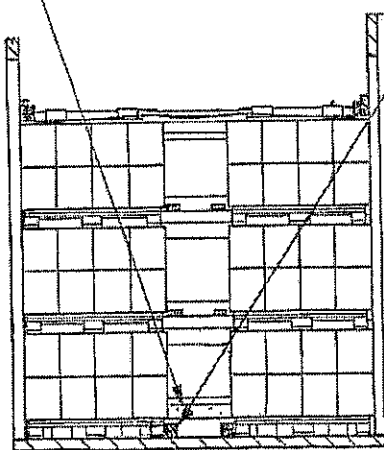


LOWER GATE-LOCK PIECE, 2"x4"x CUT TO FIT BETWEEN PALLET UNITS (1 REQD).  
NAIL TO GATE HORIZONTAL W/4-10d NAILS.



SECTION A-A

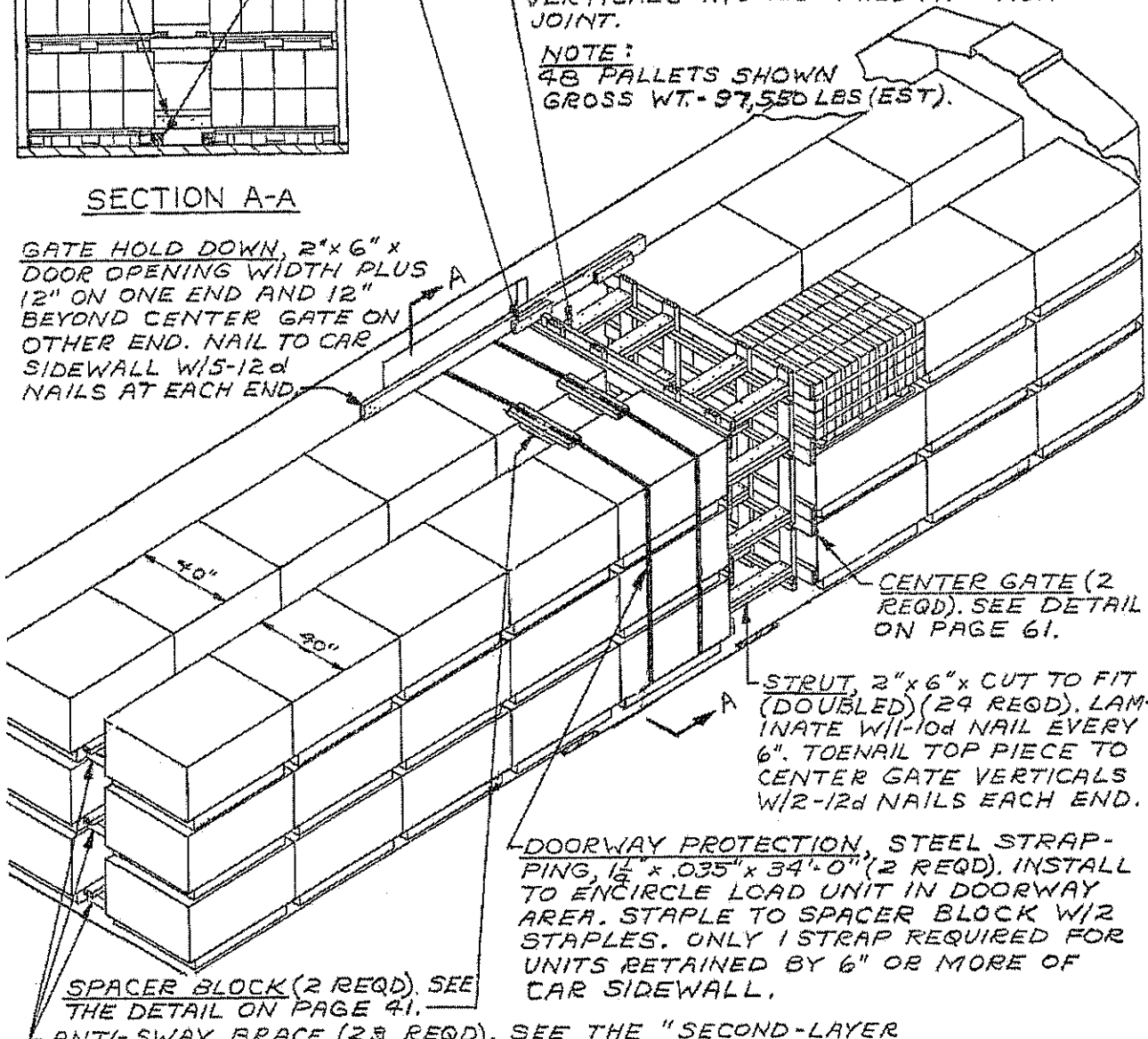
DOORWAY BLOCKING, 2"x4"x 48" (DOUBLED) (2 REQD).  
POSITION AGAINST PALLET AND NAIL THE FIRST  
PIECE TO CAR FLOOR W/7-16d NAILS. NAIL SECOND  
PIECE TO FIRST IN A LIKE MANNER.

GATE HOLD-DOWN CLEAT, 2"x4"x 18" (4 REQD).  
CENTER ABOVE GATE AND NAIL TO GATE HOLD  
DOWN W/5-10d NAILS.

UPPER GATE-LOCK PIECE, 2"x4"x CAR WIDTH  
MINUS 6 1/2" (1 REQD). NAIL TO CENTER GATE  
VERTICALS W/3-10d NAILS AT EACH  
JOINT.

NOTE:  
48 PALLETS SHOWN  
GROSS WT. - 97,550 LBS (EST).

GATE HOLD DOWN, 2"x6" x  
DOOR OPENING WIDTH PLUS  
12" ON ONE END AND 12"  
BEYOND CENTER GATE ON  
OTHER END. NAIL TO CAR  
SIDEWALL W/5-12d  
NAILS AT EACH END.



CENTER GATE (2  
REQD). SEE DETAIL  
ON PAGE 61.

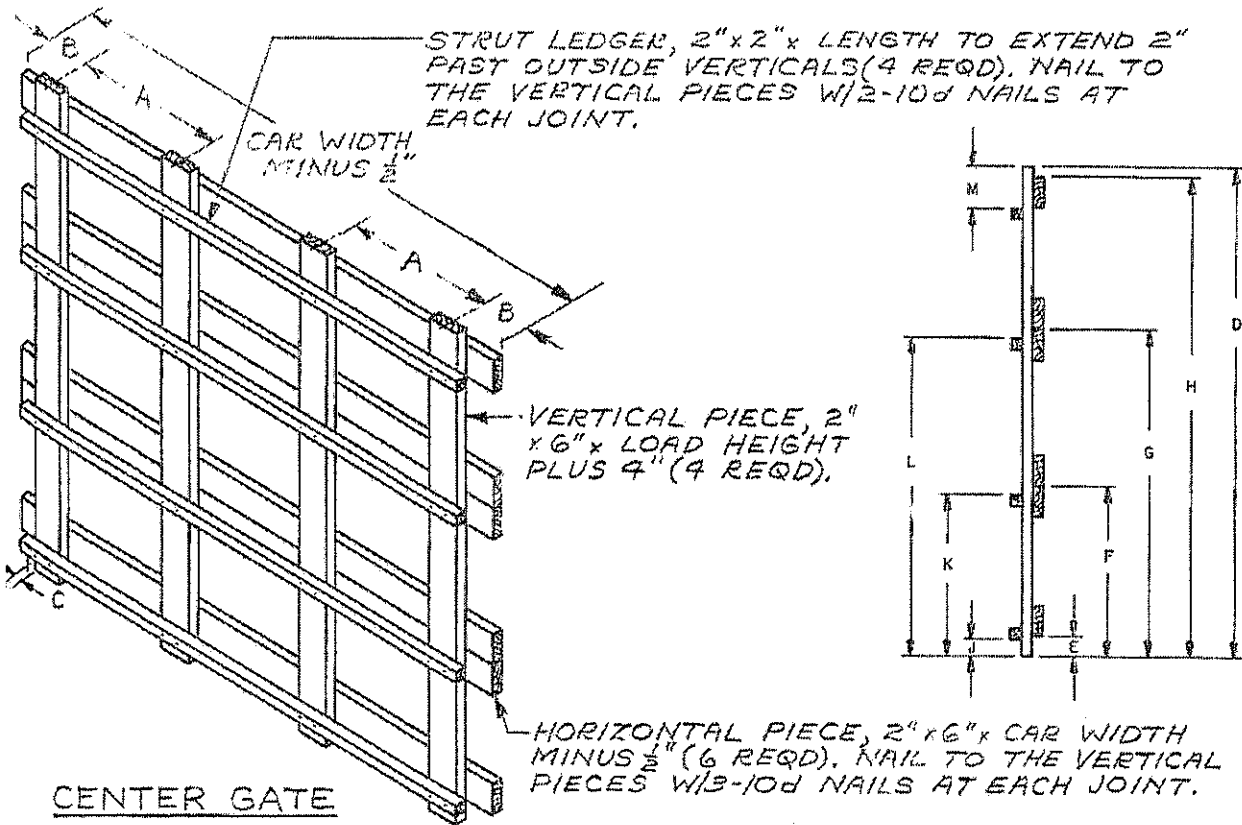
STRUT, 2"x6"x CUT TO FIT  
(DOUBLED) (29 REQD). LAM-  
INATE W/1-10d NAIL EVERY  
6". TOENAIL TOP PIECE TO  
CENTER GATE VERTICALS  
W/2-12d NAILS EACH END.

DOORWAY PROTECTION, STEEL STRAP-  
PING, 1/2" x .035" x 34'-0" (2 REQD). INSTALL  
TO ENCIRCLE LOAD UNIT IN DOORWAY  
AREA. STAPLE TO SPACER BLOCK W/2  
STAPLES. ONLY 1 STRAP REQUIRED FOR  
UNITS RETAINED BY 6" OR MORE OF  
CAR SIDEWALL.

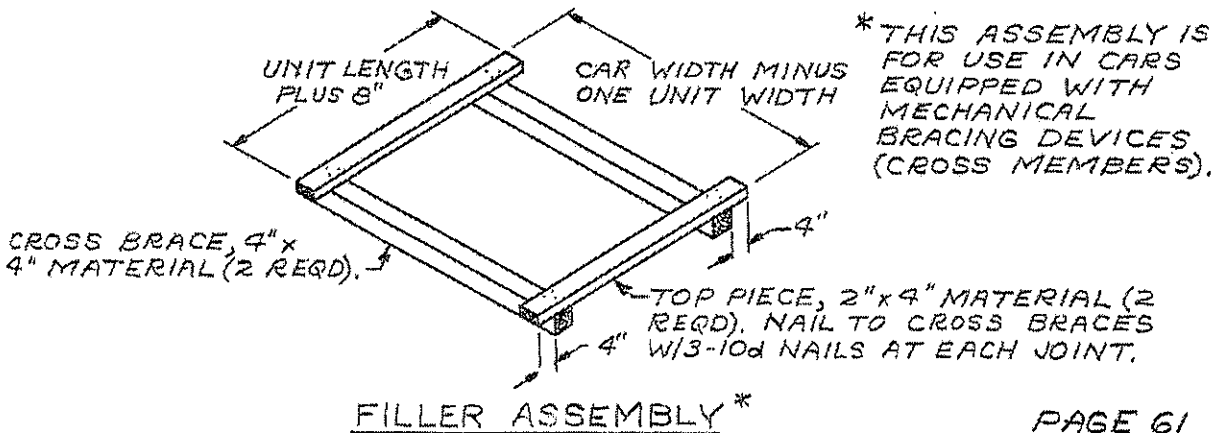
SPACER BLOCK (2 REQD). SEE  
THE DETAIL ON PAGE 41.

ANTI-SWAY BRACE (28 REQD). SEE THE "SECOND-LAYER  
ANTI-SWAY BRACE" DETAIL ON PAGE 45.

TYPICAL LOAD OF PALLETIZED BOXED  
AMMUNITION IN A 40'-6" LONG BY 8'-6" WIDE  
CONVENTIONAL BOX CAR



GATE CONSTRUCTION CHART	
DIM.	DESCRIPTION FOR POSITIONING LUMBER
A	CENTER AGAINST STRONG POINTS OF PALLET UNIT (OUTER BATTENS OR PALLET POSTS).
B	DISTANCE BETWEEN SIDEWALL AND CENTER OF OUTSIDE VERTICAL PIECE MINUS $\frac{1}{4}$ ".
C	2"
D	LOAD HEIGHT PLUS 4".
E	$3\frac{3}{4}$ "
F	$2\frac{3}{4}$ " ABOVE TOP OF FIRST LAYER.
G	$2\frac{3}{4}$ " ABOVE TOP OF SECOND LAYER.
H	LOAD HEIGHT PLUS 1".
J	$3\frac{1}{4}$ "
K	1" ABOVE TOP OF FIRST LAYER.
L	1" ABOVE TOP OF SECOND LAYER.
M	8"



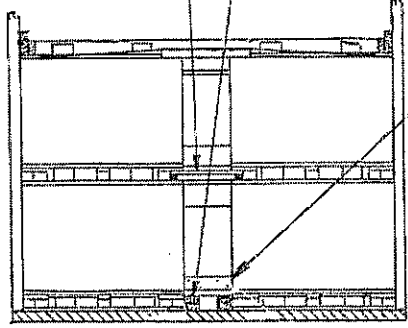
ANTI-SWAY BRACE (32 REQD). SEE DETAIL ON PAGE 45.

DOORWAY BLOCKING, 2" x 4" x 40" (DOUBLED) (2 REQD). POSITION AGAINST PALLET STRINGERS AND NAIL THE FIRST PIECE TO CAR FLOOR W/ 7-16d NAILS. NAIL SECOND PIECE TO FIRST IN LIKE MANNER.

GATE HOLD-DOWN CLEAT, 2" x 4" x 18" (4 REQD). CENTER ABOVE GATE AND NAIL TO GATE HOLD DOWN W/ 5-10d NAILS.

LOWER GATE-LOCK PIECE, 2" x 4" x CUT TO FIT BETWEEN PALLET UNITS (1 REQD). NAIL TO GATE HORIZONTAL W/ 4-10d NAILS.

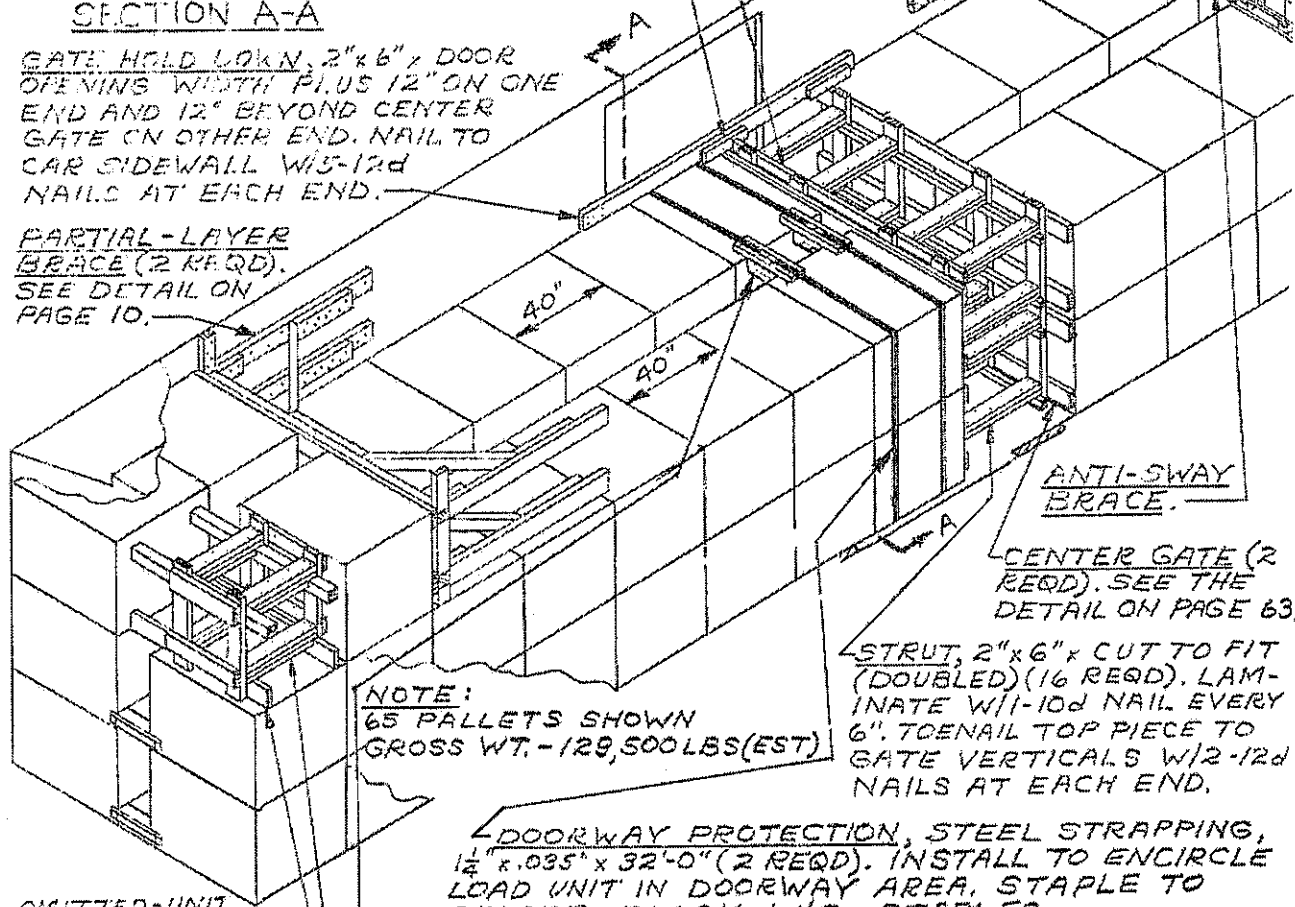
UPPER GATE-LOCK PIECE, 2" x 4" x (CAR WIDTH MINUS 6 1/2") (1 REQD). NAIL TO CENTER GATE VERTICALS W/ 5-10d NAILS AT EACH JOINT.



SECTION A-A

GATE HOLD DOWN, 2" x 6" x DOOR OPENING WIDTH PLUS 12" ON ONE END AND 12" BEYOND CENTER GATE ON OTHER END. NAIL TO CAR SIDEWALL W/ 5-12d NAILS AT EACH END.

PARTIAL-LAYER BRACE (2 REQD). SEE DETAIL ON PAGE 10.



ANTI-SWAY BRACE.

CENTER GATE (2 REQD). SEE THE DETAIL ON PAGE 63.

STRUT, 2" x 6" x CUT TO FIT (DOUBLED) (16 REQD). LAMINATE W/ 1-10d NAIL EVERY 6". TO NAIL TOP PIECE TO GATE VERTICALS W/ 2-12d NAILS AT EACH END.

NOTE:  
65 PALLET'S SHOWN  
GROSS WT. - 129,500 LBS (EST)

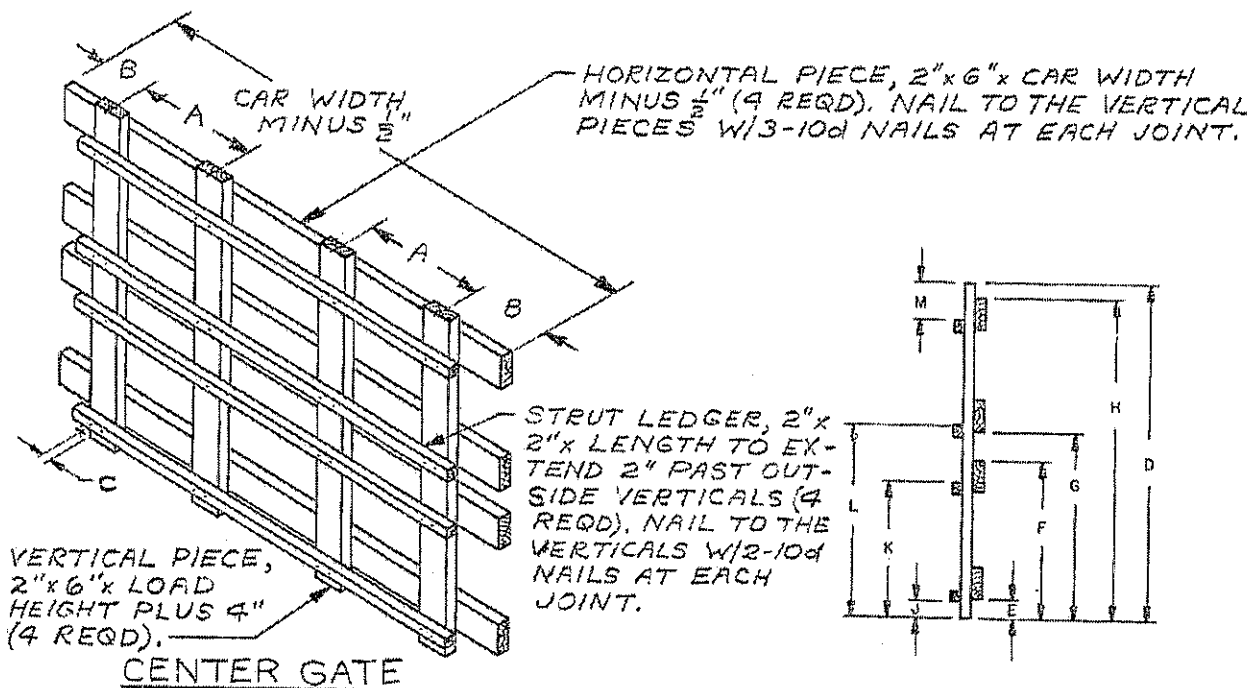
DOORWAY PROTECTION, STEEL STRAPPING, 1/2" x .035" x 32'-0" (2 REQD). INSTALL TO ENCIRCLE LOAD UNIT IN DOORWAY AREA, STAPLE TO SPACER BLOCK W/ 2-STAPLES.

SPACER BLOCK (2 REQD). SEE DETAIL ON PAGE 41.

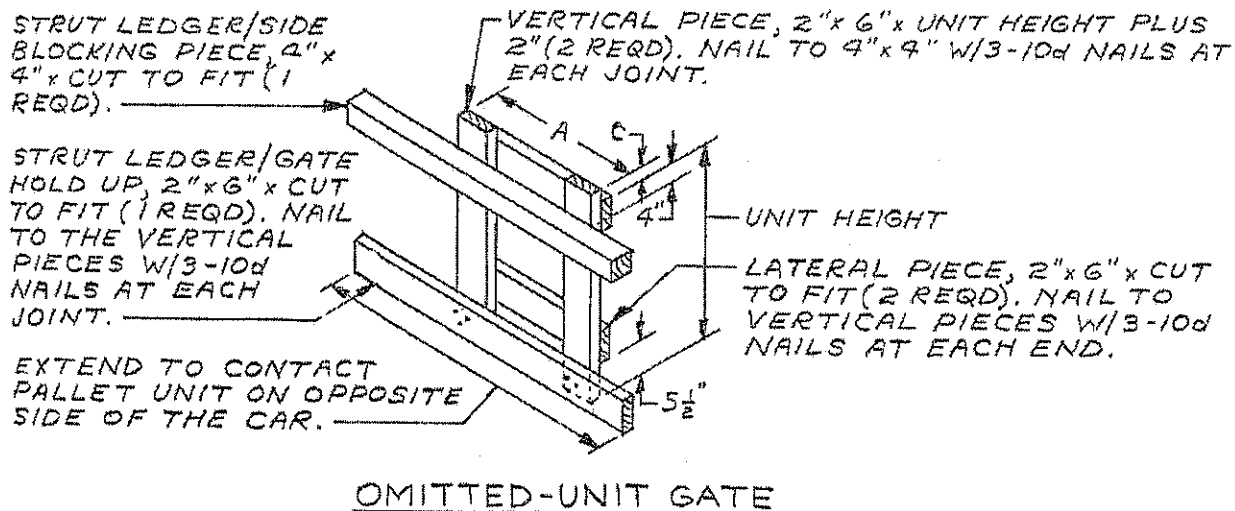
STRUT, 2" x 6" x CUT TO FIT (TRIPLED) (4 REQD). POSITION AS SHOWN. LAMINATE W/ 6-10d NAILS AND TO NAIL TOP PIECE TO GATE VERTICALS W/ 2-12d NAILS AT EACH END.

OMITTED-UNIT GATE (2 REQD). SEE DETAIL ON PAGE 63. NAIL ONE TO CAR END WALL W/ 4-10d NAILS.

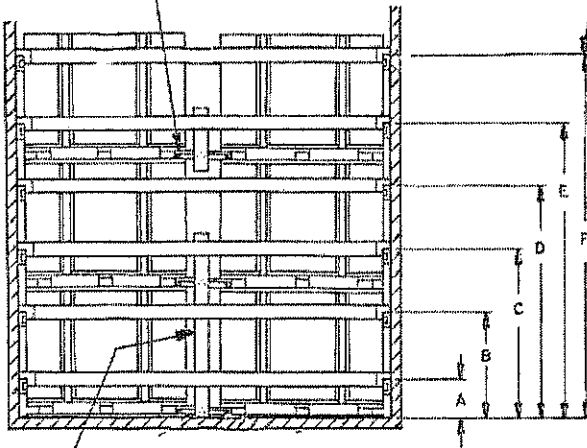
TYPICAL LOAD OF PALLETIZED BOXED AMMUNITION IN A 50'-6" LONG BY 9'-2" WIDE CONVENTIONAL BOX CAR



GATE CONSTRUCTION CHART	
DIM.	DESCRIPTION FOR POSITIONING LUMBER
A	CENTER AGAINST STRONG POINTS OF PALLET UNIT (OUTER BATTENS OR PALLET POSTS).
B	DISTANCE BETWEEN SIDEWALL AND CENTER OF OUTSIDE VERTICAL PIECE MINUS $\frac{1}{4}$ ".
C	2".
D	LOAD HEIGHT PLUS 4".
E	$3\frac{3}{4}$ ".
F	TOP OF FIRST LAYER.
G	$4\frac{1}{2}$ " ABOVE TOP OF FIRST LAYER.
H	LOAD HEIGHT PLUS 1".
J	$3\frac{1}{2}$ ".
K	$4\frac{1}{2}$ " BELOW TOP OF FIRST LAYER.
L	$5\frac{1}{2}$ " ABOVE TOP OF FIRST LAYER.
M	8"



ANTI-SWAY BRACE (29 REQD). SEE DETAIL ON PAGE 45.



EACH HEIGHT ABOVE CAR FLOOR TO A WALL MEMBER OR DOORWAY MEMBER IS SPECIFIED TO LOCATE THE CENTER LINE OF A CROSS MEMBER. SEE CHART BELOW.

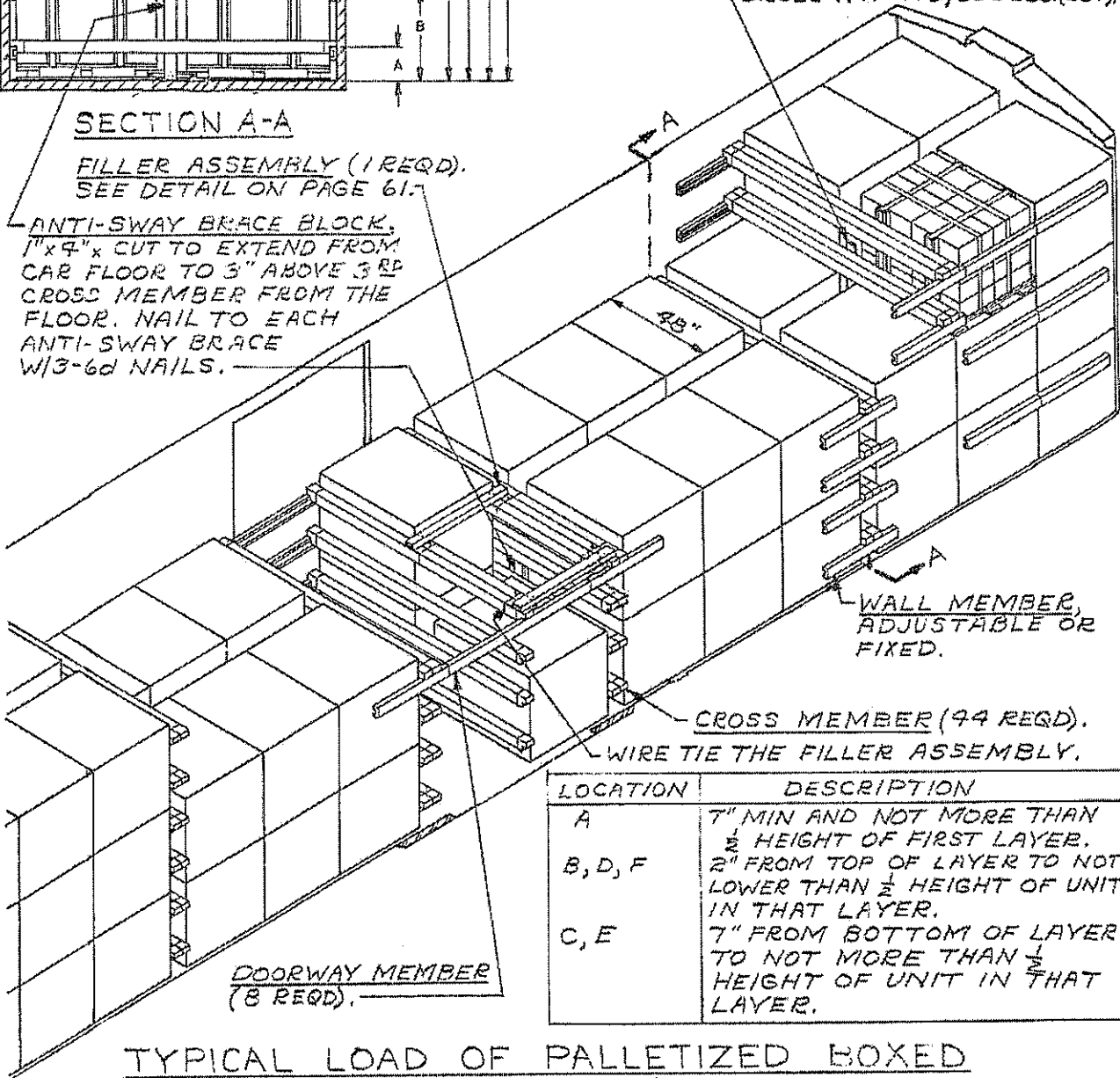
ANTI-SWAY BRACE BLOCK, 1" x 4" x LENGTH TO SUIT (4 REQD). NAIL TO ANTI-SWAY BRACE W/3-6d NAILS.

NOTE:  
58 PALLETES SHOWN  
GROSS WT. = 110,600 LBS.(EST)

SECTION A-A

FILLER ASSEMBLY (1 REQD).  
SEE DETAIL ON PAGE 61.

ANTI-SWAY BRACE BLOCK, 1" x 4" x CUT TO EXTEND FROM CAR FLOOR TO 3" ABOVE 3<sup>RD</sup> CROSS MEMBER FROM THE FLOOR. NAIL TO EACH ANTI-SWAY BRACE W/3-6d NAILS.



WALL MEMBER, ADJUSTABLE OR FIXED.

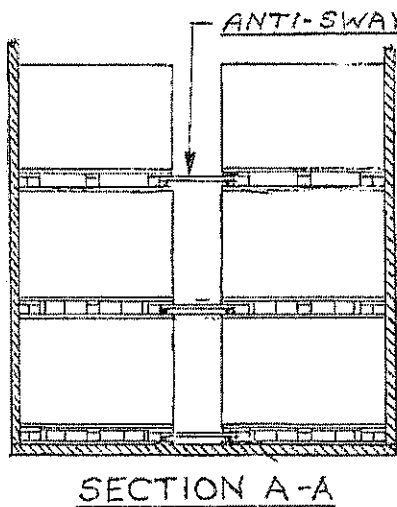
CROSS MEMBER (94 REQD).

WIRE TIE THE FILLER ASSEMBLY.

DOORWAY MEMBER (8 REQD).

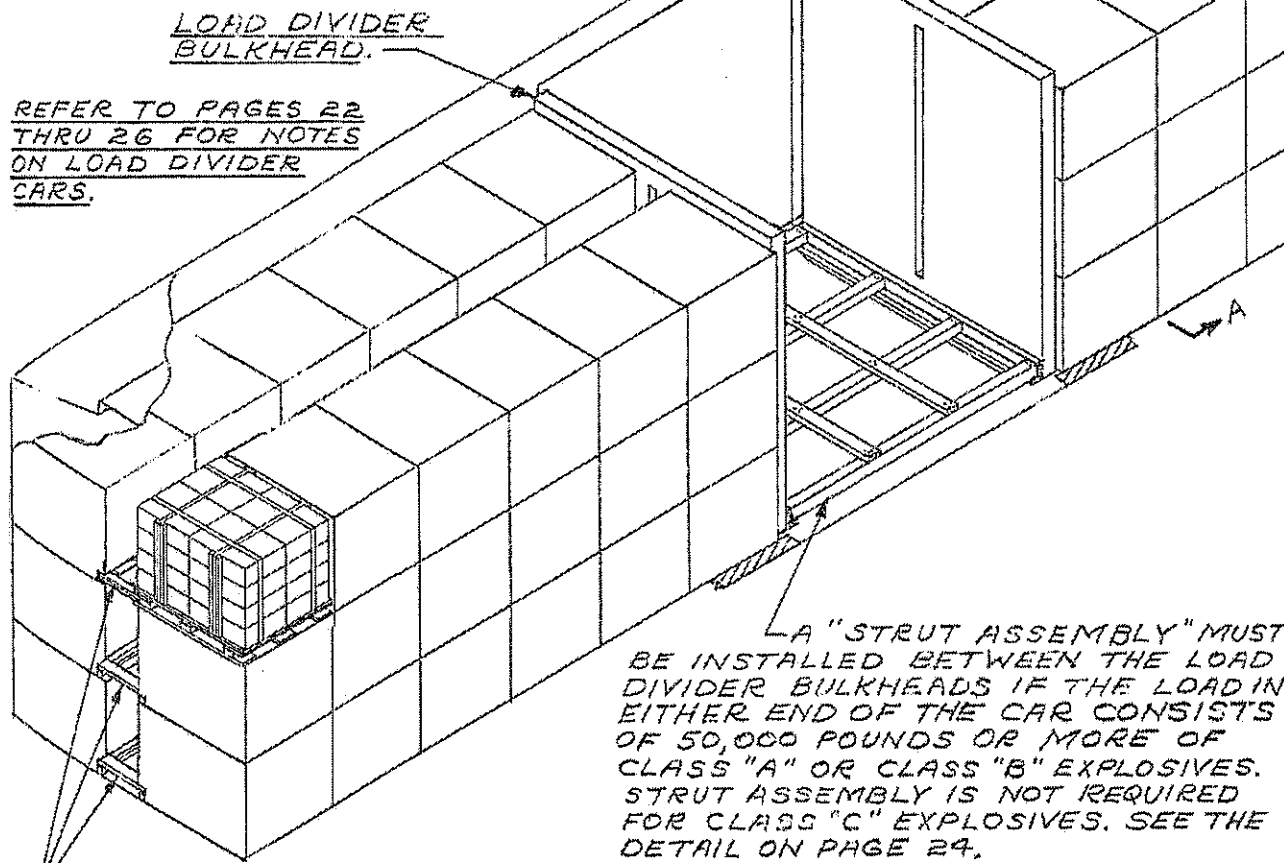
LOCATION	DESCRIPTION
A	7" MIN AND NOT MORE THAN $\frac{1}{2}$ HEIGHT OF FIRST LAYER.
B, D, F	2" FROM TOP OF LAYER TO NOT LOWER THAN $\frac{1}{2}$ HEIGHT OF UNIT IN THAT LAYER.
C, E	7" FROM BOTTOM OF LAYER TO NOT MORE THAN $\frac{1}{2}$ HEIGHT OF UNIT IN THAT LAYER.

TYPICAL LOAD OF PALLETIZED BOXED AMMUNITION IN A 50'-6" LONG BOX CAR EQUIPPED WITH MECHANICAL BRACING DEVICES (CROSS MEMBERS)



ANTI-SWAY BRACE.

IF PALLET UNITS EXTEND INTO THE DOORWAY AREA BY MORE THAN ONE-HALF THE UNIT LENGTH, DOORWAY PROTECTION MUST BE PROVIDED. SEE PAGE 62 FOR INSTALLATION GUIDANCE.



A "STRUT ASSEMBLY" MUST BE INSTALLED BETWEEN THE LOAD DIVIDER BULKHEADS IF THE LOAD IN EITHER END OF THE CAR CONSISTS OF 50,000 POUNDS OR MORE OF CLASS "A" OR CLASS "B" EXPLOSIVES. STRUT ASSEMBLY IS NOT REQUIRED FOR CLASS "C" EXPLOSIVES. SEE THE DETAIL ON PAGE 24.

ANTI-SWAY BRACE (36 REQD). SEE THE DETAIL ON PAGE 45. POSITION BETWEEN ALL Laterally ADJACENT PALLET UNITS.

NOTE:  
72 PALLETS SHOWN  
GROSS WEIGHT - 145,000 LBS (EST)

TYPICAL LOAD OF PALLETIZED BOXED AMMUNITION IN A 50'-6" LONG BY 9'-2" WIDE CAR EQUIPPED WITH LOAD DIVIDERS