

APPROVED BY
U.S. COAST GUARD

NOTE: CONTAINERS OF PROPELLING CHARGES, CG CLASS II-A ARE AUTHORIZED BY TITLE 46 CFR (PARAGRAPH 146.29-42) FOR TRANSPORT BY WATER CARRIER WITHOUT THE SPECIFIC APPROVAL OF THE COAST GUARD.

APPROVED BY
BUREAU OF EXPLOSIVES

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DATE *2/1/82*

LOADING AND BRACING¹ WITH WOODEN DUNNAGE IN COMMERCIAL CONTAINERS OF PALLETIZED UNITS OF PROPELLING CHARGES PACKED IN CYLINDRICAL METAL CONTAINERS

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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THIS DRAWING SUPERSEDES INTERIM PROCEDURAL DRAWINGS:
D-SARAC-4393, DATED MARCH 1977
D-SARAC-4404, DATED MAY 1979
D-SARAC-4405, DATED MAY 1979

DO NOT SCALE

REVISIONS											
			<small>APPROVED BY</small> <i>[Signature]</i> <small>FROM ENG</small> <i>[Signature]</i> <small>CHIEF</small> <i>[Signature]</i> <small>LEAD DESIGNER</small> <i>[Signature]</i>								
			<small>APPROVED, U. S. ARMY ARMAMENT MATERIEL READINESS COMMAND</small> <i>[Signature]</i>								
			<small>APPROVED BY ORDER OF COMMANDING GENERAL, U. S. ARMY MATERIEL DEVELOPMENT AND READINESS COMMAND (DARCOM)</small> <i>[Signature]</i> <small>U. S. ARMY DEFENSE AMMUNITION CENTER AND SCHOOL</small>								
U. S. ARMY DARCOM DRAWING MARCH 1982											
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CLASS	DIVISION	DRAWING	FILE								
19	48	4154	15PM 1002								

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 UNLOADING PROCEDURES SPECIFIED HEREIN ARE APPLICABLE TO PALLETIZED UNITS OF PROPELLING CHARGES PACKED IN CYLINDRICAL METAL CONTAINERS. SUBSEQUENT REFERENCE TO PALLET UNIT MEANS THE PALLET UNIT WITH AMMUNITION ITEMS. **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'-6" HIGH COMMERCIAL INTERMODAL FREIGHT CONTAINER, WITH INSIDE DIMENSIONS OF 19'-4" LONG BY 92" WIDE BY 95" HIGH. ALTHOUGH THE LOADS AS SHOWN ARE BASED ON AN 8'-6" HIGH CONTAINER, AN 8'-0" HIGH CONTAINER IS PREFERRED FOR SHIPPING THE DEPICTED LOADS. WHEN AN 8'-0" HIGH CONTAINER IS USED, THE HEIGHT OF SOME DUNNAGE ASSEMBLIES WILL HAVE TO BE LOWERED BY REMOVING SOME MATERIAL FROM THE TOP OF SOME OF THE VERTICAL PIECES. 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 PALLET 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 SIDEWALL 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. NAIL EACH ADDITIONAL PIECE TO THE SIDE FILL ASSEMBLIES 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 PALLET 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 6" MATERIAL IS ACTUALLY 3/4" THICK BY 5-1/2" WIDE AND 2" X 6" MATERIAL IS ACTUALLY 1-1/2" THICK BY 5-1/2" WIDE.
- F. A STAGGERED NAILING PATTERN WILL BE USED 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. A PIECE 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. A PIECE OF 2" X 4", 2" X 3", OR A SPECIAL WIDTH PIECE CUT-TO-FIT CAN BE USED. THIS FILL PIECE WILL BE NAILED WITH ONE APPROPRIATELY SIZED NAIL EVERY 12". THIS PIECE IS 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-830; 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 DUNNAGE PIECES FROM INTERLOCKING OR CATCHING ON OTHER PROJECTIONS WHEN LATERALLY ADJACENT LADING UNITS ARE BEING 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. THE UNIT LOADS SPECIFIED AS "STANDARD UNITS" WITHIN THE CHARTS ON PAGES 3 AND 4 ARE ACTUALLY THE UNIT LOADS DEPICTED ON PAGES 5 THROUGH 11. THE "MODIFIED UNITS" ARE THE "STANDARD UNITS" WITH A LAYER OF CONTAINERS EITHER ADDED OR DELETED. ADDITIONALLY, HEIGHTS ARE SPECIFIED FOR BOTH UNITS IN THE DETAILS ON PAGES 5 THROUGH 11.

SPECIAL NOTES:

1. THE FOLLOWING SPECIAL NOTES AND THE TWO CHARTS ON PAGES 4 AND 5 ARE PRESENTED AS GUIDANCE IN DETERMINING THE QUANTITY OF PROPELLING CHARGES WHICH CAN BE LOADED IN A 20' LONG BY 8' WIDE BY 8' OR 8'-6" HIGH COMMERCIAL INTERMODAL FREIGHT CONTAINER.
2. CHART NO. 1 SPECIFIES THE MAXIMUM NUMBER OF PALLET UNITS AND THE MAXIMUM NUMBER OF PROPELLING CHARGE CONTAINERS THAT CAN BE PLACED IN A 20' LONG COMMERCIAL INTERMODAL FREIGHT CONTAINER; REGARDLESS OF WHETHER THE PROPELLING CHARGE CONTAINERS ARE PALLETIZED UTILIZING THE ALTERNATED CONTAINER METHOD, THE FLAT DUNNAGE METHOD, OR THE ROUTED DUNNAGE METHOD.
3. CHART NO. 2 SPECIFIES THE NUMBER OF EITHER 2" X 6" OR 4" X 4" BEAMS REQUIRED PER BEAM ASSEMBLY AND THE NUMBER OF BEAM ASSEMBLIES REQUIRED FOR THE FORWARD AND REAR BLOCKING ASSEMBLIES FOR ALL OF THE SERIES OF PROPELLING CHARGE CONTAINERS AND ALL METHODS OF UNITIZATION. NOTE: WHEN USING 4" X 4" BEAMS IN THE BEAM ASSEMBLIES, THE BEAMS ARE TO BE IN CONTACT WITH EACH OTHER, HOWEVER, THEY ARE NOT TO BE LAMINATED TOGETHER. ONLY THE 2" X 6" BEAMS WILL BE LAMINATED TOGETHER WHEN USED IN BEAM ASSEMBLIES.
4. WHENEVER POSSIBLE, ALL BEAM ASSEMBLIES WILL BE CENTERED ON THE STRONG PORTIONS OF THE UNIT LOADS AND WILL BE EVENLY DISTRIBUTED BETWEEN LAYERS. THE STRONG PORTIONS OF THE UNIT LOADS ARE CONSIDERED TO BE THE DUNNAGE PIECES OR ASSEMBLIES OR THE JOINTS BETWEEN LAYERS OF CONTAINERS ON THE PALLET. FOR ADDITIONAL GUIDANCE SEE THE FORWARD AND REAR BLOCKING ASSEMBLY DETAILS ON PAGES, 14, 18, 19, 22, 23, 26, AND 30.
5. 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 AND REAR BLOCKING ASSEMBLY BEAM ASSEMBLIES.
6. IN ORDER TO PREVENT "METAL-TO-METAL" CONTACT BETWEEN THE PROPELLING CHARGE CONTAINERS AND THE SIDEWALLS OF SOME INTERMODAL FREIGHT CONTAINERS, DUNNAGE ASSEMBLIES SHOWN AS "SIDE FILL ASSEMBLIES" ON PAGES 15, 18, 23, AND 31 MUST BE INSTALLED WITHIN THE LOAD. THESE ASSEMBLIES ARE ALSO REQUIRED WHEN THE GROSS WEIGHT OF THE LADING EXCEEDS 26,880 POUNDS (60% OF THE MAXIMUM GROSS WEIGHT OF THE CONTAINER). WHENEVER THE GROSS WEIGHT OF THE LADING IS LESS THAN 26,880 POUNDS, THERE IS MORE THAN 1-1/2" OF UNBLOCKED SPACE ACROSS THE WIDTH OF THE LOAD BAY, AND THE DUNNAGE ASSEMBLIES OR PIECES WITHIN THE UNIT LOAD PRECLUDE "METAL-TO-METAL" CONTACT OF THE PROPELLING CHARGE CONTAINERS AND THE CONTAINER SIDEWALL, THIS UNBLOCKED SPACE MUST BE FILLED OUT BY EITHER PLACING SIDE FILL ASSEMBLIES AT THE SIDES OF THE LOAD OR ANTI-SWAY BRACING IN THE CENTER OF THE LOAD. FOR ADDITIONAL GUIDANCE IN THE CONSTRUCTION OF ANTI-SWAY BRACES, SEE THE "ANTI-SWAY BRACE" DETAILS ON PAGE 27.
7. THE HEIGHT DIMENSIONS DENOTED BY "*" IN THE "PALLET UNIT DETAILS" ON PAGES 5 THROUGH 11 ARE FOR THE "STANDARD UNITS" SPECIFIED IN CHART NO. 1 AND CHART NO. 2. THE UNMARKED HEIGHTS IN THE "PALLET UNIT DETAILS" ARE FOR THE "MODIFIED UNITS".

CHART NO. 1

UNIT NO.	PROPELLING CHARGE CONTAINER SERIES	NUMBER OF PALLET UNITS PER INTERMODAL CONTAINER						NUMBER OF PROPELLING CHARGE PER INTERMODAL CONTAINER					
		STANDARD UNITS			MODIFIED UNITS			STANDARD UNITS			MODIFIED UNITS		
		ALTERNATED CONTAINERS	FLAT DUNNAGE	ROUTED DUNNAGE	ALTERNATED CONTAINERS	FLAT DUNNAGE	ROUTED DUNNAGE	ALTERNATED CONTAINERS	FLAT DUNNAGE	ROUTED DUNNAGE	ALTERNATED CONTAINERS	FLAT DUNNAGE	ROUTED DUNNAGE
1	M10	14	7	7	14	14	14	168	112	112	224	168	168
2	M13	—	14	14	—	14	14	—	700	700	—	560	560
3	M14	18	8	8	18	16	16	720	336	336	864	560	560
4	M16	16	8	8	16	16	16	384	240	240	480	384	384
5	M18	—	8	8	—	16	16	—	400	400	—	640	640
6	M19	—	12	12	—	12	12	—	384	384	—	288	288
7	M460 W/O Protective Assembly	14	14	14	7	14	14	224	224	224	140	168	168
8	M460 W/Protective Assembly	—	14*	—	—	14*	—	—	224	—	—	280	—
9	PA37	18	10	9	18	20	18	432	250	270	540	400	432
10	PA66	16	7	8	16	14	16	240	140	160	320	210	240
11	PA68	18	16	16	18	8	8	432	384	384	540	240	240
12	PA75	20	18	20	12	18	20	600	540	600	432	432	480
13	PA91	—	18	—	—	9	—	—	540	—	—	324	—
14	PA92	—	18	—	—	9	—	—	360	—	—	225	—
15	PA93	—	14	—	—	7	—	—	448	—	—	280	—
16	PA94	—	18	—	—	9	—	—	756	—	—	441	—
17	PA95	—	16	—	—	8	—	—	800	—	—	480	—
18	PA96	—	18	—	—	9	—	—	540	—	—	324	—
19	PA97	—	16	—	—	8	—	—	800	—	—	480	—
20	PA99	—	18	—	—	9	—	—	540	—	—	324	—
21	PA100	—	18	—	—	18	—	—	630	—	—	756	—

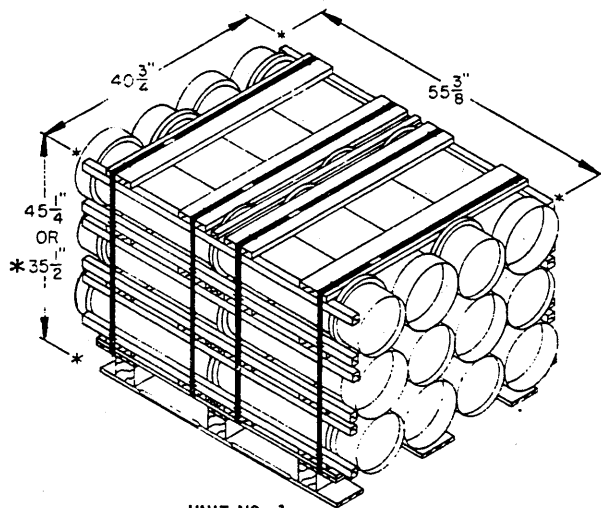
⊙ CAUTION: ONLY CONTAINERS WITH A MINIMUM INSIDE HEIGHT DIMENSION OF 93" AND A MINIMUM DOOR OPENING HEIGHT DIMENSION OF 90" CAN BE USED TO ACHIEVE A TWO-HIGH PALLET UNIT LOAD.

*ALTHOUGH UNIT NO. 8 LOAD QUANTITIES ARE SPECIFIED IN THE "FLAT DUNNAGE" COLUMNS OF THE ABOVE CHART, THE UNIT IS ACTUALLY NEITHER A FLAT DUNNAGE UNIT, A ROUTED DUNNAGE UNIT NOR AN ALTERNATED CONTAINER UNIT DUE TO THE PALLITIZATION PROCEDURES UTILIZING THE WOODEN PROTECTIVE ASSEMBLY DUNNAGE.

CHART NO. 2

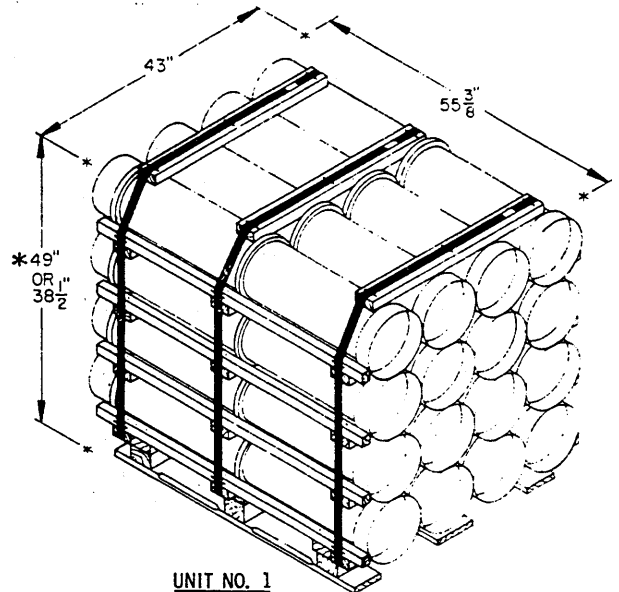
UNIT NO.	PROPELLING CHARGE CONTAINER SERIES	METHOD OF UNITIZATION	STANDARD UNITS			MODIFIED UNITS		
			FORWARD/REAR BLOCKING ASSEMBLY			FORWARD/REAR BLOCKING ASSEMBLY		
			NOMINAL SIZE BEAM LUMBER	NUMBER OF BEAM ASSEMBLIES REQUIRED	NUMBER OF BEAMS PER BEAM ASSEMBLY	NOMINAL SIZE BEAM LUMBER	NUMBER OF BEAM ASSEMBLIES REQUIRED	NUMBER OF BEAMS PER BEAM ASSEMBLY
1	M10	ALTERNATED	2" X 6"	4	3	2" X 6"	4	4
1 ●	M10	FLAT & ROUTED	2" X 6"	2	4	2" X 6"	4	3
2 ●	M13	FLAT & ROUTED	2" X 6"	4	3	2" X 6"	4	3
3	M14	ALTERNATED	4" X 4"	2	6	4" X 4"	2	7
3	M14	FLAT & ROUTED	2" X 6"	2	3	2" X 6"	4	3
4	M16	ALTERNATED	2" X 6"	4	3	2" X 6"	4	4
4	M16	FLAT	4" X 4"	2	4	4" X 4"	4	3
4	M16	ROUTED	2" X 6"	2	4	2" X 6"	4	3
5	M18	FLAT & ROUTED	4" X 4"	2	4	4" X 4"	4	3
6 ●	M19	FLAT & ROUTED	2" X 6"	4	3	2" X 6"	4	2
7	M460 W/O Protective Assembly	ALTERNATED	2" X 6"	4	4	2" X 6"	2	4
7	M460 W/O Protective Assembly	FLAT & ROUTED	2" X 6"	4	4	2" X 6"	4	3
8	M460 W/Protective Assembly		2" X 6"	4	4	2" X 6"	4	3
9	PA37	ALTERNATED	2" X 6"	4	4	2" X 6"	4	4
9	PA37	FLAT	2" X 6"	2	4	2" X 6"	4	3
9	PA37	ROUTED	4" X 4"	2	4	4" X 4"	2	7
10	PA66	ALTERNATED	2" X 6"	4	3	2" X 6"	4	4
10	PA66	FLAT	2" X 6"	2	3	2" X 6"	4	3
10 ●	PA66	ROUTED	4" X 4"	1	8	4" X 4"	4	3
11	PA68	ALTERNATED	4" X 4"	4	3	4" X 4"	4	4
11	PA68	FLAT & ROUTED	2" X 6"	4	3	2" X 6"	2	4
12	PA75	ALTERNATED	2" X 6"	4	3	4" X 4"	2	4
12 ●	PA75	FLAT	2" X 6"	4	3	2" X 6"	4	3
12	PA75	ROUTED	4" X 4"	4	4	4" X 4"	4	3
13	PA91	FLAT	2" X 6"	4	4	2" X 6"	2	5
14	PA92	FLAT	2" X 6"	4	4	2" X 6"	2	4
15	PA93	FLAT	2" X 6"	4	3	2" X 6"	2	4
16	PA94	FLAT	2" X 6"	4	3	2" X 6"	2	4
17	PA95	FLAT	2" X 6"	4	3	2" X 6"	2	4
18	PA96	FLAT	2" X 6"	4	4	2" X 6"	2	4
19	PA97	FLAT	2" X 6"	4	3	2" X 6"	2	4
20	PA99	FLAT	2" X 6"	4	3	2" X 6"	2	4
21	PA100	FLAT	2" X 6"	4	3	2" X 6"	4	3

NOTE: THE UNITS DENOTED BY " ● " ABOVE ARE SHOWN AS TYPICAL CONTAINER LOADS WITHIN THIS DRAWING. DUNNAGE ASSEMBLY DETAILS FOR EACH LOAD ARE ALSO DEPICTED IN THE PAGES FOLLOWING THE LOADS. ALTHOUGH THE LOADS AS SHOWN ARE TYPICAL, THE LOCATIONAL DIMENSIONS FOR EACH DUNNAGE ASSEMBLY ARE UNIQUE FOR EACH INDIVIDUAL LOAD AND ARE TO BE USED ONLY AS GUIDANCE WHEN DEVELOPING LOCATIONAL DIMENSIONS FOR DUNNAGE ASSEMBLIES TO BE USED IN THE REMAINDER OF THE PROPELLING CHARGE CONTAINER LOADS. REFER TO SPECIAL NOTE 4 ON PAGE 3 FOR ADDITIONAL GUIDANCE.



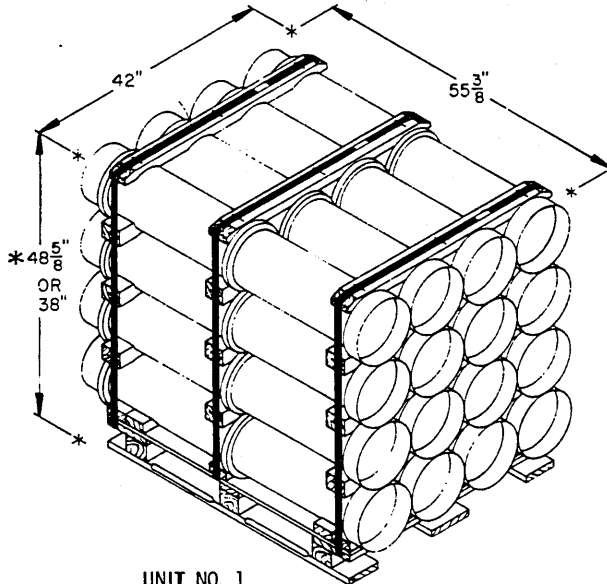
UNIT NO. 1
ALTERNATED CONTAINERS

UNIT WEIGHT ----- 1,631 - 2,142 LBS (APPROX)
CUBE ----- 46.4 - 59.1 CUBIC FEET



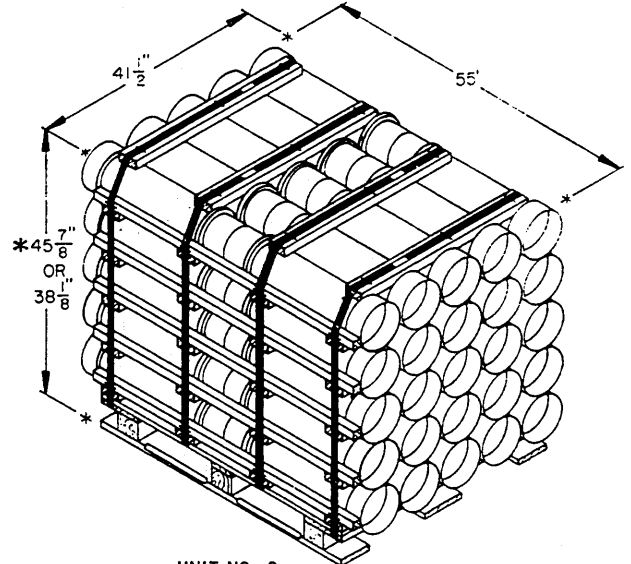
UNIT NO. 1
FLAT DUNNAGE

UNIT WEIGHT ----- 1,621 - 2,127 LBS (APPROX)
CUBE ----- 53.1 - 67.5 CUBIC FEET



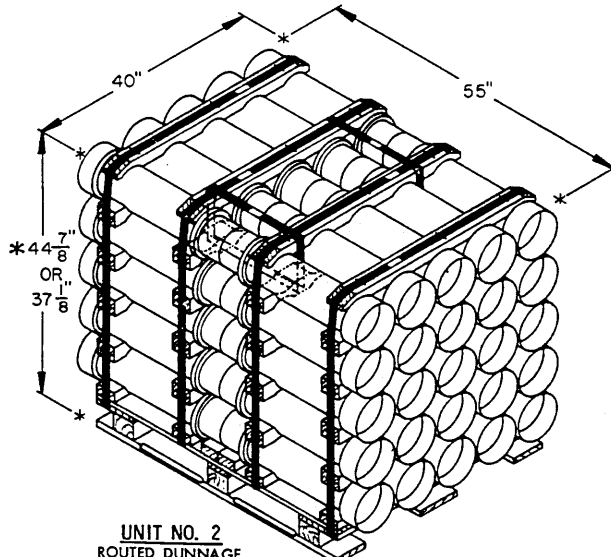
UNIT NO. 1
ROUTED DUNNAGE

UNIT WEIGHT ----- 1,616 - 2,122 LBS (APPROX)
CUBE ----- 51.1 - 65.4 CUBIC FEET



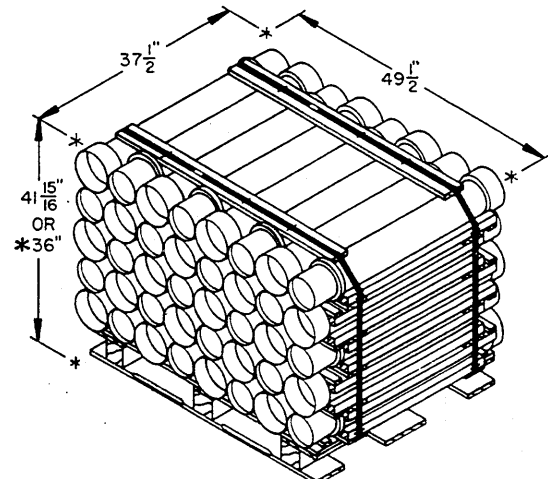
UNIT NO. 2
FLAT DUNNAGE

UNIT WEIGHT ----- 1,421 - 1,751 LBS (APPROX)
CUBE ----- 50.4 - 60.6 CUBIC FEET



UNIT NO. 2
ROUTED DUNNAGE

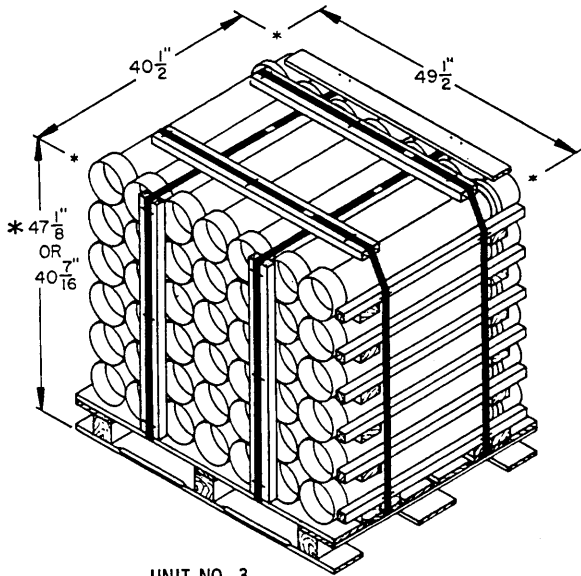
UNIT WEIGHT ----- 1,432 - 1,766 LBS (APPROX)
CUBE ----- 47.3 - 57.1 CUBIC FEET



UNIT NO. 3
ALTERNATED CONTAINER

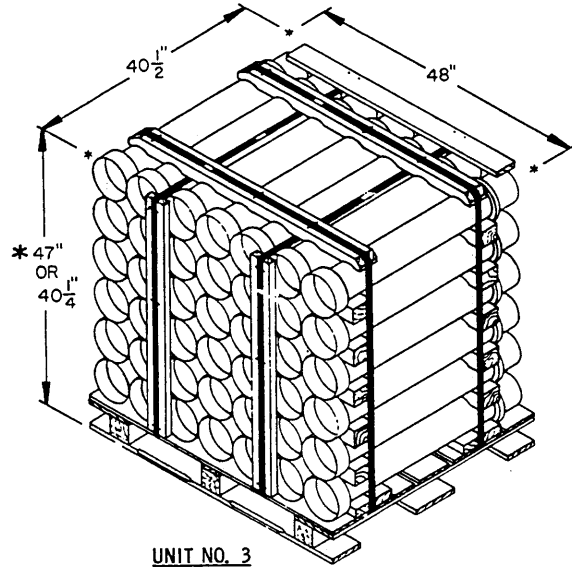
UNIT WEIGHT ----- 1,306 - 1,553 LBS (APPROX)
CUBE ----- 38.7 - 45.1 CUBIC FEET

PALLET UNIT DETAILS



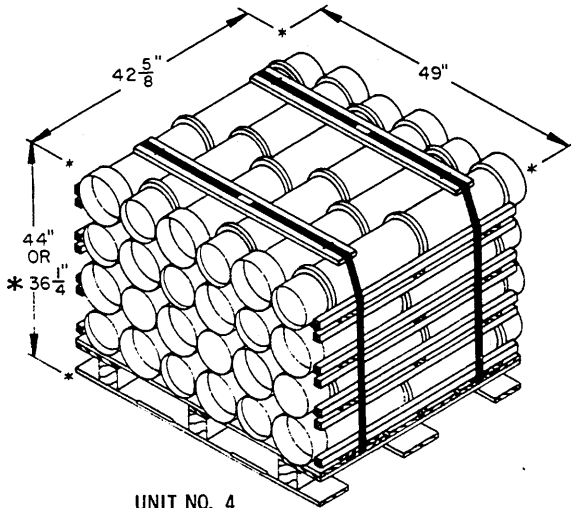
UNIT NO. 3
FLAT DUNNAGE

UNIT WEIGHT ----- 1,217 - 1,439 LBS (APPROX)
CUBE ----- 46.9 - 54.7 CUBIC FEET



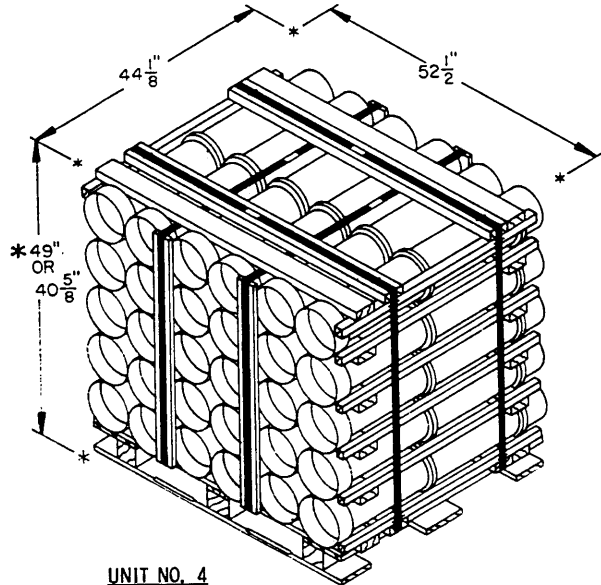
UNIT NO. 3
ROUTED DUNNAGE

UNIT WEIGHT ----- 1,216 - 1,439 LBS (APPROX)
CUBE ----- 45.3 - 52.9 CUBIC FEET



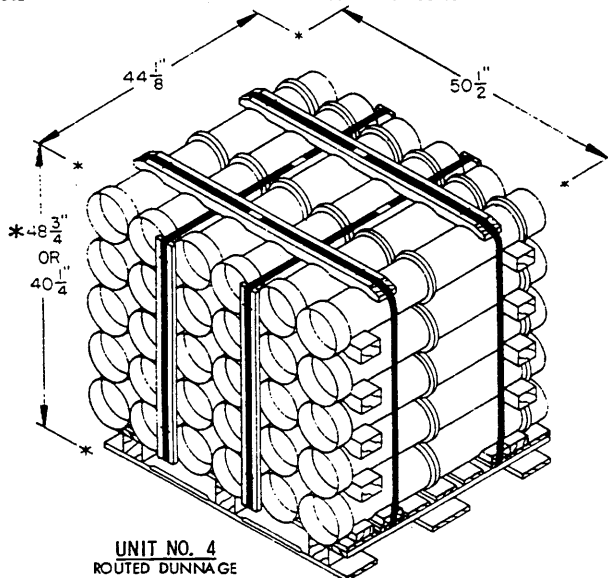
UNIT NO. 4
ALTERNATED CONTAINERS

UNIT WEIGHT ----- 1,474 - 1,820 LBS (APPROX)
CUBE ----- 43.8 - 53.2 CUBIC FEET



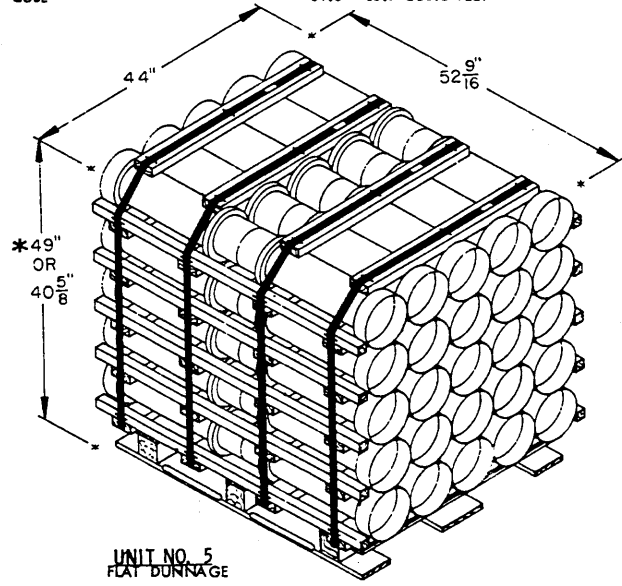
UNIT NO. 4
FLAT DUNNAGE

UNIT WEIGHT ----- 1,521 - 1,870 LBS (APPROX)
CUBE ----- 54.5 - 65.7 CUBIC FEET



UNIT NO. 4
ROUTED DUNNAGE

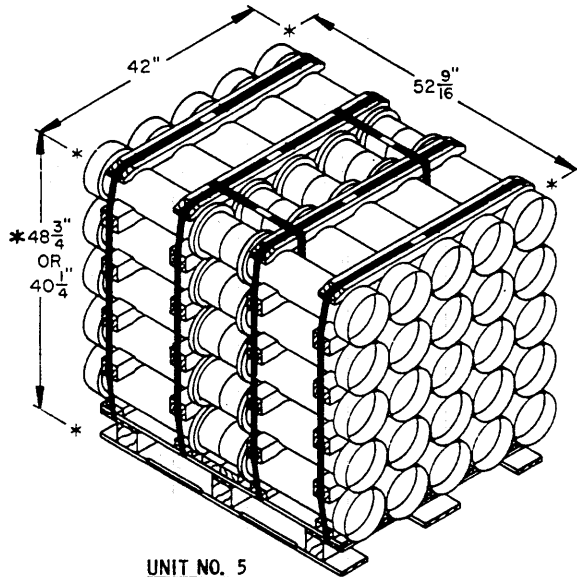
UNIT WEIGHT ----- 1,499 - 1,848 LBS (APPROX)
CUBE ----- 51.9 - 62.9 CUBIC FEET



UNIT NO. 5
FLAT DUNNAGE

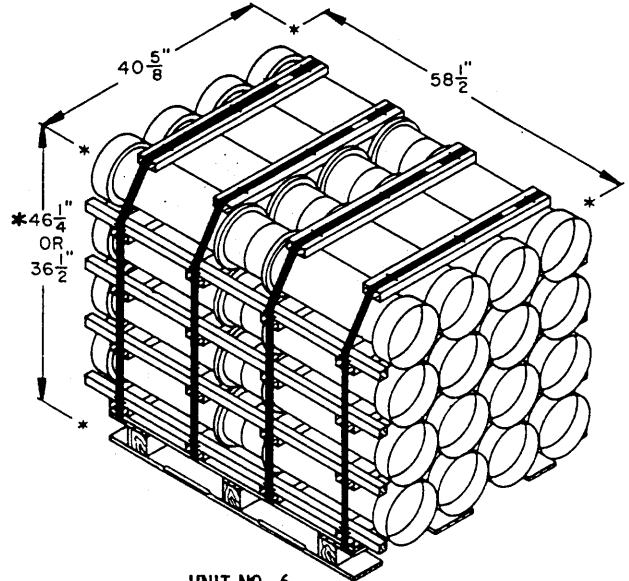
UNIT WEIGHT ----- 1,443 - 1,779 LBS (APPROX)
CUBE ----- 54.4 - 65.6 CUBIC FEET

PALLET UNIT DETAILS



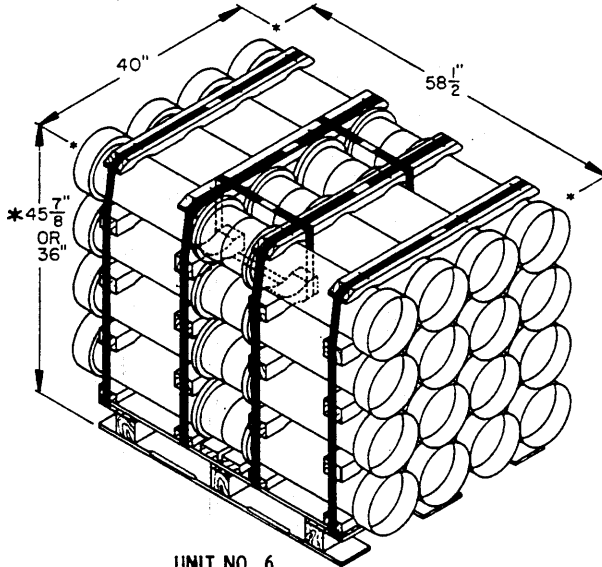
UNIT NO. 5
ROUTED DUNNAGE

UNIT WEIGHT ----- 1,453 - 1,792 LBS (APPROX)
CUBE ----- 51.4 - 62.3 CUBIC FEET



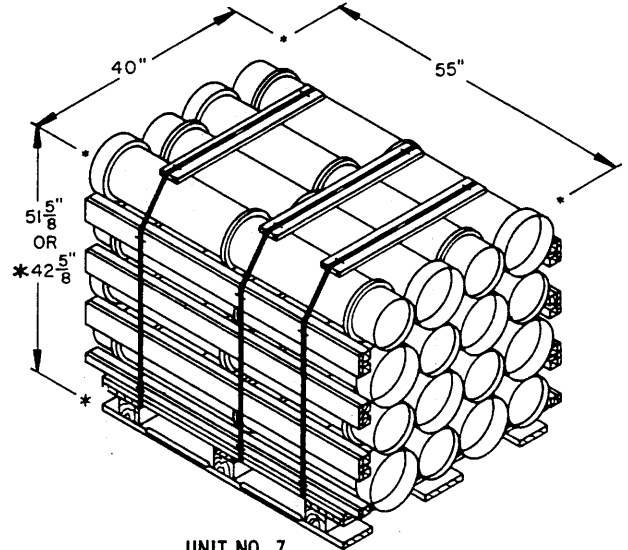
UNIT NO. 6
FLAT DUNNAGE

UNIT WEIGHT ----- 1,430 - 1,872 LBS (APPROX)
CUBE ----- 50.2 - 63.6 CUBIC FEET



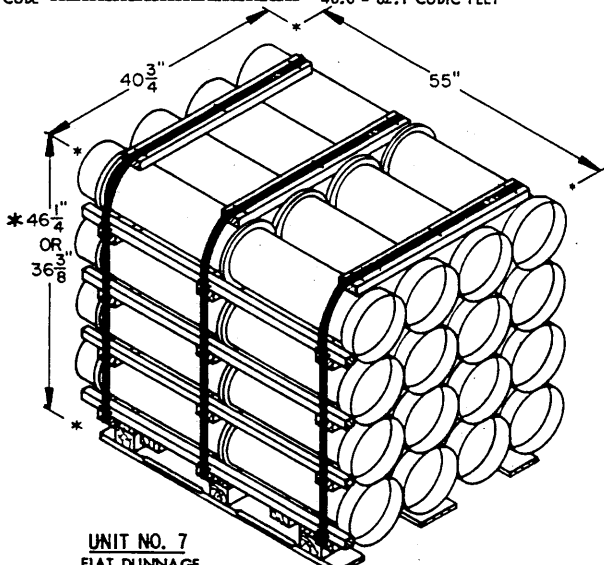
UNIT NO. 6
ROUTED DUNNAGE

UNIT WEIGHT ----- 1,429 - 1,873 LBS (APPROX)
CUBE ----- 48.8 - 62.1 CUBIC FEET



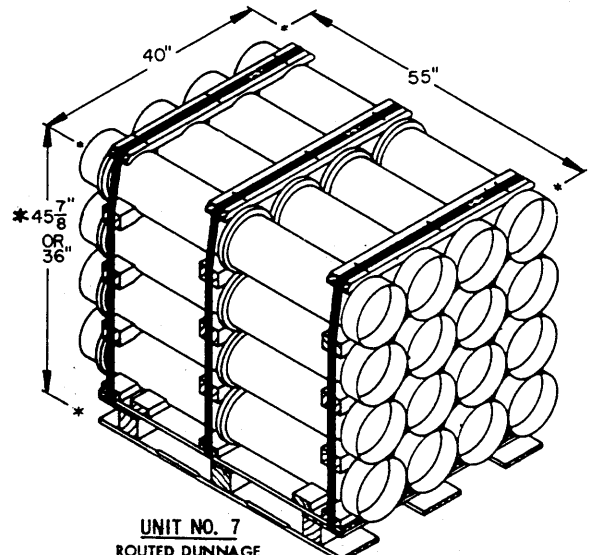
UNIT NO. 7
ALTERNATED CONTAINERS

UNIT WEIGHT ----- 1,907 - 2,364 LBS (APPROX)
CUBE ----- 54.3 - 65.7 CUBIC FEET



UNIT NO. 7
FLAT DUNNAGE

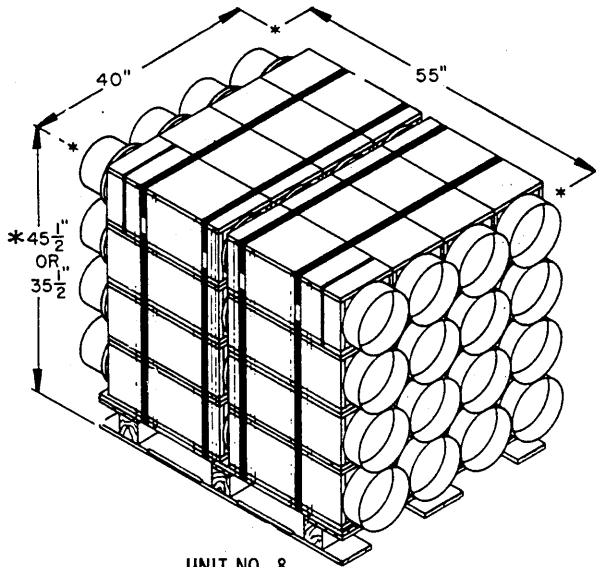
UNIT WEIGHT ----- 1,448 - 1,882 LBS (APPROX)
CUBE ----- 47.2 - 60.0 CUBIC FEET



UNIT NO. 7
ROUTED DUNNAGE

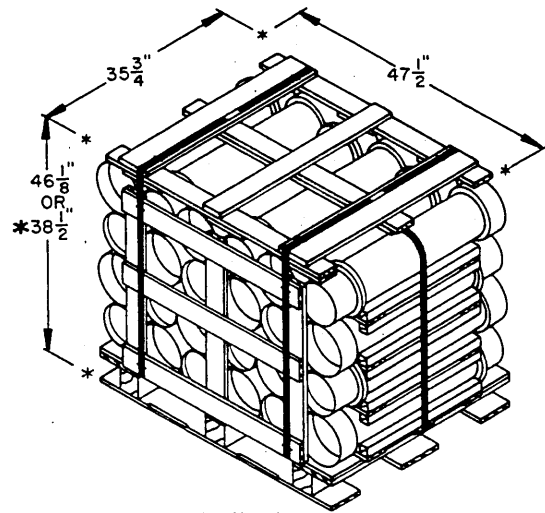
UNIT WEIGHT ----- 1,433 - 1,878 LBS (APPROX)
CUBE ----- 45.8 - 58.4 CUBIC FEET

PALLET UNIT DETAILS



UNIT NO. 8

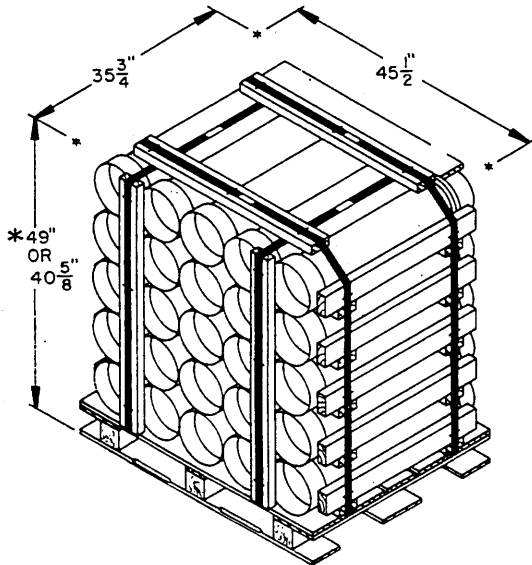
UNIT WEIGHT ----- 1,524 - 2,005 LBS (APPROX)
 CUBE ----- 45.2 - 57.9 CUBIC FEET



UNIT NO. 9

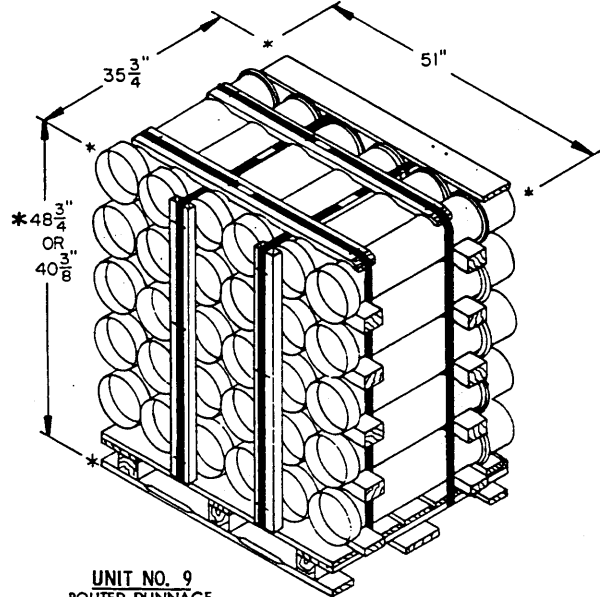
ALTERNATED CONTAINERS

UNIT WEIGHT ----- 1,475 - 1,822 LBS (APPROX)
 CUBE ----- 37.8 - 45.3 CUBIC FEET



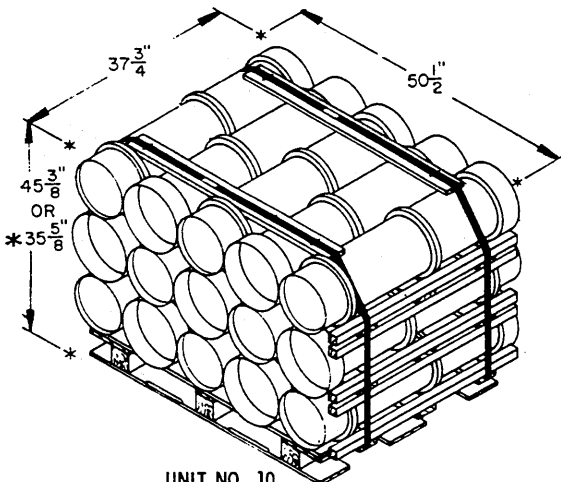
UNIT NO. 9
 FLAT DUNNAGE

UNIT WEIGHT ----- 1,266 - 1,562 LBS (APPROX)
 CUBE ----- 38.2 - 46.1 CUBIC FEET



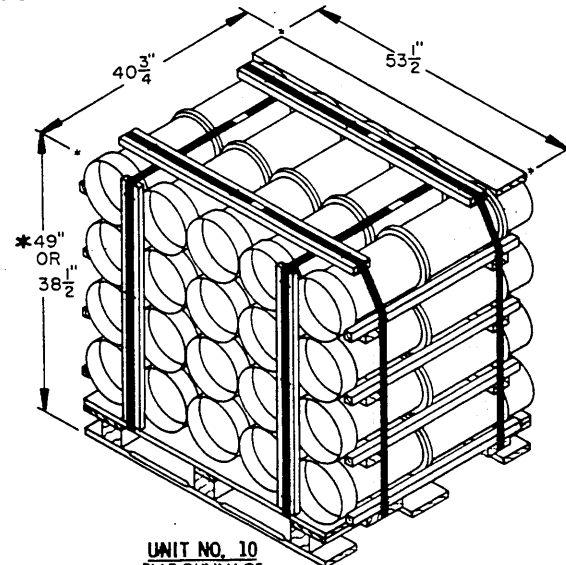
UNIT NO. 9
 ROUTED DUNNAGE

UNIT WEIGHT ----- 1,473 - 1,824 LBS (APPROX)
 CUBE ----- 42.6 - 51.4 CUBIC FEET



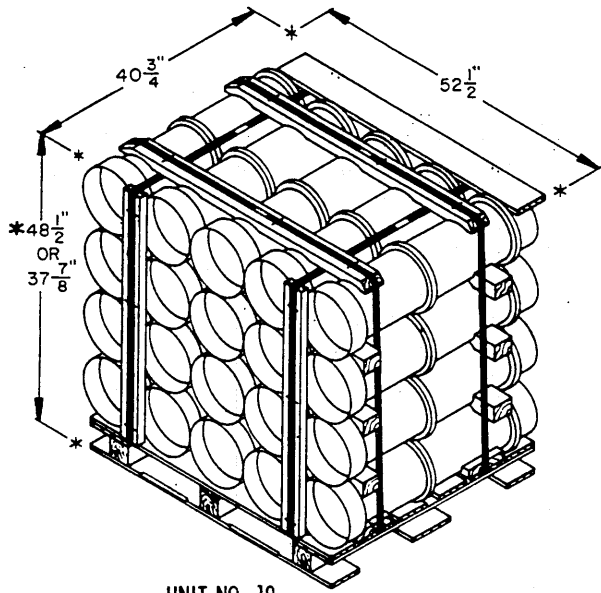
UNIT NO. 10
 ALTERNATED CONTAINERS

UNIT WEIGHT ----- 1,275 - 1,677 LBS (APPROX)
 CUBE ----- 39.3 - 50.1 CUBIC FEET



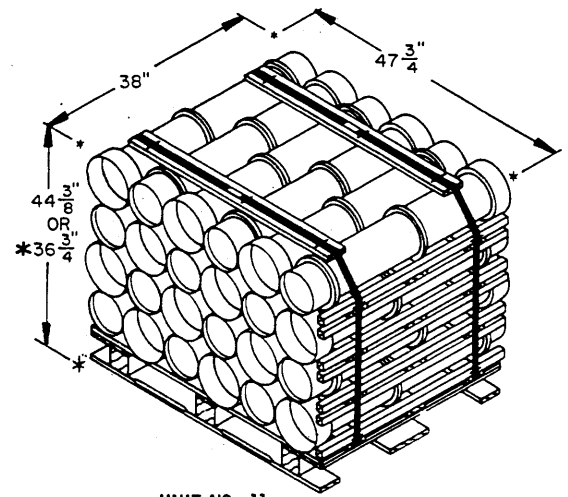
UNIT NO. 10
 FLAT DUNNAGE

UNIT WEIGHT ----- 1,331 - 1,738 LBS (APPROX)
 CUBE ----- 48.6 - 61.8 CUBIC FEET



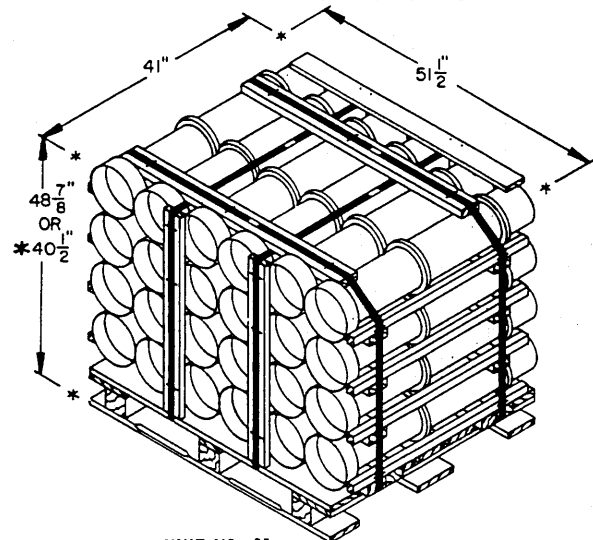
UNIT NO. 10
ROUTED DUNNAGE

UNIT WEIGHT ----- 1,331 - 1,736 LBS (APPROX)
CUBE ----- 46.9 - 60.1 CUBIC FEET



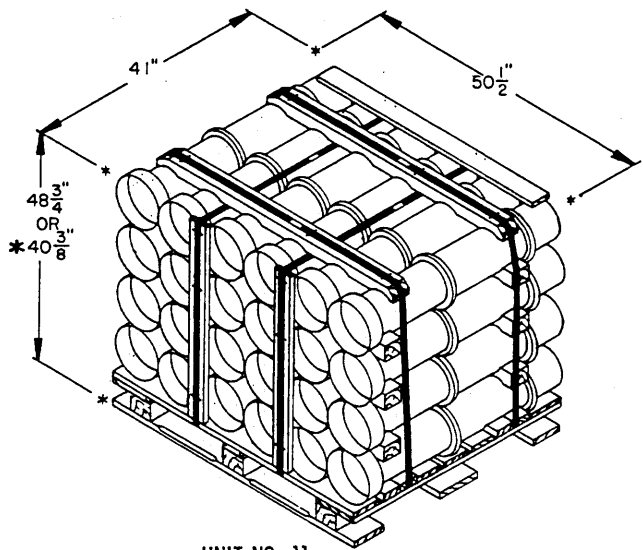
UNIT NO. 11
ALTERNATED CONTAINERS

UNIT WEIGHT ----- 1,335 - 1,651 LBS (APPROX)
CUBE ----- 38.6 - 46.6 CUBIC FEET



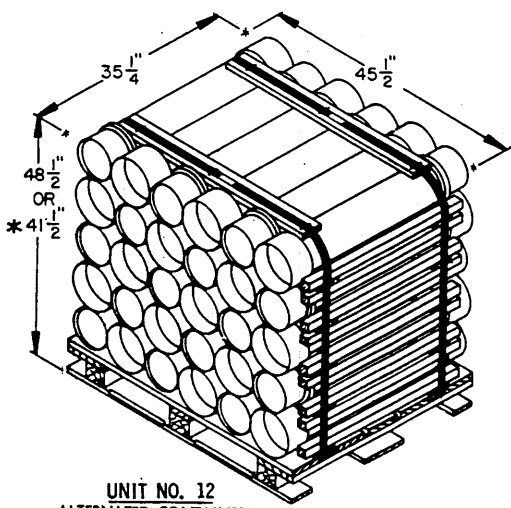
UNIT NO. 11
FLAT DUNNAGE

UNIT WEIGHT ----- 1,389 - 1,709 LBS (APPROX)
CUBE ----- 49.5 - 59.7 CUBIC FEET



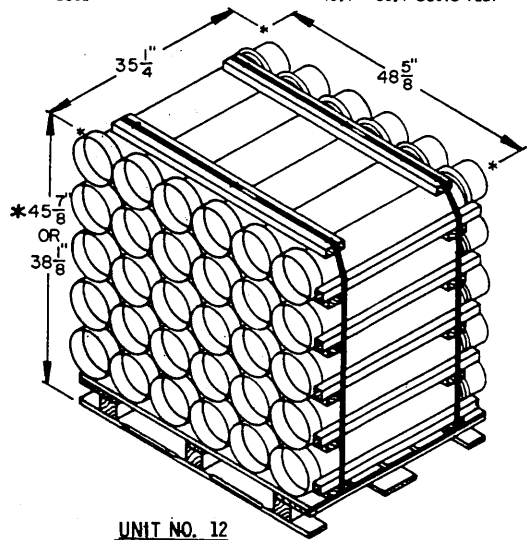
UNIT NO. 11
ROUTED DUNNAGE

UNIT WEIGHT ----- 1,390 - 1,711 LBS (APPROX)
CUBE ----- 48.4 - 58.4 CUBIC FEET



UNIT NO. 12
ALTERNATED CONTAINERS

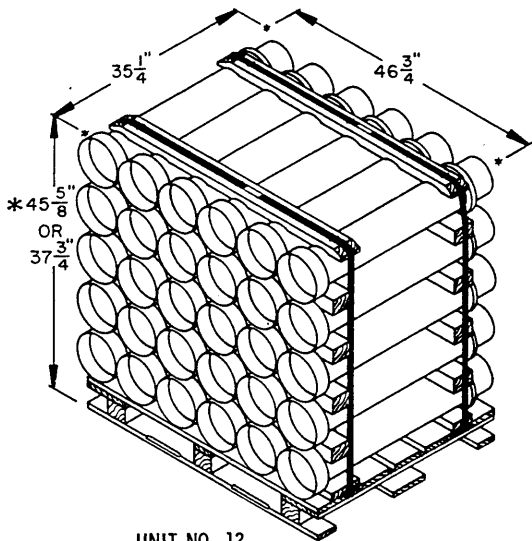
UNIT WEIGHT ----- 1,240 - 1,474 LBS (APPROX)
CUBE ----- 38.5 - 45.0 CUBIC FEET



UNIT NO. 12
FLAT DUNNAGE

UNIT WEIGHT ----- 1,025 - 1,262 LBS (APPROX)
CUBE ----- 37.8 - 45.5 CUBIC FEET

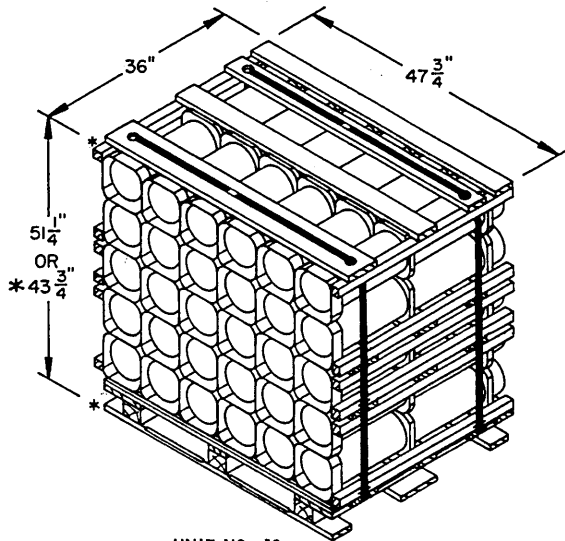
PALLET UNIT DETAILS



UNIT NO. 12

Routed Dunnage

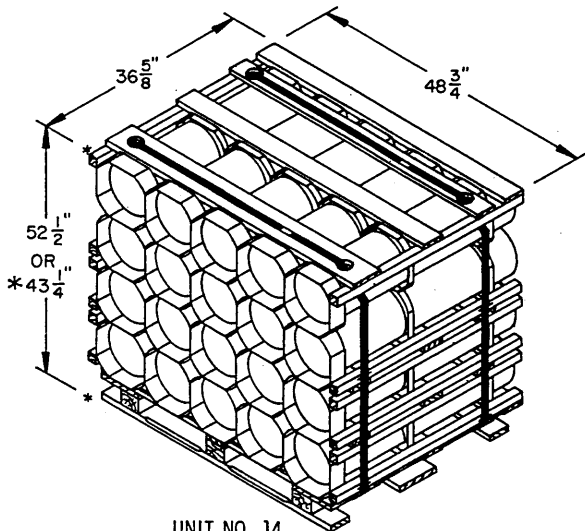
UNIT WEIGHT ----- 1,025 - 1,263 LBS (APPROX)
 CUBE ----- 36.0 - 43.5 CUBIC FEET



UNIT NO. 13

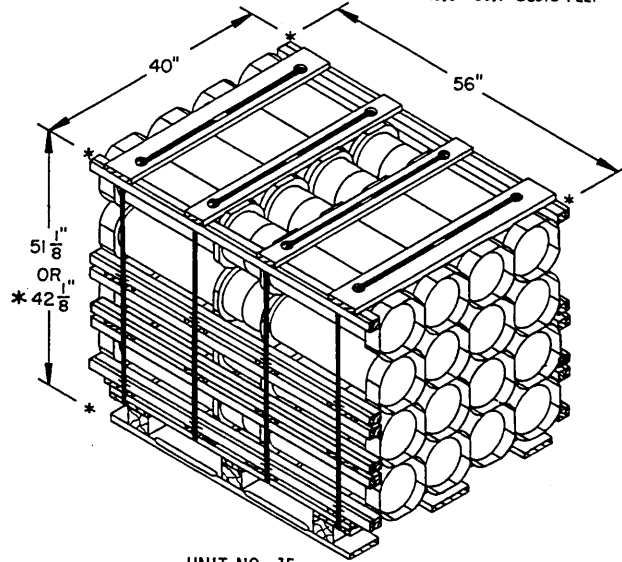
Flat Dunnage

UNIT WEIGHT ----- 1,560 - 2,024 LBS (APPROX)
 CUBE ----- 43.5 - 50.9 CUBIC FEET



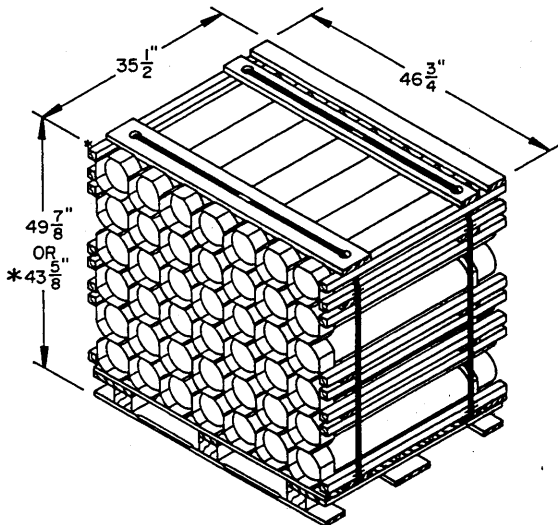
UNIT NO. 14

UNIT WEIGHT ----- 1,558 - 1,929 LBS (APPROX)
 CUBE ----- 44.7 - 54.2 CUBIC FEET



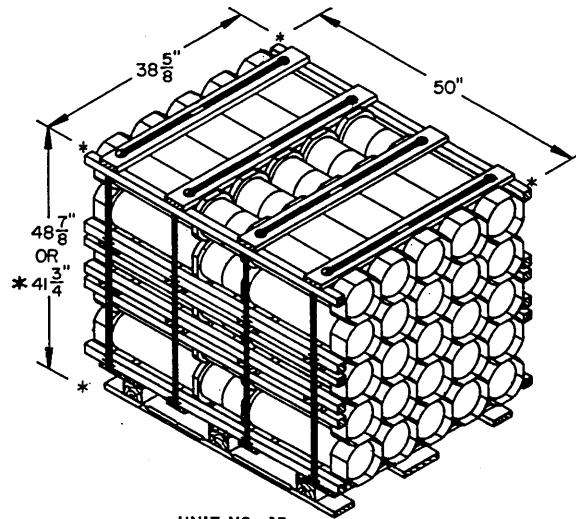
UNIT NO. 15

UNIT WEIGHT ----- 1,727 - 2,141 LBS (APPROX)
 CUBE ----- 54.6 - 66.3 CUBIC FEET



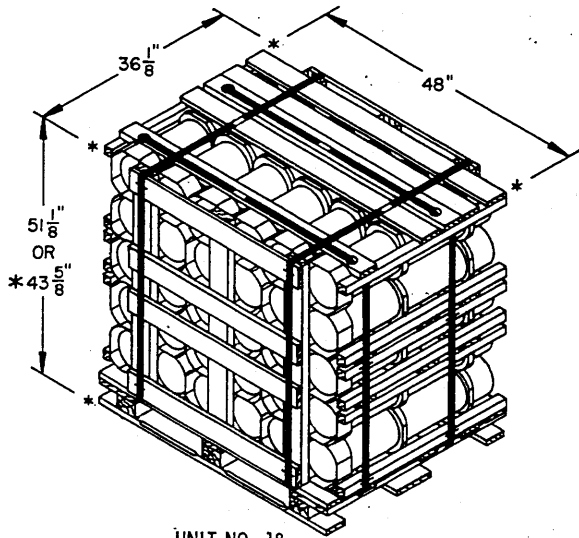
UNIT NO. 16

UNIT WEIGHT ----- 1,271 - 1,473 LBS (APPROX)
 CUBE ----- 41.9 - 47.9 CUBIC FEET



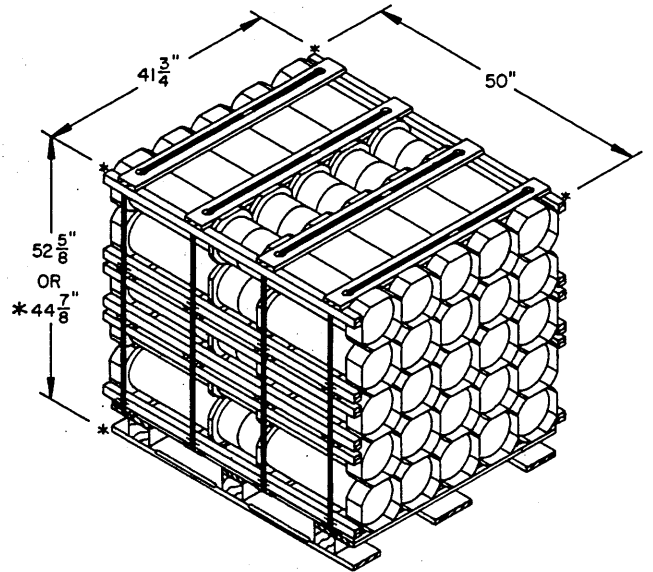
UNIT NO. 17

UNIT WEIGHT ----- 1,543 - 1,843 LBS (APPROX)
 CUBE ----- 46.7 - 54.6 CUBIC FEET



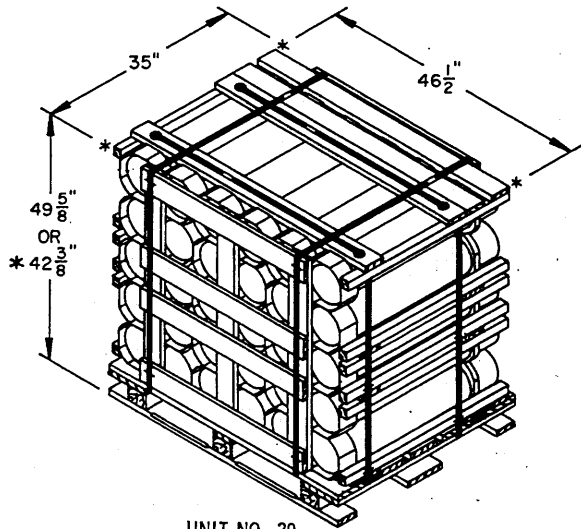
UNIT NO. 18

UNIT WEIGHT-----1,498 - 1,777 LBS (APPROX)
 CUBE-----43.8 - 51.3 CUBIC FEET



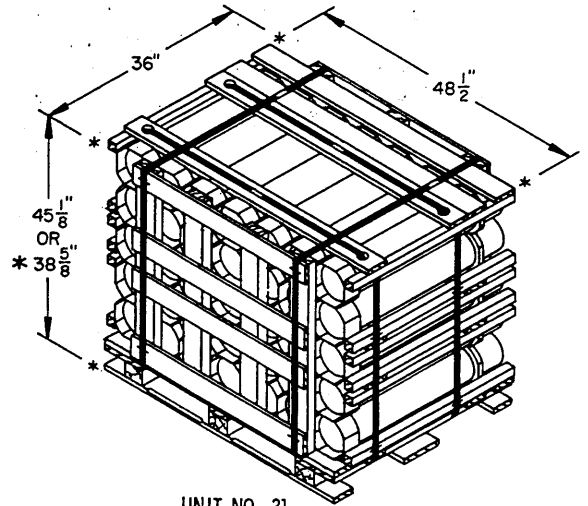
UNIT NO. 19

UNIT WEIGHT-----1,613 - 1,843 LBS (APPROX)
 CUBE-----54.2 - 63.6 CUBIC FEET



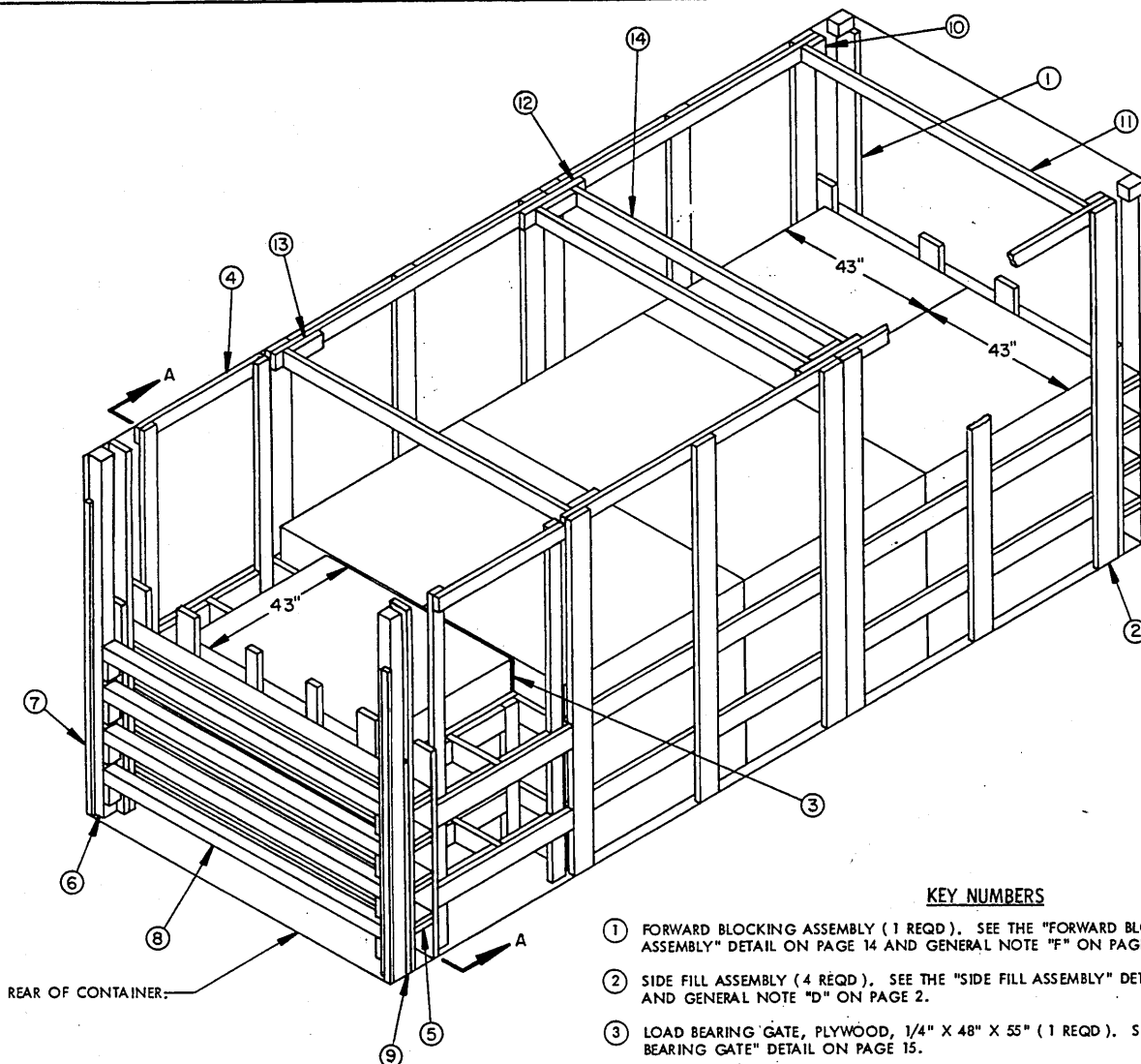
UNIT NO. 20

UNIT WEIGHT-----1,442 - 1,712 LBS (APPROX)
 CUBE-----39.6 - 46.7 CUBIC FEET



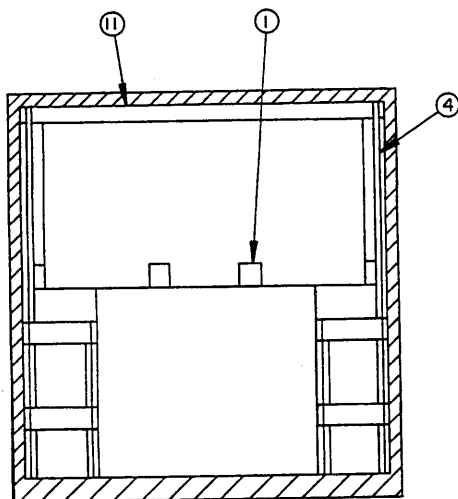
UNIT NO. 21

UNIT WEIGHT-----1,081 - 1,275 LBS (APPROX)
 CUBE-----39.0 - 45.6 CUBIC FEET



REAR OF CONTAINER

ISOMETRIC VIEW



SECTION A-A

KEY NUMBERS

- ① FORWARD BLOCKING ASSEMBLY (1 REQD). SEE THE "FORWARD BLOCKING ASSEMBLY" DETAIL ON PAGE 14 AND GENERAL NOTE "F" ON PAGE 2.
- ② SIDE FILL ASSEMBLY (4 REQD). SEE THE "SIDE FILL ASSEMBLY" DETAIL ON PAGE 15 AND GENERAL NOTE "D" ON PAGE 2.
- ③ LOAD BEARING GATE, PLYWOOD, 1/4" X 48" X 55" (1 REQD). SEE THE "LOAD BEARING GATE" DETAIL ON PAGE 15.
- ④ FILLER ASSEMBLY (2 REQD). SEE THE "FILLER ASSEMBLY" DETAIL ON PAGE 15.
- ⑤ REAR BLOCKING ASSEMBLY (1 REQD). SEE THE "REAR BLOCKING ASSEMBLY" DETAIL ON PAGE 14 AND GENERAL NOTE "F" ON PAGE 2.
- ⑥ DOOR POST VERTICAL (2 REQD). SEE THE "DOOR POST VERTICAL" DETAIL ON PAGE 13 AND "TYPICAL DETAIL B" ON PAGE 33.
- ⑦ DOOR POST VERTICAL RETAINER (2 REQD). SEE THE "DOOR POST VERTICAL RETAINER" DETAILS ON PAGE 32 AND "TYPICAL DETAIL C" ON PAGE 33. NAIL THROUGH THE HOLES INTO THE DOOR POST VERTICAL W/4-10d NAILS.
- ⑧ 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 PIECE W/2-12d NAILS AT EACH END. SEE THE "BEVEL CUT" DETAIL ON PAGE 33. AFTER INSTALLING THE BOTTOM AND TOP DOOR SPANNERS, THE FILL MATERIAL, PIECE MARKED ⑨, IS TO BE INSTALLED.
- ⑨ FILL MATERIAL, 6" WIDE BY 55" LONG MATERIAL (AS REQD). NAIL EACH PIECE TO THE REAR BLOCKING ASSEMBLY AND/OR LAMINATE TOGETHER W/5 NAILS OF A SUITABLE SIZE (10d NAILS FOR 2" THICK MATERIAL). **CAUTION:** DO NOT NAIL TO THE DOOR POST VERTICALS, PIECES MARKED ⑥.
- ⑩ SPANNER PIECE CLEAT, 2" X 4" X 4" (2 REQD). LOCATE NEAR THE END OF A TIE PIECE AND NAIL TO THE TIE PIECE W/3-8d NAILS.
- ⑪ SPANNER PIECE, 2" X 4" MATERIAL, CUT TO A LENGTH THAT WILL PROVIDE FOR A TIGHT FIT (REF: 7'-2") (2 REQD). TOENAIL TO THE SIDE FILL ASSEMBLIES W/2-10d NAILS AT EACH END.
- ⑫ SPLICE FOR TIE PIECES, 2" X 4" X 18" (2 REQD). NAIL TO TWO LONGITUDINALLY ADJACENT TIE PIECES OF THE SIDE FILL ASSEMBLIES W/3-10d NAILS AT EACH END.
- ⑬ SPANNER PIECE CLEAT, 2" X 4" X 9" (4 REQD). LOCATE AS SHOWN AND NAIL TO THE TIE PIECE W/3-8d NAILS.
- ⑭ SPANNER PIECE, 2" X 4" MATERIAL, CUT TO A LENGTH THAT WILL PROVIDE FOR A TIGHT FIT (REF: 6'-11") (2 REQD). TOENAIL TO THE SPLICE FOR TIE PIECES W/2-10d NAILS AT EACH END.

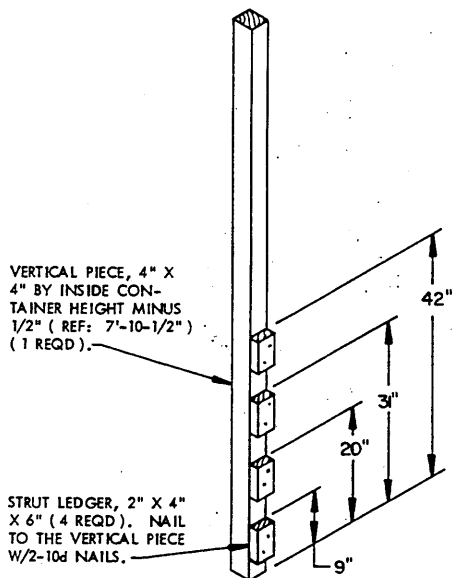
SPECIAL NOTES:

1. THE LOAD VIEWS AND THE "LOAD AS SHOWN" SECTION ON PAGES 12 AND 13 ARE BASED ON UNIT NO. 1, FLAT DUNNAGE, SHOWN ON PAGE 5, WITH OVERALL DIMENSIONS OF 43" LONG BY 55-3/8" WIDE BY 49" HIGH WITH A UNIT WEIGHT OF 2,127 POUNDS.
2. EXCESSIVE SLACK ACROSS THE WIDTH OF A LOAD CAN BE ELIMINATED BY LAMINATING ADDITIONAL PIECES OF APPROPRIATE THICKNESS TO THE BEARING PIECES ON THE SIDE FILL ASSEMBLIES ON ONE OR BOTH SIDES OF THE CONTAINER. NAIL EACH ADDITIONAL PIECE TO THE BEARING PIECE W/1 APPROPRIATELY SIZED NAIL EVERY 12". ADDITIONALLY, THE NUMBER AND THICKNESS OF THE BEARING PIECES AND THE THICKNESS OF THE VERTICAL PIECES MAY BE ADJUSTED AS REQUIRED TO FACILITATE VARIANCE IN THE LENGTH OF THE PALLET UNIT.

RECOMMENDED SEQUENTIAL LOADING PROCEDURES:

1. PREFABRICATE ONE FORWARD BLOCKING ASSEMBLY, FOUR SIDE FILL ASSEMBLIES, ONE LOAD BEARING 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 FORWARD BLOCKING ASSEMBLY.
3. INSTALL ONE SIDE FILL ASSEMBLY AND LOAD ONE PALLET UNIT.
4. REPEAT STEP 3.
5. REPEAT STEP 3.
6. REPEAT STEP 3.
7. LOAD TWO PALLET UNITS AND INSTALL LOAD BEARING GATE.
8. LOAD REMAINING PALLET UNIT AND INSTALL THE TWO FILLER ASSEMBLIES.
9. INSTALL REAR BLOCKING ASSEMBLY.
10. INSTALL THE TWO DOOR POST VERTICAL ASSEMBLIES (ONE RIGHT HAND AND ONE LEFT HAND).
11. INSTALL TWO DOOR SPANNER PIECES (ONE AT THE LOWEST POSITION AND ONE AT THE UPPERMOST POSITION).
12. INSTALL THE SOLID FILL TYPE LOAD-BLOCKING MATERIAL.
13. INSTALL THE TWO SPLICE PIECES FOR THE TIE PIECES, THE SIX SPANNER PIECE CLEATS, AND THE FOUR SPANNER PIECES. SEE " * " NOTE BELOW.
14. INSTALL THE REMAINING TWO DOOR SPANNER PIECES.

* IF DESIRED, PIECES MARKED (2) AND (10) THRU (14) MAY BE INSTALLED PRIOR TO LOADING A CONTAINER.



DOOR POST VERTICAL

THE STRUT LEDGERS CAN ONLY BE PRE-NAILED TO THE DOOR POST VERTICAL ON ONE SIDE OF THE CONTAINER. THE STRUT LEDGERS ON THE OTHER SIDE ARE TO BE NAILED AFTER A LOWER DOOR SPANNER IS INSTALLED.

BILL OF MATERIAL		
LUMBER	LINEAR FEET	BOARD FEET
2" X 2"	2	1
2" X 4"	127	85
2" X 6"	413	413
4" X 4"	45	60
NAILS	NO. REQD	POUNDS
6d (2")	6	1/4
8d (2-1/2")	18	1/4
10d (3")	566	8-3/4
12d (3-1/4")	16	1/2
PLYWOOD, 1/4"	19 SQ FT REQD	28 LBS
DOOR POST VERTICAL RETAINER	2 REQD	64 LBS

LOAD AS SHOWN

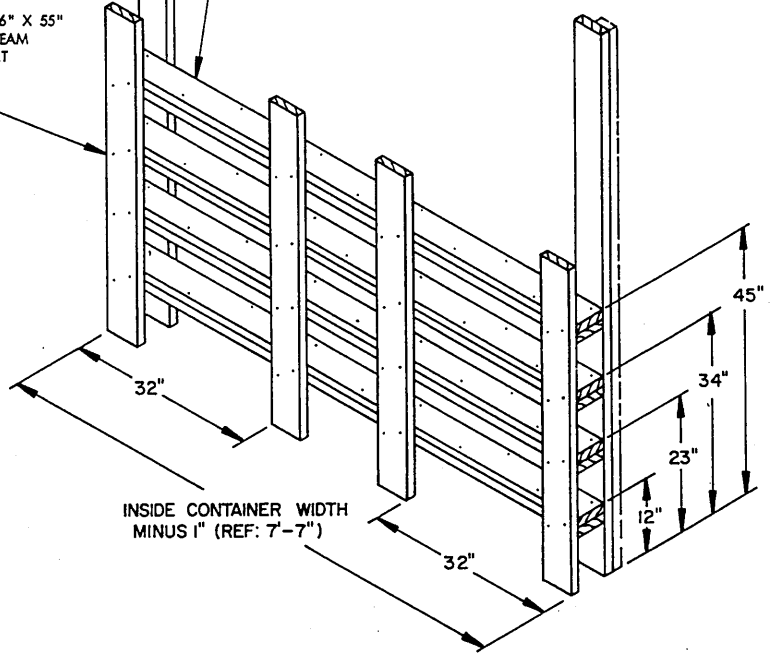
ITEM	QUANTITY	WEIGHT (APPROX)
PALLET UNIT	7	14,889 LBS
DUNNAGE		1,220 LBS
CONTAINER		4,700 LBS
TOTAL WEIGHT		20,809 LBS

SEE GENERAL NOTE "G" ON PAGE 2.

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

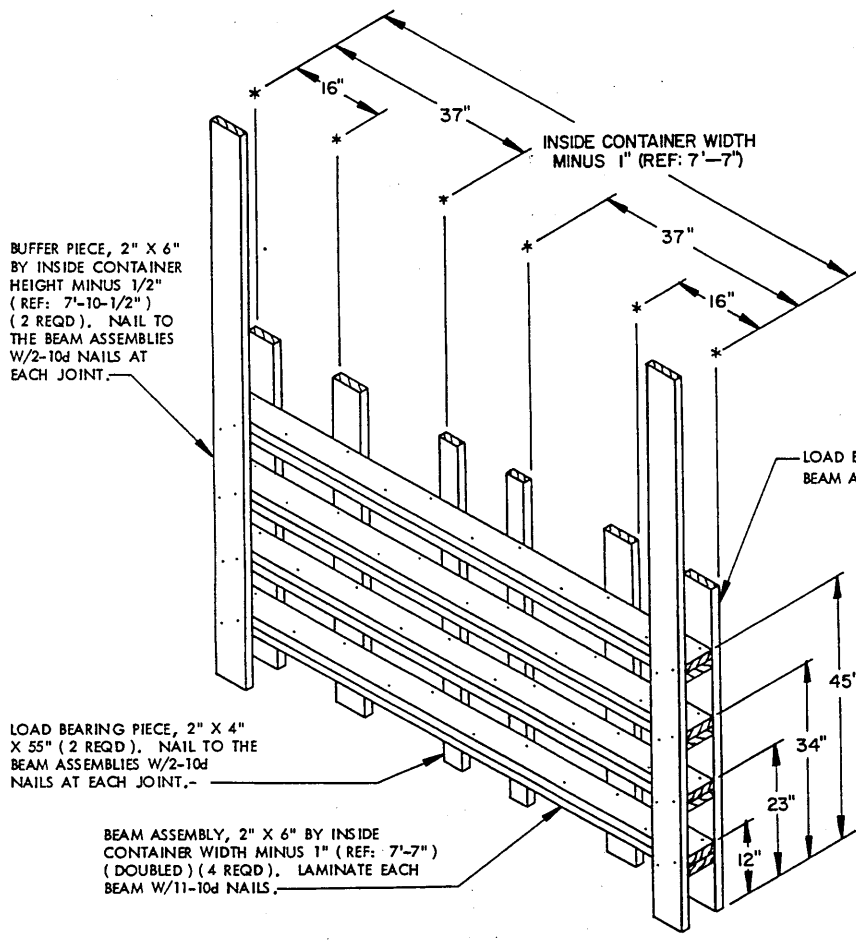
BEAM ASSEMBLY, 2" X 6" BY INSIDE CONTAINER WIDTH MINUS 1" (REF: 7'-7") (DOUBLED) (4 REQD). LAMINATE EACH BEAM W/11-10d NAILS.

LOAD BEARING PIECE, 2" X 6" X 55" (4 REQD). NAIL TO THE BEAM ASSEMBLIES W/2-10d NAILS AT EACH JOINT.



FORWARD BLOCKING ASSEMBLY

SEE THE "TYPICAL ALTERNATIVE FORWARD/REAR BLOCKING ASSEMBLY" DETAIL AND SPECIAL NOTES ON PAGE 34.



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

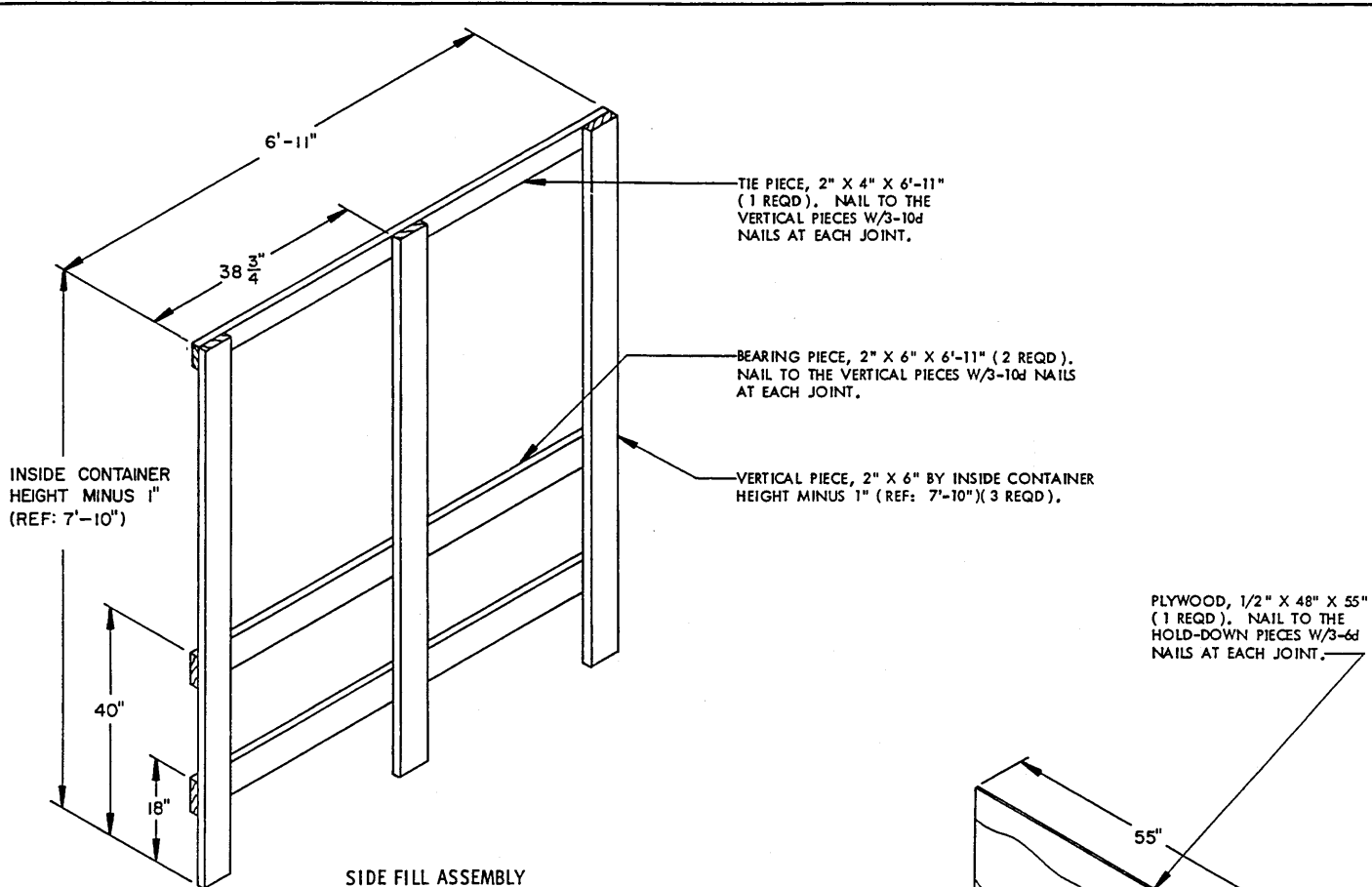
LOAD BEARING PIECE, 2" X 4" X 55" (2 REQD). NAIL TO THE BEAM ASSEMBLIES W/2-10d NAILS AT EACH JOINT.

BEAM ASSEMBLY, 2" X 6" BY INSIDE CONTAINER WIDTH MINUS 1" (REF: 7'-7") (DOUBLED) (4 REQD). LAMINATE EACH BEAM W/11-10d NAILS.

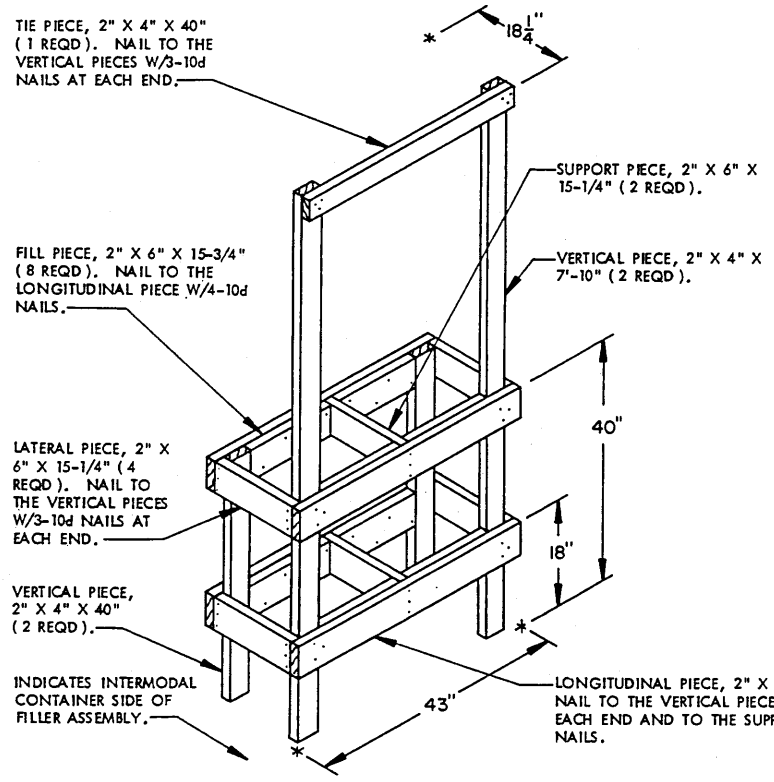
LOAD BEARING PIECE, 2" X 6" X 55" (4 REQD). NAIL TO THE BEAM ASSEMBLIES W/2-10d NAILS AT EACH JOINT.

REAR BLOCKING ASSEMBLY

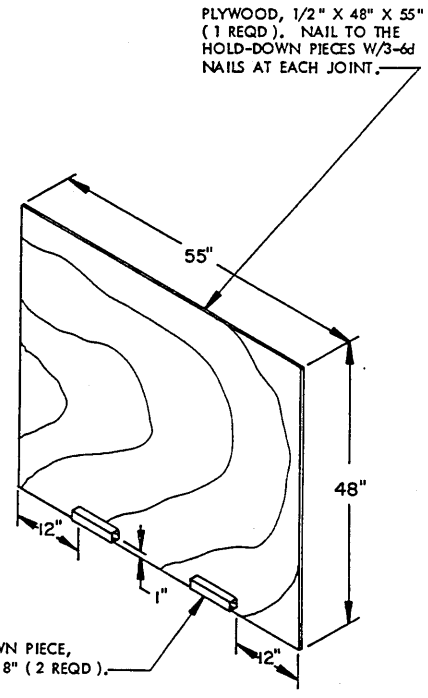
SEE THE "TYPICAL ALTERNATIVE FORWARD/REAR BLOCKING ASSEMBLY" DETAIL AND SPECIAL NOTES ON PAGE 34.



SIDE FILL ASSEMBLY
SEE SPECIAL NOTE 2 ON PAGE 13.

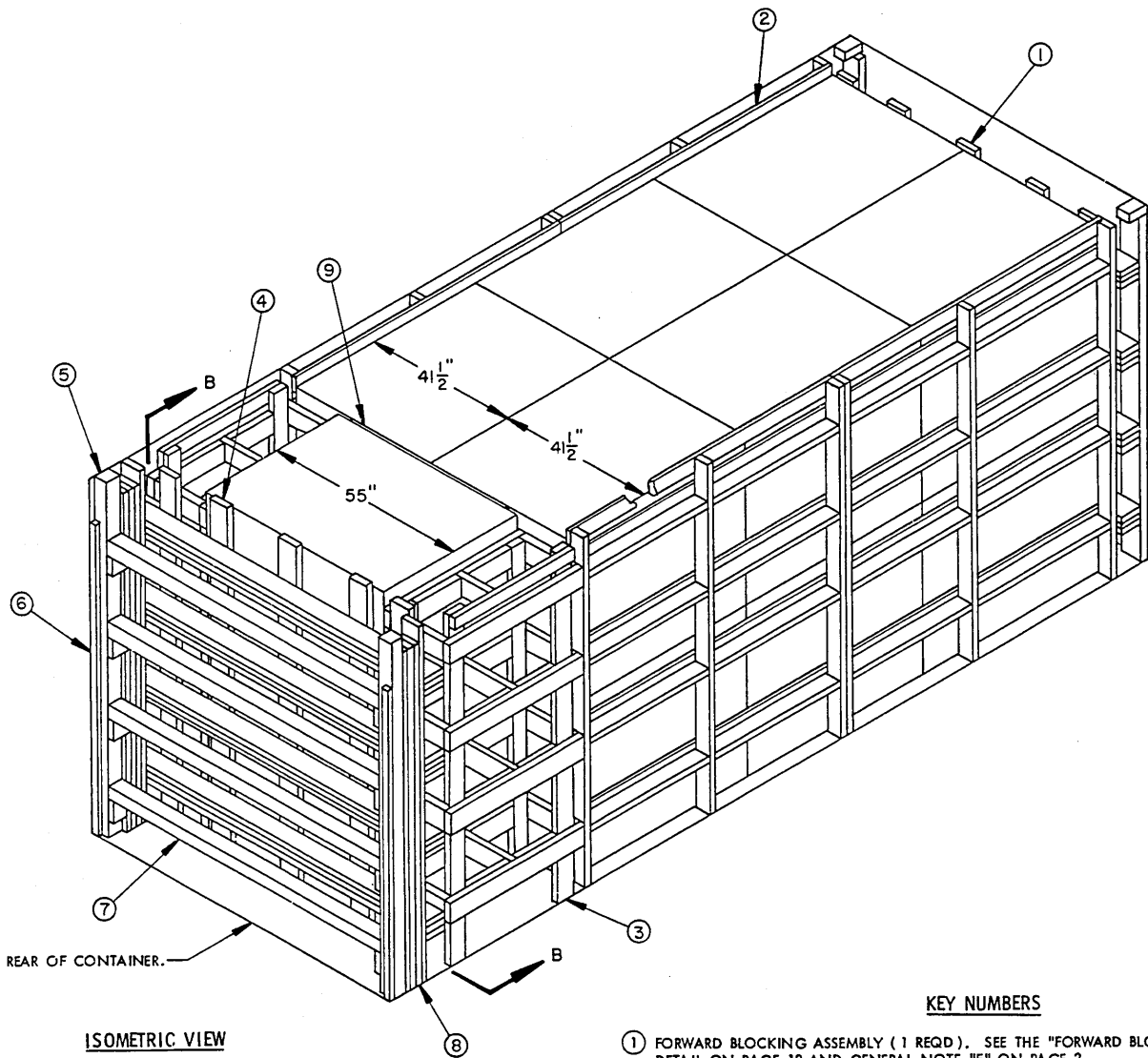


FILLER ASSEMBLY



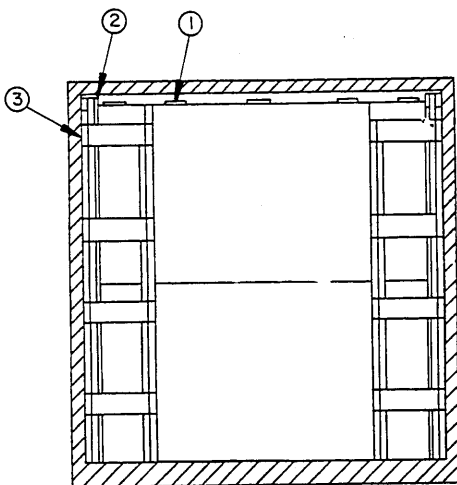
LOAD BEARING GATE

DETAILS



KEY NUMBERS

- ① FORWARD BLOCKING ASSEMBLY (1 REQD). SEE THE "FORWARD BLOCKING ASSEMBLY" DETAIL ON PAGE 18 AND GENERAL NOTE "F" ON PAGE 2.
- ② SIDE FILL ASSEMBLY (4 REQD). SEE THE "SIDE FILL ASSEMBLY" DETAIL ON PAGE 18 AND GENERAL NOTE "D" ON PAGE 2.
- ③ FILLER ASSEMBLY (2 REQD). SEE THE "FILLER ASSEMBLY" DETAIL ON PAGE 19.
- ④ REAR BLOCKING ASSEMBLY (1 REQD). SEE THE "REAR BLOCKING ASSEMBLY" DETAIL ON PAGE 19 AND GENERAL NOTE "F" ON PAGE 2.
- ⑤ DOOR POST VERTICAL (2 REQD). SEE THE "DOOR POST VERTICAL" DETAIL ON PAGE 17 AND "TYPICAL DETAIL B" ON PAGE 33.
- ⑥ DOOR POST VERTICAL RETAINER (2 REQD). SEE THE "DOOR POST VERTICAL RETAINER" DETAILS ON PAGE 32 AND "TYPICAL DETAIL C" ON PAGE 33. NAIL THROUGH THE HOLES INTO THE DOOR POST VERTICAL W/4-10d NAILS.
- ⑦ 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 33. AFTER INSTALLING THE BOTTOM AND TOP DOOR SPANNERS, THE FILL MATERIAL, PIECE MARKED ⑧, IS TO BE INSTALLED.
- ⑧ FILL MATERIAL, 6" WIDE BY 7'-7" LONG MATERIAL (AS REQD). NAIL EACH PIECE TO THE REAR BLOCKING ASSEMBLY AND/OR LAMINATE TOGETHER W/9 NAILS OF A SUITABLE SIZE (10d NAILS FOR 2" MATERIAL). CAUTION: DO NOT NAIL TO THE DOOR POST VERTICALS, PIECES MARKED ⑤.
- ⑨ LOAD BEARING GATE, PLYWOOD, 3/8" X 48" X 7'-8" (1 REQD).



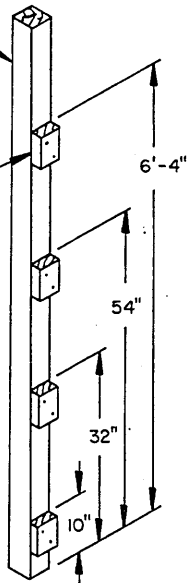
REAR OF CONTAINER.

SPECIAL NOTES:

1. THE LOAD VIEWS AND THE "LOAD AS SHOWN" SECTION ON PAGES 16 AND 17 ARE BASED ON UNIT NO. 2, FLAT DUNNAGE, SHOWN ON PAGE 5, WITH OVERALL DIMENSIONS OF 41-1/2" LONG BY 55" WIDE BY 45-7/8" HIGH WITH A UNIT WEIGHT OF 1,751 POUNDS.
2. EXCESSIVE SLACK ACROSS THE WIDTH OF A LOAD CAN BE ELIMINATED BY LAMINATING ADDITIONAL PIECES OF APPROPRIATE THICKNESS TO THE BEARING PIECES ON THE SIDE FILL ASSEMBLIES ON ONE OR BOTH SIDES OF THE CONTAINER. NAIL EACH ADDITIONAL PIECE TO THE BEARING PIECE W/1 APPROPRIATELY SIZED NAIL EVERY 12". ADDITIONALLY, THE NUMBER AND THICKNESS OF THE BEARING PIECES AND THE THICKNESS OF THE VERTICAL PIECES MAY BE ADJUSTED AS REQUIRED TO FACILITATE VARIANCE IN THE LENGTH OF THE PALLET UNIT.
3. **CAUTION:** ONLY INTERMODAL CONTAINERS WITH A MINIMUM INSIDE HEIGHT DIMENSION OF 93" AND A MINIMUM DOOR OPENING HEIGHT DIMENSION OF 90" CAN BE USED TO ACHIEVE THE TWO-HIGH PALLET UNIT LOAD CONFIGURATION DEPICTED ON PAGE 17.
4. **NOTICE:** EXTREME CARE MUST BE EXERCISED WHEN LOADING THE LAST CROSS-WISE PALLET UNIT INTO PLACE DUE TO THE CLOSENESS OF FIT.

VERTICAL PIECE, 4" X 4"
BY INSIDE CONTAINER
HEIGHT MINUS 1/2"
(REF: 7'-10-1/2")
(1 REQD).

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



DOOR POST VERTICAL

THE STRUT LEDGERS CAN ONLY BE PRE-NAILED TO THE DOOR POST VERTICAL ON ONE SIDE OF THE CONTAINER. THE STRUT LEDGERS ON THE OTHER SIDE ARE TO BE NAILED AFTER A LOWER DOOR SPANNER IS INSTALLED.

BILL OF MATERIAL

LUMBER	LINEAR FEET	BOARD FEET
1" X 4"	28	10
1" X 6"	125	63
2" X 4"	271	181
2" X 6"	446	446
4" X 4"	45	60
NAILS	NO. REQD	POUNDS
6d (2")	314	2
10d (3")	824	12-3/4
12d (3-1/4")	16	1/4
DOOR POST VERTICAL RETAINER ---- 2 REQD		64 LBS
PLYWOOD, 3/8" ----- 31 SQ FT REQD		32 LBS

RECOMMENDED SEQUENTIAL LOADING PROCEDURES:

1. PREFABRICATE ONE FORWARD BLOCKING ASSEMBLY, FOUR SIDE FILL ASSEMBLIES, 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 FORWARD BLOCKING ASSEMBLY.
3. INSTALL ONE SIDE FILL ASSEMBLY AND LOAD TWO PALLET UNITS.
4. REPEAT STEP 3.
5. REPEAT STEP 3.
6. REPEAT STEP 3.
7. LOAD FOUR PALLET UNITS AND INSTALL LOAD BEARING GATE.
8. INSTALL REMAINING TWO PALLET UNITS AND THE TWO FILLER ASSEMBLIES.
9. INSTALL REAR BLOCKING ASSEMBLY.
10. INSTALL THE TWO DOOR POST VERTICAL ASSEMBLIES (ONE RIGHT HAND AND ONE LEFT HAND).
11. INSTALL TWO DOOR SPANNER PIECES (ONE AT THE LOWEST POSITION AND ONE AT THE UPPERMOST POSITION).
12. INSTALL THE SOLID FILL TYPE LOAD-BLOCKING MATERIAL.
13. INSTALL THE REMAINING TWO DOOR SPANNER PIECES.

LOAD AS SHOWN

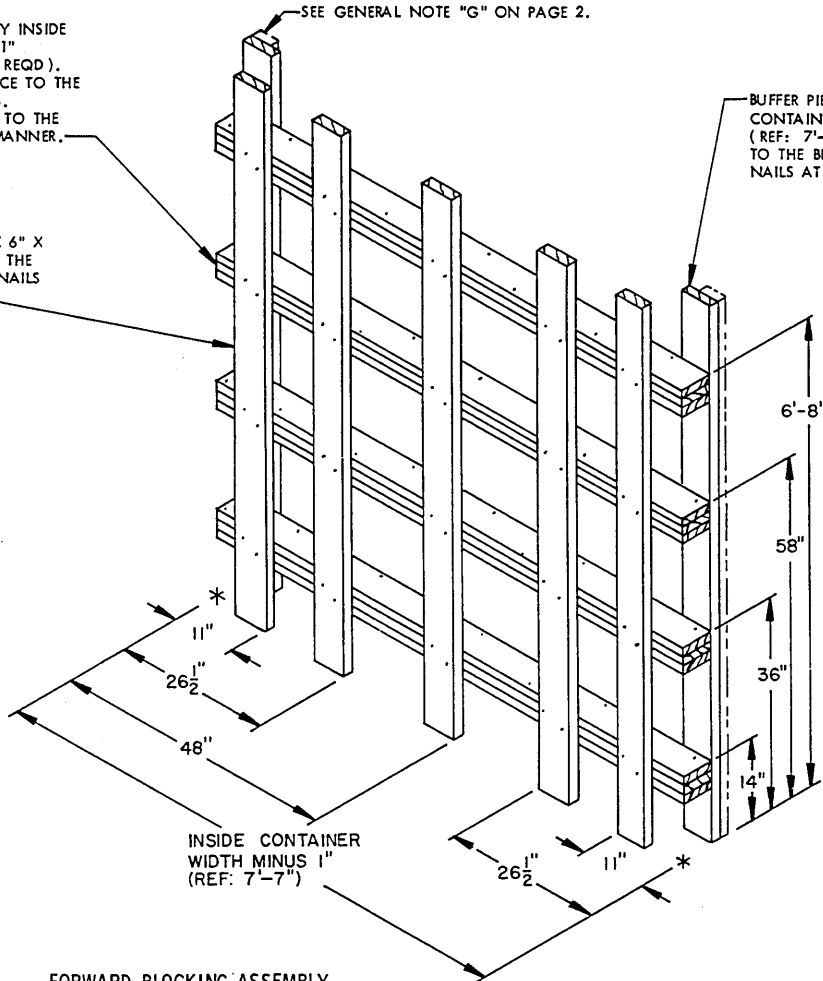
ITEM	QUANTITY	WEIGHT (APPROX)
PALLET UNIT -----	14 -----	24,514 LBS
DUNNAGE -----		1,631 LBS
CONTAINER -----		4,700 LBS
TOTAL WEIGHT -----		30,845 LBS

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

LOAD BEARING PIECE, 2" X 6" X 7'-8" (5 REQD). NAIL TO THE BEAM ASSEMBLIES W/2-10d NAILS AT EACH JOINT.

SEE GENERAL NOTE "G" ON PAGE 2.

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



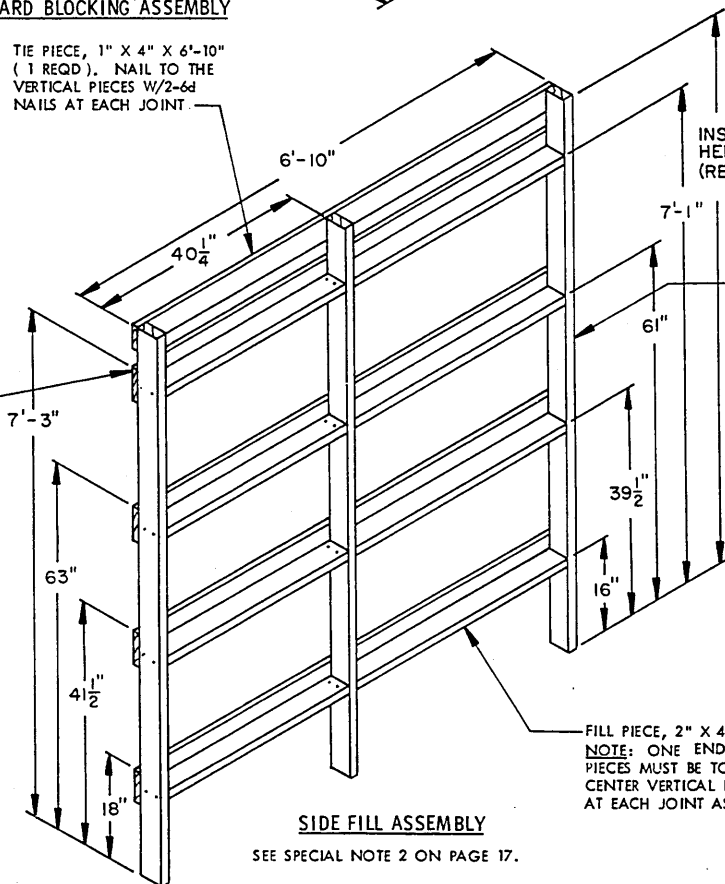
FORWARD BLOCKING ASSEMBLY

TIE PIECE, 1" X 4" X 6'-10" (1 REQD). NAIL TO THE VERTICAL PIECES W/2-6d NAILS AT EACH JOINT.

BEARING PIECE, 1" X 6" X 6'-10" (4 REQD). NAIL TO THE VERTICAL PIECES W/3-6d NAILS AT EACH JOINT AND TO THE FILL PIECES W/4-6d NAILS.

INSIDE CONTAINER HEIGHT MINUS 1" (REF: 7'-10")

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



SIDE FILL ASSEMBLY

SEE SPECIAL NOTE 2 ON PAGE 17.

FILL PIECE, 2" X 4" X 38-3/4" (8 REQD). NOTE: ONE END OF FOUR OF THE FILL PIECES MUST BE TOENAILED INTO THE CENTER VERTICAL PIECE W/2-10d NAILS AT EACH JOINT AS SHOWN.

DETAILS

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

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

LOAD BEARING PIECE, 2" X 6" X 7'-8" (5 REQD). NAIL TO THE BEAM ASSEMBLIES W/2-10d NAILS AT EACH JOINT.

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

SUPPORT PIECE, 2" X 6" X 15-1/2" (4 REQD).

REAR BLOCKING ASSEMBLY

FILL PIECE, 2" X 6" X 15" (16 REQD). NAIL TO THE LONGITUDINAL PIECE W/4-10d NAILS.

TIE PIECE, 2" X 4" X 38-1/2" (1 REQD). NAIL TO THE VERTICAL PIECES W/3-10d NAILS AT EACH END.

LATERAL PIECE, 2" X 6" X 15-1/2" (8 REQD). NAIL TO THE VERTICAL PIECES W/3-10d NAILS AT EACH END.

LONGITUDINAL PIECE, 2" X 6" X 41-1/2" (8 REQD). NAIL TO THE VERTICAL PIECES W/3-10d NAILS AT EACH END AND TO THE SUPPORT PIECE W/3-10d NAILS.

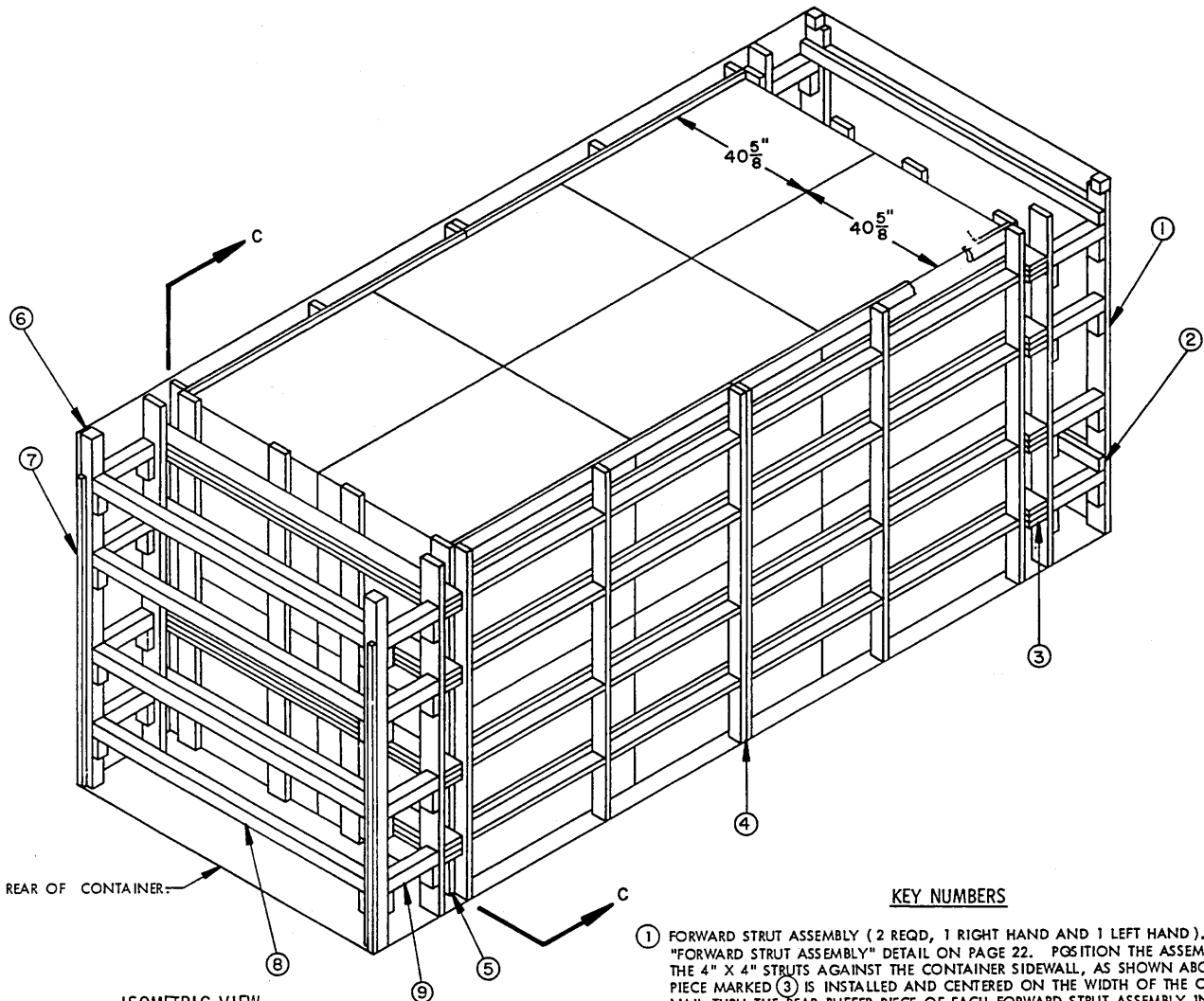
VERTICAL PIECE, 2" X 4" X 7'-3" (2 REQD).

VERTICAL PIECE, 2" X 4" X INSIDE CONTAINER HEIGHT MINUS 1" (REF: 7'-10") (2 REQD).

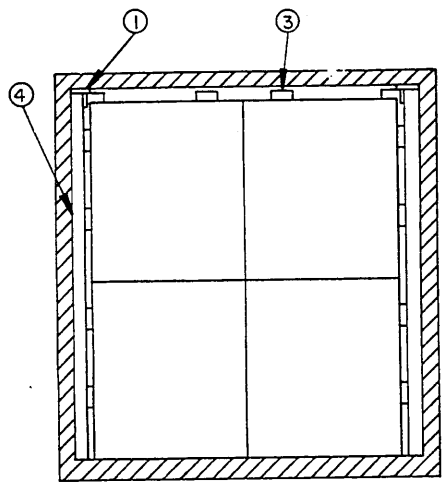
INDICATES INTERMODAL CONTAINER SIDE OF FILLER ASSEMBLY.

FILLER ASSEMBLY

DETAILS



ISOMETRIC VIEW



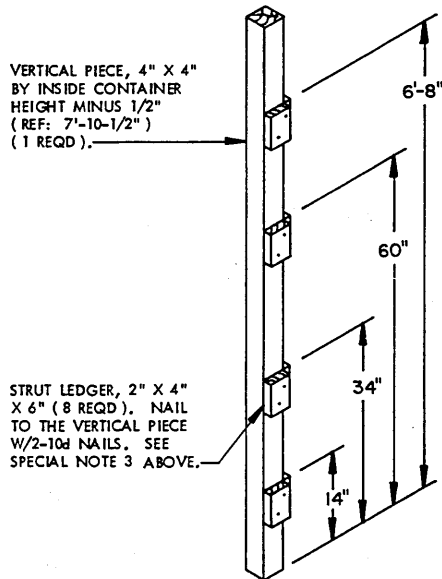
SECTION C-C

KEY NUMBERS

- ① FORWARD STRUT ASSEMBLY (2 REQD, 1 RIGHT HAND AND 1 LEFT HAND). SEE THE "FORWARD STRUT ASSEMBLY" DETAIL ON PAGE 22. 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 THRU 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 "SPREADER ASSEMBLY" DETAIL ON PAGE 22. POSITION AS SHOWN, IMMEDIATELY ABOVE THE 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 "FORWARD BLOCKING ASSEMBLY" DETAIL ON PAGE 22 AND GENERAL NOTE "F" ON PAGE 2.
- ④ SIDE FILL ASSEMBLY (4 REQD). SEE THE "SIDE FILL ASSEMBLY" DETAIL ON PAGE 23 AND GENERAL NOTE "D" ON PAGE 2.
- ⑤ REAR BLOCKING ASSEMBLY (1 REQD). SEE THE "REAR BLOCKING ASSEMBLY" DETAIL ON PAGE 23 AND GENERAL NOTE "F" ON PAGE 2.
- ⑥ DOOR POST VERTICAL (2 REQD). SEE THE "DOOR POST VERTICAL" DETAIL ON PAGE 21 AND "TYPICAL DETAIL A" ON PAGE 33.
- ⑦ DOOR POST VERTICAL RETAINER (2 REQD). SEE THE "DOOR POST VERTICAL RETAINER" DETAILS ON PAGE 32 AND "TYPICAL DETAIL A" ON PAGE 33. NAIL THROUGH THE HOLES INTO THE DOOR POST VERTICAL W/4- 10d NAILS.
- ⑧ 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 33. AFTER INSTALLING THE BOTTOM AND TOP DOOR SPANNERS, THE STRUTS, PIECES MARKED ⑨, ARE TO BE INSTALLED.
- ⑨ 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 33.

SPECIAL NOTES:

1. THE LOAD VIEWS AND THE "LOAD AS SHOWN" SECTION ON PAGES 20 AND 21 ARE BASED ON UNIT NO. 6, FLAT DUNNAGE, SHOWN ON PAGE 7, WITH OVERALL DIMENSIONS OF 40-5/8" LONG BY 58-1/2" WIDE BY 46-1/4" HIGH WITH A UNIT WEIGHT OF 1,872 POUNDS.
2. EXCESSIVE SLACK ACROSS THE WIDTH OF A LOAD CAN BE ELIMINATED BY LAMINATING ADDITIONAL PIECES OF APPROPRIATE THICKNESS TO THE BEARING PIECES ON THE SIDE FILL ASSEMBLIES ON ONE OR BOTH SIDES OF THE CONTAINER. NAIL EACH ADDITIONAL PIECE TO THE BEARING PIECE W/1 APPROPRIATELY SIZED NAIL EVERY 12". ADDITIONALLY, THE NUMBER AND THICKNESS OF THE BEARING PIECES AND THE THICKNESS OF THE VERTICAL PIECES MAY BE ADJUSTED AS REQUIRED TO FACILITATE VARIANCE IN THE LENGTH OF THE PALLET UNIT.
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.
4. CAUTION: ONLY CONTAINERS WITH A MINIMUM INSIDE HEIGHT DIMENSION OF 93" AND A MINIMUM DOOR OPENING HEIGHT DIMENSION OF 90" CAN BE USED TO ACHIEVE THE TWO-HIGH PALLET UNIT LOAD CONFIGURATION DEPICTED ON PAGE 20.
5. NOTICE: EXTREME CARE WILL HAVE TO BE EXERCISED WHEN LOADING THE LAST TWO LENGTHWISE PALLET UNITS INTO PLACE DUE TO THE CLOSENESS OF FIT.



DOOR POST VERTICAL

RECOMMENDED SEQUENTIAL LOADING PROCEDURES:

1. PREFABRICATE ONE RIGHT HAND AND ONE LEFT HAND FORWARD STRUT ASSEMBLY, TWO SPREADER ASSEMBLIES, ONE FORWARD BLOCKING ASSEMBLY, FOUR SIDE FILL 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 TWO FORWARD STRUT ASSEMBLIES (ONE RIGHT HAND AND ONE LEFT HAND) AND TWO SPREADER ASSEMBLIES.
3. INSTALL FORWARD BLOCKING ASSEMBLY.
4. INSTALL ONE SIDE FILL ASSEMBLY AND LOAD TWO PALLET UNITS.
5. REPEAT STEP 4.
6. REPEAT STEP 4.
7. REPEAT STEP 4.
8. LOAD FOUR PALLET UNITS.
9. INSTALL REAR BLOCKING ASSEMBLY.
10. INSTALL THE TWO DOOR POST VERTICAL ASSEMBLIES (ONE RIGHT HAND AND ONE LEFT HAND).
11. INSTALL TWO DOOR SPANNER PIECES (ONE AT THE LOWEST POSITION AND ONE AT THE UPPERMOST POSITION).
12. INSTALL THE STRUTS BETWEEN THE REAR BLOCKING ASSEMBLY AND THE DOOR POST VERTICALS.
13. INSTALL THE REMAINING TWO DOOR SPANNER PIECES.

BILL OF MATERIAL

LUMBER	LINEAR FEET	BOARD FEET
1" X 4"	30	10
2" X 4"	254	170
2" X 6"	409	409
4" X 4"	67	90
NAILS	NO. REQD	POUNDS
6d (2")	24	1/4
10d (3")	838	13
12d (3-1/4")	64	1-1/4
DOOR POST VERTICAL RETAINER --- 2 REQD		64 LBS

LOAD AS SHOWN

ITEM	QUANTITY	WEIGHT (APPROX)
PALLET UNIT	12	22,464 LBS
DUNNAGE		1,437 LBS
CONTAINER		4,700 LBS
TOTAL WEIGHT		28,601 LBS

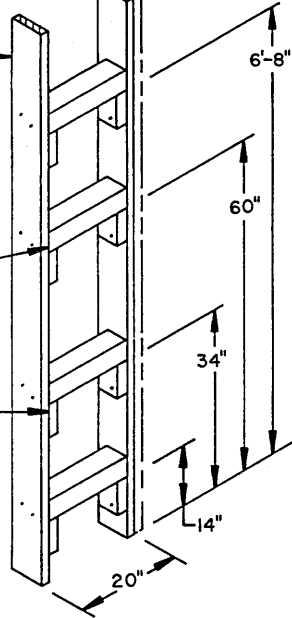
FORWARD BUFFER PIECE, 2" X 6" BY INSIDE CONTAINER HEIGHT MINUS 1/2" (REF: 7'-7-1/2") (1 REQD). NAIL TO THE STRUTS W/2-10d NAILS AT EACH JOINT.

SEE GENERAL NOTE "G" ON PAGE 2.

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

STRUT, 4" X 4" X 17" (4 REQD).

STRUT LEDGER, 2" X 4" X 6" (8 REQD). NAIL TO THE BUFFER PIECE W/2-10d NAILS.



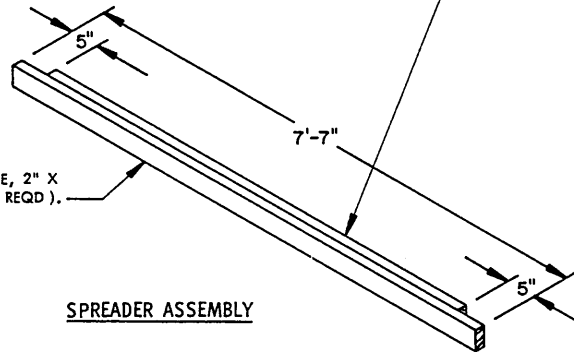
FORWARD STRUT ASSEMBLY

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 AND STRUT LEDGERS 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.

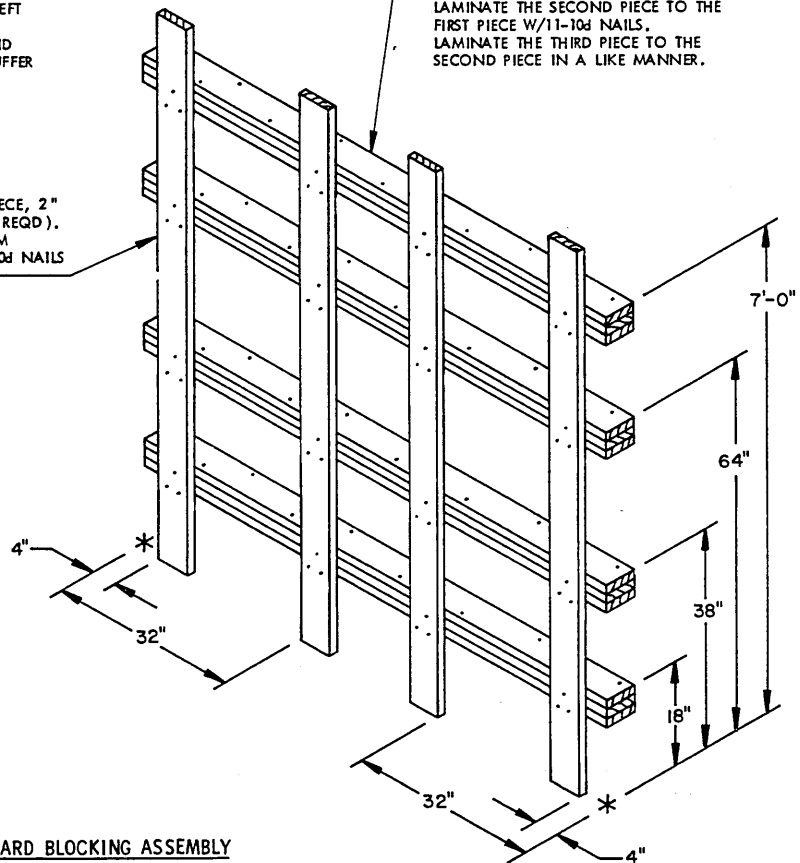
RETAINER PIECE, 2" X 4" X 7'-7" (1 REQD).

SPREADER ASSEMBLY



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

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

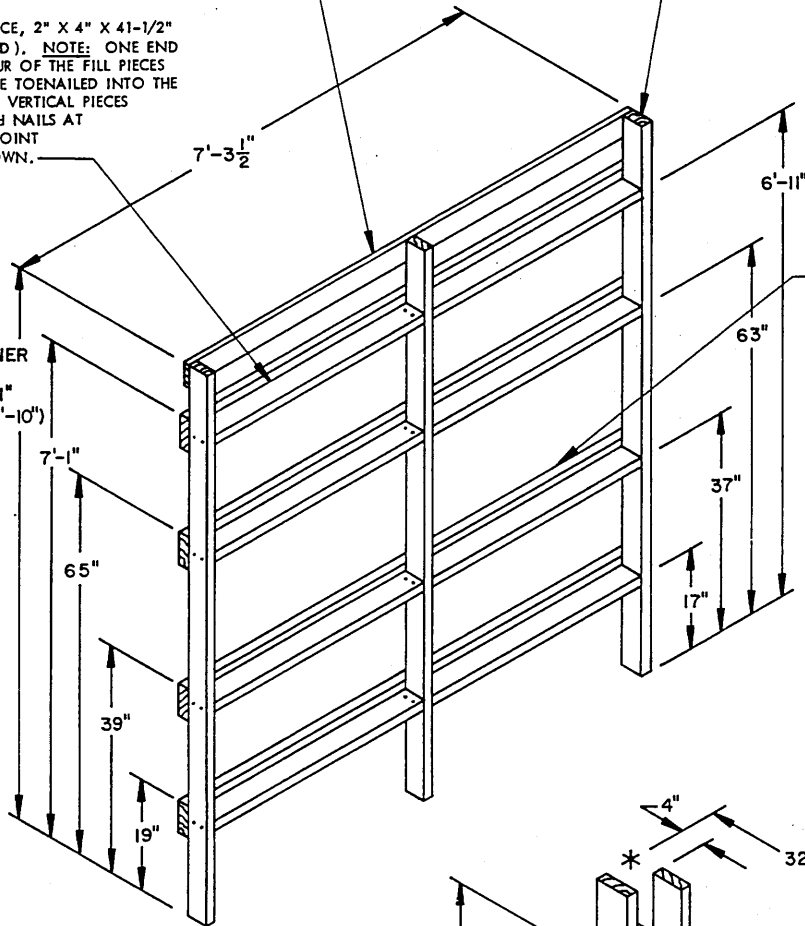


FORWARD BLOCKING ASSEMBLY

TIE PIECE, 1" X 4" X 7'-3-1/2"
(1 REQD). NAIL TO THE VERTICAL
PIECES W/2-6d NAILS AT EACH JOINT.

FILL PIECE, 2" X 4" X 41-1/2"
(8 REQD). NOTE: ONE END
OF FOUR OF THE FILL PIECES
MUST BE TOENAILED INTO THE
CENTER VERTICAL PIECES
W/2-10d NAILS AT
EACH JOINT
AS SHOWN.

INSIDE
CONTAINER
HEIGHT
MINUS 1"
(REF: 7'-10")



SIDE FILL ASSEMBLY

SEE SPECIAL NOTE 2 ON PAGE 21.

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

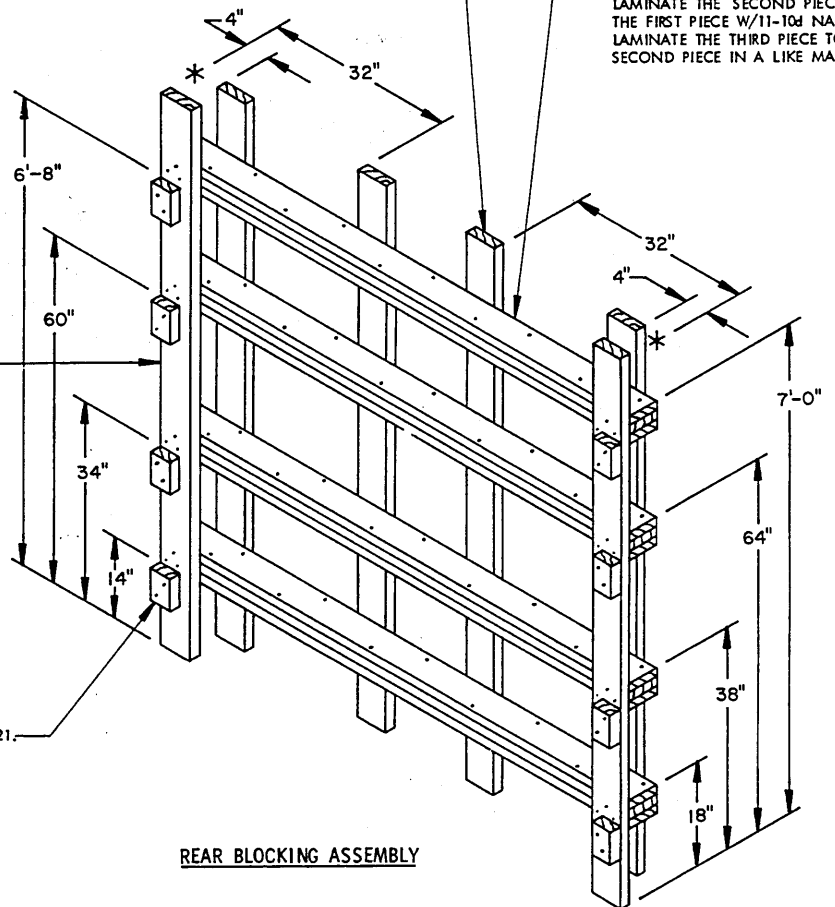
STRUT LEDGER, 2" X 4" X 6"
(8 REQD). NAIL TO THE
BUFFER PIECE W/2-10d NAILS.
SEE SPECIAL NOTE 3 ON PAGE 21.

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

BEARING PIECE, 2" X 6" X 7'-3-1/2"
(4 REQD). NAIL TO THE VERTICAL
PIECES W/3-10d NAILS AT EACH JOINT
AND TO THE FILL PIECES W/4-10d
NAILS EACH.

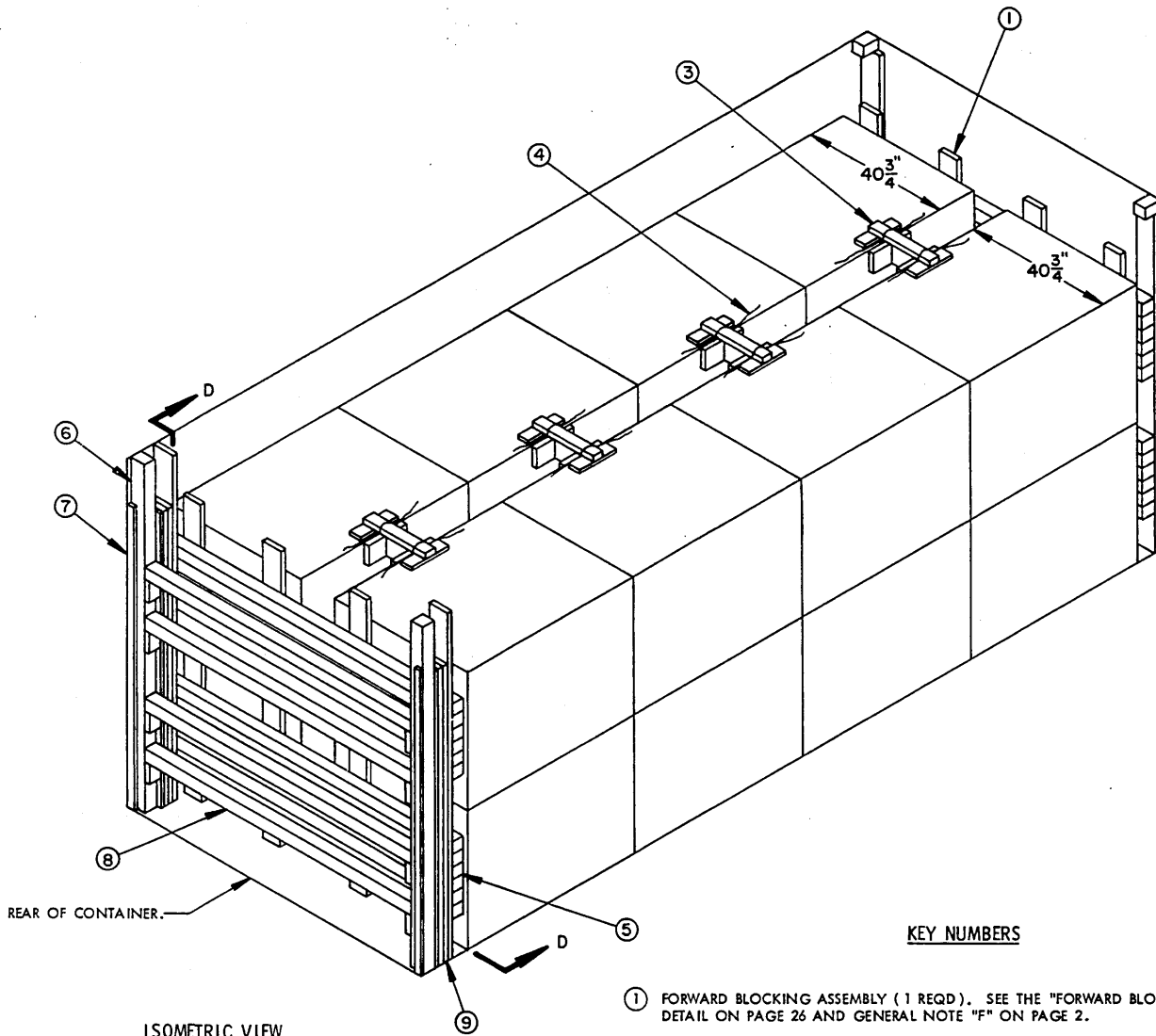
LOAD BEARING PIECE, 2" X 4" X 7'-10"
(4 REQD). NAIL TO THE BEAM ASSEMBLIES
W/3-10d NAILS AT EACH JOINT.

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



REAR BLOCKING ASSEMBLY

DETAILS

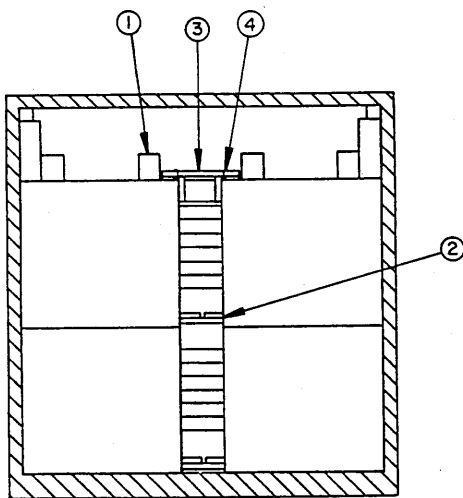


ISOMETRIC VIEW

REAR OF CONTAINER.

KEY NUMBERS

- ① FORWARD BLOCKING ASSEMBLY (1 REQD). SEE THE "FORWARD BLOCKING ASSEMBLY" DETAIL ON PAGE 26 AND GENERAL NOTE "F" ON PAGE 2.
- ② LOWER ANTI-SWAY BRACE (8 REQD). SEE THE "LOWER ANTI-SWAY BRACE" DETAIL ON PAGE 27.
- ③ TOP ANTI-SWAY BRACE (4 REQD). SEE THE "TOP ANTI-SWAY BRACE" DETAIL ON PAGE 27.
- ④ TIE WIRE, 14 GAGE WIRE BY LENGTH TO SUIT (8 REQD). INSTALL THE WIRE TO FORM A COMPLETE LOOP AROUND THE RETAINER PIECE OF THE TOP ANTI-SWAY BRACE. ATTACH EACH END TO A PALLET UNIT UNITIZING STRAP.
- ⑤ REAR BLOCKING ASSEMBLY (1 REQD). SEE THE "REAR BLOCKING ASSEMBLY" DETAIL ON PAGE 26 AND GENERAL NOTE "F" ON PAGE 2.
- ⑥ DOOR POST VERTICAL (2 REQD). SEE THE "DOOR POST VERTICAL" DETAIL ON PAGE 27 AND "TYPICAL DETAIL B" ON PAGE 33.
- ⑦ DOOR POST VERTICAL RETAINER (2 REQD). SEE THE "DOOR POST VERTICAL RETAINER" DETAILS ON PAGE 32 AND "TYPICAL DETAIL C" ON PAGE 33. NAIL THROUGH THE HOLES INTO THE DOOR POST VERTICAL W/4-10d NAILS.
- ⑧ DOOR SPANNER, 4" X 4" MATERIAL, CUT TO A LENGTH THAT WILL PROVIDE FOR A DRIVE FIT BETWEEN DOOR POST VERTICALS (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 33. AFTER INSTALLING THE BOTTOM AND TOP DOOR SPANNERS, THE FILL MATERIAL, PIECE MARKED ⑨, IS TO BE INSTALLED.
- ⑨ FILL MATERIAL, 6" WIDE BY 6'-9" LONG MATERIAL (AS REQD). NAIL EACH PIECE TO THE REAR BLOCKING ASSEMBLY AND/OR LAMINATE TOGETHER W/9 NAILS OF A SUITABLE SIZE (10d NAILS FOR 2" THICK MATERIAL). **CAUTION:** DO NOT NAIL TO THE DOOR POST VERTICALS, PIECES MARKED ⑥ .



SECTION D-D

SPECIAL NOTES:

1. THE LOAD VIEWS AND THE "LOAD AS SHOWN" SECTION ON PAGES 24 AND 25 ARE BASED ON UNIT NO. 10, ROUTED DUNNAGE, SHOWN ON PAGE 9, WITH OVERALL DIMENSIONS OF 40-3/4" LONG BY 52-1/2" WIDE BY 37-7/8" HIGH WITH A UNIT WEIGHT OF 1,331 POUNDS.

RECOMMENDED SEQUENTIAL LOADING PROCEDURES:

1. PREFABRICATE ONE FORWARD BLOCKING ASSEMBLY, FOUR TOP ANTI-SWAY BRACES, 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.
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. REPEAT STEPS 3, 4, AND 5.
9. INSTALL REAR BLOCKING ASSEMBLY.
10. INSTALL THE TWO DOOR POST VERTICAL ASSEMBLIES (ONE RIGHT HAND AND ONE LEFT HAND).
11. INSTALL TWO DOOR SPANNER PIECES (ONE AT THE LOWEST POSITION AND ONE AT THE UPPERMOST POSITION).
12. INSTALL THE SOLID FILL TYPE LOAD-BLOCKING MATERIAL.
13. INSTALL THE REMAINING TWO DOOR SPANNER PIECES.

BILL OF MATERIAL		
LUMBER	LINEAR FEET	BOARD FEET
1" X 4"	6	2
1" X 6"	14	7
2" X 4"	43	29
2" X 6"	175	175
4" X 4"	227	303
NAILS	NO. REQD	POUNDS
6d (2")	42	1/4
10d (3")	460	7-1/4
12d (3-1/4")	16	1/2
DOOR POST VERTICAL RETAINER	2 REQD	64 LBS
WIRE NO. 14 GAGE	24' REQD	1/2 LB

LOAD AS SHOWN

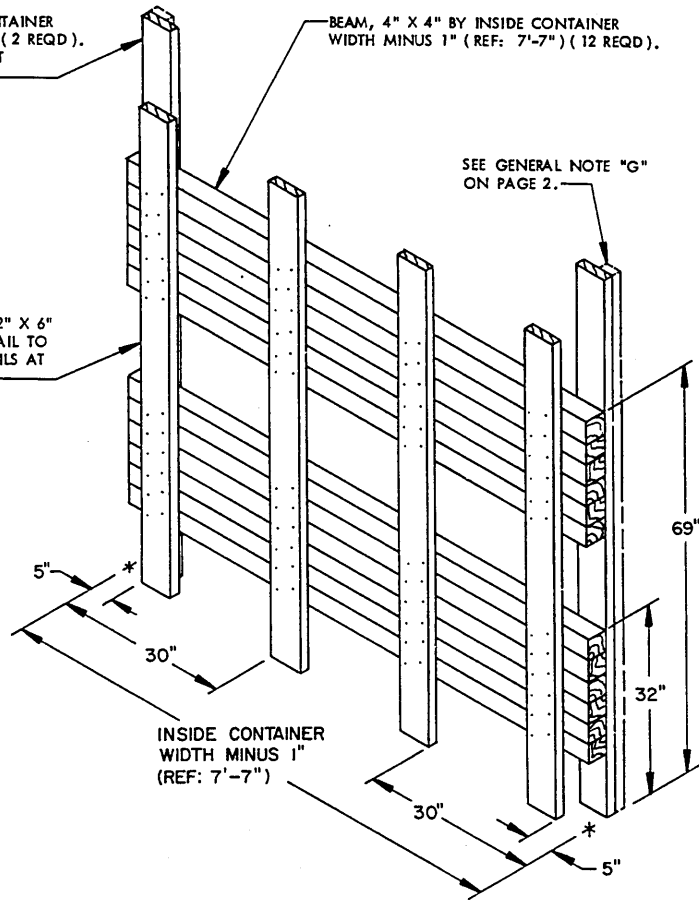
ITEM	QUANTITY	WEIGHT (APPROX)
PALLET UNIT	16	21,296 LBS
DUNNAGE		1,105 LBS
CONTAINER		4,700 LBS
TOTAL GROSS WEIGHT		27,101 LBS

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

BEAM, 4" X 4" BY INSIDE CONTAINER WIDTH MINUS 1" (REF: 7'-7") (12 REQD).

SEE GENERAL NOTE "G" ON PAGE 2.

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



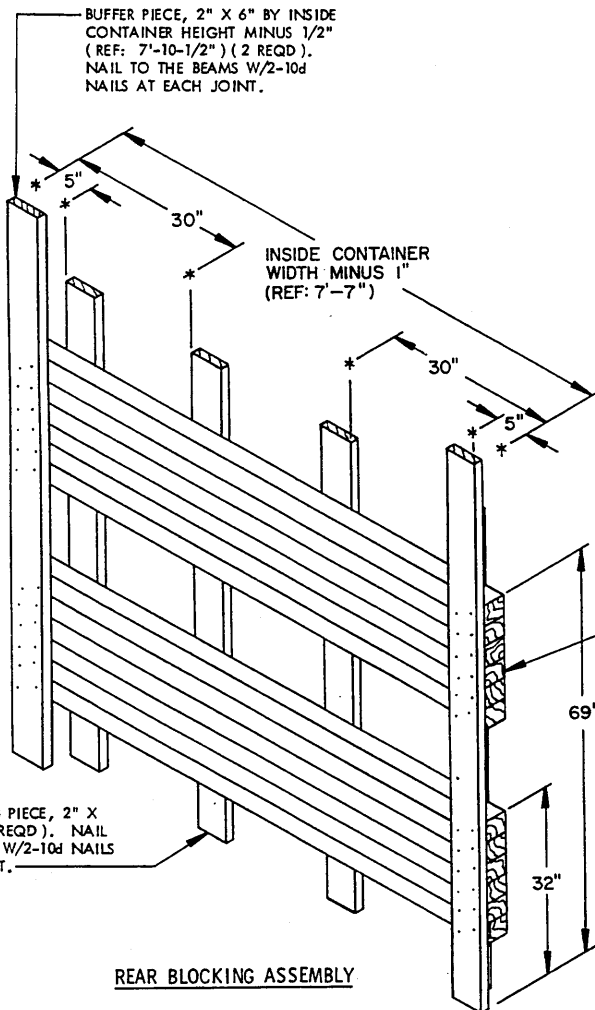
FORWARD BLOCKING ASSEMBLY

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

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

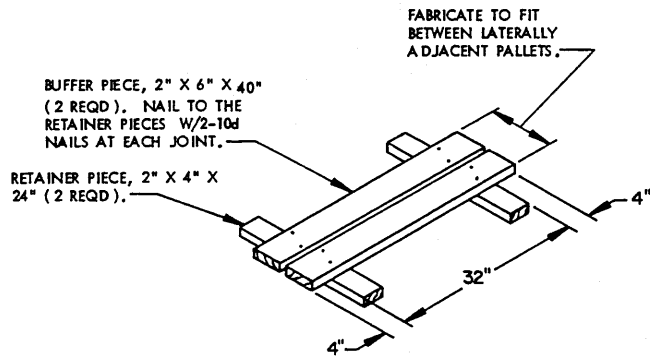
BEAM, 4" X 4" BY INSIDE CONTAINER WIDTH MINUS 1" (REF: 7'-7") (12 REQD).

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



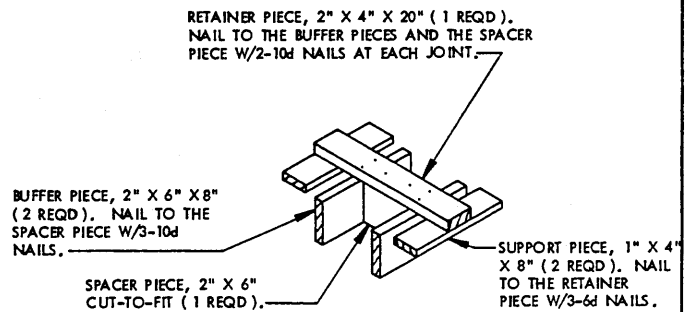
REAR BLOCKING ASSEMBLY

DETAILS



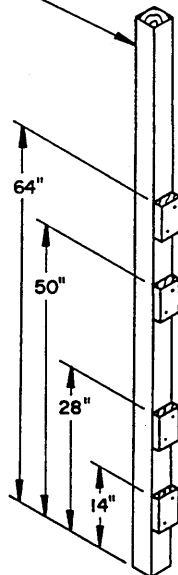
LOWER ANTI-SWAY BRACE

THIS ASSEMBLY MUST BE FABRICATED IN PLACE BETWEEN THE PALLET UNITS.



TOP ANTI-SWAY BRACE

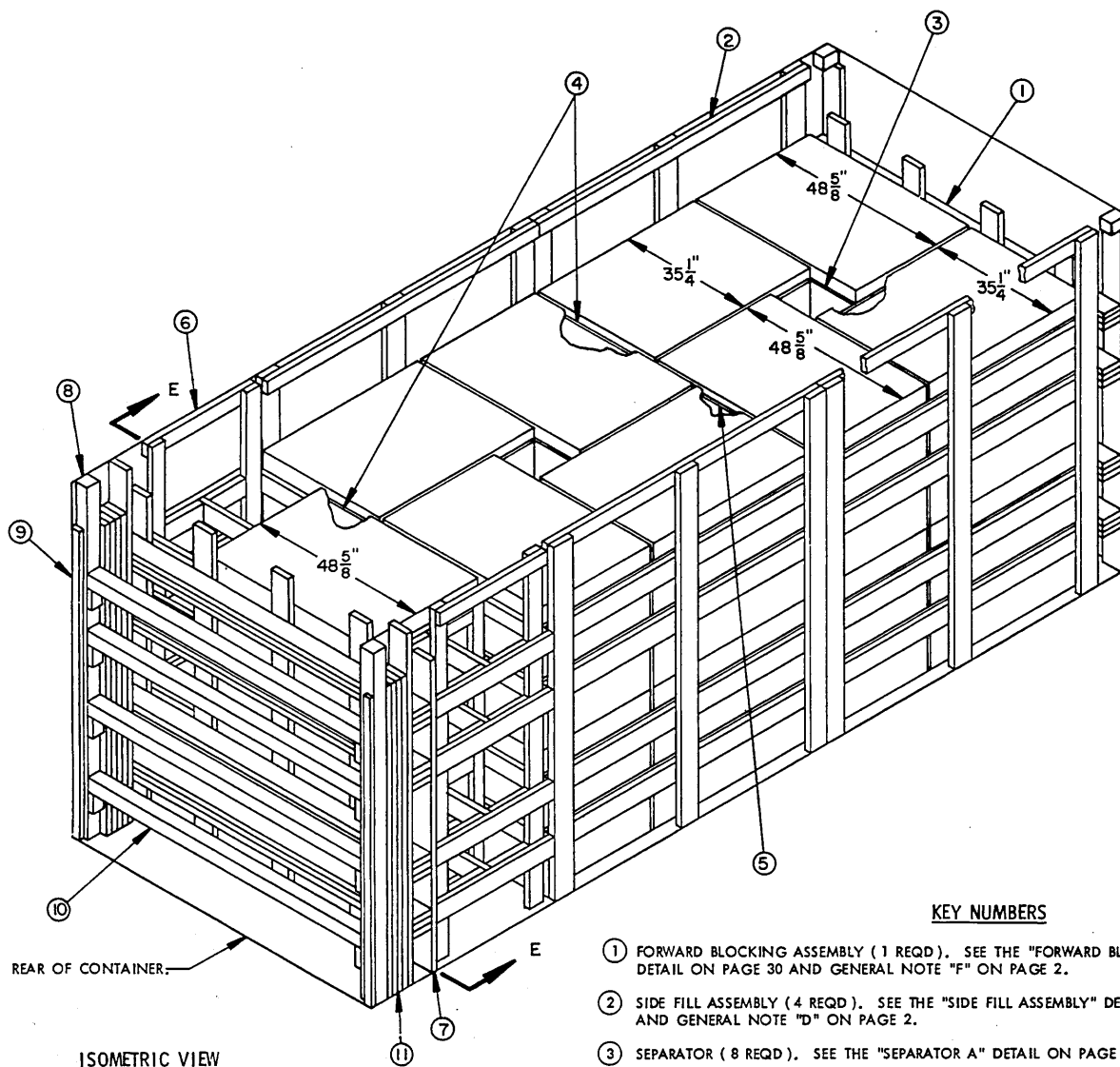
VERTICAL PIECE, 4" X 4" BY INSIDE CONTAINER HEIGHT MINUS 1/2" (REF: 7'-10-1/2") (1 REQD).



DOOR POST VERTICAL

THE STRUT LEDGERS CAN ONLY BE PRE-NAILED TO THE DOOR POST VERTICAL ON ONE SIDE OF THE CONTAINER. THE STRUT LEDGERS ON THE OTHER SIDE ARE TO BE NAILED AFTER A LOWER DOOR SPANNER IS INSTALLED.

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

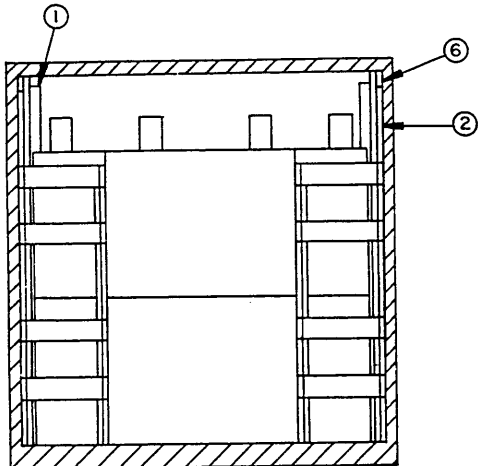


REAR OF CONTAINER.

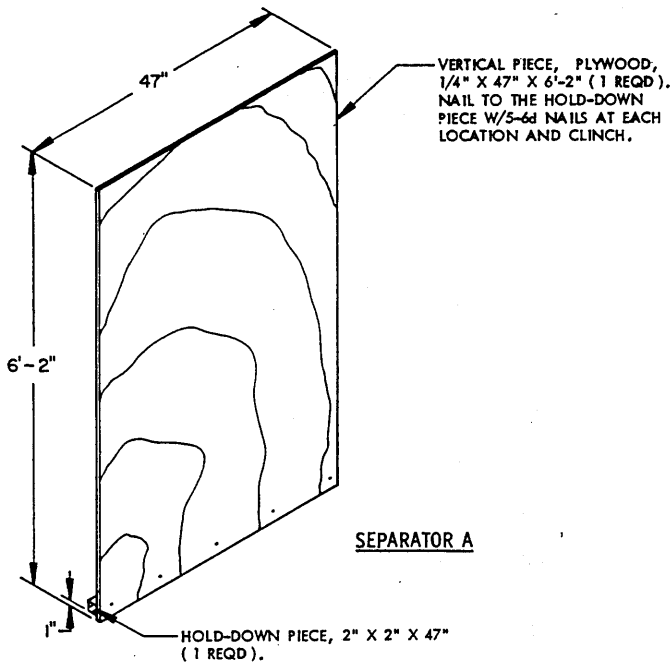
ISOMETRIC VIEW

KEY NUMBERS

- ① FORWARD BLOCKING ASSEMBLY (1 REQD). SEE THE "FORWARD BLOCKING ASSEMBLY" DETAIL ON PAGE 30 AND GENERAL NOTE "F" ON PAGE 2.
- ② SIDE FILL ASSEMBLY (4 REQD). SEE THE "SIDE FILL ASSEMBLY" DETAIL ON PAGE 31 AND GENERAL NOTE "D" ON PAGE 2.
- ③ SEPARATOR (8 REQD). SEE THE "SEPARATOR A" DETAIL ON PAGE 29.
- ④ SEPARATOR (2 REQD). SEE THE "SEPARATOR B" DETAIL ON PAGE 31.
- ⑤ SEPARATOR (1 REQD). SEE THE "SEPARATOR C" DETAIL ON PAGE 31.
- ⑥ FILLER ASSEMBLY (2 REQD). SEE THE "FILLER ASSEMBLY" DETAIL ON PAGE 31.
- ⑦ REAR BLOCKING ASSEMBLY (1 REQD). SEE THE "REAR BLOCKING ASSEMBLY" DETAIL ON PAGE 30 AND GENERAL NOTE "F" ON PAGE 2.
- ⑧ DOOR POST VERTICAL (2 REQD). SEE THE "DOOR POST VERTICAL" DETAIL ON PAGE 29 AND "TYPICAL DETAIL B" ON PAGE 33.
- ⑨ DOOR POST VERTICAL RETAINER (2 REQD). SEE THE "DOOR POST VERTICAL RETAINER" DETAILS ON PAGE 32 AND "TYPICAL DETAIL C" ON PAGE 33. 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 33. AFTER INSTALLING THE BOTTOM AND TOP DOOR SPANNERS, THE FILL MATERIAL, PIECE MARKED ⑪, IS TO BE INSTALLED.
- ⑪ FILL MATERIAL, 6" WIDE BY 7'-0" LONG MATERIAL (AS REQD). NAIL EACH PIECE TO THE REAR BLOCKING ASSEMBLY AND/OR LAMINATE TOGETHER W/9 NAILS OF A SUITABLE SIZE (10d NAILS FOR 2" MATERIAL). **CAUTION:** DO NOT NAIL TO THE DOOR POST VERTICALS, PIECES MARKED ⑧.



SECTION E-E

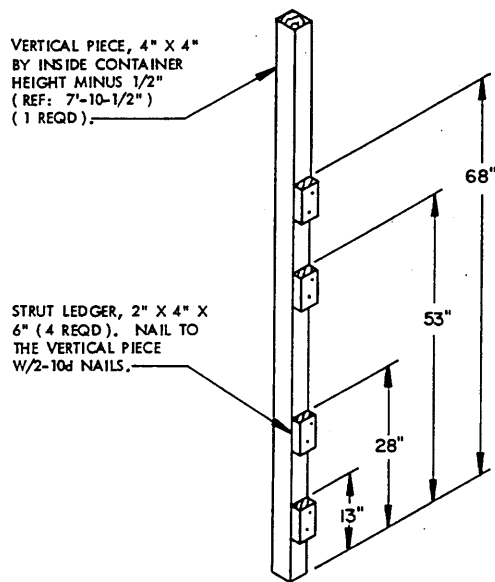


SPECIAL NOTES:

1. THE LOAD VIEWS AND THE "LOAD AS SHOWN" SECTION ON PAGES 28 AND 29 ARE BASED ON UNIT NO. 12, FLAT DUNNAGE, SHOWN ON PAGE 9, WITH OVERALL DIMENSIONS OF 35-1/4" LONG BY 48-5/8" WIDE BY 38-1/8" HIGH WITH A UNIT WEIGHT OF 1,025 POUNDS.
2. EXCESSIVE SLACK ACROSS THE WIDTH OF A LOAD CAN BE ELIMINATED BY LAMINATING ADDITIONAL PIECES OF APPROPRIATE THICKNESS TO THE BEARING PIECES ON THE SIDE FILL ASSEMBLIES ON ONE OR BOTH SIDES OF THE CONTAINER. NAIL EACH ADDITIONAL PIECE TO THE BEARING PIECE W/1 APPROPRIATELY SIZED NAIL EVERY 12". ADDITIONALLY, THE NUMBER AND THICKNESS OF THE BEARING AND SPACER PIECES MAY BE ADJUSTED AS REQUIRED TO FACILITATE VARIANCE IN THE LENGTH OF THE PALLET UNIT.

RECOMMENDED SEQUENTIAL LOADING PROCEDURES:

1. PREFABRICATE ONE FORWARD BLOCKING ASSEMBLY, FOUR SIDE FILL ASSEMBLIES, EIGHT SEPARATORS "A", TWO SEPARATORS "B", ONE SEPARATOR "C", 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 FORWARD BLOCKING ASSEMBLY.
3. INSTALL ONE SIDE FILL ASSEMBLY AND LOAD TWO PALLET UNITS.
4. REPEAT STEP 3.
5. INSTALL FOUR SEPARATOR "A" ASSEMBLIES AND LOAD FOUR PALLET UNITS.
6. INSTALL ONE SEPARATOR "B" AND ONE SEPARATOR "C" ASSEMBLY.
7. REPEAT STEP 3.
8. REPEAT STEP 3.
9. REPEAT STEP 5.
10. INSTALL ONE SEPARATOR "B" ASSEMBLY.
11. LOAD THE REMAINING TWO PALLET UNITS AND INSTALL THE TWO FILLER ASSEMBLIES.
12. INSTALL REAR BLOCKING ASSEMBLY.
13. INSTALL THE TWO DOOR POST VERTICAL ASSEMBLIES (ONE RIGHT HAND AND ONE LEFT HAND).
14. INSTALL TWO DOOR SPANNER PIECES (ONE AT THE LOWEST POSITION AND ONE AT THE UPPERMOST POSITION).
15. INSTALL THE SOLID FILL TYPE LOAD BLOCKING MATERIAL.
16. INSTALL THE REMAINING TWO DOOR SPANNER PIECES.



DOOR POST VERTICAL

THE STRUT LEDGERS CAN ONLY BE PRE-NAILED TO THE DOOR POST VERTICAL ON ONE SIDE OF THE CONTAINER. THE STRUT LEDGERS ON THE OTHER SIDE ARE TO BE NAILED AFTER A LOWER DOOR SPANNER IS INSTALLED.

BILL OF MATERIAL		
LUMBER	LINEAR FEET	BOARD FEET
1" X 6"	112	56
2" X 2"	38	13
2" X 4"	93	62
2" X 6"	654	654
4" X 4"	45	60
NAILS	NO. REQD	POUNDS
6d (2")	181	1-1/4
10d (3")	956	14-3/4
12d (3-1/4")	16	1/2
PLYWOOD	261 SQ FT REQD	180 LBS
DOOR POST VERTICAL RETAINER	2 REQD	64 LBS

LOAD AS SHOWN

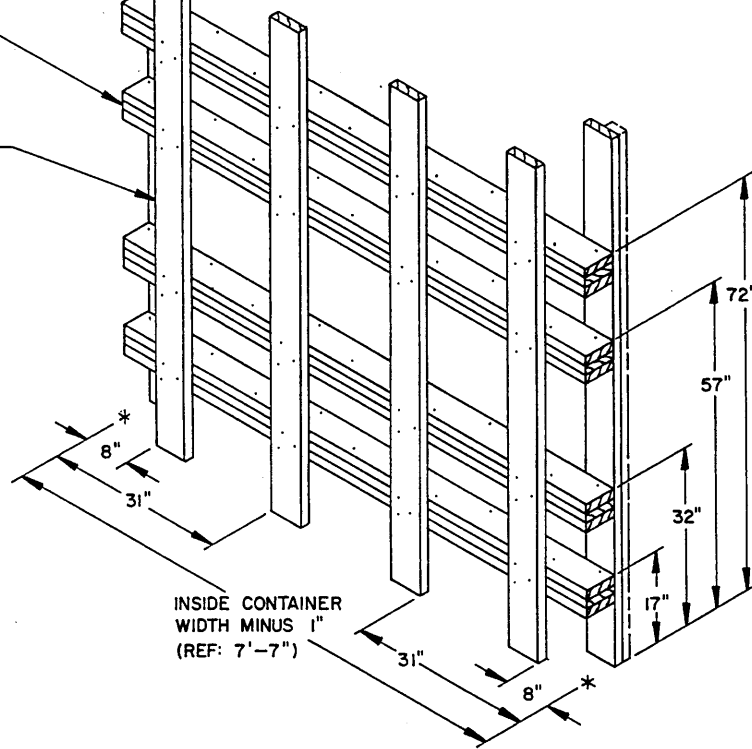
ITEM	QUANTITY	WEIGHT (APPROX)
PALLET UNIT	18	18,450 LBS
DUNNAGE		1,951 LBS
CONTAINER		4,700 LBS
TOTAL WEIGHT		25,101 LBS

BEAM ASSEMBLY, 2" X 6" BY INSIDE CONTAINER WIDTH MINUS 1" (REF: 7'-7") (TRIPLED) (4 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 7'-0" (4 REQD). NAIL TO THE BEAM ASSEMBLIES W/3-10d NAILS AT EACH JOINT.

SEE GENERAL NOTE "G" ON PAGE 2.

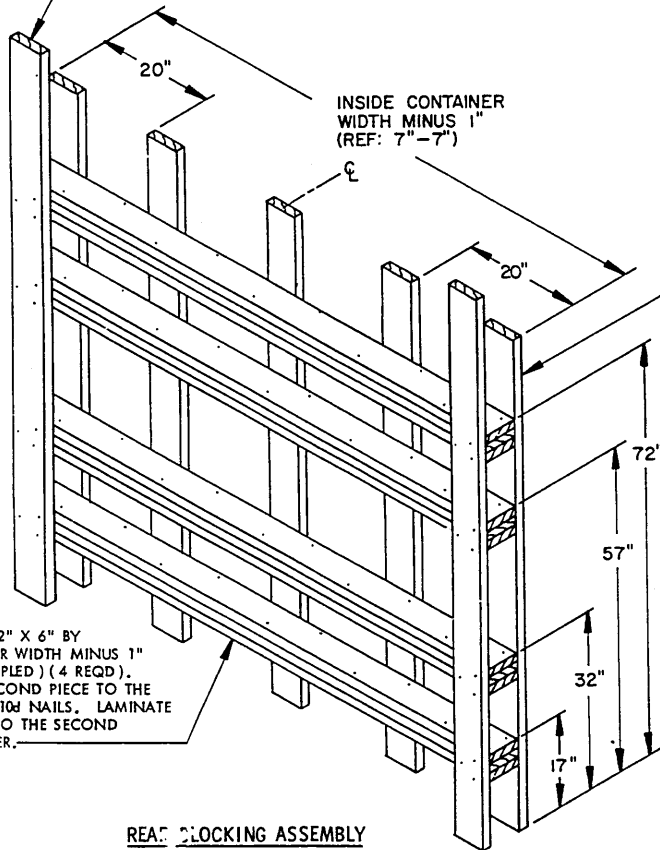
BUFFER PIECE, 2" X 6" BY INSIDE CONTAINER HEIGHT MINUS 1/2" (REF: 7'-7-1/2") (2 REQD). NAIL TO THE BEAM ASSEMBLIES W/3-10d NAILS AT EACH JOINT.



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

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

FORWARD BLOCKING ASSEMBLY



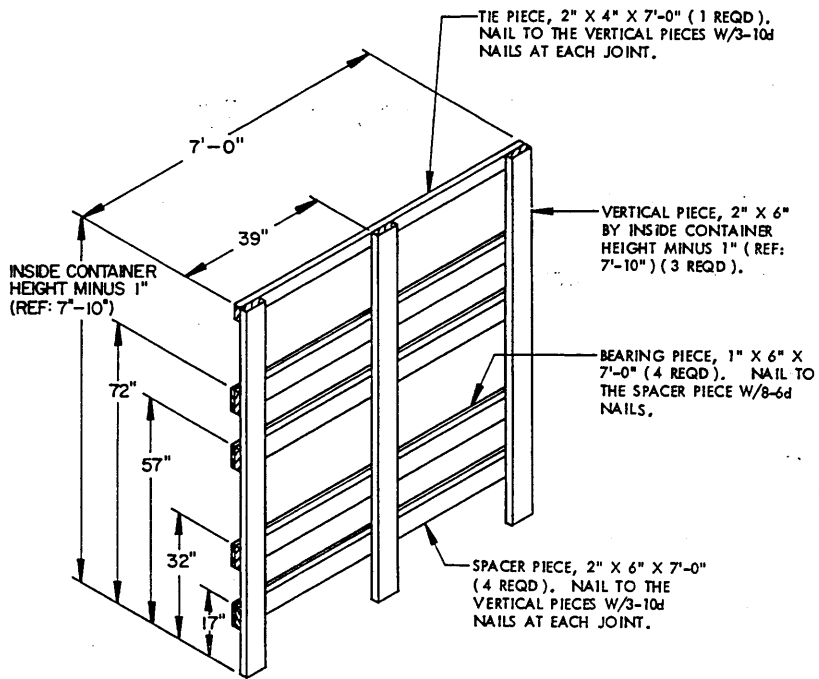
INSIDE CONTAINER WIDTH MINUS 1" (REF: 7'-7")

LOAD BEARING PIECE, 2" X 6" X 7'-0" (5 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) (4 REQD). LAMINATE THE SECOND PIECE TO THE FIRST PIECE W/11-10d NAILS. LAMINATE THE THIRD PIECE TO THE SECOND IN A LIKE MANNER.

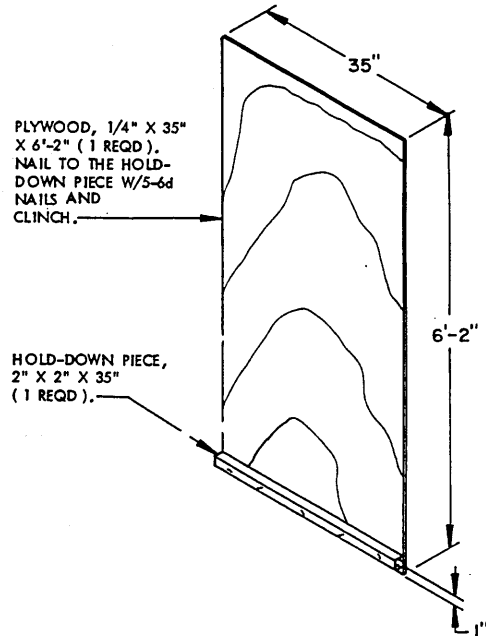
REAR BLOCKING ASSEMBLY

DETAILS

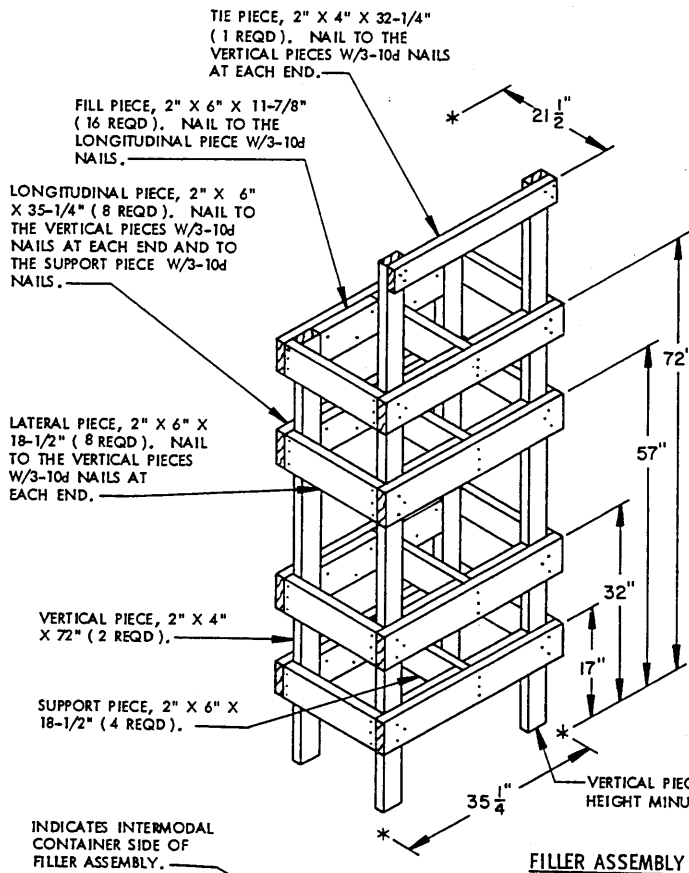


SIDE FILL ASSEMBLY

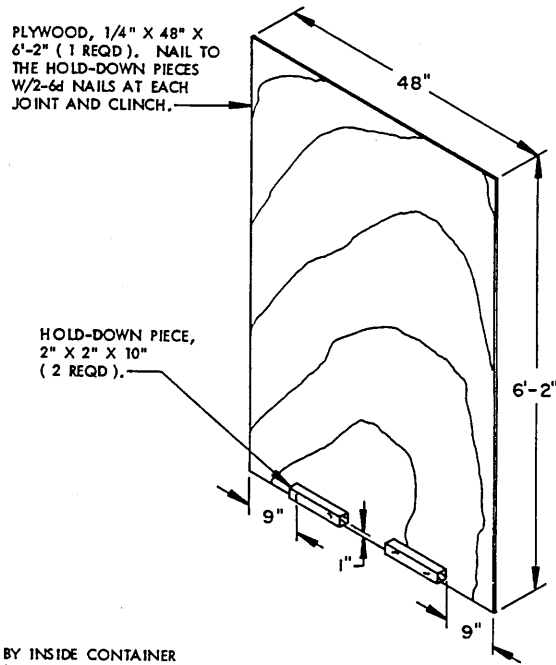
SEE SPECIAL NOTE 2 ON PAGE 29.



SEPARATOR C

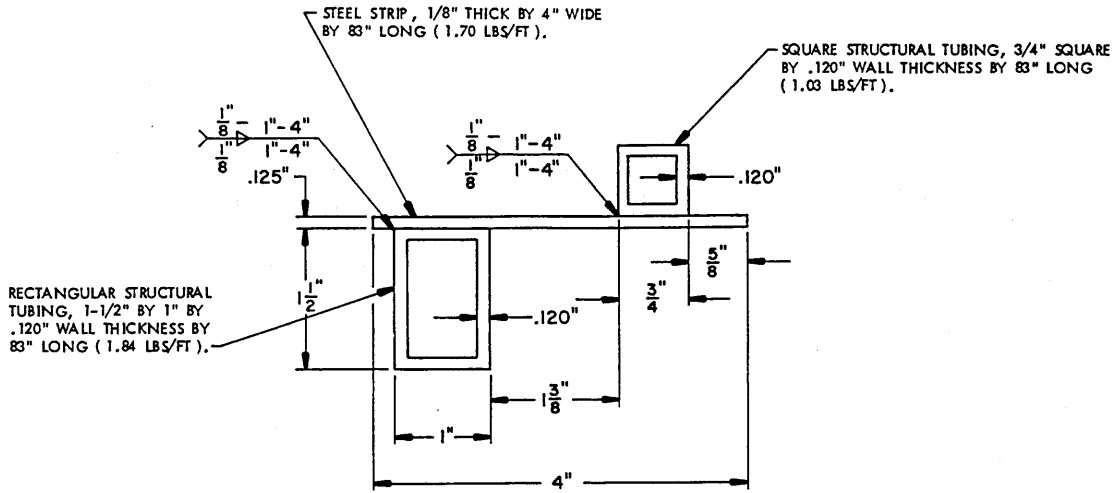


FILLER ASSEMBLY

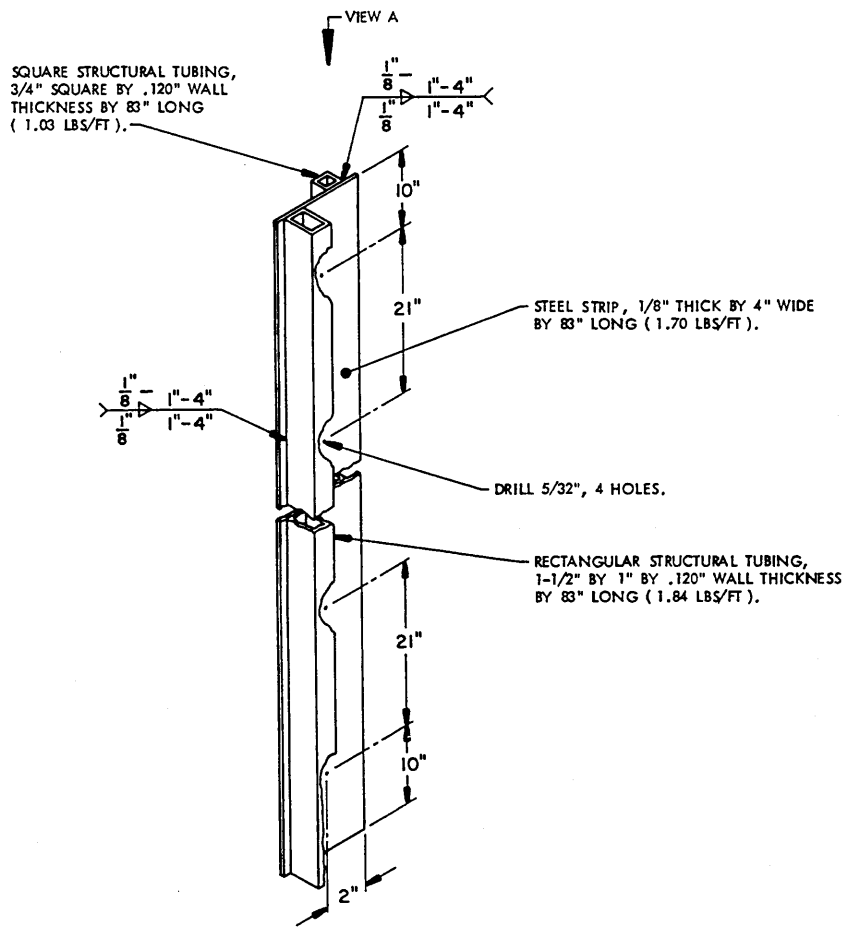


SEPARATOR B

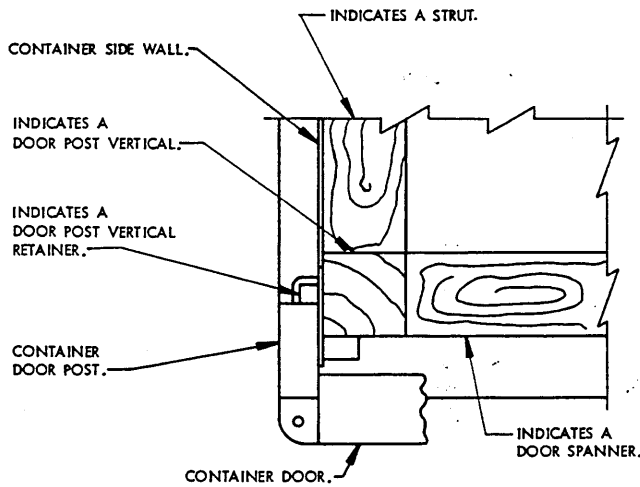
DETAILS



VIEW A

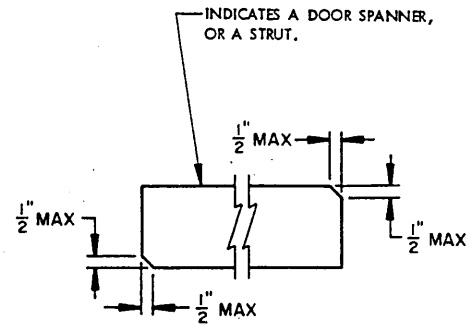


DOOR POST VERTICAL RETAINER



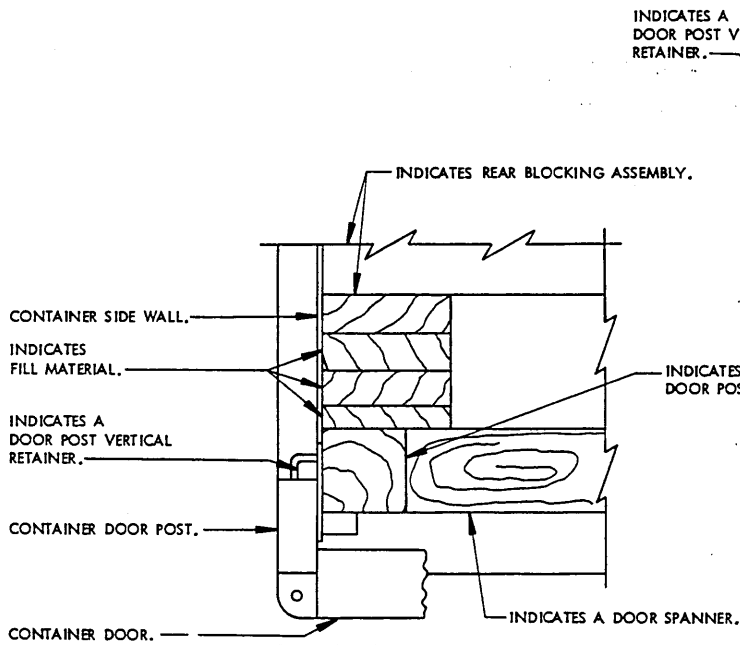
TYPICAL DETAIL A

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.



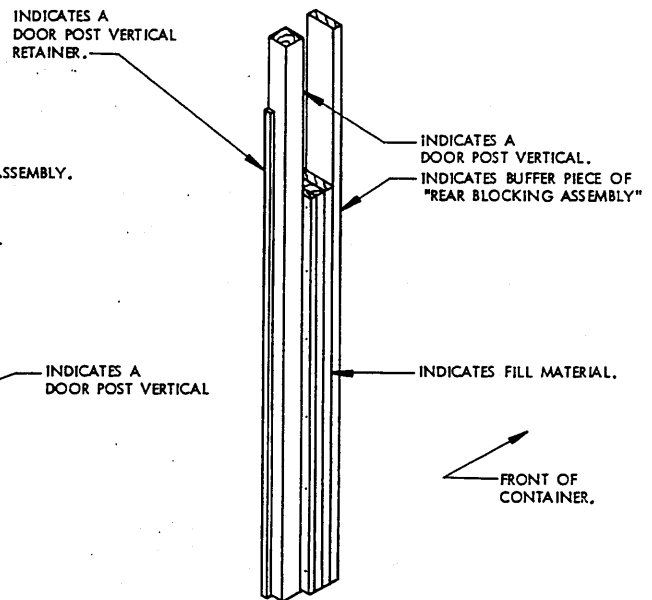
BEVEL-CUT

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.



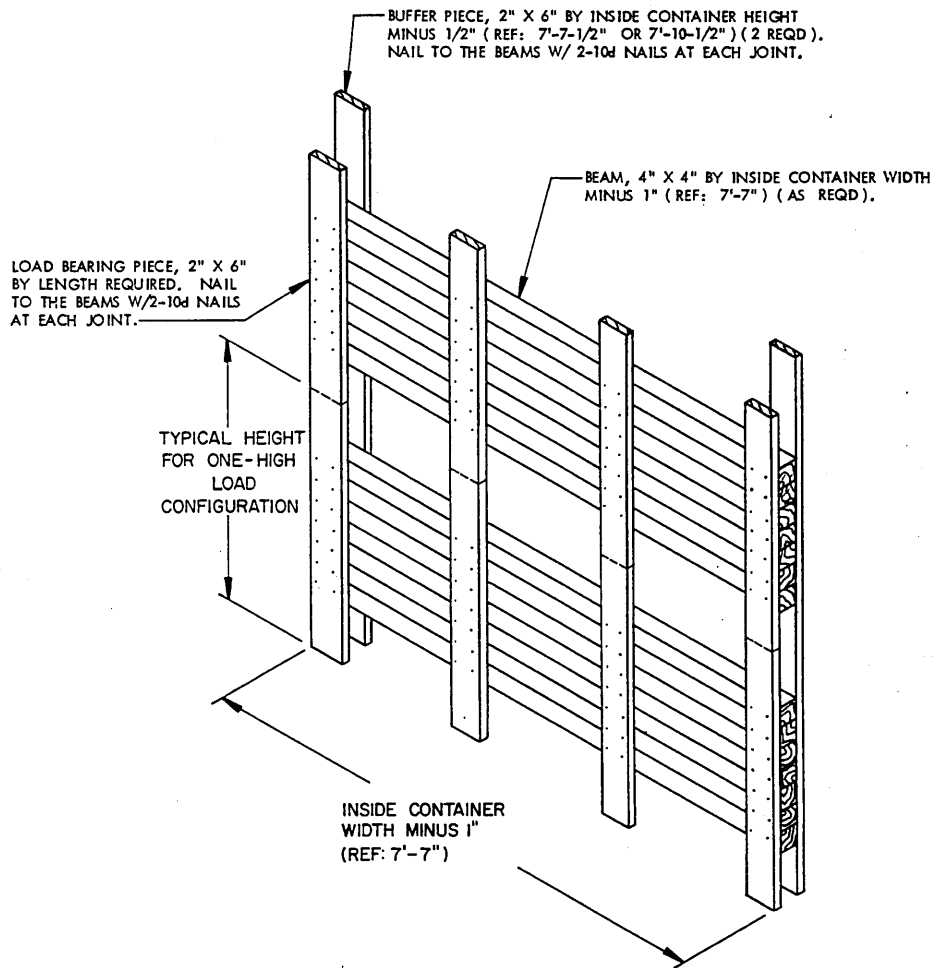
TYPICAL DETAIL B

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 STRUTS HAVE BEEN OMITTED FOR CLARITY PURPOSES.

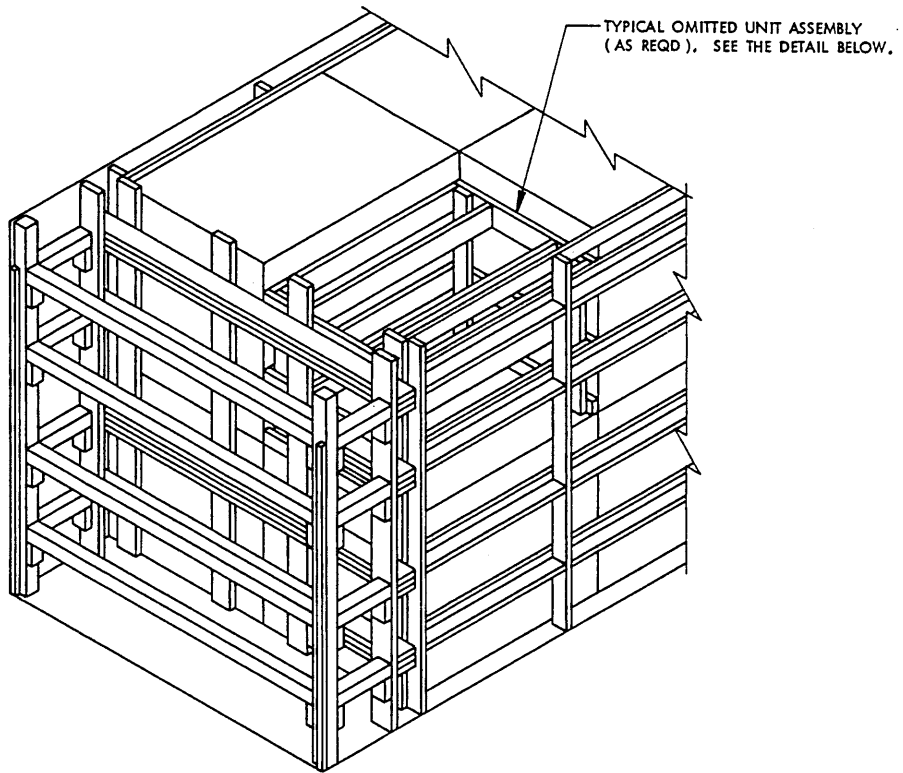


TYPICAL ALTERNATIVE FORWARD/REAR BLOCKING ASSEMBLY

SEE SPECIAL NOTES BELOW.

SPECIAL NOTES:

1. IN SOME LOADS USING FILL MATERIAL FOR THE ACHIEVEMENT OF A TIGHT REAR-OF-LOAD FIT, VARIANCE IN THE PALLET UNIT LENGTH OR WIDTH DIMENSIONS MAY NECESSITATE THE USE OF ALTERNATIVE FORWARD AND/OR REAR BLOCKING ASSEMBLIES. THESE ALTERNATIVE BLOCKING ASSEMBLIES, AS DEPICTED ABOVE, UTILIZE NOMINAL 4" X 4" MATERIAL FOR THE BEAMS OF THE BEAM ASSEMBLIES RATHER THAN 2" X 6" MATERIAL ELSEWHERE SPECIFIED WITHIN THIS DOCUMENT. **NOTE:** WHEN USING 4" X 4" MATERIAL IN LIEU OF 2" X 6" MATERIAL, THE 4" X 4" BEAMS MUST BE SUBSTITUTED ON A "ONE-TO-ONE" BASIS FOR THE 2" X 6" BEAMS. FOR EXAMPLE, IF FOUR DOUBLED 2" X 6" MATERIAL BEAM ASSEMBLIES ARE SPECIFIED, THEY MUST BE REPLACED BY EIGHT 4" X 4" MATERIAL BEAMS. SEE THE SPECIAL NOTES ON PAGE 3 FOR ADDITIONAL GUIDANCE IN THE PLACEMENT OF THE BEAMS WITHIN THE BLOCKING ASSEMBLIES.
2. THE BLOCKING ASSEMBLY SHOWN ABOVE IS TYPICAL. ACTUAL DIMENSIONS OF THE ASSEMBLY AND PIECE PLACEMENT WITHIN THE ASSEMBLY ARE DEPENDENT UPON THE SPECIFIC PALLET UNIT BEING LOADED INTO THE INTERMODAL CONTAINER.
3. THE TYPICAL 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 BEAMS AND CUTTING THE LOAD BEARING PIECES TO A HEIGHT OF 6" ABOVE THE TOP OF THE PALLET UNIT.



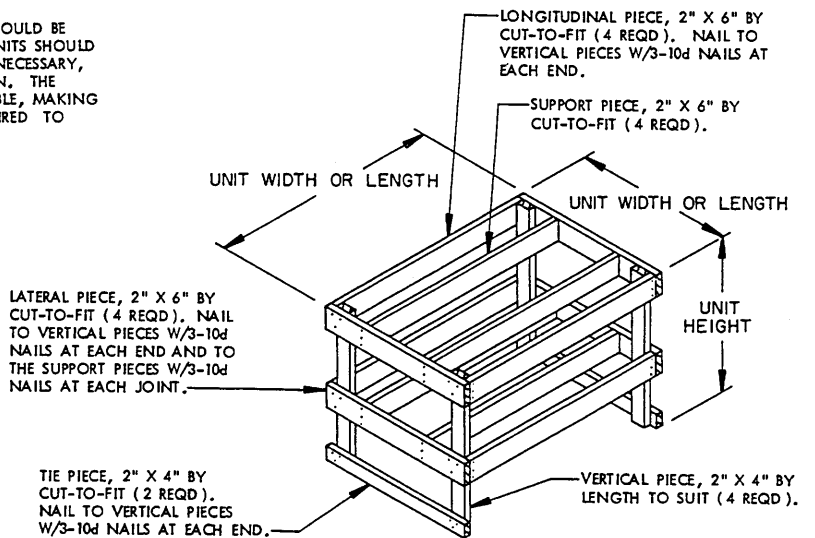
TYPICAL REDUCED LOAD

(SEE THE "REDUCED LOAD PROVISIONS" BELOW.)

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.



TYPICAL OMITTED UNIT ASSEMBLY

THE ASSEMBLY AS DEPICTED ABOVE IS FOR USE IN PLACE OF AN OMITTED PALLET UNIT, AND WILL BE REQUIRED FOR SOME LOADS TO PROVIDE A ONE OR TWO-WIDE LOADING PATTERN THROUGHOUT THE LENGTH OF THESE LOADS. THE MAXIMUM NUMBER OF OMITTED-UNIT ASSEMBLIES ALLOWED IN A LOAD ARE AS FOLLOWS: ONE ASSEMBLY FOR A ONE-HIGH, TWO-WIDE LOAD CONFIGURATION; AND THREE ASSEMBLIES FOR A TWO-HIGH, TWO-WIDE LOAD CONFIGURATION.

