLY DEPICTED ABOVE CAN ONLY BE USED IN PLACE OF AN ASSEMBLY UTILIZING 2" X 6" MATERIAL FOR BEAMS IN THE BEAM ASSEMBLIES. THIS ASSEMBLY WILL NOT BE USED WHEN THE BEAM ASSEMBLIES CONSIST OF 2" X 8" OR 2" X 10" MATERIAL.