

LANCE

LOADING AND BRACING (CL & LCL) IN
 BOX CARS[⊕] OF CONTROL SURFACE, M30
 PACKED IN THE M596 CONTAINER OR A
 PLYWOOD CONTAINER, AND THE M29
 PACKED IN THE M597 CONTAINER
 (PALLETIZED AND UNPALLETIZED)

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THIS DRAWING, INCLUDING REVISION NUMBER 1, SUPERSEDES
 DRAWING 19-48-5495-GM5A174, DATED JUNE 1971.

⊕ THIS OUTLOADING PROCEDURE DRAWING INCLUDES PROCEDURES
 FOR CONVENTIONAL TYPE BOX CARS AND CUSHIONED BOX CARS
 EQUIPPED WITH LOAD DIVIDER BULKHEADS.

REVISIONS				DRAWN BY <i>RSB</i>	PROJ. ENG. <i>JDS/huw</i>	DRAWN BY <i>RSB/Elb</i>
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U.S. ARMY DARCOM DRAWING						
AUGUST 1980						
CLASS	DIVISION	DRAWING	FILE			
19	48	5495	GM 5LC3			

DO NOT SCALE

GENERAL NOTES

(GENERAL NOTES CONTINUED)

- 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 IN THIS DRAWING ARE APPLICABLE TO THE LANCE CONTROL SURFACE M30 WHEN PACKED IN THE M596 CONTAINER OR IN A PLYWOOD CONTAINER, AND THE M29 WHEN PACKED IN THE M597 CONTAINER. SUBSEQUENT REFERENCE TO CONTAINER MEANS THE M596, M597, AND/OR THE PLYWOOD CONTAINER, WITH CONTENTS.
- C. FOR DETAILS OF THE M596 CONTAINER, SEE USAMICOM DRAWING NO. 10245730 AND "CONTAINER" DETAIL ON PAGE 4 OF THIS DRAWING.
- CONTAINER DIMENSIONS - 56" LONG BY 27-3/4" WIDE BY 6-3/4" HIGH.
GROSS WEIGHT ----- 97 POUNDS (APPROX).
TARE WEIGHT ----- 65 POUNDS (APPROX).
CUBE ----- 6.1 CUBIC FEET.
- D. FOR DETAILS OF THE M597 CONTAINER, SEE USAMICOM DRAWING NO. 10245740 AND "CONTAINER" DETAIL ON PAGE 4 OF THIS DRAWING.
- CONTAINER DIMENSIONS - 69-1/2" LONG BY 27-3/4" WIDE BY 6-3/4" HIGH.
GROSS WEIGHT ----- 117 POUNDS (APPROX).
TARE WEIGHT ----- 77 POUNDS (APPROX).
CUBE ----- 7.5 CUBIC FEET.
- E. FOR DETAILS OF THE PLYWOOD CONTAINER, SEE USAMICOM DRAWING NO. 10166845 AND "CONTAINER" DETAIL ON PAGE 4 OF THIS DRAWING.
- CONTAINER DIMENSIONS - 60" LONG BY 24" WIDE BY 5-1/2" HIGH.
GROSS WEIGHT ----- 84 POUNDS (APPROX).
TARE WEIGHT ----- 52 POUNDS (APPROX).
CUBE ----- 4.6 CUBIC FEET.
- F. FOR DETAILS OF THE M596 CONTAINER PALLET UNIT, SEE US ARMY DARCOM DRAWING NO. 19-48-5236-GM20LC1 AND THE "PALLETIZED UNIT" DETAIL ON PAGE 5 OF THIS DRAWING.
- PALLETIZED UNIT DIMENSIONS - 57-1/2" LONG BY 29-1/4" WIDE BY 38-7/8" HIGH.
GROSS WEIGHT ----- 571 POUNDS (APPROX).
CUBE ----- 37.8 CUBIC FEET.
- G. FOR DETAILS OF THE M597 CONTAINER PALLET UNIT, SEE US ARMY DARCOM DRAWING NO. 19-48-5236-GM20LC1 AND THE "PALLETIZED UNIT" DETAIL ON PAGE 5 OF THIS DRAWING.
- PALLET UNIT DIMENSIONS ----- 71" LONG BY 29-1/4" WIDE BY 38-7/8" HIGH.
GROSS WEIGHT ----- 682 POUNDS (APPROX).
CUBE ----- 46.7 CUBIC FEET.
- H. FOR DETAILS OF THE PLYWOOD CONTAINER PALLET UNIT, SEE US ARMY DARCOM DRAWING 19-48-5236-GM20LC1 AND THE "PALLETIZED UNIT" DETAIL ON PAGE 5 OF THIS DRAWING.
- PALLET UNIT DIMENSIONS ----- 62" LONG BY 26" WIDE BY 34" HIGH.
GROSS WEIGHT ----- 481 POUNDS (APPROX)
CUBE ----- 31.7 CUBIC FEET.
- J. CAUTION: UNPALLETIZED CONTAINERS MUST NOT BE STACKED MORE THAN SIX (6) CONTAINERS HIGH.
- K. THE OUTLOADING PROCEDURES DEPICTED WITHIN THIS DOCUMENT ARE APPLICABLE FOR SHIPMENTS IN CONVENTIONAL TYPE BOX CARS, AND FOR SHIPMENTS IN CUSHIONED BOX CARS EQUIPPED WITH LOAD DIVIDER BULKHEADS. REFER TO GENERAL NOTES "AA" THROUGH "FF" FOR SPECIFIC GUIDANCE RELATIVE TO OUTLOADING IN CARS HAVING LOAD DIVIDER BULKHEADS.
- L. DUNNAGE LUMBER SPECIFIED THROUGHOUT THIS PROCEDURAL DRAWING IS OF NOMINAL SIZE. FOR EXAMPLE, 1" X 6" MATERIAL IS ACTUALLY 3/4" THICK BY 5-1/2" WIDE AND 2" X 4" MATERIAL IS ACTUALLY 1-1/2" THICK BY 3-1/2" WIDE. IF THOSE MEMBERS SPECIFICALLY IDENTIFIED AS "STRUTS" WITHIN THE KEY NUMBERS OF A DEPICTED LOAD ARE SPECIFIED TO BE 4" X 4" MATERIAL, IT IS PERMISSIBLE TO USE TWO LAMINATED PIECES OF 2" X 6" MATERIAL IN LIEU OF EACH 4" X 4" STRUT. DOUBLE 2" X 6" STRUTS WILL BE LAMINATED W/1-10d NAIL EVERY 6".
- M. NOTICE: A STAGGERED NAILING PATTERN WILL BE USED WHEREVER POSSIBLE WHEN NAILS ARE DRIVEN INTO JOINTS OF DUNNAGE ASSEMBLIES. ALSO, A STAGGERED NAILING PATTERN WILL BE USED WHEN DUNNAGE IS NAILED TO THE FLOOR OR SIDEWALL OF THE TRANSPORTING VEHICLE, OR WHEN LAMINATING DUNNAGE. THE NAILING PATTERN WILL BE ADJUSTED AS REQUIRED SO THAT A NAIL DOES NOT PENETRATE INTO OR NEAR A CRACK BETWEEN FLOOR BOARDS OR SIDEWALL BOARDS. 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.
- N. PORTIONS OF THE BOX CARS DEPICTED WITHIN THIS PROCEDURAL DRAWING, SUCH AS SIDEWALLS, END WALLS, AND ROOFS, AND PORTIONS OF THE BLOCKING AND BRACING COMPONENTS, HAVE NOT BEEN SHOWN IN THE LOAD VIEWS FOR CLARITY PURPOSES.
- O. WHEN STEEL STRAPPING IS SEALED AT AN END-OVER-END LAP JOINT, A MINIMUM OF TWO (2) SEALS, BUTTED TOGETHER, WITH TWO (2) PAIR OF CRIMPS PER SEAL MUST BE USED TO SEAL THE JOINT.
- P. IN SOME INSTANCES CONTAINERS WILL ALREADY BE UNITIZED WHEN OFFERED FOR LOADING. THESE UNITS SHOULD BE INSPECTED AND, AS REQUIRED, LOOSE UNITIZING STEEL STRAPPING MUST BE REPLACED OR TIGHTENED.
- Q. BOX CARS EQUIPPED WITH CONVENTIONAL SLIDING DOORS HAVE BEEN SHOWN. HOWEVER, THE DEPICTED OUTLOADING PROCEDURES ARE ALSO APPLICABLE FOR CARS EQUIPPED WITH PLUG DOORS. CAUTION: DUNNAGE MATERIAL MUST NOT BE NAILED TO ANY PLUG DOOR, WHETHER AUXILIARY OR MAIN. ALSO, AFTER THE PLUG DOORS ON A CAR ARE CLOSED AND READY FOR THE INSTALLATION OF CAR SEALS, A PIECE OF WIRE OF SUITABLE SIZE WILL BE USED IN ADDITION TO AND IN CONJUNCTION WITH, EACH CAR SEAL USED TO SEAL THE CAR. THE WIRE WILL BE THREADED THRU THE HOLES IN THE DOOR LATCH ASSEMBLY ONE OR MORE TIMES, AND THE WIRE ENDS WILL BE TWISTED TOGETHER.
- R. THE SELECTION OF RAIL CARS FOR THE TRANSPORT OF THE DESIGNATED ITEMS IS THE RESPONSIBILITY OF THE ORIGINATING CARRIER AND THE SHIPPER. ONLY CARS WHICH HAVE "SOUND" FLOORS AND ARE IN OTHERWISE PROPER CONDITION, IN ACCORDANCE WITH THE REQUIREMENTS OF THE APPLICABLE REGULATORY DOCUMENT, WILL BE SELECTED. WHEN SELECTING RAIL CARS, EVERY EFFORT SHOULD BE MADE TO OBTAIN BOX CARS THAT DO NOT HAVE BOWED END WALLS. CARS WITH BOWED ENDS CAN BE USED, HOWEVER, IF AN END WALL IS BOWED OUTWARD MORE THAN TWO INCHES (2"), EITHER FROM SIDE TO SIDE OR FROM FLOOR TO ROOF, AN END-OF-CAR BULKHEAD MUST BE INSTALLED TO PROVIDE A "SQUARED OFF" SURFACE FOR THE LOAD AT THE END OF THE CAR. REFER TO PAGE 29 FOR GUIDANCE.
- S. NOTICE: WHEN POSITIONING UNITS IN A CAR THEY SHOULD BE PLACED TIGHTLY AGAINST A CAR SIDEWALL AND/OR AGAINST A LATERALLY ADJACENT UNIT, AS APPLICABLE, AND ARE TO BE PRESSED TIGHTLY TOGETHER LENGTHWISE SO AS TO ACHIEVE A TIGHT LOAD. TO AID IN ACHIEVING TIGHTNESS LENGTHWISE IN A FULL LOAD, A LOAD-COMPRESSING JACK MAY BE EMPLOYED IN THE AREA OF THE CENTER GATES TO MOVE THE UNITS INTO THEIR FINAL SHIPPING POSITION. A HYDRAULIC JACK IS RECOMMENDED FOR THIS OPERATION. CAUTION: WHEN USING A JACK TO COMPACT A LOAD, THE JACK MUST BE USED AGAINST STRONG POINTS OF THE UNITS, OR 2-INCH (2") THICK LUMBER OR ANY OTHER MATERIAL OF SIMILAR CONSISTENCY, SHOULD BE PLACED BETWEEN THE JACK AND THE LADING.
- T. THE NUMBER OF LADING UNITS MAY BE ADJUSTED TO FIT THE SIZE OF THE BOX CAR BEING LOADED OR THE QUANTITY TO BE SHIPPED; HOWEVER, THE APPROVED METHODS SPECIFIED HEREIN MUST BE FOLLOWED AS CLOSELY AS POSSIBLE FOR BLOCKING, BRACING, AND STAYING OF THE UNITS. NOTICE: A SHIPMENT WILL BE POSITIONED IN THE RAIL CAR IN COMPLIANCE WITH THE WEIGHT DISTRIBUTION REQUIREMENTS OF THE AAR.
- U. OTHER TYPES OF LADING ITEMS MAY BE LOADED IN CARS WHICH ARE PARTIALLY LOADED WITH THE DESIGNATED ITEMS, PROVIDING THE TOTAL LOAD IS COMPATIBLE, EXISTING DIRECTIVES ARE NOT VIOLATED, AND THE OTHER LADING ITEMS ARE BLOCKED AND BRACED TO EQUAL THE BLOCKING AND BRACING CRITERIA SPECIFIED HEREIN.
- V. IF THE CAR BEING USED FOR A SHIPMENT IS EQUIPPED WITH A NAILABLE METAL FLOOR AND A NAIL SIZE FOR FLOOR NAILING IS MARKED ON THE SIDEWALL OF THE CAR, THAT GUIDANCE SHOULD BE APPLIED TO THE NAILING OF THE "DOORWAY BLOCKING" PIECES IN THE FULL LOADS AND TO THE NAILING TO THE CAR FLOOR OF THE LCL BRACES IN THE LESS-THAN-FULL LOADS. IF A NAIL SIZE IS NOT SPECIFIED IN THE CAR, 30d NAILS SHOULD BE USED IN LIEU OF THOSE SPECIFIED IN THE APPLICABLE KEY NUMBERS. SEE GENERAL NOTE "M" ON THIS PAGE.
- W. THE USE OF AN OFFSET LOADING PATTERN WILL FACILITATE LOADING AND UNLOADING OPERATIONS IN THE DOORWAY AREA OF THE CAR. WHEN POSSIBLE TO DO SO, A FULL LOAD SHOULD BE BUILT USING AN OFFSET LOADING PATTERN. FOR INSTANCE, A LOAD CONSISTING OF AN EVEN NUMBER OF LOAD UNITS AND HAVING TWO MORE LOAD UNITS IN ONE END OF THE CAR THAN IN THE OPPOSITE END, OR A LOAD CONSISTING OF AN ODD NUMBER OF LOAD UNITS AND HAVING ONE OR THREE MORE LOAD UNITS IN ONE END THAN IN THE OTHER IS CONSIDERED TO BE AN OFFSET LOAD.
- X. LOAD-BLOCKING STRUTS WHICH ARE 48" OR LONGER MUST BE STIFFENED BY THE APPLICATION OF HORIZONTAL AND VERTICAL STRUT BRACING AS SHOWN BY THE "STRUT BRACING" ON PAGE 26. THESE PIECES ARE NOT REQUIRED IF THE STRUTS FOR THE LOAD BEING SHIPPED ARE SHORTER THAN 48". THE LENGTH OF THE LOADBLOCKING STRUTS SHOULD BE KEPT AS SHORT AS POSSIBLE (APPROX 18" MINIMUM), BUT IN THE EVENT IT IS NECESSARY TO USE STRUTS WHICH ARE 8'-0" OR MORE IN LENGTH, IT WILL BE NECESSARY TO APPLY AN ADDITIONAL SET OF HORIZONTAL AND VERTICAL STRUT BRACING PIECES. STRUT BRACING SHOULD BE APPLIED SO AS TO PROVIDE NEARLY EQUAL SPACES BETWEEN THE BRACING PIECES AND THE CENTER GATES AND/OR BETWEEN ADJACENT STRUT BRACING PIECES. NOTE THAT THE HORIZONTAL STRUT BRACING PIECES FOR THE UPPER LEVEL OF STRUTS FOR ALL BUT THE UPPERMOST TIER OF A LOAD MAY BE DIFFICULT TO APPLY TO THE TOP SURFACES OF THE STRUTS AS DEPICTED. STRUT BRACING WILL BE EQUALLY EFFECTIVE IF APPLIED TO THE UNDER SIDE OF THOSE STRUTS.

(CONTINUED AT RIGHT)

MATERIAL SPECIFICATIONS

LUMBER	SEE TM 743-200-1; DUNNAGE LUMBER; FED SPEC MM-L-751.
NAILS	FED SPEC FF-N-105, COMMON.
STRAPPING, STEEL	CLASS 1, TYPE I OR IV, HEAVY DUTY, FINISH A, B (GRADE 2), OR C; FED SPEC QQ-5-781.
SEAL, STRAP	TYPE D, STYLE I, II, OR IV, CLASS H, FED SPEC QQ-5-781.
STAPLE, STRAP	TYPE III, STYLE 3, 1-17/32" WIDE BY 3/4" LEG LENGTH, OR EQUIVALENT. FED SPEC FF-N-105.
WIRE	FED SPEC QQ-W-461.

(GENERAL NOTES CONTINUED)

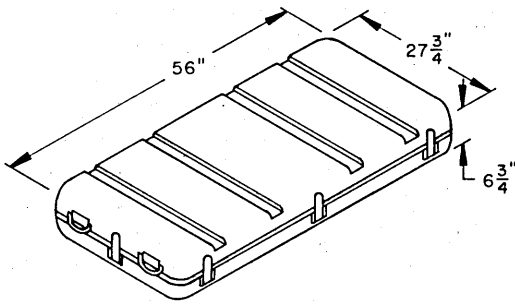
- Y. TO ACHIEVE A TIGHTLY BLOCKED LOAD, A STRUT WILL BE CUT SLIGHTLY LONGER THAN THE MEASURED DISTANCE BETWEEN THE STRUT BEARING AREAS ON THE TWO CENTER GATES. ONE END OF THE STRUT WILL BE POSITIONED AT ITS BEARING AREA JUST ABOVE THE STRUT LEDGER ON ONE GATE, THEN THE OTHER END, WHICH CAN BE BEVELED ON THE LOWER CORNER IF DESIRED, WILL BE DRIVEN DOWNWARD UNTIL IT CONTACTS THE STRUT LEDGER ON THE OTHER GATE. EACH END OF THE STRUT WILL BE TOENAILED TO THE ADJACENT CENTER GATE, AS SPECIFIED WITHIN THE KEY NUMBERS FOR A LOAD, IN SUCH A MANNER SO THAT AS NEARLY AS PRACTICAL EQUAL LENGTHS OF A NAIL ARE EMBEDDED IN THE STRUT AND IN THE VERTICAL PIECE OF THE CENTER GATE. SEE THE "BEVEL CUT" DETAIL ON PAGE 29 FOR BEVELING INSTRUCTIONS AND THE "STRUT INSTALLATION" DETAIL ON THAT PAGE FOR A PICTORIAL VIEW SHOWING THE PROPER POSITIONING OF A BEVELED STRUT FOR INSTALLATION. NOTE THAT THE UPPER CORNER NEEDS TO BE BEVELED ONLY IF THE STRUTS ARE VERY SHORT. IF ONLY ONE END IS BEVEL-CUT, THE BEVELED EDGE WILL BE PLACED IN THE DOWNWARD POSITION SO THAT IT WILL ALLOW THE STRUT END TO SLIDE MORE FREELY DOWN THE FACE OF THE VERTICAL PIECE ON THE ADJACENT CENTER GATE AS THE STRUT IS DRIVEN DOWN INTO ITS FINAL BLOCKING POSITION.
- Z. ALL THE LOADS SHOWN HEREIN ARE TYPICAL. BECAUSE OF THIS FACT, IT IS MOST LIKELY THAT THE ACTUAL QUANTITY TO BE SHIPPED WILL NOT BE DEPICTED IN ANY OF THE LOADING PROCEDURES HEREIN. A LOAD PLAN SHOULD BE DEVELOPED WHICH WILL BE THE MOST EFFICIENT AS TO THE AMOUNT OF DUNNAGE REQUIRED AND THE EASE OF LOADING FOR THE QUANTITY TO BE SHIPPED.
- AA. THE OUTLOADING PROCEDURES SPECIFIED WITHIN THIS DRAWING ARE FOR CUSHIONED BOX CARS EQUIPPED WITH LOAD DIVIDER BULKHEADS AND WITH OR WITHOUT ADJUSTABLE SIDE FILLERS. CAUTION: ONLY CARS EQUIPPED WITH LOAD DIVIDERS MANUFACTURED BY EVANS, EQUIPCO OF PRECO MAY BE USED. LOAD DIVIDERS MANUFACTURED BY TRANSCO ARE NOT ACCEPTABLE, WHETHER OF ALUMINUM OR STEEL CONSTRUCTION. ALSO, ONLY CUSHIONED CARS THAT HAVE SLIDING CENTER SILL TYPE CUSHIONING DEVICES OR END-OF-CAR TYPE DEVICES WHICH HAVE AT LEAST FIFTEEN INCHES (15") OF TRAVEL ARE ACCEPTABLE. CAUTION: THE WEIGHT OF THE LOAD TO BE RETAINED BY ONE LOAD DIVIDER BULKHEAD MUST NOT EXCEED ONE-HALF OF THE LOAD LIMIT WHICH IS STENCILED ON THE SIDE OF THE CAR. THE DEPICTED PROCEDURES ARE APPLICABLE FOR CARS OF VARIOUS LENGTHS AND WIDTHS. THE AAR MECHANICAL DESIGNATION CLASS FOR THESE CARS, AS IDENTIFIED IN THE "OFFICIAL RAILWAY EQUIPMENT REGISTER", WILL BE RBL, XL, OR XLI.
- BB. THE USE OF LOAD DIVIDER EQUIPPED CARS WILL ELIMINATE THE NEED FOR CENTER GATES AND STRUTS, AND GATE HOLD DOWNS (WHEN APPLICABLE) WHICH ARE REQUIRED IN CONVENTIONAL BOX CAR LOADS. THIS WILL ACCOUNT FOR A CONSIDERABLE SAVING IN MATERIAL AND LABOR COSTS. THEREFORE, EVERY EFFORT SHOULD BE MADE TO ACQUIRE CUSHIONED CARS EQUIPPED WITH LOAD DIVIDERS FOR SHIPMENT OF AMMUNITION ITEMS.
- CC. IF NAILING TO A CAR SIDEWALL IS NOT REQUIRED, BOX CARS EQUIPPED WITH ADJUSTABLE SIDE FILLERS THAT HAVE 3/8" OR THICKER PANELS MAY BE USED. HOWEVER, THESE SIDE FILLERS MUST NOT BE USED FOR LATERAL BLOCKING; THEY MUST BE INSTALLED IN THE VOID BETWEEN THE CAR SIDEWALL AND THE SIDE FILLER PANEL. SEE THE "TYPICAL TYPE A" VIEW ON PAGE 30 FOR GUIDANCE. IF THE BACK OF THE SIDE FILLER PANELS ARE REINFORCED WITH VERTICAL AND HORIZONTAL STEEL MEMBERS AS SHOWN IN THE "TYPICAL TYPE B" VIEW ON PAGE 30, THE "FILL PIECE" MATERIAL IS NOT REQUIRED. NOTE: DUNNAGE MATERIALS MUST NOT BE NAILED TO SIDE FILLERS.
- DD. NOTICE: AFTER THE LOAD DIVIDER BULKHEADS ARE POSITIONED AGAINST THE LADING, AND THE LOCKING PINS ARE ENGAGED IN THE HOLES OF THE RAILS, THE LOWER LOCKING PINS MUST BE INSPECTED TO ENSURE THAT THE PINS ARE FULLY ENGAGED IN THE LOCKING HOLES. IF THE PINS ARE NOT FULLY SEATED IN THE LOCKING HOLES, THE LINKAGE MECHANISM WILL BE ADJUSTED AS REQUIRED SO THAT THE PINS WILL BE FULLY SEATED INTO THE LOCKING HOLES OF THE LOWER RAILS. IF PRESENT, DEBRIS MUST BE REMOVED FROM BENEATH THE LOCKING HOLES WHICH HAVE BEEN SELECTED FOR SECURING A LOAD DIVIDER BULKHEAD.
- EE. NOTICE: FOR MAXIMUM LOADS WITHIN THIS DRAWING, 50'-6" LONG BOX CARS ARE SHOWN. HOWEVER, THE BLOCKING AND BRACING PROCEDURES USED ARE ALSO ADEQUATE FOR MAXIMUM LOADS IN BOX CARS WHICH ARE 60'-8" LONG, OR OF OTHER LENGTHS.
- FF. FOR ADDITIONAL GUIDANCE, ATTENTION IS DIRECTED TO THE "SPECIAL NOTES" SECTIONS WHICH ARE IMMEDIATELY ADJACENT TO THE DEPICTED OUTLOADING METHODS.

ITEMIZED INDEX

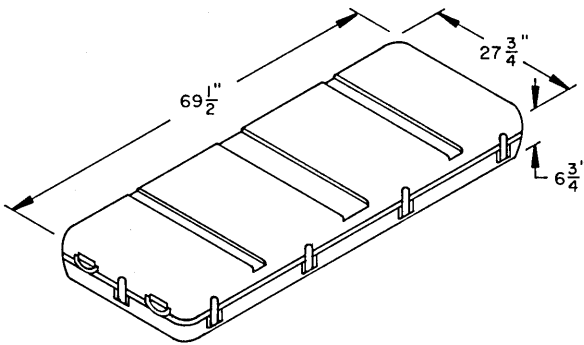
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REVISIONS

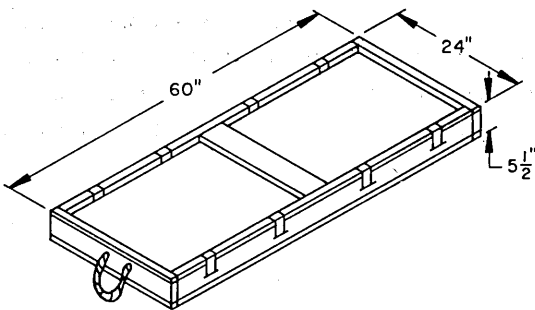
- REVISION NO. 1 DATED MAY 1980, CONSISTS OF:
1. ADDED PROCEDURES FOR THE CONTROL SURFACE, M30, IN PLYWOOD CONTAINER.
 2. DELETED "X" FROM ALL CONTROL SURFACE AND CONTAINER MODEL NUMBERS.
 3. CHANGED DRAWING FILE NUMBER FROM GM5A174 TO GM5LC3.
 4. UPDATED GENERAL NOTES, MATERIAL SPECIFICATIONS, AND DRAWING FORMAT.



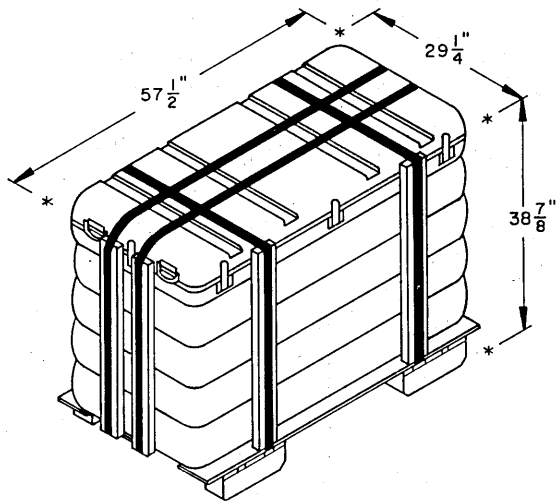
M596 CONTAINER
FOR CONTROL SURFACE, M30



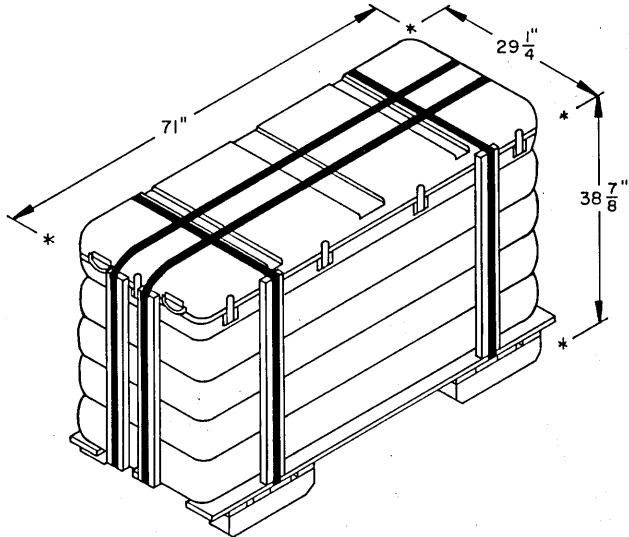
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FOR CONTROL SURFACE, M29



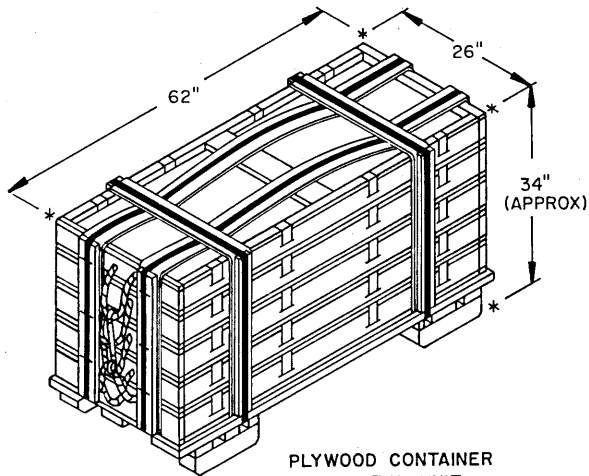
PLYWOOD CONTAINER
FOR CONTROL SURFACE, M30



M596 CONTAINER
PALLETIZED UNIT

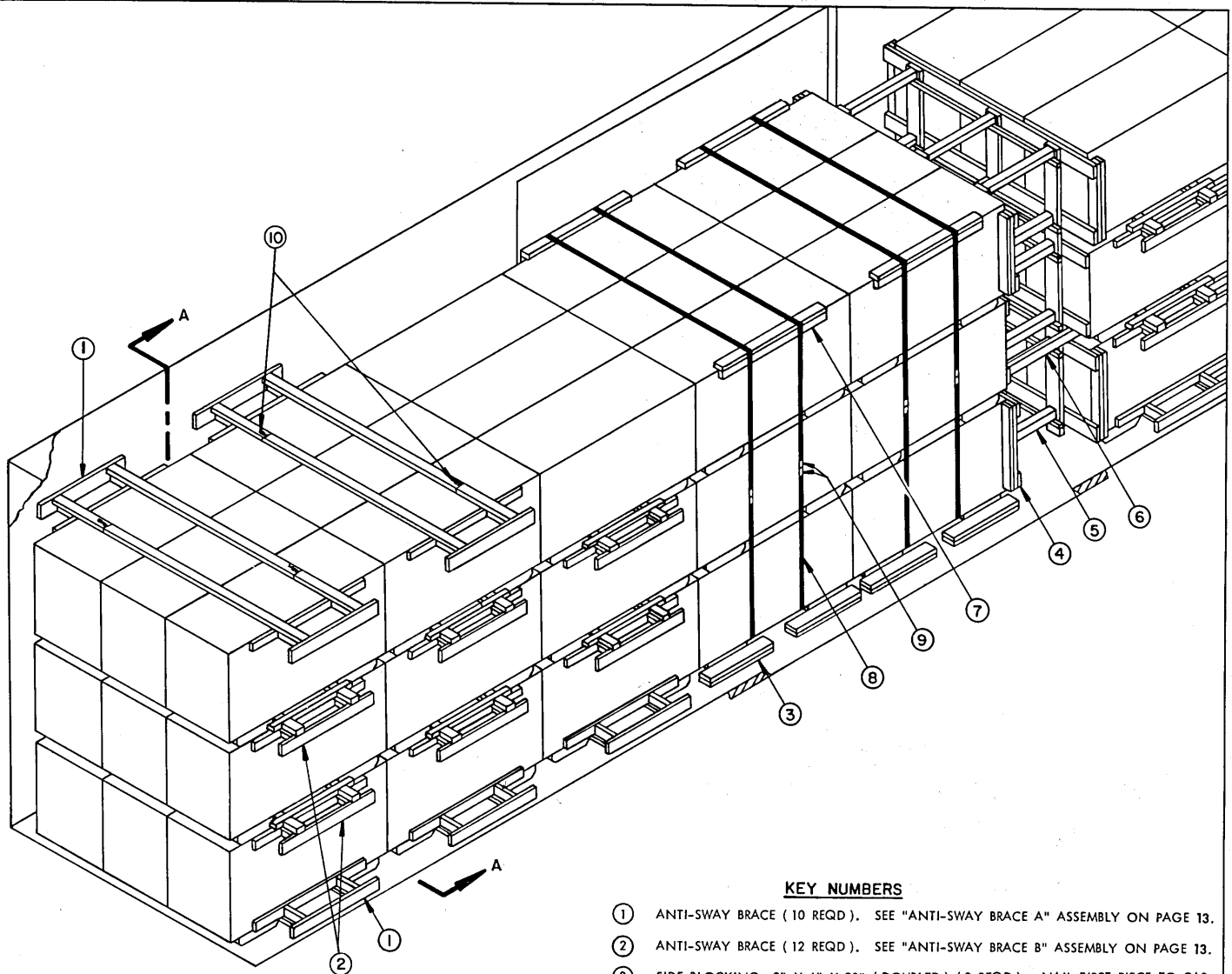


M597 CONTAINER
PALLETIZED UNIT

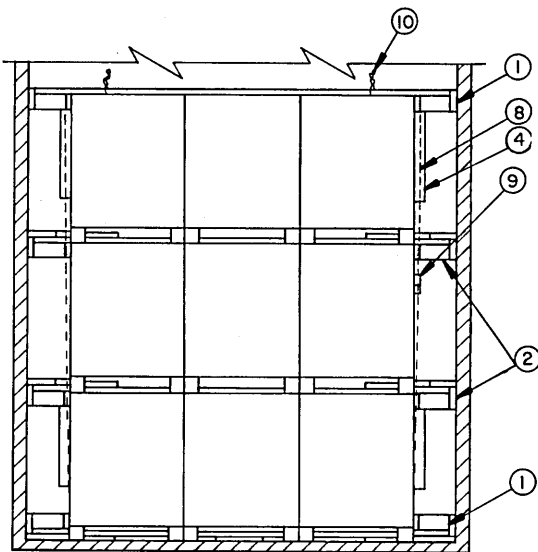


PLYWOOD CONTAINER
PALLETIZED UNIT

PALLETIZED UNIT DETAIL



ISOMETRIC VIEW



SECTION A-A

KEY NUMBERS

- ① ANTI-SWAY BRACE (10 REQD). SEE "ANTI-SWAY BRACE A" ASSEMBLY ON PAGE 13.
- ② ANTI-SWAY BRACE (12 REQD). SEE "ANTI-SWAY BRACE B" ASSEMBLY ON PAGE 13.
- ③ SIDE BLOCKING, 2" X 6" X 30" (DOUBLED) (8 REQD). NAIL FIRST PIECE TO CAR FLOOR W/7-16d NAILS. NAIL SECOND PIECE TO FIRST PIECE IN LIKE MANNER. SEE GENERAL NOTES "M" AND "V" ON PAGE 2.
- ④ CENTER GATE (2 REQD). SEE "CENTER GATE A" ON PAGE 12.
- ⑤ STRUTS, 4" X 4" BY CUT TO FIT (18 REQD). POSITION AS SHOWN AND NAIL TO PIECES MARKED ④ W/2-12d NAILS AT EACH END.
- ⑥ GATE HOLD DOWN, 2" X 4" BY CUT TO EXTEND ACROSS CENTER VOID OF CAR AND 6" UNDER PALLET UNIT AT EACH END (2 REQD). NAIL TO VERTICAL OF PIECE MARKED ④ W/2-10d NAILS AT EACH END.
- ⑦ STRAPPING BOARD (4 REQD). SEE "STRAPPING BOARD" ASSEMBLY ON PAGE 13.
- ⑧ DOORWAY PROTECTION, 1-1/4" X .035" X 34'-0" LONG STEEL STRAPPING. INSTALL AS SHOWN TO ENCIRCLE THOSE LOAD UNITS WHICH PROTRUDE INTO THE DOORWAY AREA. STAPLE TO PIECE MARKED ⑦ W/1-1/4" STAPLE. SEE SPECIAL NOTE 3 ON PAGE 7 AND GENERAL NOTE "O" ON PAGE 2.
- ⑨ SEAL FOR 1-1/4" STEEL STRAPPING (8 REQD, 2 PER STRAP). DOUBLE CRIMP EACH SEAL. SEE GENERAL NOTE "O" ON PAGE 2.
- ⑩ TIE-WIRE, 14 GAGE, BLACK ANNEALED WIRE (8 REQD, 2 PER PIECE MARKED ① WHEN USED AS AN UPPER ANTI-SWAY BRACE. INSTALL TO ENCIRCLE UNITIZING STRAP OF TOP OUTSIDE PALLET UNIT AND PIECE MARKED ① WITH TWO (2) STRANDS AND TWIST TAUT, (FOR USE AT TOP OF LOAD ONLY).

SPECIAL NOTES:

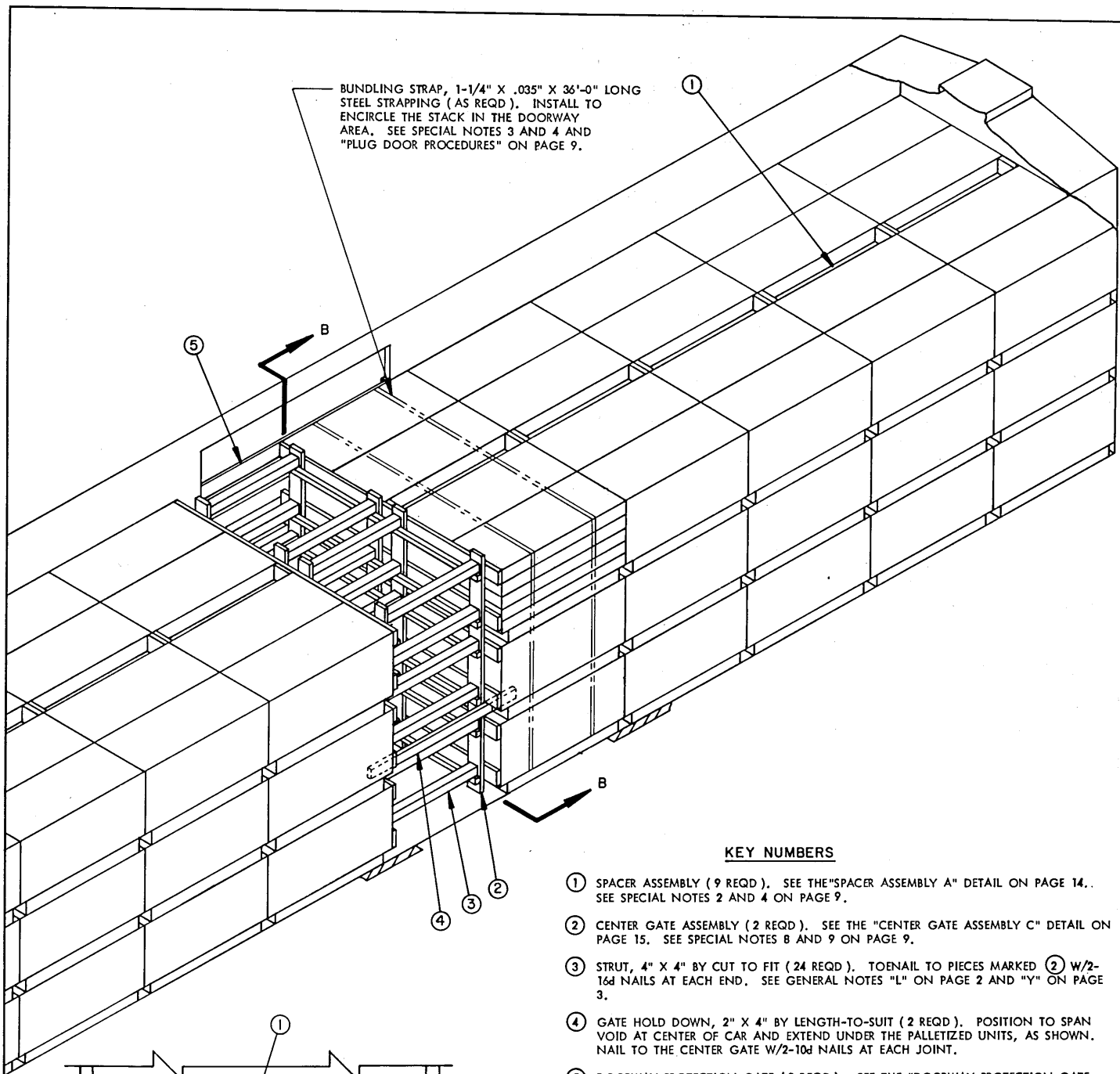
1. A LOAD OF SEVENTY-TWO (72) PALLETIZED UNITS OF M597 CONTAINERS IS SHOWN IN A 50'-6" LONG BY 9'-2" WIDE CONVENTIONAL TYPE BOX CAR EQUIPPED WITH 12'-0" WIDE DOOR OPENINGS. CARS OF OTHER DIMENSIONS AND CARS HAVING WIDER OR NARROWER DOOR OPENINGS OR "STAGGERED" DOOR OPENINGS MAY ALSO BE USED.
2. A WIDER OR NARROWER CAR CAN BE USED FOR SHIPPING THE DEPICTED LOAD BY ADJUSTING THE "ANTI-SWAY BRACE ASSEMBLY A".
3. DOORWAY PROTECTION IS REQUIRED FOR ALL PALLETIZED UNITS WHICH ARE COMPLETELY WITHIN THE DOORWAY AREA OR WHICH EXTEND INTO THE DOORWAY AREA ONE-HALF OR MORE OF THE PALLETIZED UNIT LENGTH. SEE SPECIAL NOTE 4 ON THIS PAGE.
4. IF THE CAR BEING LOADED HAS "THRU" PLUG DOORS OR "STAGGERED" PLUG DOORS OF ANY WIDTH, DOORWAY PROTECTION STRAPS, SHOWN AS PIECES MARKED (B) IN THE LOAD ON PAGE 6 WILL BE REQUIRED.
5. IF THE DELINEATED OUTLOADING METHOD IS USED FOR SHIPPING A LOAD WHICH CONTAINS LESS PALLET UNITS THAN SHOWN, THE "FILLER ASSEMBLY" MAY BE USED IN PLACE OF THE OMITTED PALLET UNIT. SEE "PALLET FILLER ASSEMBLY" DETAIL ON PAGE 12.
6. IF A LOAD IS TO CONTAIN LESS PALLETS THAN SHOWN AND THE QUANTITY TO BE SHIPPED CANNOT READILY BE ACHIEVED BY OMITTING A FULL LAYER, OR A COMPLETE STACK, OR BY THE SUBSTITUTION OF PALLET FILLER ASSEMBLIES FOR OMITTED PALLETS, A K-BRACE ASSEMBLY MAY BE INSTALLED. REFER TO PAGE 10 FOR THE K-BRACE SPECIFICATIONS AND A TYPICAL INSTALLATION.
7. IF THE BOX CAR BEING LOADED HAS BOWED END WALLS WHICH ARE BOWED OUTWARD TWO INCHES (2") OR MORE EITHER FROM SIDE-TO-SIDE OR FROM FLOOR-TO-ROOF, AN END-OF-CAR BULKHEAD MUST BE INSTALLED TO PROVIDE A "SQUARED OFF" SURFACE FOR THE LOAD AT THE END OF THE CAR. SEE THE "BOWED END WALL PROVISIONS" DETAIL ON PAGE 29 AND GENERAL NOTE "R" ON PAGE 2.
8. IF THE CAR BEING LOADED IS EQUIPPED WITH LOAD DIVIDER BULKHEADS OMIT PIECES MARKED (4), (5), AND (6) AS SHOWN IN THE LOAD ON PAGE 6. POSITION THE LOAD DIVIDER BULKHEADS TIGHTLY AGAINST THE PALLETIZED UNITS IN THE CENTER AREA OF THE CAR. SEE GENERAL NOTES "K" ON PAGE 2 AND "AA" THROUGH "FF" ON PAGE 3.
9. A LOAD OF NINETY (90) PALLETIZED UNITS OF M596 CONTAINERS CAN BE LOADED IN A 50'-6" LONG BY 9'-2" WIDE BOX CAR BY APPLYING THE PROCEDURES DEPICTED IN THE LOAD ON PAGE 6. AN OFFSET LOAD WITH 54 PALLETIZED UNITS AT ONE END OF THE CAR AND 36 PALLETIZED UNITS AT THE OPPOSITE END CAN BE USED. FOUR (4) ADDITIONAL PIECES MARKED (1) AND (2) WILL BE REQUIRED.
10. WHEN LOADING THE PALLETIZED PLYWOOD CONTAINERS SEE THE PROCEDURES ON PAGES 8 AND 9.

BILL OF MATERIAL		
LUMBER	LINEAR FEET	BOARD FEET
2" X 2"	72	24
2" X 3"	10	5
2" X 4"	874	582
2" X 6"	370	370
4" X 4"	48	64
NAILS	NO. REQD	POUNDS
10d (3")	1564	24-1/4
12d (3-1/4")	72	1-1/4
16d (3-1/2")	192	4-1/4
STEEL STRAPPING, 1-1/4" X .035"-136'-0" REQD ----- 19 LBS		
SEAL FOR 1-1/4" STRAPPING ----- 8--- REQD ----- 1/4 LB		
WIRE, 14 GAGE ----- 16--- REQD ----- 1 LB		
STAPLES FOR 1-1/4" STRAPPING--- 8--- REQD ----- 1/4 LB		

LOAD AS SHOWN

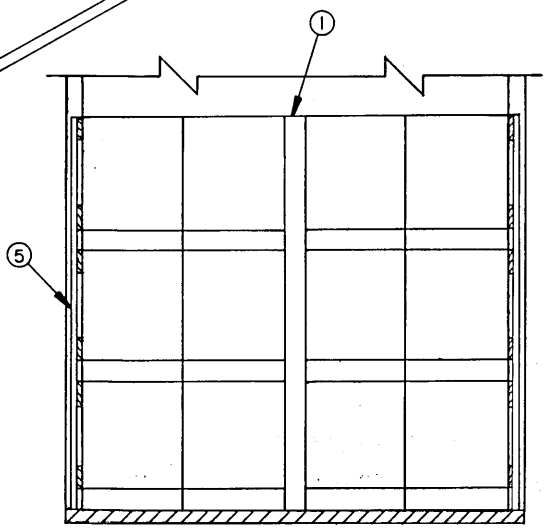
ITEM	QUANTITY	WEIGHT (APPROX)
CONTAINER M 597 (PALLETIZED)	72	49,104 LBS
DUNNAGE		2,141 LBS
TOTAL WEIGHT		51,245 LBS

72 PALLETIZED UNITS OF M597 CONTAINERS IN A 50'-6" LONG BY 9'-2" WIDE CONVENTIONAL BOX CAR



KEY NUMBERS

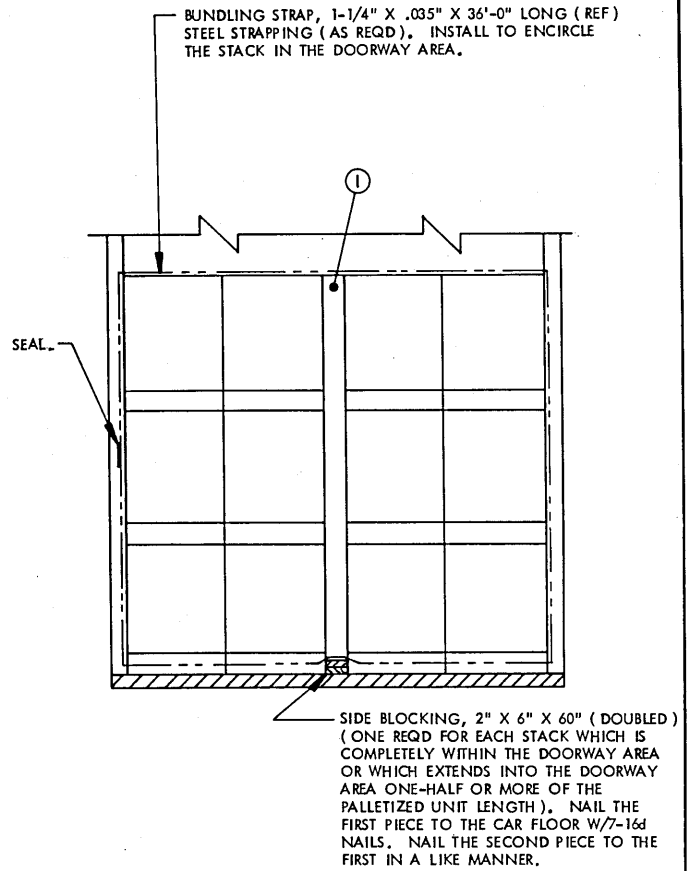
- ① SPACER ASSEMBLY (9 REQD). SEE THE "SPACER ASSEMBLY A" DETAIL ON PAGE 14. SEE SPECIAL NOTES 2 AND 4 ON PAGE 9.
- ② CENTER GATE ASSEMBLY (2 REQD). SEE THE "CENTER GATE ASSEMBLY C" DETAIL ON PAGE 15. SEE SPECIAL NOTES 8 AND 9 ON PAGE 9.
- ③ STRUT, 4" X 4" BY CUT TO FIT (24 REQD). TOENAIL TO PIECES MARKED ② W/2-16d NAILS AT EACH END. SEE GENERAL NOTES "L" ON PAGE 2 AND "Y" ON PAGE 3.
- ④ GATE HOLD DOWN, 2" X 4" BY LENGTH-TO-SUIT (2 REQD). POSITION TO SPAN VOID AT CENTER OF CAR AND EXTEND UNDER THE PALLETIZED UNITS, AS SHOWN. NAIL TO THE CENTER GATE W/2-10d NAILS AT EACH JOINT.
- ⑤ DOORWAY PROTECTION GATE (2 REQD). SEE THE "DOORWAY PROTECTION GATE B" DETAIL ON PAGE 14. SEE SPECIAL NOTE 3 ON PAGE 9.



SECTION B-B

SPECIAL NOTES:

1. A LOAD OF ONE-HUNDRED AND EIGHT PALLETIZED UNITS OF PLYWOOD CONTAINERS IS SHOWN IN A 50'-6" LONG BY 9'-2" WIDE CONVENTIONAL TYPE BOX CAR EQUIPPED WITH 8'-0" WIDE DOOR OPENINGS. CARS OF OTHER DIMENSIONS AND CARS HAVING WIDER OR NARROWER DOOR OPENINGS OR "STAGGERED" DOOR OPENINGS MAY ALSO BE USED.
2. A WIDER OR NARROWER CAR CAN BE USED FOR SHIPPING THE DEPICTED LOAD BY ADJUSTING THE WIDTH OF THE "SPACER ASSEMBLY A".
3. DOORWAY PROTECTION IS REQUIRED FOR ALL PALLETIZED UNITS WHICH ARE COMPLETELY WITHIN THE DOORWAY AREA OR WHICH EXTEND INTO THE DOORWAY ONE-HALF OR MORE OF THE PALLETIZED UNIT LENGTH. SEE SPECIAL NOTE 4 ON THIS PAGE.
4. IF THE CAR BEING LOADED HAS "THRU" PLUG DOORS OR "STAGGERED" PLUG DOORS OF ANY WIDTH, DOORWAY PROTECTION STRAPS, SHOWN AS PIECES MARKED (8) IN THE LOAD ON PAGE 6, WILL BE REQUIRED. ALSO A SIDE BLOCKING PIECE, 2" X 6" X 60" (DOUBLED), MUST BE POSITIONED ON THE FLOOR OF THE CAR, BETWEEN THE TWO CENTER STACKS OF PALLETIZED UNITS. NAIL THE FIRST PIECE TO THE CAR FLOOR W/7-16d NAILS. NAIL THE SECOND PIECE TO THE FIRST IN A LIKE MANNER. ADJUST THE HEIGHT OF THE SPACER ASSEMBLY A TO SUIT.
5. IF THE DELINEATED OUTLOADING METHOD IS USED FOR SHIPPING A LOAD WHICH CONTAINS LESS PALLET UNITS THAN SHOWN, THE "FILLER ASSEMBLY" MAY BE USED IN PLACE OF THE OMITTED PALLET UNIT. SEE "PALLET FILLER ASSEMBLY" DETAIL ON PAGE 12.
6. IF A LOAD IS TO CONTAIN LESS PALLETS THAN SHOWN AND THE QUANTITY TO BE SHIPPED CANNOT READILY BE ACHIEVED BY OMITTING A FULL LAYER, OR A COMPLETE STACK, OR BY SUBSTITUTION OF PALLET FILLER ASSEMBLIES FOR OMITTED PALLETS, A K-BRACE ASSEMBLY MAY BE INSTALLED. REFER TO PAGE 10 FOR THE K-BRACE SPECIFICATIONS AND A TYPICAL INSTALLATION.
7. IF THE BOX CAR BEING LOADED HAS BOWED END WALLS WHICH ARE BOWED OUTWARD TWO INCHES (2") OR MORE EITHER FROM SIDE-TO-SIDE OR FROM FLOOR-TO-ROOF, AN END-OF-CAR BULKHEAD MUST BE INSTALLED TO PROVIDE A "SQUARED OFF" SURFACE FOR THE LOAD AT THE END OF THE CAR. SEE THE "BOWED END WALL PROVISIONS" DETAIL ON PAGE 29 AND GENERAL NOTE "R" ON PAGE 2.
8. IF THE CAR BEING LOADED IS EQUIPPED WITH LOAD DIVIDER BULKHEADS OMIT PIECES MARKED (2), (3), AND (4) AS SHOWN IN THE LOAD ON PAGE 8. POSITION THE LOAD DIVIDER BULKHEADS TIGHTLY AGAINST THE PALLETIZED UNITS IN THE CENTER AREA OF THE CAR. SEE GENERAL NOTES "K" ON PAGE 2 AND "AA" THROUGH "FF" ON PAGE 3.
9. FOR EASE OF HANDLING, SPLIT CENTER GATES WHICH ARE NOT DEPENDENT UPON THE WIDTH OF THE CAR, MAY BE USED AS AN ALTERNATIVE. IN LIEU OF EACH "CENTER GATE ASSEMBLY C" INSTALL TWO (2) GATES AS SHOWN IN THE "TYPICAL TIE-PIECE APPLICATION" DETAIL ON PAGE 30.



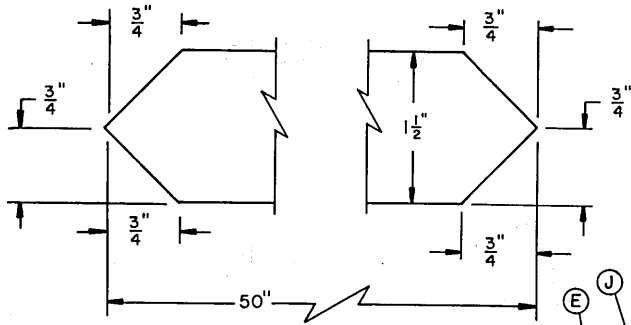
PLUG DOOR PROCEDURES

THESE PROCEDURES WILL APPLY TO PLUG DOORS, WHETHER AUXILIARY OR MAIN. EACH STACK OF PALLETIZED UNITS WHICH EXTENDS MORE THAN 31" PAST A DOOR POST INTO THE DOORWAY AREA ON ONE OR BOTH SIDES OF THE CAR BEING LOADED MUST BE BUNDLED WITH ONE (1) BUNDLING STRAP, AS SHOWN ABOVE. IF A STACK OF PALLETIZED UNITS EXTENDS MORE THAN 45" INTO THE DOORWAY AREA, TWO (2) BUNDLING STRAPS WILL BE REQUIRED ON THAT STACK. BUNDLING STRAPS WILL NOT BE REQUIRED FOR STACKS WHICH EXTEND LESS THAN 31" PAST A DOOR POST, INTO THE DOORWAY AREA.

BILL OF MATERIAL		
LUMBER	LINEAR FEET	BOARD FEET
1" X 6"	96	48
2" X 2"	98	33
2" X 3"	34	17
2" X 4"	10	7
2" X 6"	466	466
4" X 4"	84	112
NAILS	NO. REQD	POUNDS
6d (2")	72	-1/2
10d (3")	356	5-3/4
12d (3-1/4")	20	-1/2
16d (3-1/2")	96	2-1/4

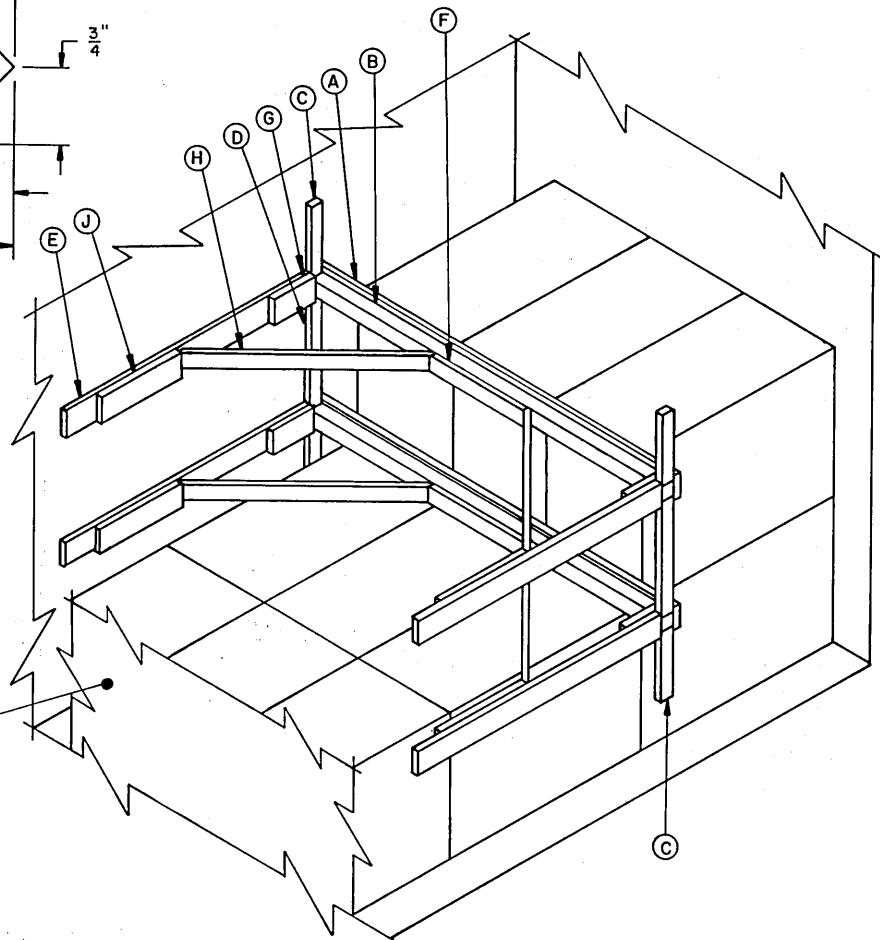
LOAD AS SHOWN

ITEM	QUANTITY	WEIGHT (APPROX)
PALLET UNIT	108	51,948 LBS
DUNNAGE		1,375 LBS
TOTAL WEIGHT		53,323 LBS



DIAGONAL BRACE

PIECE MARKED (H)



FOR SIDE BLOCKING SPECIFICATIONS APPLICABLE TO THE LOAD SHOWN, REFER TO THE LOAD DEPICTED ON PAGES 6 AND 7 AND "CENTER GATE "A" ON PAGE 12. SEE SPECIAL NOTE 4 BELOW.

ISOMETRIC VIEW

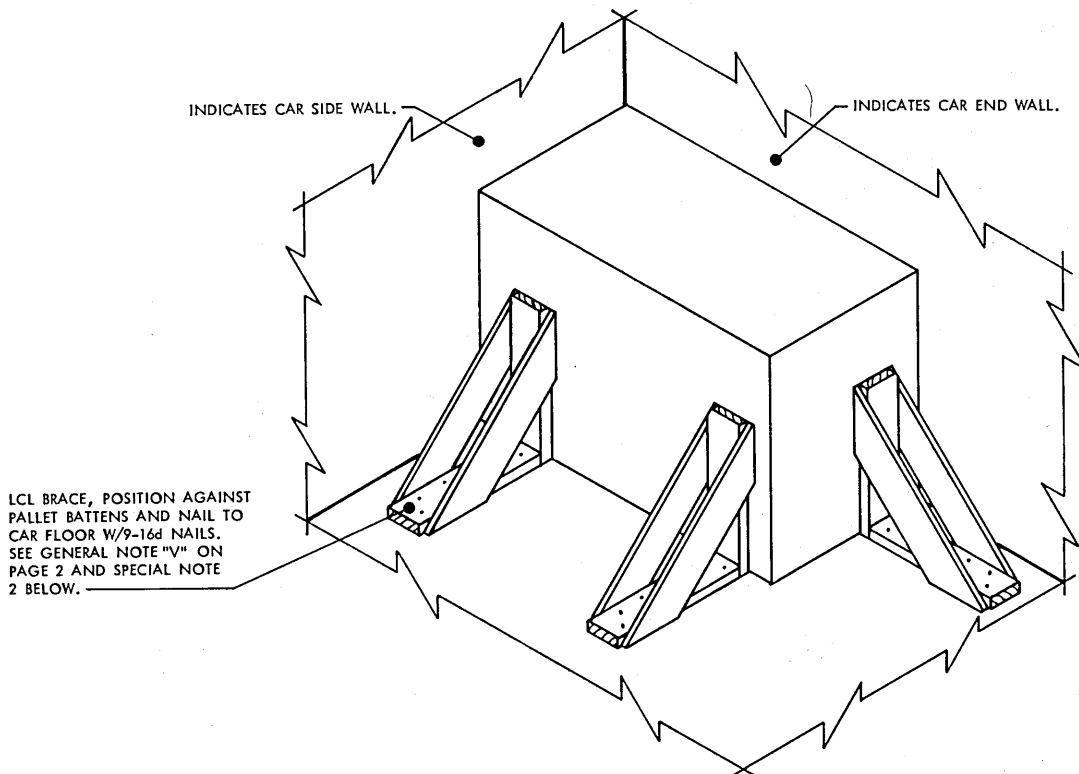
THE PALLETIZED M596 CONTAINER IS SHOWN ABOVE. SEE SPECIAL NOTE 4 ON THIS PAGE.

KEY LETTERS

SPECIAL NOTES:

1. A 9'-0" WIDE (INSIDE CLEARANCE) CONVENTIONAL TYPE BOX CAR IS SHOWN; HOWEVER, WIDER OR NARROWER CARS MAY BE USED.
2. A K-BRACE ASSEMBLY AS SHOWN IS ADEQUATE FOR RETAINING A MAXIMUM PARTIAL LAYER LOAD OF 8,000 POUNDS. CAUTION: SOME CARS ARE NOT SUITED FOR THE APPLICATION OF "PARTIAL LAYER BRACING" BECAUSE THE LENGTH OF THE PARTIAL LAYER TO BE SHIPPED AND/OR THE SIZE OR CONFIGURATION OF THE CAR DOORS WILL NOT PERMIT PROPER INSTALLATION OF THE SPECIFIED K-BRACE DUNNAGE. PIECES (A), (B), (C), (D) AND (E) MUST BE SUPPORTED AT THE SIDES OF A CAR BY A CAR SIDE WALL. IT IS ALRIGHT FOR THE END OF A DIAGONAL BRACE TO BEAR IN FRONT OF A DOOR OPENING; HOWEVER, THE ADJACENT PIECE MARKED (E) MUST BE DOUBLED.
3. A FULL STACK OF THESE PALLET UNITS MUST CONTACT THE K-BRACE IN THE PARTIAL LAYER BRACED. IF THE QUANTITY OF UNITS IN THE PARTIAL LAYER TO BE SHIPPED IS INADEQUATE TO MEET THIS REQUIREMENT, OMIT THE REQUIRED UNITS FROM THE UPPERMOST FULL LAYER NEAR THE CENTER OF THE CAR AND SEE THE "PALLET FILLER ASSEMBLY" DETAIL ON PAGE 12 FOR OMITTED PALLET FILLERS.
4. ONLY THE BLOCKING AND BRACING PIECES WHICH ARE NECESSARY TO DEPICT THE PARTIAL LAYER BRACING ARE SHOWN. WHEN LOADING THE PALLETIZED M596 OR M597 CONTAINERS REFER TO THE LOAD ON PAGES 6 AND 7. WHEN LOADING THE PALLETIZED PLYWOOD CONTAINERS REFER TO THE LOAD ON PAGES 8 AND 9.

- (A) HORIZONTAL, 2" X 6" X CAR WIDTH (CUT TO FIT) (2 REQD). NAIL TO (B) W/1-12d NAIL EVERY 12"
- (B) CROSS BRACE, 4" X 4" BY CAR WIDTH (CUT TO FIT) (2 REQD).
- (C) WALL CLEAT, 2" X 4" X 18" (4 REQD). NAIL TO CAR SIDE WALL W/4-12d NAILS.
- (D) SPACER, 2" X 4" X 30" (2 REQD). NAIL TO CAR WALL W/5-12d NAILS.
- (E) HORIZONTAL WALL CLEAT, 2" X 6" X 72" (4 REQD). NAIL TO CAR SIDE WALL W/16-12d NAILS.
- (F) CENTER CLEAT, 2" X 4" X 28" FOR 8'-6" WIDE CAR OR 2" X 4" X 36" FOR A 9'-2" WIDE CAR (2 REQD). NAIL TO PIECE MARKED (B) W/7-12d NAILS.
- (G) POCKET CLEAT, 2" X 6" X 12" (4 REQD). NAIL TO PIECE MARKED (E) W/4-16d NAILS.
- (H) DIAGONAL BRACE, 2" X 4" X 50" (4 REQD). SEE "DIAGONAL BRACE" DETAIL ABOVE. TOENAIL TO PIECES MARKED (B) AND (E) W/2-16d NAILS AT EACH END.
- (J) BACK-UP CLEAT, 2" X 6" X 24" (4 REQD). NAIL TO PIECE MARKED (E) W/8-16d NAILS.

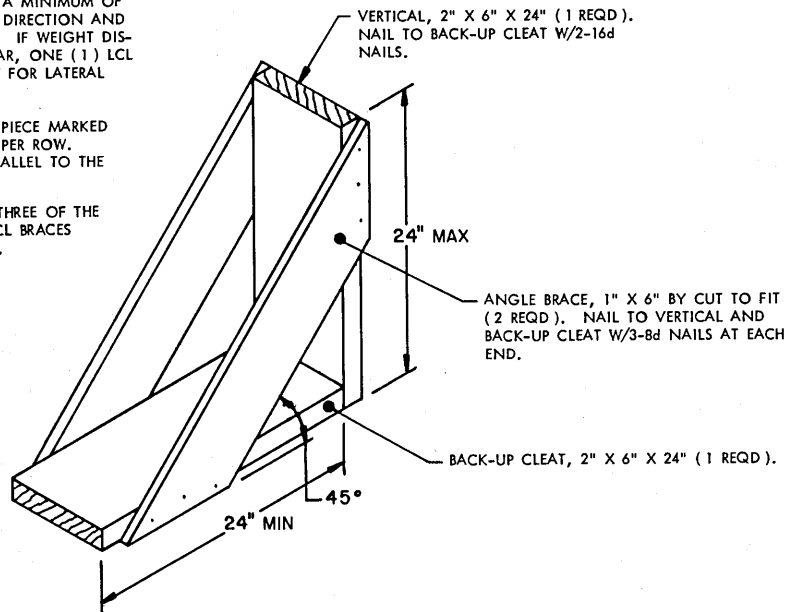


ISOMETRIC VIEW

THE PALLETIZED M596 CONTAINER IS SHOWN ABOVE.
SEE SPECIAL NOTE 4 ON THIS PAGE.

SPECIAL NOTES:

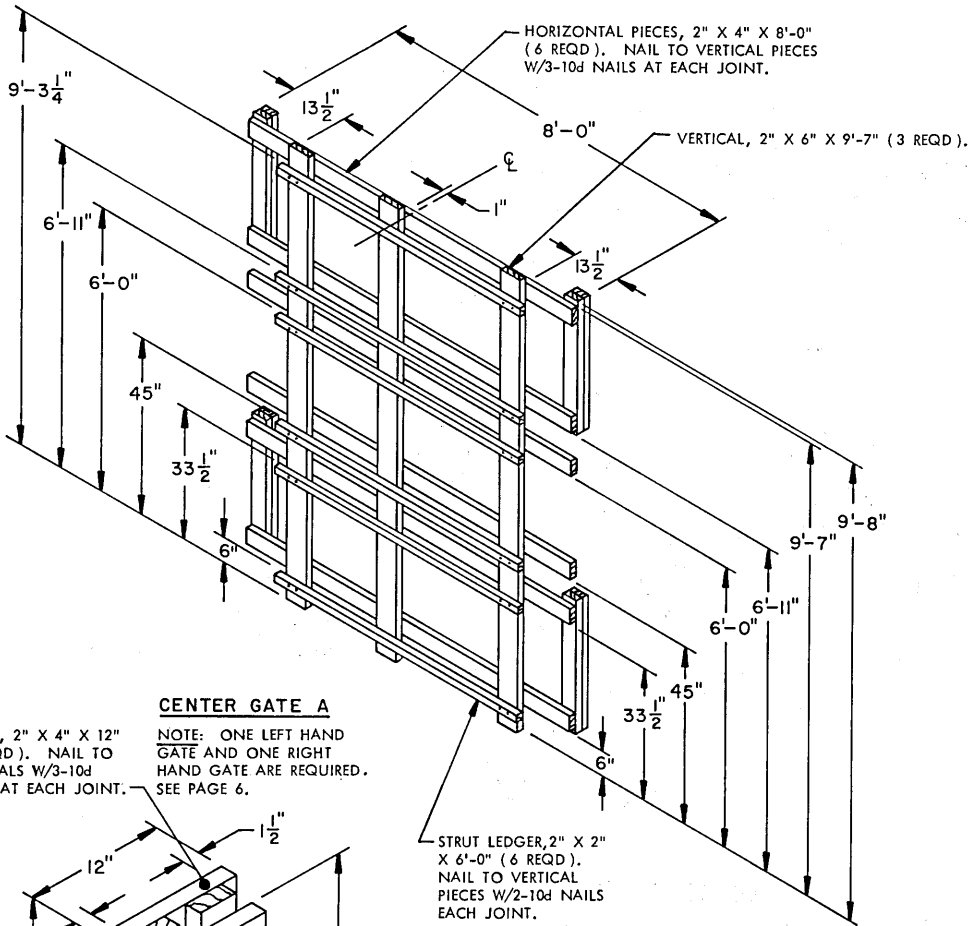
1. A ONE UNIT LOAD IS SHOWN.
2. EACH LCL BRACE AS APPLIED FOR LONGITUDINAL OR LATERAL BRACING WILL SUPPORT 2,000 POUNDS OR 8,000 POUNDS, RESPECTIVELY. A MINIMUM OF TWO (2) BRACES ARE REQUIRED IN A LONGITUDINAL DIRECTION AND ONE (1) LCL BRACE PER PALLET IN A LATERAL DIRECTION. IF WEIGHT DISTRIBUTION REQUIRES THE LOAD TO BE CENTERED IN THE CAR, ONE (1) LCL BRACE MAY BE POSITIONED AT EACH SIDE OF EACH PALLET FOR LATERAL BLOCKING.
3. IF A THREE (3) WIDE LOAD IS SHIPPED, SIDE BLOCK WITH PIECE MARKED ① ON PAGE 6 AS REQUIRED AND BRACE W/1-LCL BRACE PER ROW. PALLET UNITS MUST BE POSITIONED WITH THE LENGTH PARALLEL TO THE CAR SIDE WALL FOR THIS METHOD OF BLOCKING.
4. THE PROCEDURES SHOWN ABOVE ARE APPLICABLE TO ALL THREE OF THE PALLETIZED UNITS SHOWN ON PAGE 5. POSITION THE LCL BRACES AGAINST THE STRONG POINTS ON THE PALLETIZED UNITS.



LCL BRACE

EACH LCL BRACE AS APPLIED FOR LONGITUDINAL BRACING WILL RETAIN 2,000 POUNDS OF LADING. A MINIMUM OF TWO (2) LCL BRACES MUST BE USED FOR LONGITUDINAL BRACING. EACH LCL BRACE AS APPLIED FOR LATERAL BRACING WILL SUPPORT 8,000 POUNDS OF LADING.

TYPICAL LCL USING LCL BRACE METHOD OF PARTIAL FIRST LAYER (TIER) BRACING (PALLETIZED UNITS)



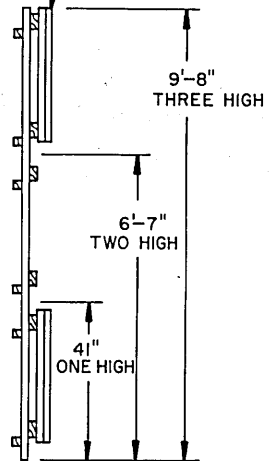
CENTER GATE A

BUFFER, 2" X 4" X 12" (2 REQD). NAIL TO VERTICALS W/3-10d NAILS AT EACH JOINT.

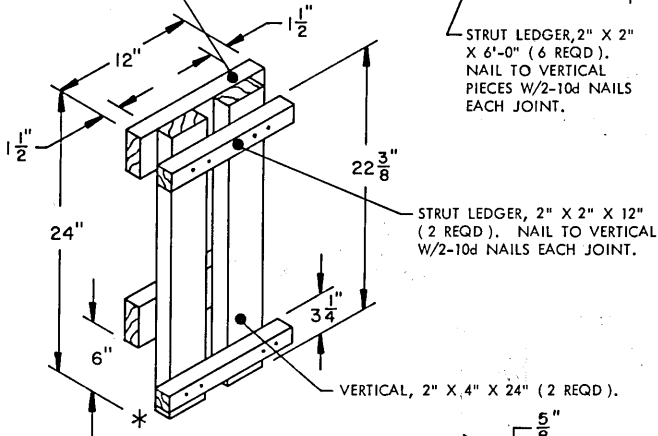
NOTE: ONE LEFT HAND GATE AND ONE RIGHT HAND GATE ARE REQUIRED. SEE PAGE 6.

STRUT LEDGER, 2" X 2" X 6'-0" (6 REQD). NAIL TO VERTICAL PIECES W/2-10d NAILS EACH JOINT.

STOP PIECE, 2" X 4" X 34" (DOUBLED) (4 REQD). NAIL FIRST PIECE TO HORIZONTAL PIECES W/3-10d NAILS AT EACH JOINT. NAIL SECOND PIECE TO FIRST W/5-10d NAILS.

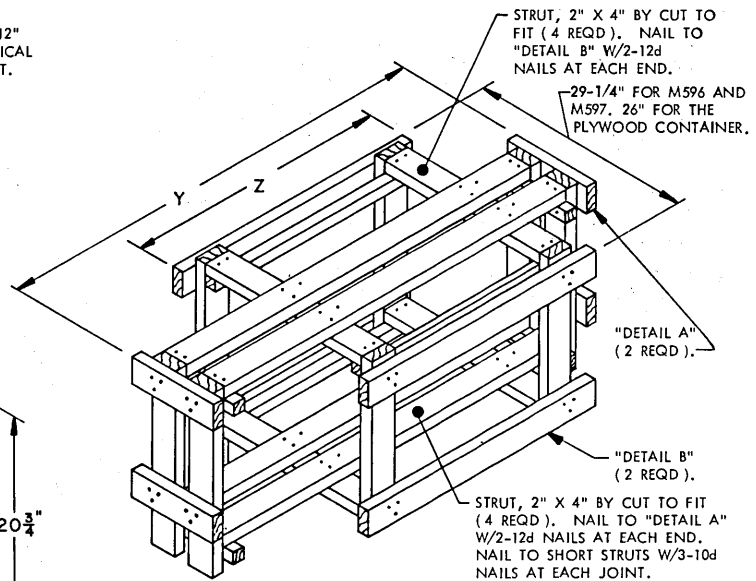


END VIEW (CENTER GATE A)



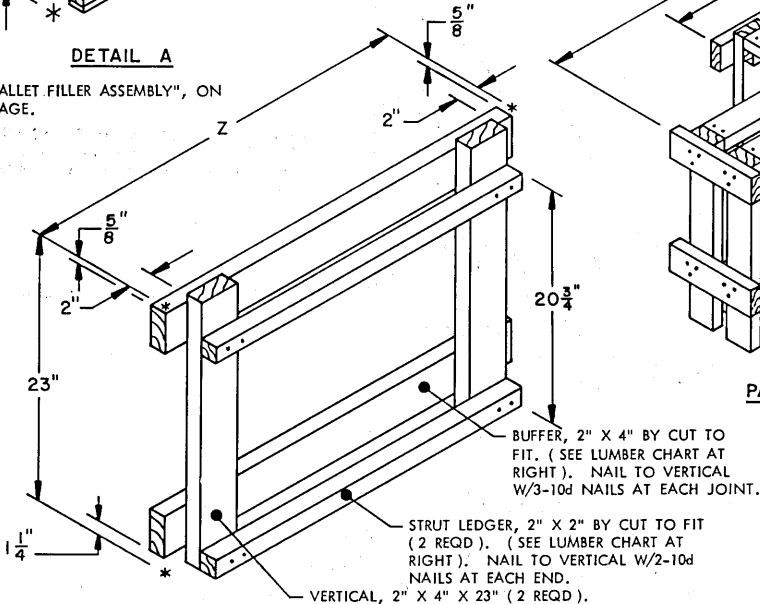
DETAIL A

SEE "PALLET FILLER ASSEMBLY", ON THIS PAGE.



PALLET FILLER ASSEMBLY

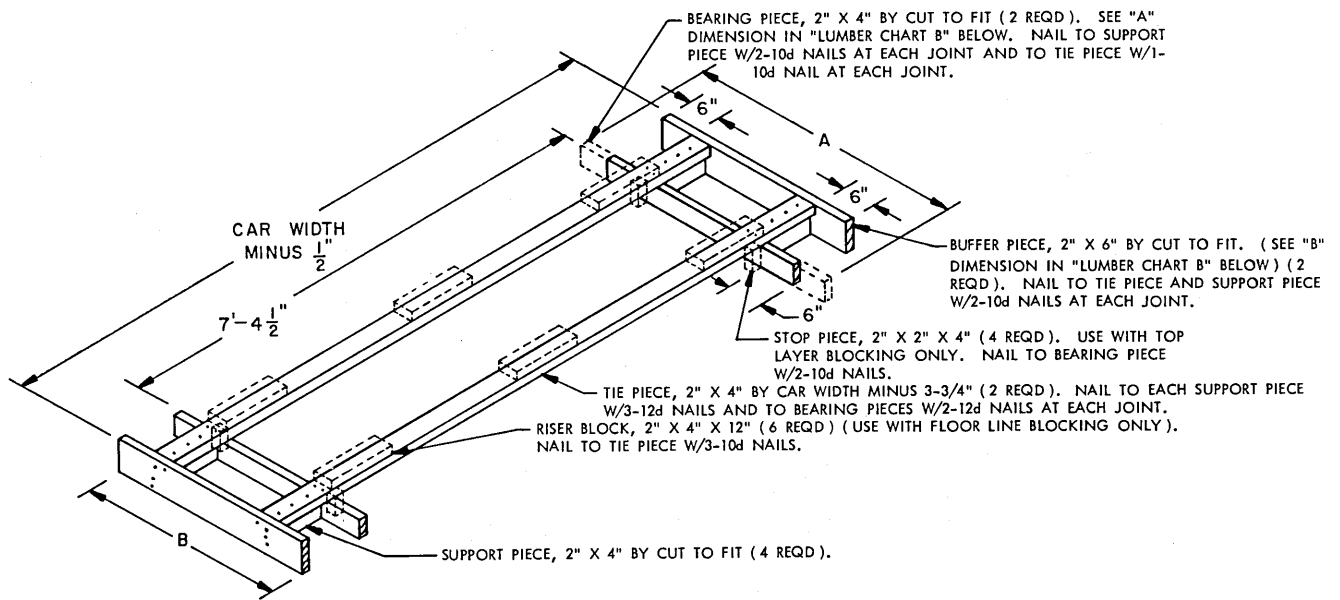
SEE SPECIAL NOTE 5 ON PAGE 7.



DETAIL B

SEE "PALLET FILLER ASSEMBLY", ON THIS PAGE.

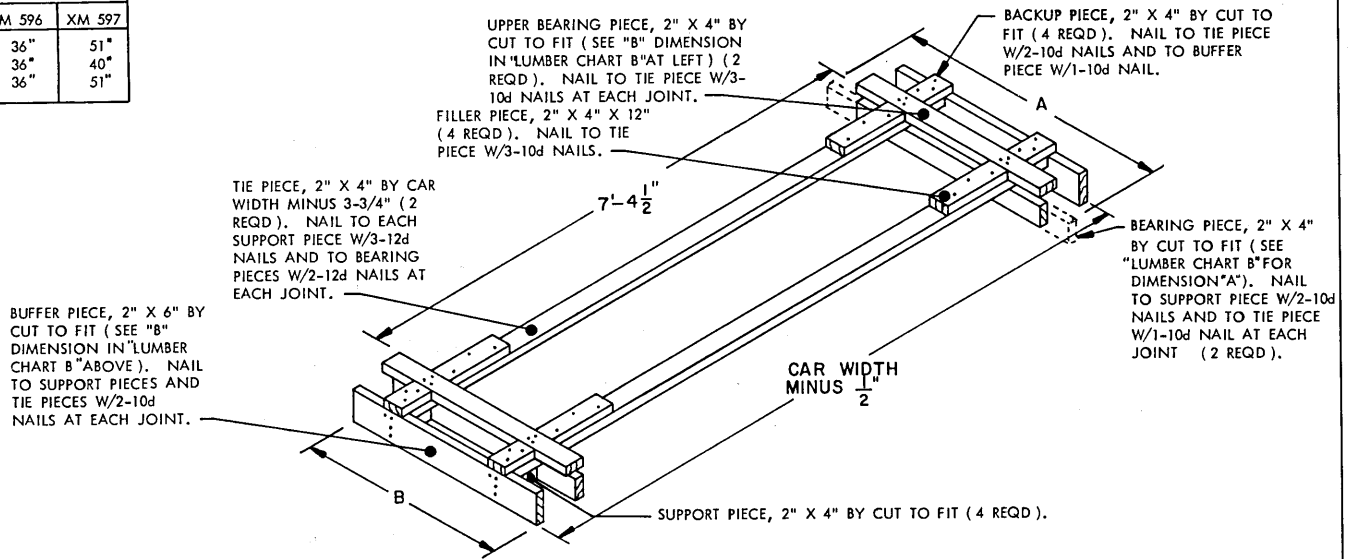
LUMBER CHART A			
	XM 596	XM 597	PLYWOOD
Y	57-1/2"	71"	62"
Z	34"	55"	44"



ANTI-SWAY BRACE A

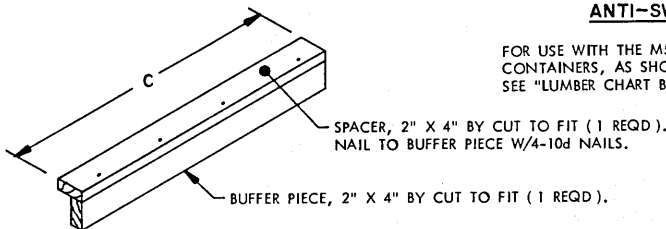
NOTE THAT THE ASSEMBLY TO BE USED FOR FLOOR LINE BLOCKING WILL BE INSTALLED UPSIDE DOWN RATHER THAN AS SHOWN, FOR USE WITH THE M596 OR M597 PALLETIZED CONTAINERS, AS SHOWN IN THE LOAD ON PAGE 6. SEE "LUMBER CHART B" ON THIS PAGE.

LUMBER CHART B		
	XM 596	XM 597
A	36"	51"
B	36"	40"
C	36"	51"



ANTI-SWAY BRACE B

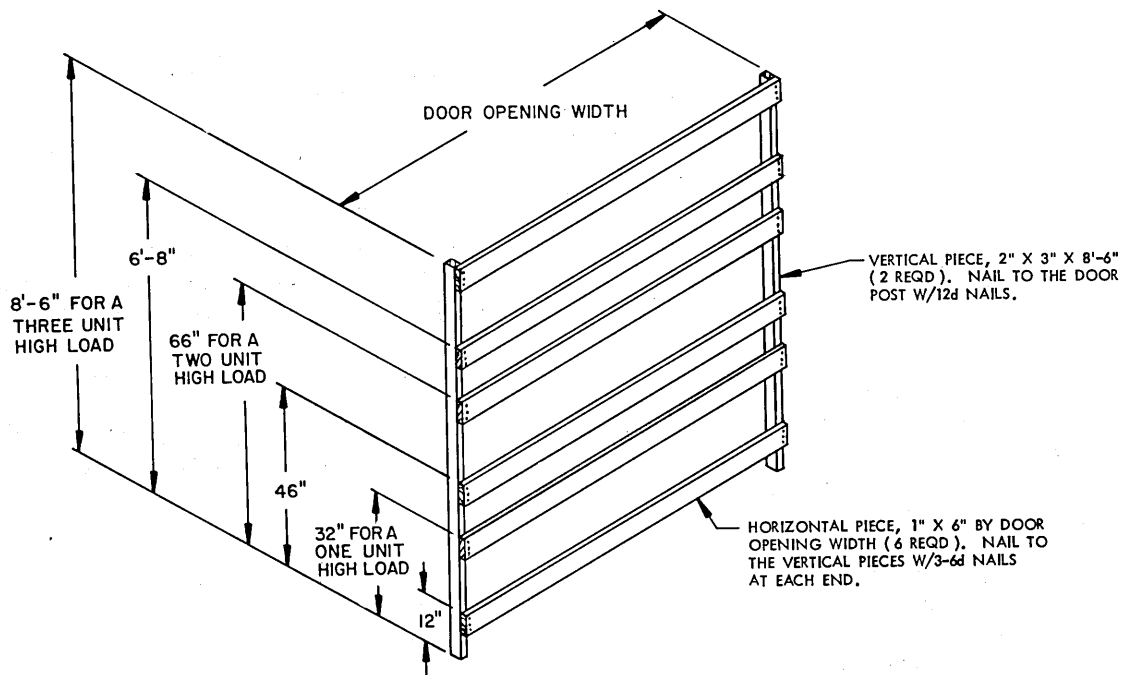
FOR USE WITH THE M596 OR M597 PALLETIZED CONTAINERS, AS SHOWN IN THE LOAD ON PAGE 6. SEE "LUMBER CHART B" ON THIS PAGE.



STRAPPING BOARD

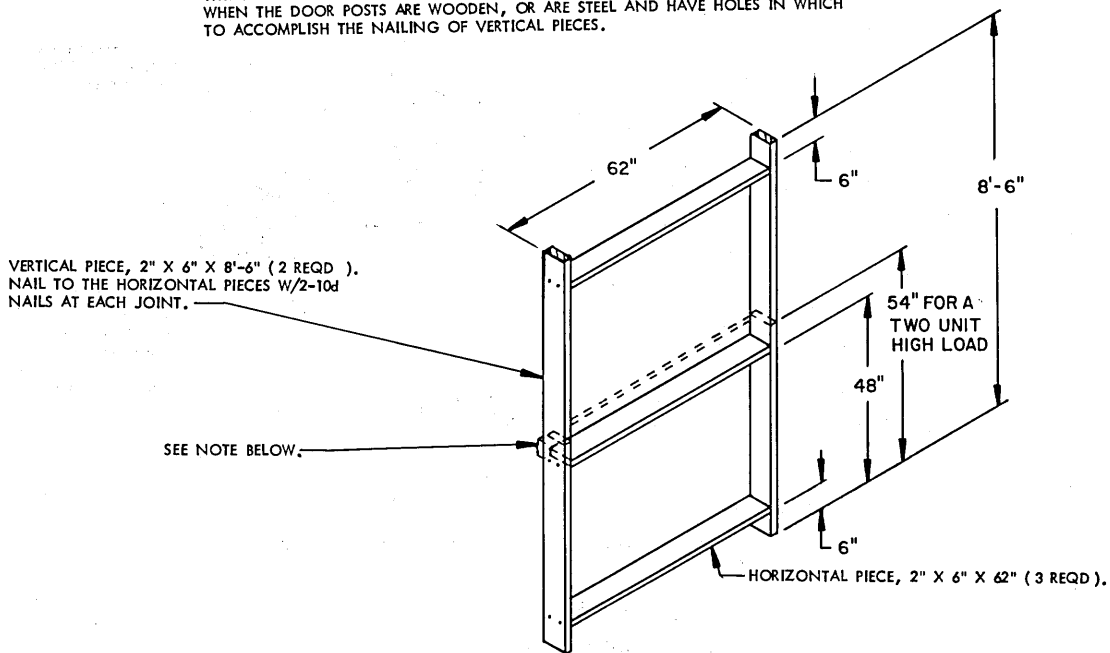
FOR USE WITH THE M596 OR M597 PALLETIZED CONTAINERS, AS SHOWN IN THE LOAD ON PAGE 6 SEE "LUMBER CHART B" ON THIS PAGE.

DETAILS



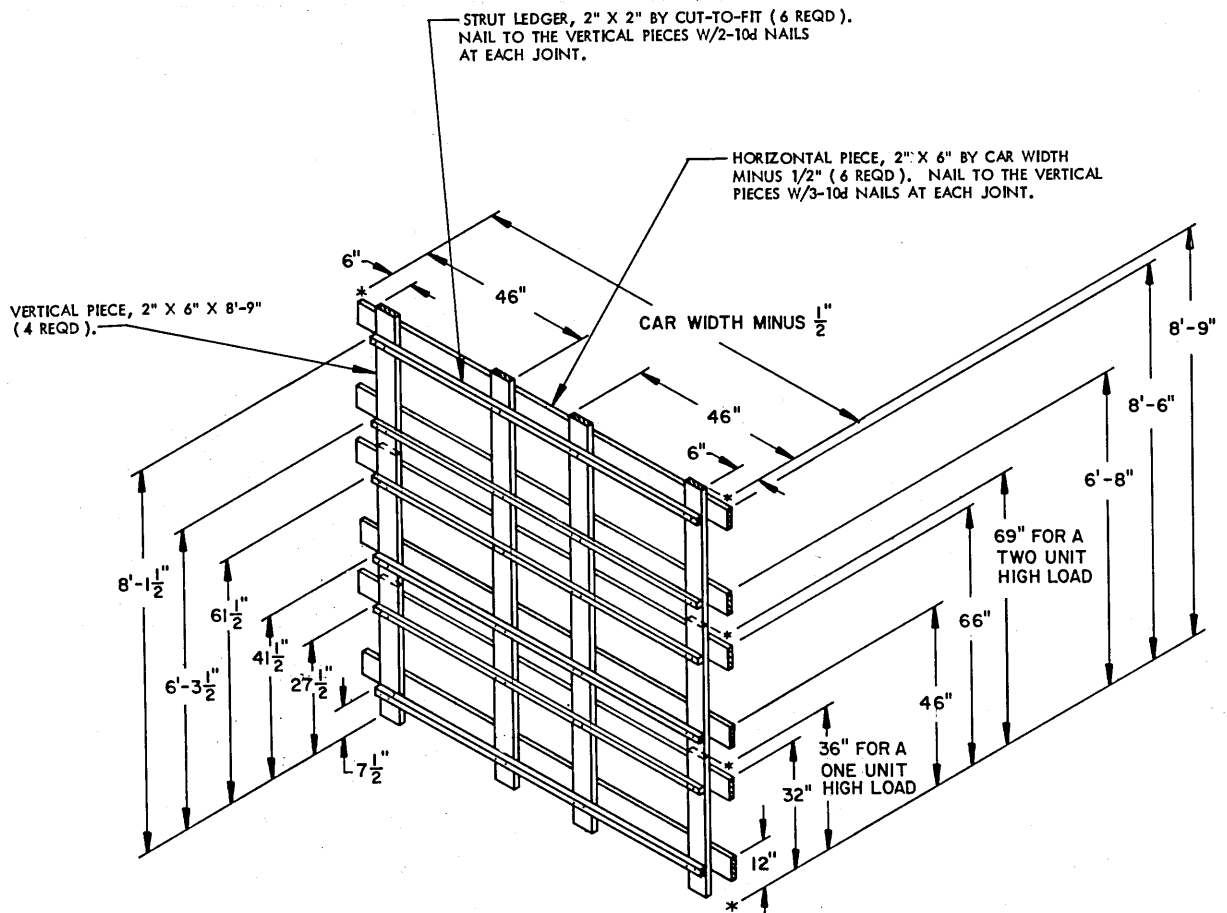
DOORWAY PROTECTION GATE B

THE GATE SHOWN ABOVE IS FOR A THREE UNIT HIGH LOAD OF PALLETIZED PLYWOOD CONTAINERS. DIMENSIONS ARE ALSO GIVEN FOR A TWO OR ONE UNIT HIGH LOAD. THIS METHOD IS FOR USE IN CARS EQUIPPED WITH CONVENTIONAL SLIDING DOORS WHEN THE DOOR POSTS ARE WOODEN, OR ARE STEEL AND HAVE HOLES IN WHICH TO ACCOMPLISH THE NAILING OF VERTICAL PIECES.



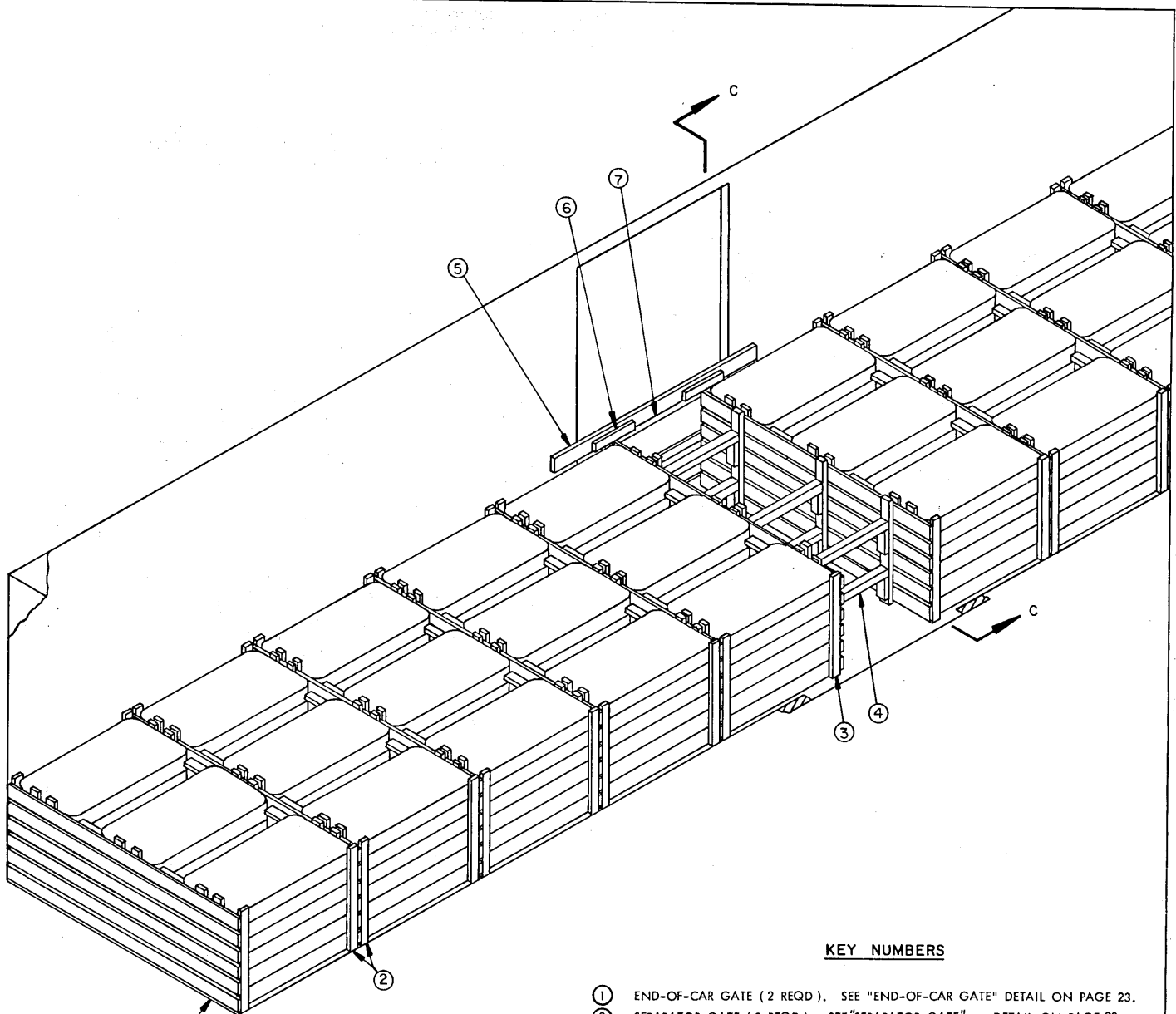
SPACER ASSEMBLY A

THIS SPACER IS FOR USE BETWEEN LATERALLY ADJACENT PALLETIZED PLYWOOD CONTAINERS AS SHOWN IN THE LOAD ON PAGE 8. THE WIDTH MAY BE REDUCED BY USING 2" X 4" MATERIAL IN LIEU OF 2" X 6" MATERIAL OR MADE WIDER BY NAILING A 4" WIDE BY THICKNESS-TO-SUIT BY 62" LONG PIECE TO EACH HORIZONTAL PIECE, AS SHOWN ABOVE. THE SPACER SHOWN ABOVE IS FOR A THREE UNIT HIGH LOAD. DIMENSIONS ARE ALSO GIVEN FOR A TWO UNIT HIGH LOAD. FOR A TWO UNIT HIGH LOAD USE 68" HIGH VERTICAL PIECES AND TWO HORIZONTAL PIECES, ONE POSITIONED AT THE 6" HEIGHT AND ONE AT THE 62" HEIGHT. FOR A ONE UNIT HIGH LOAD USE 36" VERTICAL PIECES AND TWO HORIZONTAL PIECES, ONE POSITIONED AT THE 6" HEIGHT AND ONE AT THE 30" HEIGHT.



CENTER GATE C

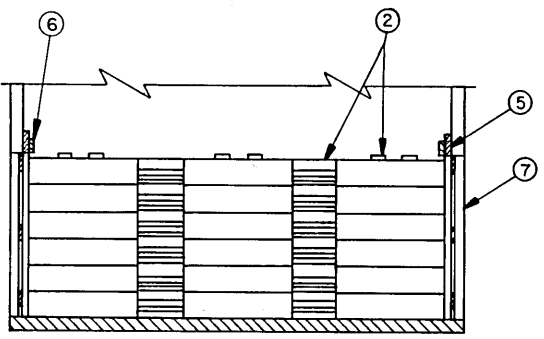
THE GATE SHOWN ABOVE IS FOR A THREE UNIT HIGH LOAD OF PALLETIZED PLYWOOD CONTAINERS. DIMENSIONS ARE ALSO GIVEN FOR A TWO OR A ONE UNIT HIGH LOAD. THIS GATE IS FOR USE AGAINST THE ENDS OF THE PALLETIZED UNIT IN A LOAD SUCH AS SHOWN ON PAGE 8.



① ISOMETRIC VIEW

KEY NUMBERS

- ① END-OF-CAR GATE (2 REQD). SEE "END-OF-CAR GATE" DETAIL ON PAGE 23.
- ② SEPARATOR GATE (8 REQD). SEE "SEPARATOR GATE" DETAIL ON PAGE 23.
- ③ CENTER GATE (2 REQD). SEE "CENTER GATE B" DETAIL ON PAGE 24.
- ④ STRUTS, 4" X 4" BY CUT TO FIT (6 REQD). TOENAIL TO CENTER GATE, PIECE MARKED ③, W/2-12d NAILS EACH END. SEE "STRUT BRACING" DETAIL ON PAGE 26.
- ⑤ HOLD-DOWN, 2" X 6" BY DOOR WIDTH PLUS 24" (2 REQD). NAIL TO CAR WALL W/5-10d NAILS AT EACH END.
- ⑥ CENTER GATE HOLD-DOWN CLEAT, 2" X 4" X 18" (4 REQD). CENTER ON THE CENTER GATE AND NAIL TO THE HOLD-DOWN W/5-10d NAILS.
- ⑦ DOORWAY PROTECTION (2 REQD). SEE "DOORWAY PROTECTION GATE A" ON PAGE 24.



SECTION C-C
CENTER GATE OMITTED FOR CLARITY.

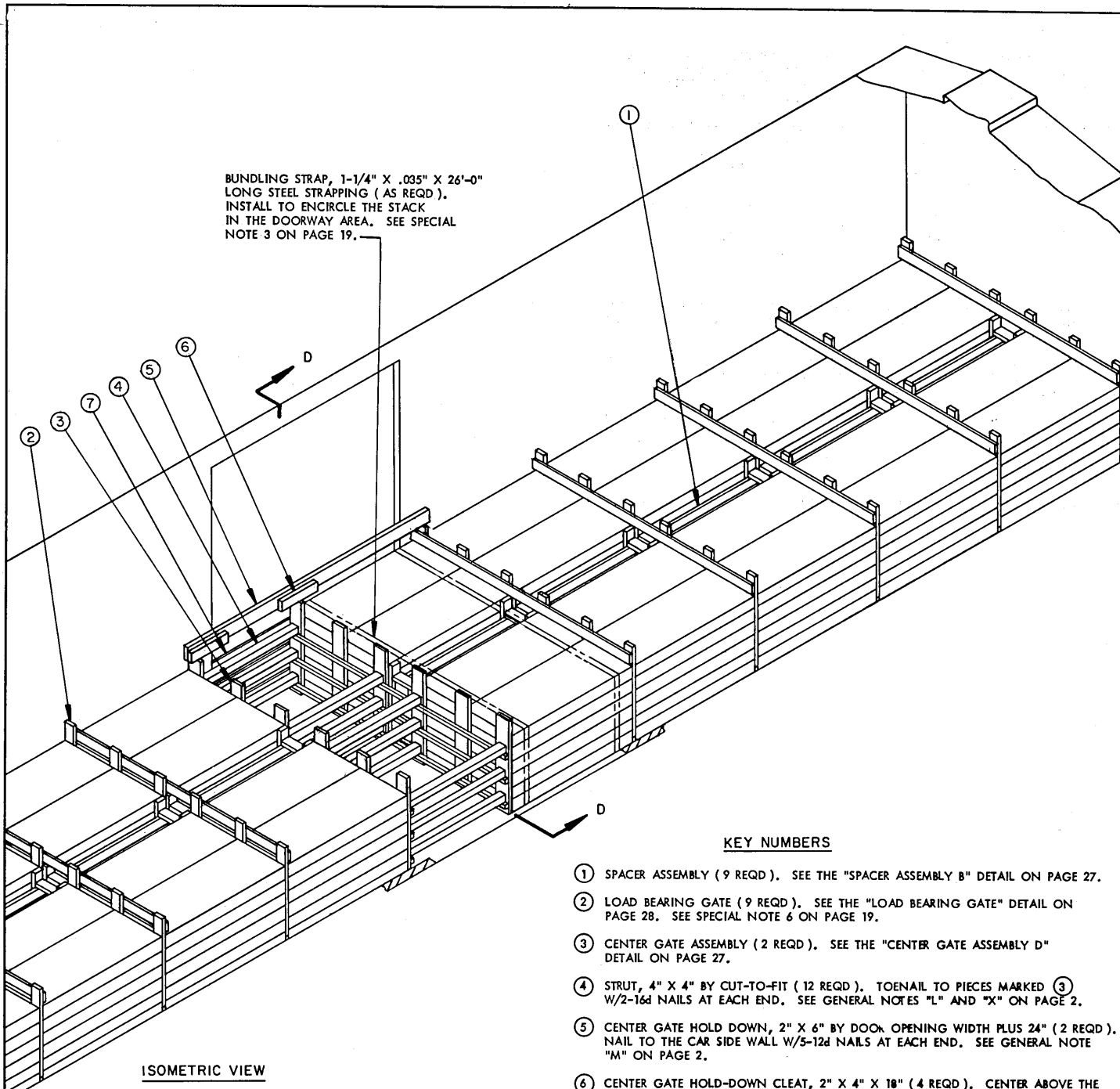
SPECIAL NOTES:

1. A LOAD OF 180 UNPALLETIZED M596 CONTAINERS IS SHOWN IN A 50'-6" LONG BY 9'-2" WIDE CONVENTIONAL TYPE BOX CAR EQUIPPED WITH 6'-0" WIDE DOOR OPENINGS. CARS OF OTHER DIMENSIONS AND CARS HAVING WIDER DOOR OPENINGS OR "STAGGERED" DOOR OPENINGS MAY ALSO BE USED.
2. FOR SHIPMENT OF A LOAD WHICH CONTAINS LESS CONTAINERS THAN SHOWN IT IS PERMISSIBLE TO USE "FILLER ASSEMBLIES" IN THE TOP LAYER ONLY. SEE THE "FILLER ASSEMBLY" DETAIL ON PAGE 26. ALSO ONE OR MORE COMPLETE LAYERS MAY BE OMITTED. SEE PAGES 20 THROUGH 22 FOR OTHER METHODS OF SHIPPING LESS THAN FULL LOADS.
3. IF THE CAR BEING LOADED HAS "PLUG" DOORS THE "DOORWAY PROTECTION GATE A", SHOWN AS PIECE MARKED ⑥ ON PAGE 16, MUST BE OMITTED. ALL "CENTER GATE B" ASSEMBLIES SHOWN AS PIECES MARKED ③ ON PAGE 16, MUST BE MODIFIED. SEE "NOTE ●" ON PAGE 23 AND "APPLICATION OF DOORWAY PROTECTION FOR PLUG DOORS" ON PAGE 25. SEE GENERAL NOTES "K" AND "U" ON PAGE 2.
4. A LOAD OF ONE-HUNDRED AND FORTY-FOUR (144) M597 CONTAINERS CAN BE LOADED IN A 50'-6" LONG BY 9'-2" WIDE BOX CAR BY APPLYING THE PROCEDURES DEPICTED IN THE LOAD ON PAGE 16. A LOAD OF 72 CONTAINERS (FOUR ROWS OF 18 CONTAINERS EACH) CAN BE LOADED IN EACH END OF THE BOX CAR. THE QUANTITY OF "SEPARATOR GATE" ASSEMBLIES, SHOWN AS PIECES MARKED ② ON PAGE 16 MUST BE DECREASED BY TWO (2). SEE GENERAL NOTES "G" AND "J" ON PAGE 2.
5. IF THE CAR BEING LOADED HAS BOWED END WALLS WHICH ARE BOWED OUTWARD TWO INCHES (2") OR MORE EITHER FROM SIDE-TO-SIDE OR FROM FLOOR-TO-ROOF, AN END-OF-CAR BULKHEAD MUST BE INSTALLED TO PROVIDE A "SQUARED OFF" SURFACE FOR THE LOAD AT THE END OF THE CAR. SEE THE "BOWED END WALL PROVISIONS" ON PAGE 29.
6. WHEN LOADING THE UNPALLETIZED PLYWOOD CONTAINER, SEE THE LOAD ON PAGES 18 AND 19.

BILL OF MATERIAL FOR M596		
LUMBER	LINEAR FEET	BOARD FEET
1" X 3"	14	4
1" X 6"	531	266
2" X 4"	313	209
2" X 6"	138	138
4" X 4"	21	28
NAILS	NO. REQD	POUNDS
6d (2")	2196	13
10d (3")	276	4-1/4
12d (3-1/4")	24	1/2

LOAD AS SHOWN

ITEM	QUANTITY	WEIGHT (APPROX)
M596 CNTR	180	17,460 LBS
DUNNAGE		1,308 LBS
TOTAL WEIGHT		18,768 LBS

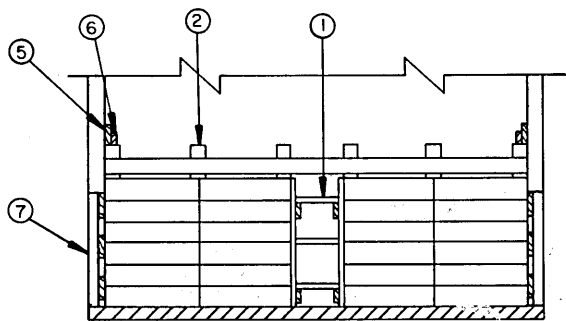


ISOMETRIC VIEW

BUNDLING STRAP, 1-1/4" X .035" X 26'-0"
LONG STEEL STRAPPING (AS REQD).
INSTALL TO ENCIRCLE THE STACK
IN THE DOORWAY AREA. SEE SPECIAL
NOTE 3 ON PAGE 19.

KEY NUMBERS

- ① SPACER ASSEMBLY (9 REQD). SEE THE "SPACER ASSEMBLY B" DETAIL ON PAGE 27.
- ② LOAD BEARING GATE (9 REQD). SEE THE "LOAD BEARING GATE" DETAIL ON PAGE 28. SEE SPECIAL NOTE 6 ON PAGE 19.
- ③ CENTER GATE ASSEMBLY (2 REQD). SEE THE "CENTER GATE ASSEMBLY D" DETAIL ON PAGE 27.
- ④ STRUT, 4" X 4" BY CUT-TO-FIT (12 REQD). TOENAIL TO PIECES MARKED ③ W/2-16d NAILS AT EACH END. SEE GENERAL NOTES "L" AND "X" ON PAGE 2.
- ⑤ CENTER GATE HOLD DOWN, 2" X 6" BY DOOR OPENING WIDTH PLUS 24" (2 REQD). NAIL TO THE CAR SIDE WALL W/5-12d NAILS AT EACH END. SEE GENERAL NOTE "M" ON PAGE 2.
- ⑥ CENTER GATE HOLD-DOWN CLEAT, 2" X 4" X 18" (4 REQD). CENTER ABOVE THE VERTICAL PIECES ON THE CENTER GATE AND NAIL TO THE CENTER GATE HOLD-DOWN W/5-10d NAILS.
- ⑦ DOORWAY PROTECTION GATE (2 REQD). SEE THE "DOORWAY PROTECTION GATE C" DETAIL ON PAGE 28. SEE SPECIAL NOTE 3 ON PAGE 19.



SECTION D-D

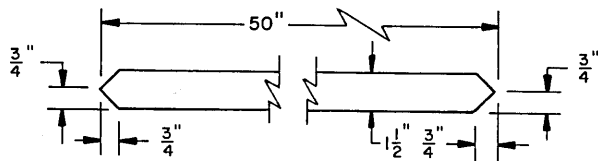
SPECIAL NOTES:

1. A LOAD OF 216 UNPALLETIZED PLYWOOD CONTAINERS IS SHOWN IN A 50'-6" LONG BY 9'-2" WIDE CONVENTIONAL TYPE BOX CAR EQUIPPED WITH 8'-0" WIDE DOOR OPENINGS. CARS OF OTHER DIMENSIONS AND CARS HAVING WIDER OR NARROWER DOOR OPENINGS OR "STAGGERED" DOOR OPENINGS MAY ALSO BE USED.
2. FOR SHIPMENT OF A LOAD WHICH CONTAINS LESS CONTAINERS THAN SHOWN, IT IS PERMISSIBLE TO USE "FILLER ASSEMBLIES" IN THE TOP LAYER ONLY. SEE THE "FILLER ASSEMBLY" DETAIL ON PAGE 26. ALSO ONE OR MORE COMPLETE LAYERS MAY BE OMITTED. SEE PAGES 20 THRU 22 FOR OTHER METHODS OF SHIPPING LESS THAN FULL LOADS.
3. IF THE CAR BEING LOADED HAS "PLUG" DOORS THE "DOORWAY PROTECTION GATE C", SHOWN AS PIECE MARKED ⑥ ON PAGE 18, MUST BE OMITTED AND "BUNDLING STRAPS" AS SHOWN IN THE LOAD ON PAGE 18 MUST BE USED. THESE PROCEDURES WILL APPLY TO ALL PLUG DOORS WHETHER AUXILIARY OR MAIN. EACH STACK OF PLYWOOD CONTAINERS WHICH EXTEND MORE THAN 30" PAST A DOOR POST INTO THE DOORWAY AREA ON ONE OR BOTH SIDES OF THE CAR BEING LOADED MUST BE BUNDLED WITH ONE STRAP. IF A STACK EXTENDS MORE THAN 20" PAST A DOOR POST INTO THE DOORWAY AREA, TWO (2) BUNDLING STRAPS, AS SHOWN IN THE LOAD ON PAGE 18, WILL BE REQUIRED ON THAT STACK. NOTE: THE BUNDLING STRAP MUST BE PRE-POSITIONED PRIOR TO LOADING THE PLYWOOD CONTAINERS. BUNDLING STRAPS WILL NOT BE REQUIRED FOR STACKS WHICH EXTEND LESS THAN 30" PAST A DOOR POST.
4. IF THE CAR BEING LOADED HAS BOWED END WALLS WHICH ARE BOWED OUTWARD TWO INCHES (2") OR MORE EITHER FROM SIDE-TO-SIDE OR FROM FLOOR-TO-ROOF, AN END-OF-CAR BULKHEAD MUST BE INSTALLED TO PROVIDE A "SQUARED OFF" SURFACE FOR THE LOAD AT THE END OF THE CAR. SEE THE "BOWED END WALL PROVISIONS" ON PAGE 29.
5. IF THE CAR BEING LOADED IS EQUIPPED WITH LOAD DIVIDER BULKHEADS OMIT PIECES MARKED ③, ④, AND ⑤ AS SHOWN IN THE LOAD ON PAGE 18. POSITION THE LOAD DIVIDER BULKHEADS TIGHTLY AGAINST THE UNPALLETIZED CONTAINERS IN THE CENTER AREA OF THE CAR. SEE GENERAL NOTES "K" ON PAGE 2 AND "AA" THROUGH "FF" ON PAGE 3.
6. LOAD BEARING GATES ARE REQUIRED TO PROVIDE A SPACE FOR THE ROPE HANDLES AT EACH END OF THE PLYWOOD CONTAINERS.

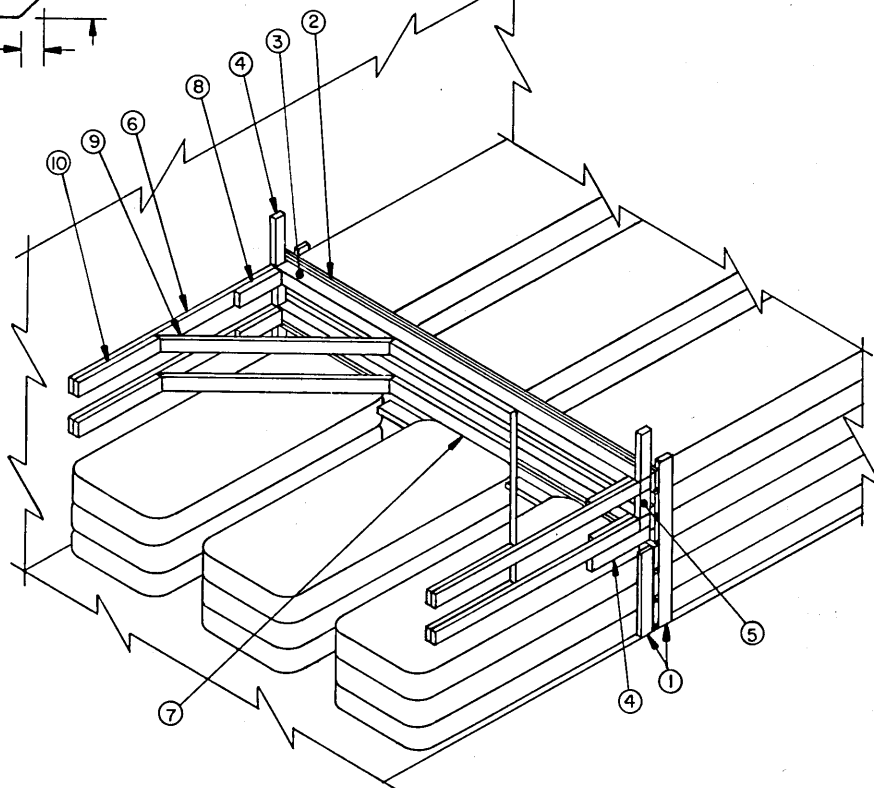
BILL OF MATERIAL		
LUMBER	LINEAR FEET	BOARD FEET
1" X 4"	83	28
1" X 6"	48	24
2" X 2"	138	46
2" X 3"	10	5
2" X 4"	524	350
2" X 6"	58	58
4" X 4"	50	67
NAILS	NO. REQD	POUNDS
6d (2")	198	1-1/4
10d (3")	632	9-3/4
12d (3-1/4")	20	-1/2
16d (3-1/2")	48	1-1/4

LOAD AS SHOWN

ITEM	QUANTITY	WEIGHT (APPROX)
PLYWOOD CNTR'S	216	18,144 LBS
DUNNAGE		1,168 LBS
TOTAL WEIGHT		19,312 LBS



DIAGONAL BRACE
PIECE MARKED ⑨



ISOMETRIC VIEW

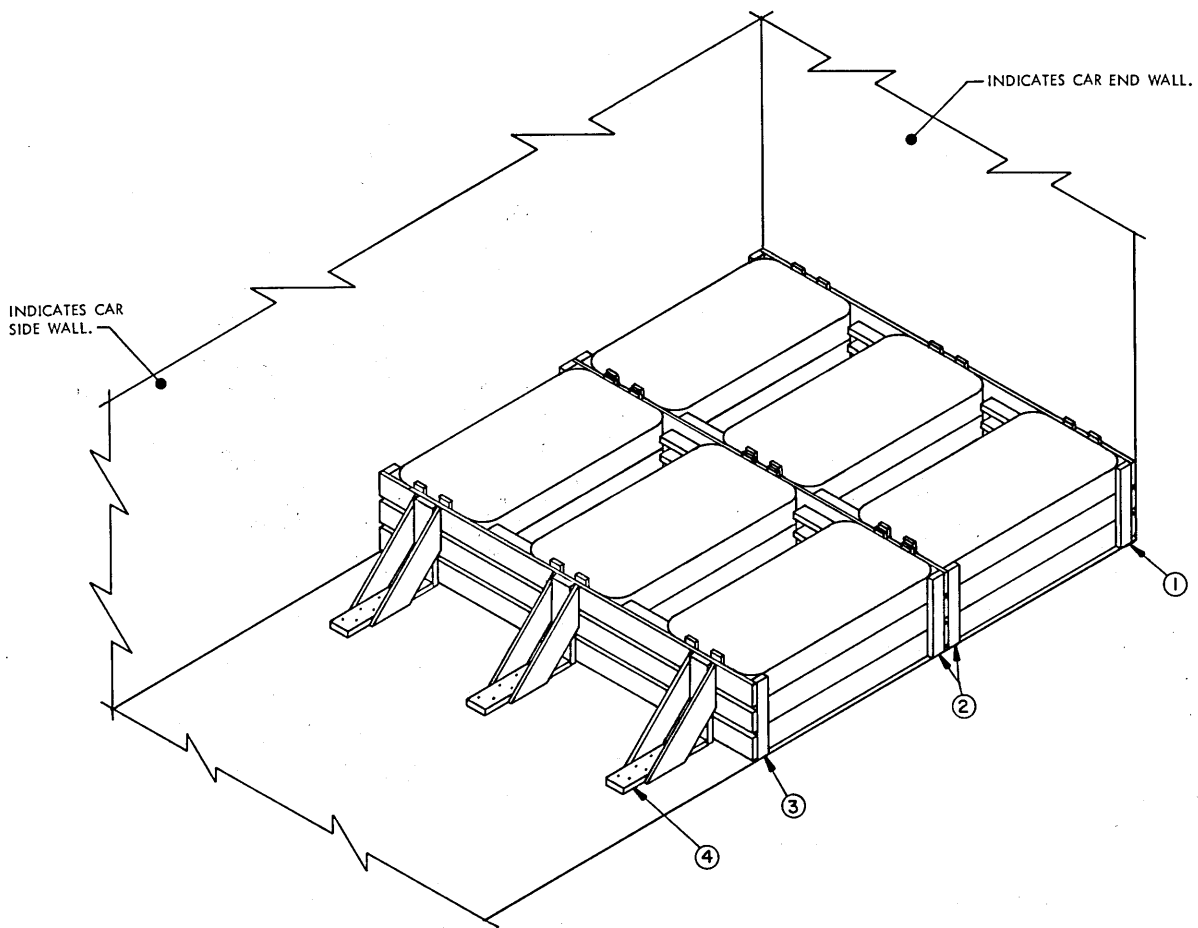
THE M597 CONTAINER IS SHOWN ABOVE. SEE SPECIAL NOTE 5 ON THIS PAGE.

SPECIAL NOTES:

1. A 9'-2" WIDE (INSIDE CLEARANCE) CONVENTIONAL TYPE BOX CAR IS SHOWN; HOWEVER, NARROWER OR WIDER CARS MAY BE USED.
2. A K-BRACE ASSEMBLY AS SHOWN IS ADEQUATE FOR RETAINING A MAXIMUM PARTIAL LAYER LOAD OF 8,000 POUNDS. **CAUTION:** SOME CARS ARE NOT SUITED FOR THE APPLICATION OF PARTIAL LAYER BRACING BECAUSE THE LENGTH OF THE PARTIAL LAYER TO BE SHIPPED AND/OR CONFIGURATION OF THE CAR DOORS WILL NOT PERMIT PROPER INSTALLATION OF THE SPECIFIED K-BRACE DUNNAGE. PIECES MARKED ②, ③, ④, ⑤ AND ⑧ MUST BE SUPPORTED AT THE SIDES OF A CAR BY A CAR SIDE WALL. IT IS ALL RIGHT FOR THE END OF A DIAGONAL BRACE TO BEAR IN FRONT OF A DOOR OPENING; HOWEVER, THE ADJACENT PIECE MARKED ⑦ MUST BE DOUBLED.
3. A FULL STACK OF THREE UNITS MUST CONTACT THE K-BRACE IN THE PARTIAL LAYER BRACED. IF THE QUANTITY OF UNITS IN THE PARTIAL LAYER TO BE SHIPPED IS INADEQUATE TO MEET THIS REQUIREMENT, OMIT THE NUMBER OF UNITS REQUIRED FROM THE UPPERMOST FULL LAYER NEAR THE CENTER OF THE CAR AND SEE THE CONTAINER "FILLER ASSEMBLY" ON PAGE 26 FOR FILLER(S), AND GENERAL NOTE "J" ON PAGE 2.
4. IF THE METHODS SHOWN ARE USED FOR PARTIAL LAYER SHIPMENT, SHORTEN THE CENTER-OF-CAR SIDE OF THE SEPARATOR GATE TO SUIT THE HEIGHT OF THE FULL LAYERS SHIPPED, AND ADD 1" X 6" BY CAR WIDTH (CUT TO FIT) TO THE FULL-HEIGHT HALF OF THE SEPARATOR GATE, AS REQUIRED TO FILL ANY VOIDS CAUSED BY SHORTENING THE CENTER-OF-CAR SIDE OF THE GATE. NAIL AT EACH END W/3-6d NAILS. APPLY SIDE BLOCKING 2" X 4" PIECES TO THIS ADDED 1" X 6" PIECE. ALSO, THE END BUFFER PIECES SHOULD BE NAILED TO THIS ADDED PIECE.
5. ONLY THE BLOCKING AND BRACING PIECES WHICH ARE NECESSARY TO DEPICT THE PARTIAL LAYER BRACING ARE SHOWN. WHEN LOADING THE M596 OR M597 CONTAINERS, REFER TO THE LOAD ON PAGES 16 AND 17. WHEN LOADING THE PLYWOOD CONTAINERS, REFER TO THE LOAD ON PAGES 18 AND 19.

KEY NUMBERS

- ① SEPARATOR GATE (1 REQD). SEE "SEPARATOR GATE" DETAIL ON PAGE 23 AND SPECIAL NOTE 4 ON THIS PAGE.
- ② HORIZONTAL, 2" X 6" BY CAR WIDTH (CUT TO FIT) (2 REQD). NAIL TO PIECE MARKED ③ W/1-12d NAIL EVERY 12".
- ③ CROSS BRACE, 4" X 4" BY CAR WIDTH (CUT TO FIT) (2 REQD).
- ④ WALL CLEAT, 2" X 4" X 12" (4 REQD). NAIL TO CAR SIDE WALL W/3-12d NAILS. **NOTE:** POSITION LOWER WALL CLEAT HORIZONTALLY AS SHOWN.
- ⑤ SPACER, 2" X 4" X 7" (2 REQD). NAIL TO CAR WALL W/2-12d NAILS.
- ⑥ HORIZONTAL WALL CLEAT, 2" X 4" X 72" (4 REQD). NAIL TO CAR WALL W/16-12d NAILS.
- ⑦ CENTER CLEAT, 2" X 4" X 28" FOR 8'-6" WIDE CAR, 32" FOR A 8'-10" WIDE CAR, 36" FOR A 9'-2" WIDE CAR, AND 38" FOR A 9'-4" WIDE CAR (2 REQD). NAIL TO PIECE MARKED ③ W/7-12d NAILS.
- ⑧ POCKET CLEAT, 2" X 4" X 12" (4 REQD). NAIL TO PIECE MARKED ⑥ W/4-16d NAILS.
- ⑨ DIAGONAL BRACE, 2" X 4" X 50" (4 REQD). SEE "DIAGONAL BRACE" DETAIL ABOVE. TOENAIL TO PIECES MARKED ③ AND ④ W/2-16d NAILS AT EACH END.
- ⑩ BACK-UP CLEAT, 2" X 4" X 24" (4 REQD). NAIL TO PIECE MARKED ⑥ W/8-16d NAILS.



ISOMETRIC VIEW

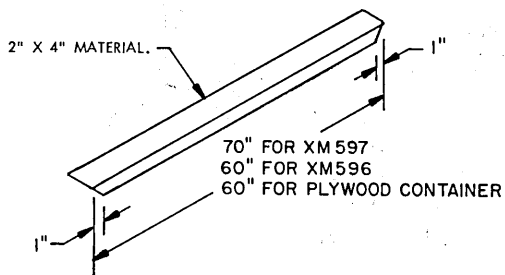
THE M596 CONTAINER IS SHOWN ABOVE.
SEE SPECIAL NOTE 5 ON THIS PAGE.

SPECIAL NOTES:

1. AN 18-UNIT LOAD IS SHOWN IN A 9'-2" WIDE (INSIDE CLEARANCE) CONVENTIONAL CAR; HOWEVER, A NARROWER CAR OR A WIDER CAR MAY BE USED.
2. A THREE CONTAINER HIGH STACK IS THE MAXIMUM HEIGHT ALLOWED WHEN USING THE LCL BRACE METHOD OF PARTIAL LAYER BRACING FOR THE M596 AND M597 CONTAINERS. THE PLYWOOD CONTAINERS MAY BE STACKED FOUR HIGH.
3. CAUTION: IF A UNIT EXTENDS MORE THAN ONE-HALF OF ITS LENGTH PAST A DOOR POST INTO A DOORWAY AREA IN A PLUG DOOR CAR, A PIECE OF DOOR SPANNING DUNNAGE OF 2" X 6" MATERIAL BY DOOR-OPENING WIDTH PLUS 24 INCHES IN LENGTH WILL BE POSITIONED ACROSS THE DOOR OPENING APPROXIMATELY 24 INCHES ABOVE THE CAR FLOOR AND NAILED TO THE CAR SIDE WALL W/5-12d NAILS AT EACH END. SEE "NOTE ●" ON PAGE 23 FOR GATE MODIFICATION REQUIREMENTS.
4. SPECIFIED LCL BRACE ASSEMBLIES ARE ADEQUATE FOR RETAINING A MAXIMUM LCL LOAD. EACH LCL BRACE AS APPLIED FOR LONGITUDINAL BRACING WILL SUPPORT 2,000 POUNDS. A MINIMUM OF ONE (1) LCL BRACE IS REQUIRED FOR EACH ROW.
5. THE PROCEDURES SHOWN ABOVE ARE FOR USE WHEN LOADING THE M596 OR THE M597 CONTAINERS. WHEN LOADING THE PLYWOOD CONTAINER FOLLOW THE PROCEDURES DEPICTED ON PAGES 18 AND 19. USE FOUR LCL BRACES. POSITION ONE AGAINST EACH ROW OF PLYWOOD CONTAINERS (DO NOT POSITION THE LCL BRACE AGAINST THE ROPE HANDLE).

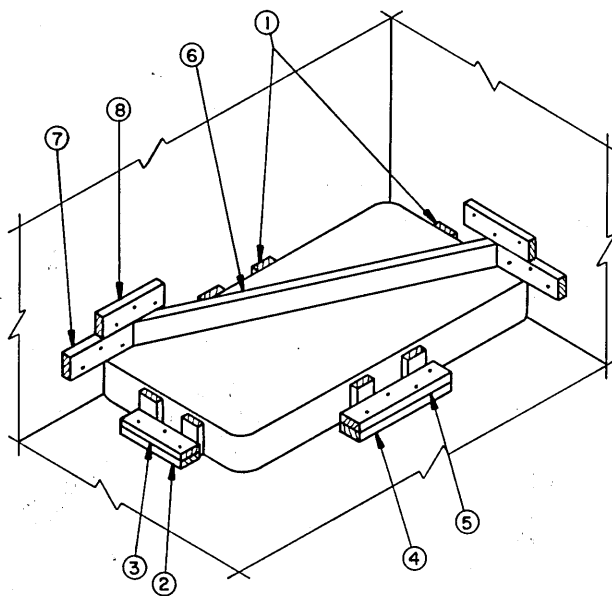
KEY NUMBERS

- ① GATE (1 REQD). SEE "END-OF-CAR GATE" DETAIL ON PAGE 23.
- ② SEPARATOR GATE (1 REQD). SEE "SEPARATOR GATE" DETAIL ON PAGE 23.
- ③ LOAD GATE (1 REQD). SEE "CENTER GATE B" DETAIL ON PAGE 24.
- ④ LCL BRACE (3 REQD). SEE "LCL BRACE" DETAIL ON PAGE 11.



BRACE

PIECE MARKED ⑥



ISOMETRIC VIEW

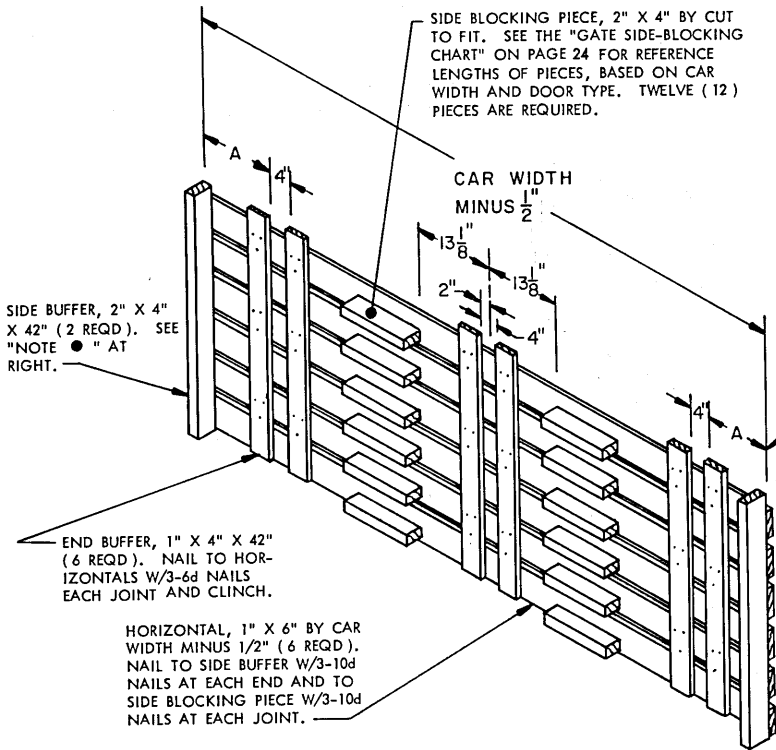
THE M596 CONTAINER IS SHOWN ABOVE.
SEE SPECIAL NOTE 3 ON THIS PAGE.

SPECIAL NOTES:

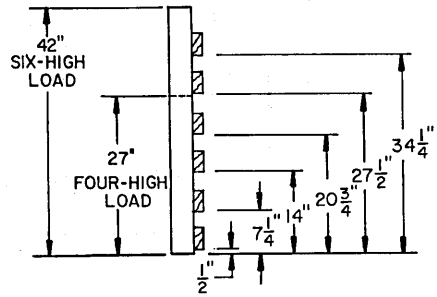
1. A ONE (1) CONTAINER UNIT LOAD IS SHOWN.
2. FOR SHIPMENT OF MORE THAN ONE CONTAINER UNIT SEE UNPALLETIZED LOAD METHODS SHOWN ON PAGES 16 THRU 21.
3. THE PROCEDURES SHOWN ABOVE ARE FOR USE WHEN LOADING THE M596, M597, OR THE PLYWOOD CONTAINER.

KEY NUMBERS

- ① BUFFER, 2" X 4" X 6" (8 REQD). NAIL TO CAR SIDE OR END WALL AND PIECES MARKED ② AND ④ W/2-10d NAILS EACH.
- ② END BLOCKING, 2" X 4" X 12" (1 REQD). NAIL TO CAR FLOOR W/3-12d NAILS.
- ③ END BLOCKING, 1" X 4" X 12" (1 REQD). NAIL TO PIECE MARKED ② W/3-12d NAILS.
- ④ SIDE BLOCKING, 2" X 4" X 18" (1 REQD). NAIL TO CAR FLOOR W/4-12d NAILS.
- ⑤ SIDE BLOCKING, 1" X 4" X 18" (1 REQD). NAIL TO PIECE MARKED ④ W/4-12d NAILS.
- ⑥ BRACE, 2" X 4" BY CUT TO FIT (1 REQD). SEE "BRACE" DETAIL AT LEFT.
- ⑦ WALL CLEAT, 2" X 4" X 12" (2 REQD). NAIL TO CAR WALL W/3-12d NAILS.
- ⑧ STOP PIECE, 2" X 4" X 12" (2 REQD). POSITION AS SHOWN AND NAIL TO CAR WALL W/3-12d NAILS.



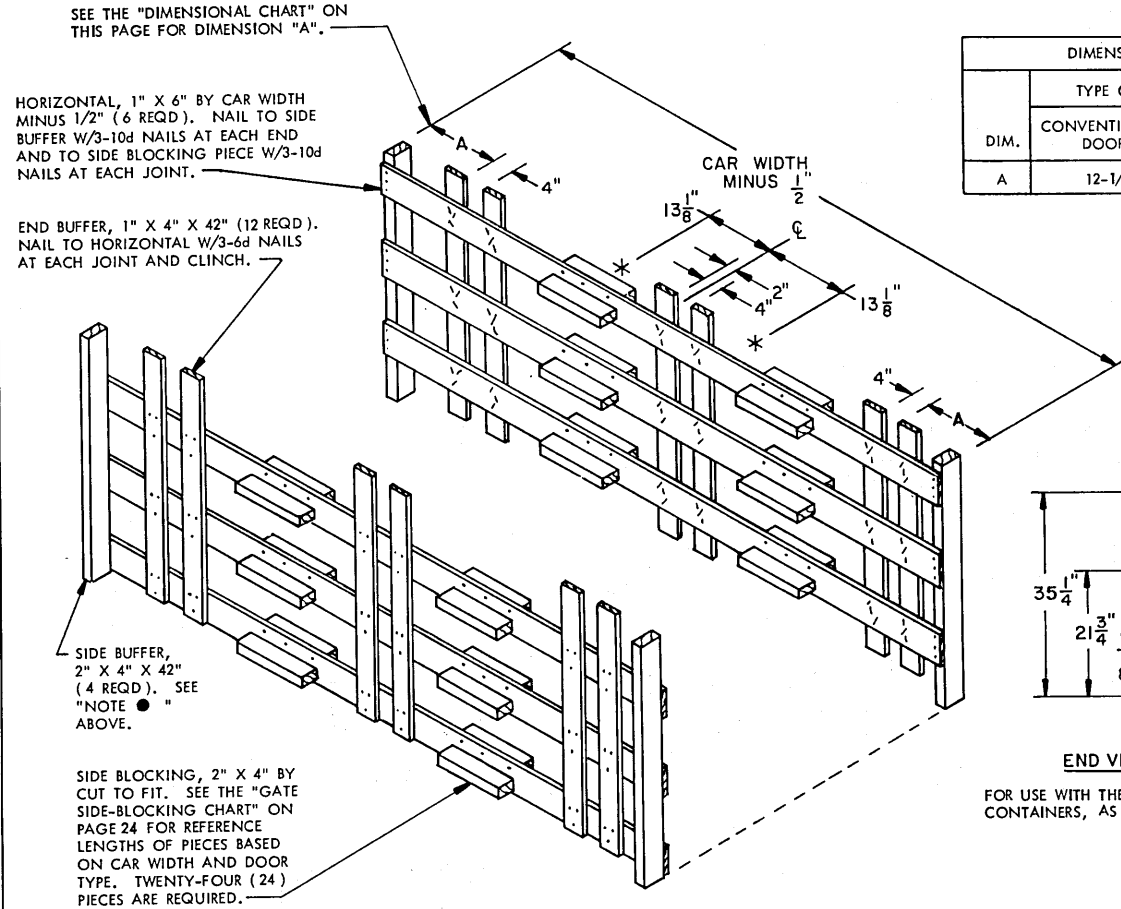
- NOTE ●:** GATES ASSEMBLED FOR CARS EQUIPPED WITH PLUG DOORS MUST BE MODIFIED AS FOLLOWS:
1. END BUFFER PIECES AT EACH END OF ALL GATES MUST BE INSET 1-1/2" (SEE DIMENSIONAL CHART BELOW).
 2. ALL SIDE BLOCKING PIECES MUST BE SHORTENED 1-1/2"
 3. SIDE BUFFER PIECES MUST BE DOUBLED AND LAMINATED W/1-10d NAIL EVERY 8" FOR EACH END OF GATE NOT CONTACTING THE DOORWAY PROTECTION.
 4. EACH END OF A GATE CONTACTING THE DOORWAY PROTECTION (SPANNERS) MUST BE SHORTENED 1-1/2" ON THAT END AND NAILED TO ONE (1) SIDE BUFFER PIECE.



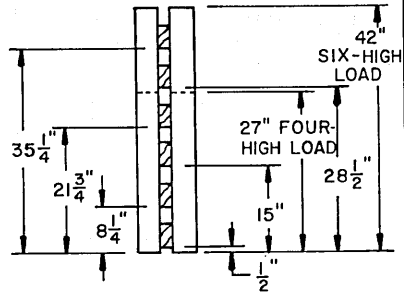
END-OF-CAR GATE

FOR USE WITH THE M596 OR M597 UNPALLETIZED CONTAINERS, AS SHOWN IN THE LOAD ON PAGE 16.

END VIEW (END-OF-CAR-GATE)



DIMENSIONAL CHART			
DIM.	TYPE OF CAR DOOR		
	CONVENTIONAL DOOR	PLUG DOOR	
		IN DOOR	NOT IN DOOR
A	12-1/2"	12-1/2"	14-1/4"

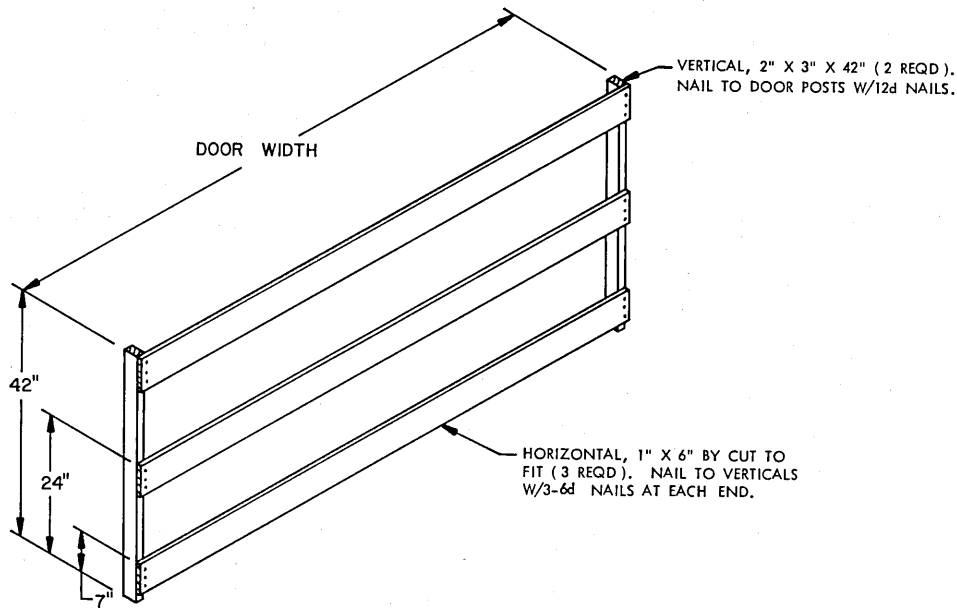


SEPARATOR GATE

NOTE: THE SEPARATOR GATE IS TO BE CONSTRUCTED IN TWO (2) PARTS AND POSITIONED IN THE CAR BACK TO BACK AS SHOWN.

DETAILS

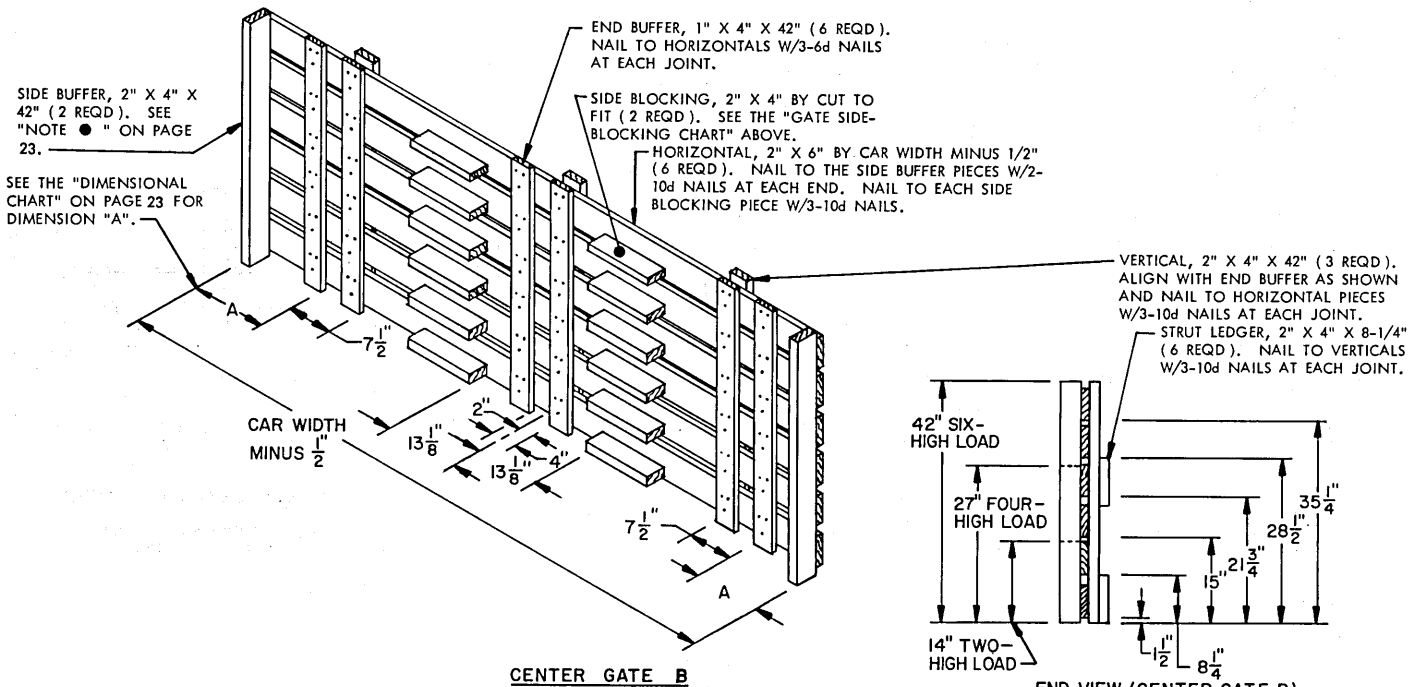
END VIEW (SEPARATOR GATE)
FOR USE WITH THE M596 OR M597 UNPALLETIZED CONTAINERS, AS SHOWN IN THE LOAD ON PAGE 16.



DOORWAY PROTECTION GATE A

FOR USE WITH THE M596 OR M597 UNPALLETIZED CONTAINERS, AS SHOWN IN THE LOAD ON PAGE 16.

GATE "SIDE BLOCKING" CHART		
CAR WIDTH	CARS W/CONVENTIONAL DOORS	CARS W/PLUG DOORS
8'-6"	10-1/2"	8-7/8"
8'-10"	12-1/2"	10-7/8"
9'-2"	14-1/2"	12-7/8"
9'-4"	15-1/2"	13-7/8"

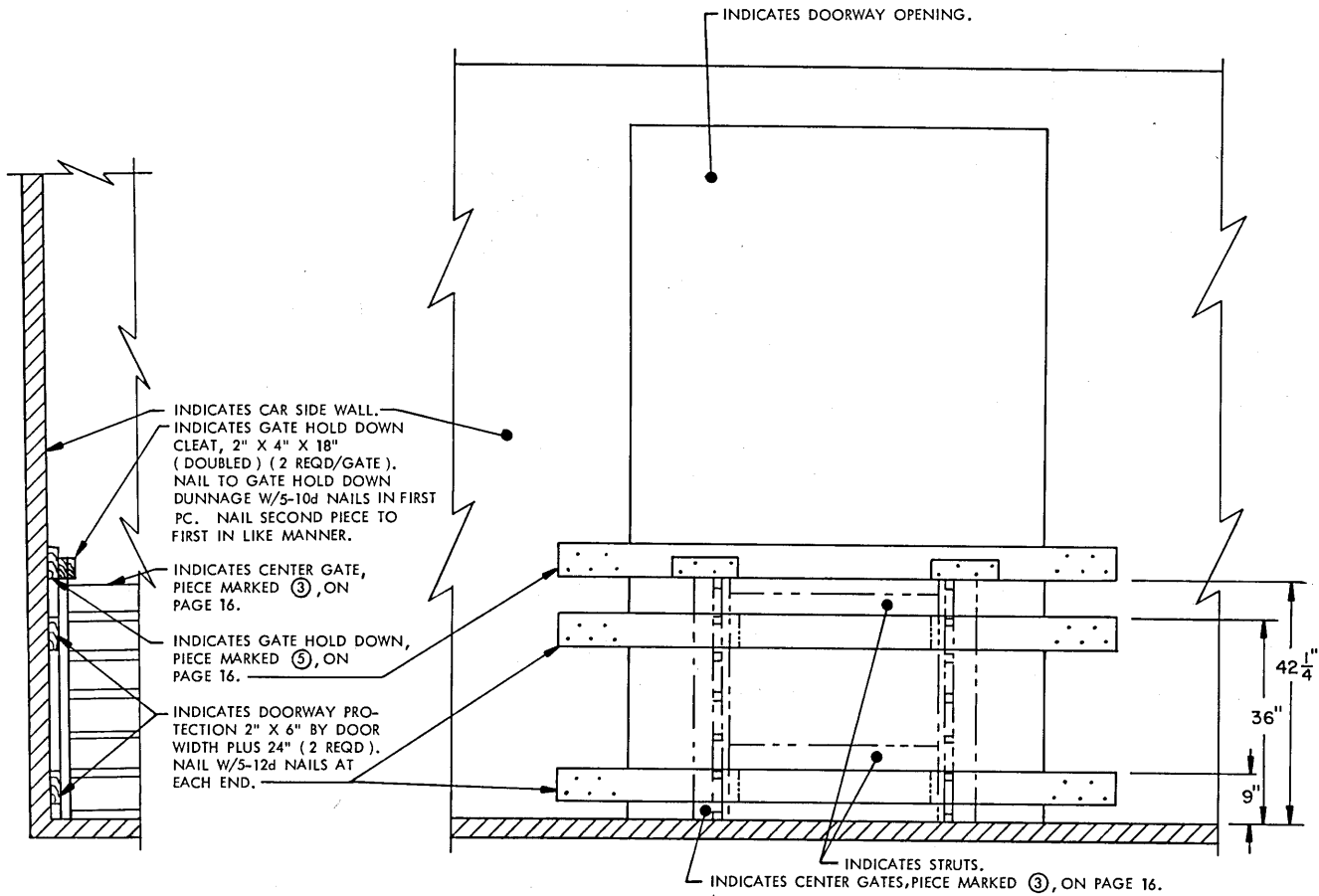


CENTER GATE B

FOR USE WITH THE M596 OR M597 UNPALLETIZED CONTAINERS, AS SHOWN IN THE LOAD ON PAGE 16.

END VIEW (CENTER GATE B)

DETAILS

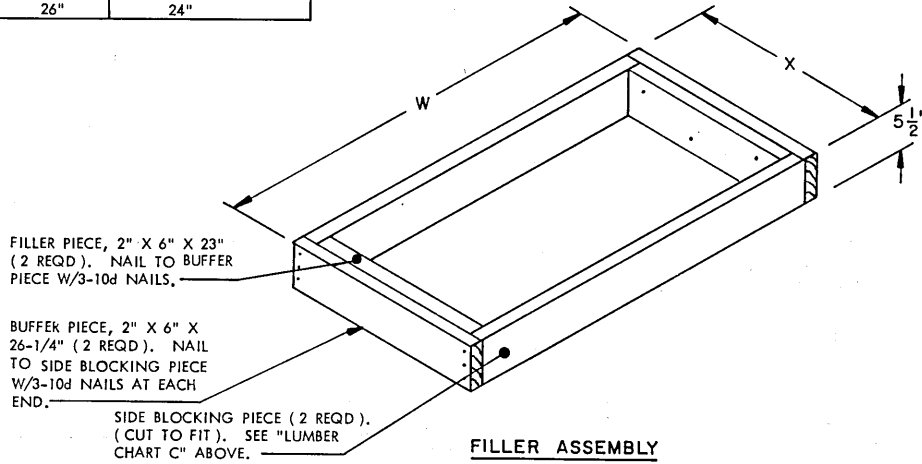


END VIEW

APPLICATION OF DOORWAY PROTECTION FOR PLUG DOORS

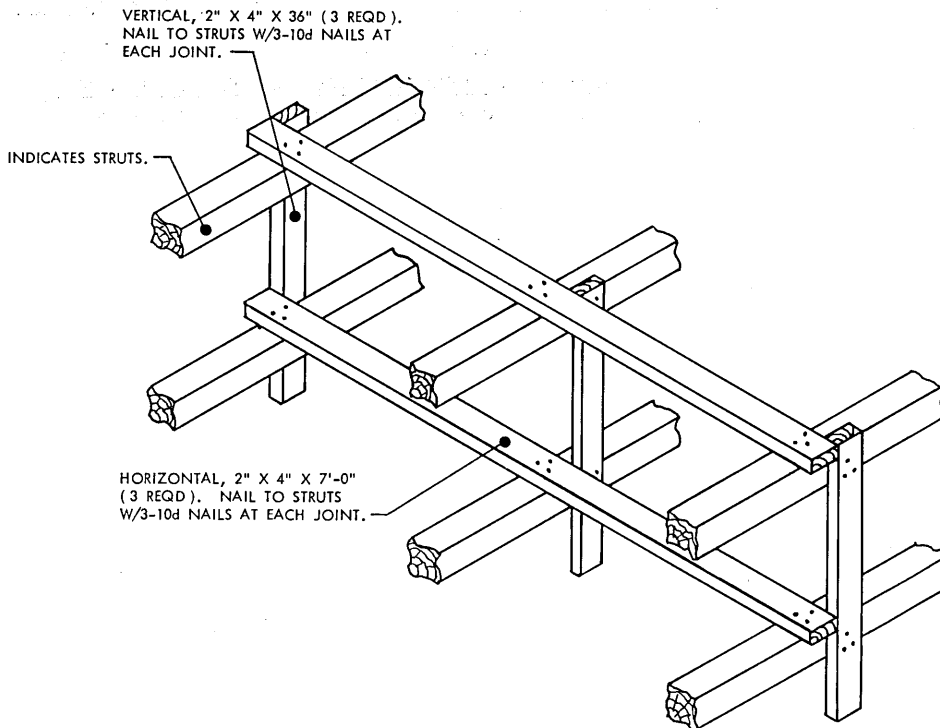
CAUTION: DUNNAGE MATERIAL, MUST NOT BE NAILED TO PLUG DOOR.

LUMBER CHART C			
	M 596	M 597	PLYWOOD CONTAINER
W	REF 54-1/2"	REF 68"	REF 60"
X	REF 26"	REF 26"	REF 24"



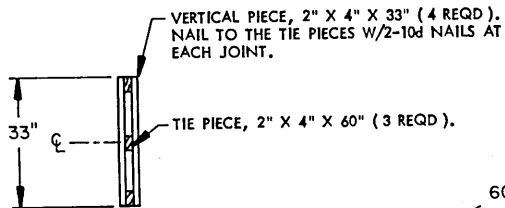
FILLER ASSEMBLY

THIS ASSEMBLY IS DESIGNED TO TAKE THE PLACE OF AN OMITTED CONTAINER IN THE TOP LAYER OF AN UNPALLETIZED LOAD. IT IS FOR USE WITH THE M596, M597, OR THE PLYWOOD CONTAINER.



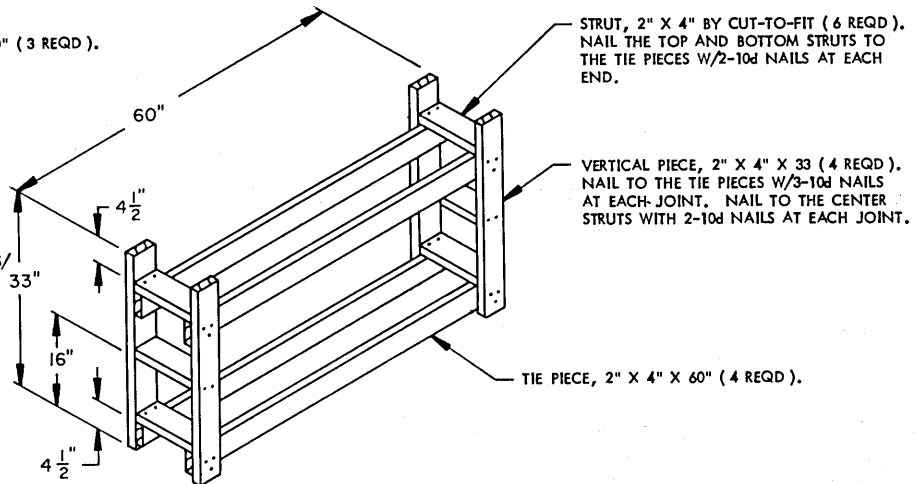
STRUT BRACING

ONE (1) SET OF HORIZONTAL AND VERTICAL STRUT BRACING MUST BE APPLIED EVERY 48" IF STRUTS ARE 48" OR LONGER. STRUT BRACING AS SHOWN IS APPLICABLE FOR THE UNPALLETIZED LOAD ON PAGE 16; THE PRINCIPLES MAY BE APPLIED FOR BRACING OF THE STRUTS IN ANY OF THE LOADS DEPICTED WITHIN THIS DRAWING.



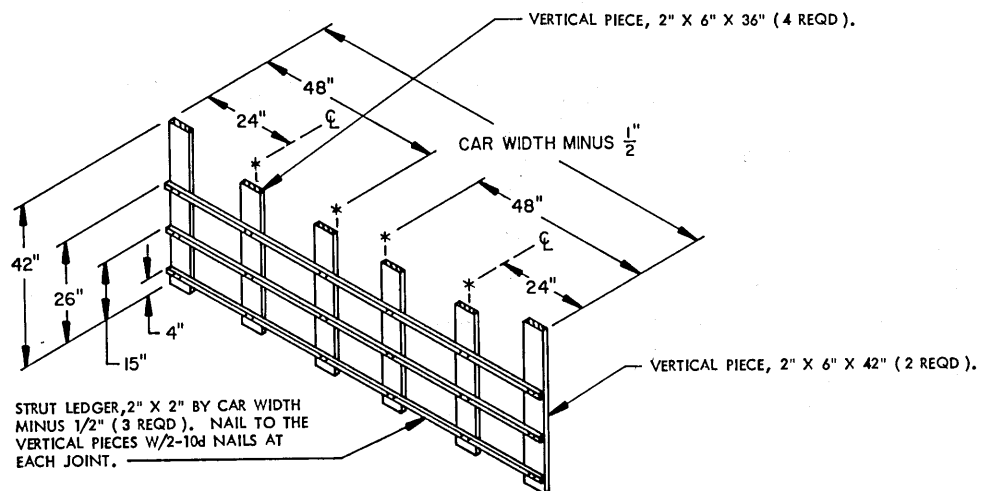
DETAIL A

THIS SPACER ASSEMBLY MAY BE USED WHEN THE EXCESS SPACE ACROSS THE CAR WIDTH IS 9" OR LESS, SUCH AS IN AN 8'-6" WIDE BOX CAR. ADDITIONAL 4" WIDE BY THICKNESS/TO-SUIT BY 33" LONG MATERIAL MAY BE LAMINATED TO THE VERTICAL PIECES IF REQUIRED.



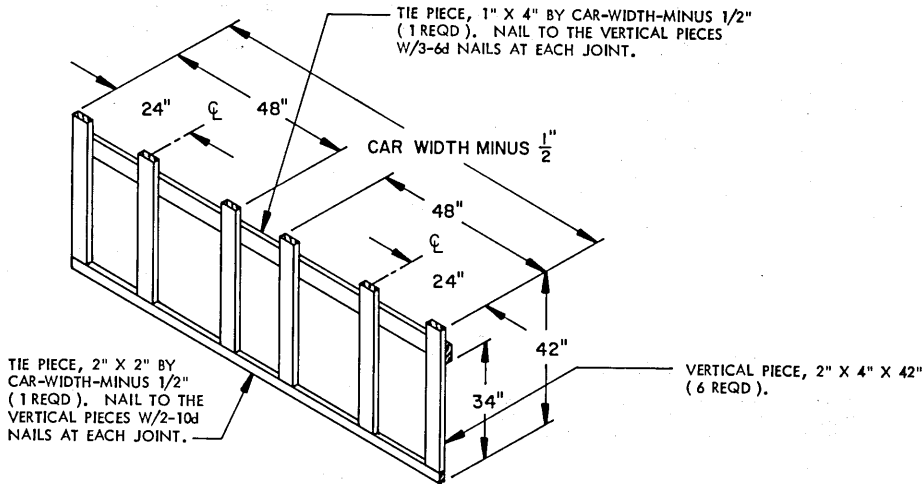
SPACER ASSEMBLY B

THIS SPACER IS FOR USE BETWEEN LATERALLY ADJACENT STACKS OF UNPALLETIZED PLYWOOD CONTAINERS AS SHOWN IN THE LOAD ON PAGE 18. IF THE EXCESS SPACE IS 9" OR LESS SEE "DETAIL A" ABOVE.



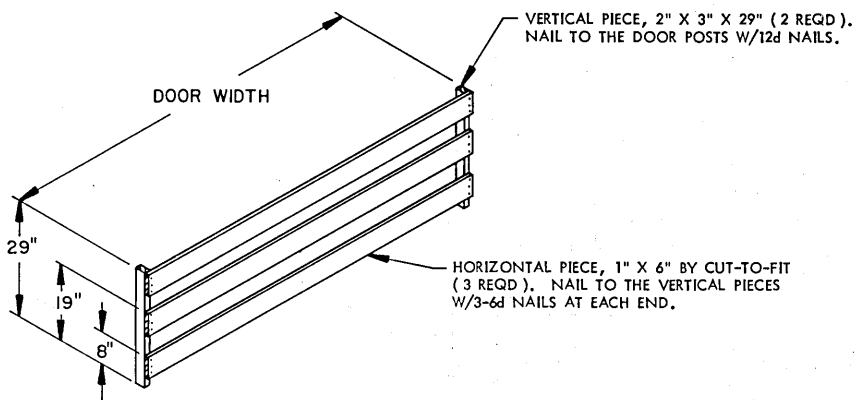
CENTER GATE ASSEMBLY D

THE GATE SHOWN ABOVE IS FOR A SIX HIGH LOAD OF UNPALLETIZED PLYWOOD CONTAINERS AS SHOWN IN THE LOAD ON PAGE 18.



LOAD BEARING GATE

THE GATE SHOWN ABOVE IS FOR A SIX HIGH LOAD OF UNPALLETIZED PLYWOOD CONTAINERS AS SHOWN IN THE LOAD ON PAGE 18. THESE GATES ARE REQUIRED TO PROVIDE A SPACE FOR THE ROPE HANDLES AT EACH END OF THE PLYWOOD CONTAINER.



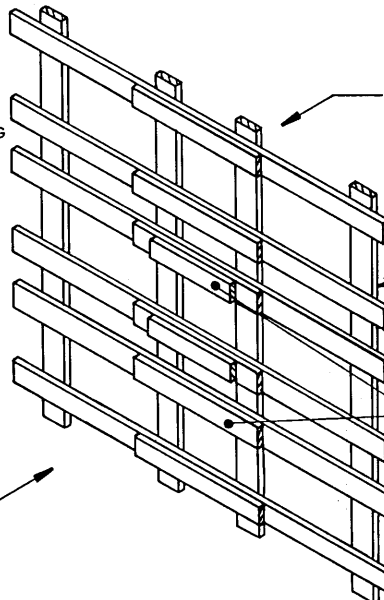
DOORWAY PROTECTION GATE C

THE GATE SHOWN ABOVE IS FOR A SIX HIGH LOAD OF UNPALLETIZED PLYWOOD CONTAINERS AS SHOWN IN THE LOAD ON PAGE 18.

SPECIAL NOTES:

1. IF A BOX CAR TO BE LOADED HAS BOWED END WALLS WHICH ARE BOWED OUTWARD MORE THAN TWO INCHES (2"), EITHER FROM SIDE-TO-SIDE OR FROM FLOOR TO ROOF, AN END-OF-CAR BULKHEAD MUST BE INSTALLED TO PROVIDE A "SQUARED OFF" SURFACE FOR THE LOAD AT THE END OF THE CAR. THE BULKHEAD IS APPLICABLE FOR USE AT THE END OF A LOAD IN A CONVENTIONAL BOX CAR OR IN A CAR EQUIPPED WITH LOAD DIVIDER BULKHEADS.

2. THE BULKHEAD CONSISTS OF THE CENTER GATE, WHICH WILL BE USED FOR BLOCKING AND BRACING THE COMPLETED LOAD, MODIFIED FOR USE AT THE END OF THE CAR BY OMITTING THE STRUT LEDGERS AND ADDING FILL PIECES AND SHIM MATERIAL AS SHOWN.



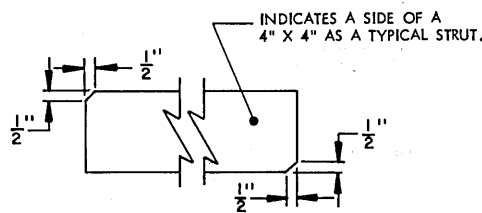
A MODIFIED CENTER GATE C IS SHOWN AS TYPICAL. SEE THE DETAIL ON PAGE 15.

SHIM MATERIAL, 6" WIDE PLYWOOD OR DIMENSIONAL LUMBER OF A THICKNESS AND A LENGTH AS REQUIRED TO FILL THE VOID BETWEEN THE CAR END WALL AND THE BULKHEAD. NAIL TO A FILLER PIECE AND/OR LAMINATE W/1-APPLICABLY SIZED NAIL EVERY 6".

PLACE THIS SIDE OF THE BULKHEAD AGAINST THE CAR END WALL.

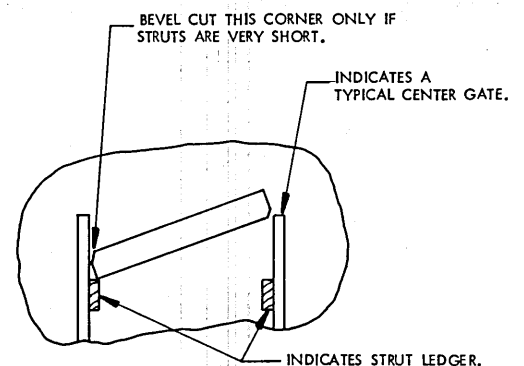
BOWED END WALL PROVISIONS

THIS BULKHEAD IS FOR USE BETWEEN THE LOAD AND THE BOWED END WALL OF A CAR. A MODIFIED CENTER GATE C IS SHOWN AS TYPICAL ONLY. SEE THE LOAD ON PAGE 8 AND THE SPECIAL NOTES ABOVE.



BEVEL CUT

BEVEL CUTTING THE STRUTS AS SPECIFIED WILL FACILITATE INSTALLING THE STRUTS WITH A "DRIVE-FIT". CAUTION: DO NOT BEVEL A CORNER MORE THAN ONE-HALF INCH (1/2").



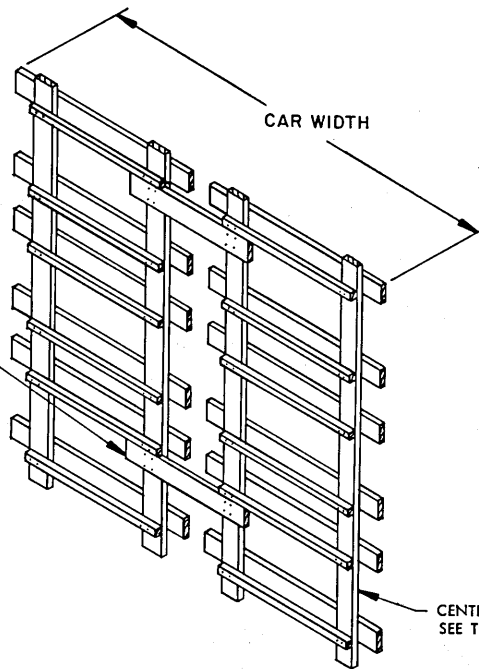
STRUT INSTALLATION

SEE GENERAL NOTE "Y" ON PAGE 3 FOR ADDITIONAL STRUT INSTALLATION GUIDANCE.

SPECIAL NOTES:

1. FOR EASE OF HANDLING, SPLIT CENTER GATES WHICH ARE NOT DEPENDENT UPON THE WIDTH OF THE CAR, MAY BE USED AS AN ALTERNATIVE. IN LIEU OF A FULL CAR WIDTH CENTER GATE, INSTALL TWO (2) SPLIT GATES.
2. A MODIFIED CENTER GATE C, AS SHOWN IN THE LOAD ON PAGE 8, IS SHOWN AS TYPICAL.

TIE PIECE, 2" X 6" BY A LENGTH TO EQUAL THE LATERAL VOID BETWEEN ROWS OF PALLETIZED UNITS, PLUS 15" (2 REQD). POSITION UNDER AND IN CONTACT WITH A STRUT LEDGER AS SHOWN. NAIL TO THE VERTICAL PIECES OF THE GATES W/4-10d NAILS AT EACH JOINT.



CENTER GATE C (2 REQD). SEE THE DETAIL ON PAGE 15.

TYPICAL TIE PIECE APPLICATION

THIS PROCEDURE IS APPLICABLE FOR USE WITH A CENTER GATE C, AS SHOWN ON PAGE 15.

3/8" OR THICKER PLYWOOD PANEL OR SIDE FILLER.

VOID BETWEEN SIDE FILLER PANEL AND CAR SIDEWALL.

INDICATES CAR FLOOR.

TYPICAL TYPE A

THIS VIEW SHOWS THE INSTALLATION OF A "FILL PIECE" IN A CAR EQUIPPED WITH A STANDARD ADJUSTABLE SIDE FILLER.

SIDE FILLER EXTENDING MECHANISM.

INDICATES CAR SIDEWALL.

FILL PIECE, 2" X 6" MATERIAL POSITIONED ON EDGE BETWEEN CAR SIDEWALL AND SIDE FILL PANEL. RANDOM LENGTH PIECES MAY BE USED FOR THE FILL MATERIAL. FILL MUST BE USED BEHIND ALL ADJUSTABLE SIDE FILLERS THAT ARE IN CONTACT WITH THE LOAD; THAT IS, FROM THE CAR END WALL TO A LOAD DIVIDER BULKHEAD.

3/8" OR THICKER PLYWOOD PANEL OR SIDE FILLER.

VOID BETWEEN SIDE FILLER PANEL AND CAR SIDEWALL.

INDICATES CAR FLOOR.

TYPICAL TYPE B

THIS VIEW SHOWS A TYPICAL SECTION OF A CAR EQUIPPED WITH HEAVY DUTY, STEEL REINFORCED, ADJUSTABLE SIDE FILLERS. A "FILL PIECE", AS SHOWN IN THE "TYPICAL TYPE A" DETAIL ABOVE, IS NOT REQUIRED IN CARS SO EQUIPPED.

INDICATES CAR SIDEWALL.

INDICATES STEEL REINFORCING.

2" WIDE BY 3-1/2" HIGH LUMBER AT BASE OF SIDE FILLER ASSEMBLY. THIS PIECE IS SHOWN AS A TYPICAL CONFIGURATION. IT MAY NOT BE IN A CAR OR IT MAY BE A DIFFERENT SIZE.