

*D. M. Hoody*  
 DATE 6-25-98

# LOADING AND BRACING (CL & LCL) IN BOXCARS OF T55 3,000-POUND BOMBS, PACKED ONE PER WOODEN PALLET AND/OR UNPALLETIZED

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## U.S. ARMY MATERIEL COMMAND DRAWING

APPROVED, U.S. ARMY INDUSTRIAL OPERATIONS COMMAND  <i>Timothy R. Fore</i>	ENGINEER	BASIC	CLYDE R. JESS	DO NOT SCALE			
		REV.		WEBSITE: HTTP://WWW.DAC.ARMY.MIL			
	TECHNICIAN	BASIC		APRIL 1953			
		REV.	RALPH ARNOLD	REVISION NO. 2		MAY 1997	
	DRAFTSMAN	BASIC	RACHEL A. SCHWANTZ	SEE THE REVISION LISTING ON PAGE 3			
		REV.	SONJA WILSON	CLASS	DIVISION	DRAWING	FILE
APPROVED BY ORDER OF COMMANDING GENERAL, U.S. ARMY MATERIEL COMMAND  <i>William Ernst</i> DEFENSE AMMUNITION CENTER	TRANSPORTATION ENGINEERING DIVISION		<i>W. R. Freuche</i>	19	48	2464	5B33
	VALIDATION ENGINEERING DIVISION		<i>Deanne H. Hoody</i> TESTED				
	LOGISTICS ENGINEERING OFFICE		<i>William Ernst</i>				

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 UNLOADING PROCEDURES SPECIFIED IN THIS DRAWING ARE APPLICABLE FOR T55 SERIES, 3,000-POUND BOMBS BOTH PALLETIZED AND UNPALLETIZED. SEE THE PALLET UNIT DETAIL AND THE BOMB DETAIL ON PAGE 3.
- C. THE UNLOADING PROCEDURES DEPICTED WITHIN THIS DOCUMENT ARE APPLICABLE FOR SHIPMENTS IN CONVENTIONAL TYPE BOX-CARS.
- D. THE SELECTION OF RAILCARS FOR THE TRANSPORT OF PALLET UNITS OF BOMBS 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 DOCUMENTS, WILL BE SELECTED.
- E. WHEN SELECTING RAILCARS, EVERY EFFORT SHOULD BE MADE TO OBTAIN BOXCARS THAT DO NOT HAVE BOWED ENDWALLS. CARS HAVING BOWED ENDS CAN BE USED, HOWEVER, IF AN ENDWALL IS BOWED OUTWARD MORE THAN 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. FOR GUIDANCE, REFER TO THE "BULKHEAD GATE A" DETAIL ON PAGE 8 FOR PALLETIZED BOMBS AND/OR THE "BULKHEAD GATE B" DETAIL ON PAGE 21 FOR UNPALLETIZED BOMBS.
- F. CONVENTIONAL BOXCARS EQUIPPED WITH SLIDING DOORS HAVE BEEN SHOWN, HOWEVER, THE DEPICTED UNLOADING PROCEDURES ARE ALSO APPLICABLE FOR CONVENTIONAL 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.
- G. OTHER TYPES OF LADING ITEMS MAY BE LOADED IN CARS WHICH ARE PARTIALLY LOADED WITH PALLET UNITS OF BOMBS OR UNPALLETIZED BOMBS 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.
- H. DUNNAGE LUMBER SPECIFIED THROUGHOUT THIS PROCEDURAL DRAWING IS OF NOMINAL SIZE. FOR EXAMPLE, 2" X 4" MATERIAL IS ACTUALLY 1-1/2" THICK BY 3-1/2" WIDE AND 2" X 6" MATERIAL IS ACTUALLY 1-1/2" THICK BY 5-1/2" WIDE.
- J. 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.

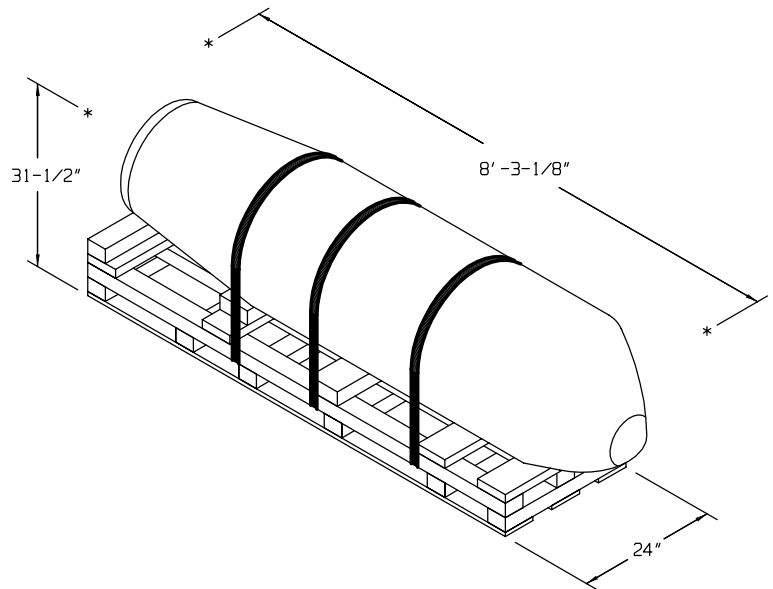
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MATERIAL SPECIFICATIONS

- LUMBER - - - - - : SEE TM 743-200-1 (DUNNAGE LUMBER) VOLUNTARY PRODUCT STANDARD PS 20.
- NAILS - - - - - : ASTM F1667; COMMON STEEL NAIL (NLCMS OR NLCCMS).
- PLYWOOD - - - - - : COMMERCIAL ITEM DESCRIPTION A-A-55057, TYPE A, 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.
- STRAPPING, STEEL - : ASTM D3953; FLAT STRAPPING, TYPE 1, HEAVY DUTY, FINISH A, B (GRADE 2), OR C.
- SEAL, STRAP - - - - : ASTM D3953; CLASS H, FINISH A, B (GRADE 2), OR C, DOUBLE NOTCH TYPE, STYLE I, II, OR IV.

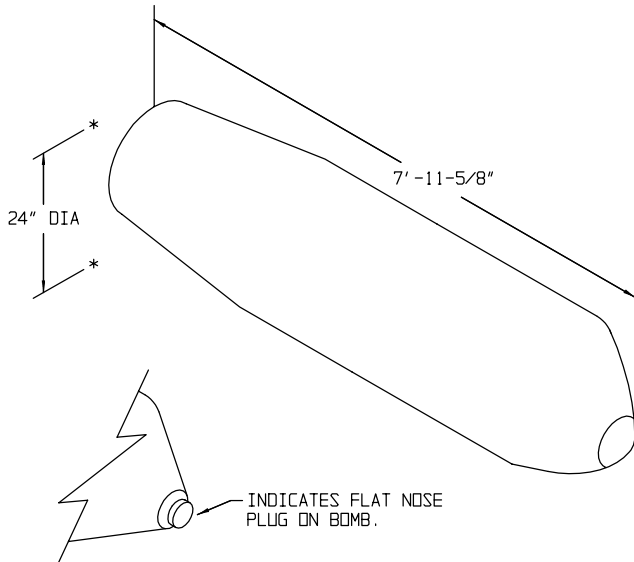
- K. POWER DRIVEN STAPLES MAY BE USED AS ALTERNATIVE FASTENERS FOR NAILS WHEN CONSTRUCTING DUNNAGE ASSEMBLIES WHICH ARE TO BE USED IN THE DELINEATED BOXCAR LOADS SHOWN THROUGHOUT THIS DRAWING. THE STAPLES TO BE USED MUST BE EQUAL IN LENGTH TO THE SPECIFIED NAIL SIZE AND MUST BE SUBSTITUTED ON A ONE STAPLE FOR ONE NAIL BASIS. STAPLES WHICH ARE 2-1/2" OR LESS IN LENGTH SHOULD BE IN ACCORDANCE WITH ASTM F1667 AS NEARLY AS PRACTICABLE. STAPLES WHICH ARE LONGER THAN 2-1/2" WILL BE A COMMERCIAL GRADE, OF A QUALITY EQUIVALENT TO THOSE MANUFACTURED BY Senco PRODUCTS INCORPORATED. NOTE: STAPLES WILL NOT BE SUBSTITUTED FOR NAILS IN ANY LOAD RESTRAINING FLOOR DUNNAGE APPLICATION.
- L. WHEN STEEL STRAPPING IS SEALED AT AN END-OVER-END LAP JOINT, A MINIMUM OF ONE SEAL WITH TWO PAIR OF NOTCHES WILL BE USED TO SEAL THE JOINT WHEN A NOTCH-TYPE SEALER IS BEING USED. A MINIMUM OF TWO SEALS, BUTTED TOGETHER, WITH TWO PAIR OF CRIMPS PER SEAL WILL BE USED TO SEAL THE JOINT WHEN A CRIMP-TYPE SEALER IS BEING USED. REFER TO THE "STRAP JOINT A" AND "STRAP JOINT B" DETAILS ON PAGE 15 FOR GUIDANCE.
- M. THROUGHOUT THIS PROCEDURAL DRAWING, PORTIONS OF THE BLOCKING COMPONENTS AND OF THE DEPICTED CARS, SUCH AS A CAR SIDEWALL, HAVE BEEN OMITTED FROM THE LOAD VIEW FOR CLARITY PURPOSES.
- N. THE NUMBER OF LADING UNITS MAY BE ADJUSTED TO FIT THE SIZE OF THE BOXCAR 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 RAILCAR IN COMPLIANCE WITH THE WEIGHT DISTRIBUTION REQUIREMENTS OF THE AAR.
- O. CAUTION: WHEN POWER OR PNEUMATIC NAILERS ARE BEING USED IN THE APPLICATION OF NAILED FLOORLINE BLOCKING OR BRACING, PALLET UNITS BEING LOADED INTO THE CONVEYANCE MUST BE POSITIONED TO ALLOW A CLEAR PATH OF EXIT FOR THE OPERATOR AT ALL TIMES, SHOULD AN EMERGENCY EXIT BECOME NECESSARY.
- P. CONVERSION TO METRIC EQUIVALENTS: DIMENSIONS WITHIN THIS DOCUMENT ARE EXPRESSED IN INCHES AND WEIGHTS ARE EXPRESSED IN POUNDS. WHEN NECESSARY, THE METRIC EQUIVALENTS MAY BE COMPUTED ON THE BASIS OF ONE INCH EQUALS 25.4 MM AND ONE POUND EQUALS 0.454 KG.
- Q. 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 SIDE BLOCKING PIECES, FLOOR STRINGER PIECES, AND DOORWAY BLOCKING PIECES IN THE FULL LOADS AND TO THE NAILING TO THE CAR FLOOR OF THE HEADERS AND BACK-UP CLEATS 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 "J" AT LEFT.
- R. NOTICE: WHEN POSITIONING PALLET UNITS IN A CAR, THEY SHOULD 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 PALLET 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 PALLET UNITS, SUCH AS THE SKIDS OR FLOOR PIECES OF THE PALLET. PADDING, OF 2" THICK LUMBER OR ANY OTHER MATERIAL OF SIMILAR CONSISTENCY, SHOULD BE PLACED BETWEEN THE JACK AND THE LADING.
- S. LOAD-BLOCKING STRUTS WHICH ARE 72" OR LONGER MUST BE STIFFENED BY THE APPLICATION OF HORIZONTAL AND VERTICAL STRUT BRACING PIECES. SEE THE "STRUT BRACING" DETAIL ON PAGE 8. BRACING IS NOT REQUIRED IF THE STRUTS FOR THE LOAD BEING SHIPPED ARE SHORTER THAN 72".

(CONTINUED ON PAGE 3)



PALLET UNIT

BOMB - - - - - 3,049 LBS (APPROX)  
 PALLET UNIT CUBE - - - - - 43.4 CUBIC FT (APPROX)  
 PALLET UNIT GROSS WEIGHT - - 3,100 LBS (APPROX)



INDICATES CONICAL NOSE  
 PLUG ON BOMB.

INDICATES FLAT NOSE  
 PLUG ON BOMB.

BOMB

BOMB - - - - - 3,049 LBS (APPROX)  
 CUBE - - - - - 31.88 CUBIC FT (APPROX)

REVISIONS

REVISION NO. 1, DATED 1 JUNE 1969, CONSISTS OF:

1. REDESIGNED ANTI-SWAY BRACES TO KEEP CONICAL NOSE PLUGS AWAY FROM THE CAR SIDEWALL AND AWAY FROM THE SIDEWALL REINFORCEMENT DUNNAGE.
2. ADDED: PROGRESSIVE LOADING AND BLOCKING VIEWS.
3. ADDED: PROVISIONS FOR OUTLOADING A 50'-6" LONG BOXCAR AND FOR OUTLOADING LESSER NUMBER OF BOMBS IN A 40'-6" LONG BOXCAR.
4. ADDED: PROVISIONS FOR OUTLOADING LCL SHIPMENTS
5. ADDED: PROVISIONS FOR SHIPPING BOMBS WITH FLAT NOSE PLUGS AND CONICAL NOSE PLUGS.
6. CHANGES AS NECESSARY TO UPDATE THE DRAWING FORMAT.

REVISION NO. 2, DATED MAY 1997, CONSISTS OF:

1. ADDED PROCEDURES FOR PALLETIZED UNITS.
2. UPDATED DRAWING FORMAT.

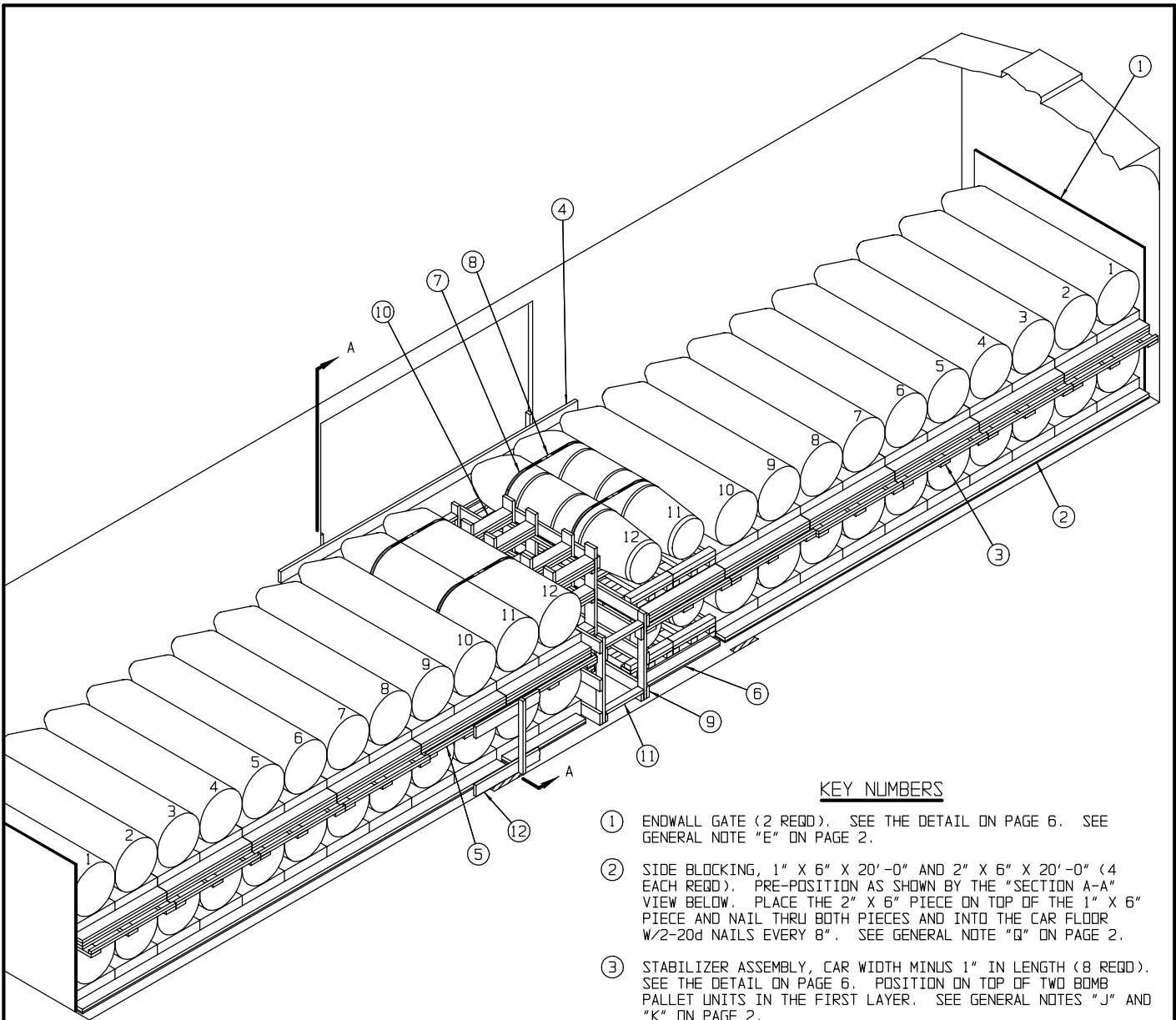
(GENERAL NOTES CONTINUED FROM PAGE 2)

- T. TO ACHIEVE A TIGHTLY BLOCKED LOAD, A STRUT WILL BE CUT APPROXIMATELY 1/4" TO 3/8" LONGER THAN THE MEASURED DISTANCE BETWEEN THE STRUT BEARING AREAS ON THE TWO CENTER GATES. MEASUREMENTS FOR STRUT LENGTHS NEED TO BE ACCOMPLISHED AT SEVERAL PLACES DURING THE BLOCKING AND BRACING PROCESS. CARE MUST BE EXERCISED WHEN MEASURING FOR AND INSTALLING STRUTS. THE SPECIFIED APPROXIMATE DIMENSION FOR A STRUT LENGTH MAY BE ADJUSTED, AS NECESSARY, TO PROVIDE FOR A TIGHTLY BLOCKED LOAD WITHOUT DISTORTING, DENTING OR OTHERWISE DAMAGING THE PALLET UNITS OR BOMBS. ONE END OF THE STRUT WILL BE POSITIONED AT ITS BEARING AREA JUST ABOVE THE STRUT LEDGER ON ONE GATE. THE OTHER END WILL THEN BE DRIVEN DOWNWARD UNTIL IT CONTACTS THE STRUT LEDGER ON THE OTHER GATE. EACH END OF THE TOP 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 "STRUT INSTALLATION" DETAIL ON PAGE 7 FOR A PICTORIAL VIEW SHOWING THE PROPER POSITIONING OF A STRUT FOR INSTALLATION.
- U. WHERE 2" X 2" PIECES ARE SPECIFIED FOR STRUT LEDGERS, 2" X 4" MATERIAL MAY BE SUBSTITUTED FOR ALL BUT THE VERY BOTTOM LEDGER, IF DESIRED.
- V. FOR ADDITIONAL GUIDANCE, ATTENTION IS DIRECTED TO THE "SPECIAL NOTES" SECTIONS WHICH ARE IMMEDIATELY ADJACENT TO THE DEPICTED OUTLOADING METHODS.

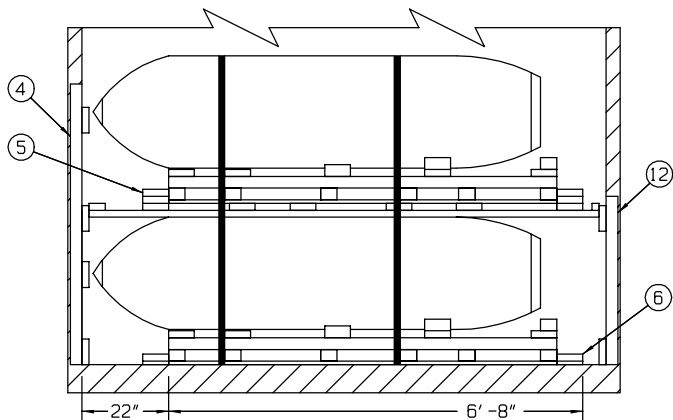
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- W. AS REQUIRED BY THE ASSOCIATION OF AMERICAN RAILROADS (AAR). ALL 1-1/4" AND 2" STEEL STRAPPING USED FOR LOAD RESTRAINT MUST BE MARKED AS SPECIFIED WITHIN THE APPLICABLE AAR RULES GOVERNING LOADING, BLOCKING AND BRACING OF FREIGHT WITHIN THE CONVEYANCE FOR THE SPECIFIC MARKING SIZE, FREQUENCY ETC., REQUIRED, REFER TO THE APPROPRIATE AAR LOADING RULES.



ISOMETRIC VIEW



SECTION A-A

KEY NUMBERS

- ① ENDWALL GATE (2 REQD). SEE THE DETAIL ON PAGE 6. SEE GENERAL NOTE "E" ON PAGE 2.
- ② SIDE BLOCKING, 1" X 6" X 20'-0" AND 2" X 6" X 20'-0" (4 EACH REQD). PRE-POSITION AS SHOWN BY THE "SECTION A-A" VIEW BELOW. PLACE THE 2" X 6" PIECE ON TOP OF THE 1" X 6" PIECE AND NAIL THRU BOTH PIECES AND INTO THE CAR FLOOR W/2-20d NAILS EVERY 8". SEE GENERAL NOTE "Q" ON PAGE 2.
- ③ STABILIZER ASSEMBLY, CAR WIDTH MINUS 1" IN LENGTH (8 REQD). SEE THE DETAIL ON PAGE 6. POSITION ON TOP OF TWO BOMB PALLET UNITS IN THE FIRST LAYER. SEE GENERAL NOTES "J" AND "K" ON PAGE 2.
- ④ DOORWAY PROTECTION A (1 REQD). SEE THE DETAIL ON PAGE 7. INSTALL IN THE DOOR OPENING ON THE SIDE OPPOSITE THE LOADING SIDE PRIOR TO LOADING PALLET UNIT STACKS NUMBERED 9 AND 10 IN EACH END OF THE LOAD. NAIL TO THE DOORPOSTS W/12d NAILS. SEE SPECIAL NOTE 2 ON PAGE 5.
- ⑤ STABILIZER ASSEMBLY, CAR WIDTH MINUS 3-1/2" IN LENGTH (4 REQD). SEE THE DETAIL ON PAGE 6. POSITION ON TOP OF TWO BOMB PALLET UNIT STACKS NUMBERED 9 AND 10, AND 11 AND 12, IN EACH END OF THE LOAD.
- ⑥ DOORWAY SIDE BLOCKING, 1" X 6" X 42" AND 2" X 6" X 42" (4 EACH REQD). PRE-POSITION THE NOSE-END PIECES IN CONTACT WITH PIECES MARKED ② AND AS SHOWN BY THE "SECTION A-A" VIEW BELOW. INSTALL THE BASE-END PIECES AFTER LOADING PALLET UNIT STACKS NUMBERED 11 AND 12. PLACE THE 2" X 6" PIECE ON TOP OF THE 1" X 6" PIECE AND NAIL THRU BOTH PIECES AND INTO THE CAR FLOOR W/2-20d NAILS EVERY 8".
- ⑦ DOORWAY PROTECTION STRAP, 1-1/4" X .035" OR .031" X 13'-0" LONG STEEL STRAPPING (4 REQD). PRE-POSITION SO AS TO ENCIRCLE THE PALLET UNIT STACKS NUMBERED 11 AND 12 WHEN LOADED.
- ⑧ SEAL FOR 1-1/4" STEEL STRAPPING (8 REQD, 2 PER STRAP). DOUBLE CRIMP EACH SEAL. SEE THE "END-OVER-END LAP JOINT DETAILS" ON PAGE 15. SEE GENERAL NOTE "L" ON PAGE 2.
- ⑨ CENTER GATE A (2 REQD, ONE RIGHT HAND AND ONE LEFT HAND). SEE THE DETAIL ON PAGE 7.

(CONTINUED ON PAGE 5)

( KEY NUMBERS CONTINUED FROM PAGE 4 )

- ⑩ STRUT, 2" X 6" BY CUT TO FIT (REF: 22") (TRIPLED) (16 REQD). LAMINATE THE SECOND PIECE TO THE FIRST W/1-10d NAIL EVERY 6". LAMINATE THE THIRD PIECE TO THE SECOND IN A LIKE MANNER. TOENAIL THE TOP PIECE TO THE CENTER GATE VERTICAL PIECES W/2-12d NAILS AT EACH END. SEE GENERAL NOTES "S" ON PAGE 2 AND "T" ON PAGE 3.
- ⑪ STRUT, 2" X 4" BY CUT TO FIT (REF: 22") (4 REQD). TOENAIL TO THE END CENTER GATE VERTICAL PIECES W/2-10d NAILS AT EACH END.
- ⑫ DOORWAY PROTECTION B (1 REQD). SEE THE DETAIL ON PAGE 8. NAIL TO THE DOORPOSTS W/12d NAILS.

SPECIAL NOTES:

- 1. A 50'-6" LONG BY 9'-4" WIDE CONVENTIONAL TYPE BOXCAR EQUIPPED WITH 10'-0" WIDE DOOR OPENINGS IS SHOWN. WIDER CARS AND CARS HAVING WIDER OR NARROWER (8'-0" MINIMUM) DOOR OPENINGS CAN BE USED.
- 2. IF THE CAR BEING LOADED IS EQUIPPED WITH PLUG TYPE DOORS, THE DOORWAY PROTECTION, PIECES MARKED ④ AND ⑫, WILL BE OMITTED. THE STABILIZER ASSEMBLIES, PIECES MARKED ⑤ WILL BE REPLACED WITH ADDITIONAL STABILIZER ASSEMBLIES, PIECES MARKED ③. THE REMAINDER OF THE BLOCKING AND BRACING WILL BE AS SHOWN.
- 3. THE DEPICTED LOAD CAN BE REDUCED TO SUIT THE QUANTITY TO BE SHIPPED. THE LOAD CAN BE REDUCED BY FOUR PALLET UNITS BY OMITTING TWO PALLET UNIT STACKS. NOTE THAT STACKS MUST BE OMITTED IN PAIRS. THE TOP COMPLETE LAYER OF PALLET UNITS MAY ALSO BE ELIMINATED, IF DESIRED. FOR TYPICAL LCL PROCEDURES, REFER TO PAGE 9 FOR GUIDANCE.
- 4. DOORWAY PROTECTION IS REQUIRED FOR ALL PALLET UNIT STACKS WHICH ARE COMPLETELY WITHIN THE DOORWAY AREA OR WHICH EXTEND INTO THE DOORWAY AREA BY ONE-HALF OR MORE OF THE STACK LENGTH (PALLET WIDTH).
- 5. A MAXIMUM OF 36 PALLET UNITS, FOR A LADING WEIGHT OF APPROXIMATELY 111,600 POUNDS, CAN BE LOADED IN A 40'-6" LONG CAR BY USING THE DEPICTED PROCEDURES. A 32-UNIT LOAD WOULD BE APPROXIMATELY 99,200 POUNDS.

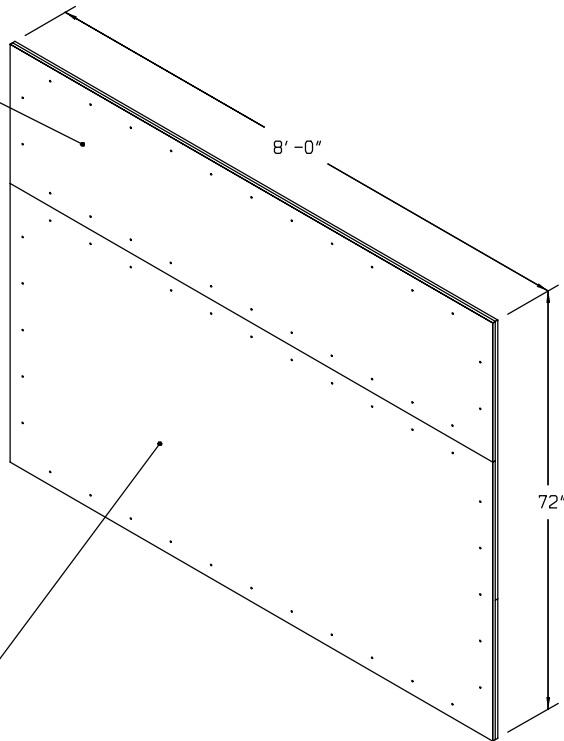
BILL OF MATERIAL

LUMBER	LINEAR FEET	BOARD FEET
1" X 6"	94	47
2" X 2"	91	31
2" X 3"	16	8
2" X 4"	73	49
2" X 6"	1179	1179
NAILS	NO. REQD	POUNDS
4d (1-1/2")	96	1/4
10d (3")	1484	23
12d (3-1/4")	80	1-1/2
20d (4")	280	10
STEEL STRAPPING, 1-1/4" -- 52' REQD -- 7-1/2 LBS		
SEAL FOR 1-1/4" STRAPPING -- 8 REQD -- 1/2 LB		
PLYWOOD, 1/2" -- 6 SHEETS REQD -- 264 LBS		

LOAD AS SHOWN

ITEM	QUANTITY	WEIGHT (APPROX)
PALLET UNIT	48	146,352 LBS
DUNNAGE		2,935 LBS
<u>TOTAL WEIGHT</u>		<u>149,287 LBS (APPROX)</u>

PLYWOOD, 1/2" X 24" X 8'-0"  
(2 REQD). LAMINATE ONE PIECE  
W/1-4d NAIL EVERY 8" AROUND  
THE PERIMETER AND CLINCH.



PLYWOOD, 1/2" X 48" X 8'-0"  
(2 REQD). LAMINATE ONE PIECE  
W/1-4d NAIL EVERY 8" AROUND  
THE PERIMETER AND CLINCH.

ENDWALL GATE

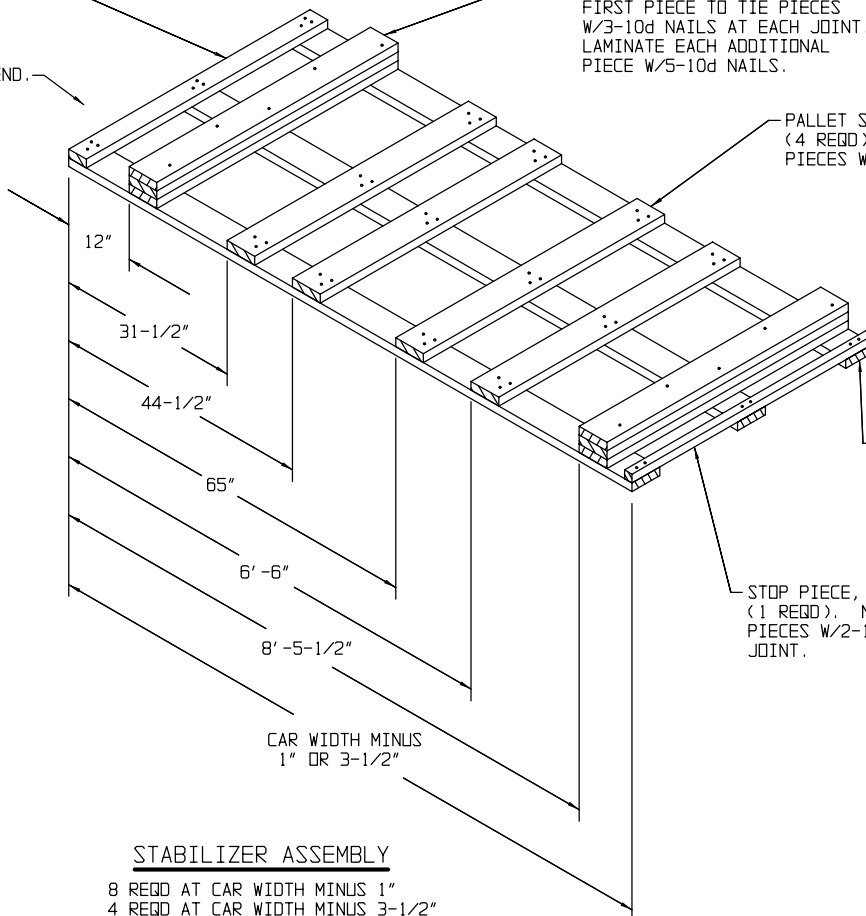
FOR PALLETIZED UNIT LOADS.

STOP PIECE, 2" X 4" X 48"  
(1 REQD). NAIL TO THE TIE  
PIECES W/3-10d NAILS AT EACH  
JOINT.

SIDE BLOCKING, 2" X 6" X 48"  
(TRIPLED) (2 REQD). NAIL  
FIRST PIECE TO TIE PIECES  
W/3-10d NAILS AT EACH JOINT.  
LAMINATE EACH ADDITIONAL  
PIECE W/5-10d NAILS.

BOMB NOSE END.

PALLET SUPPORT, 2" X 6" X 48"  
(4 REQD). NAIL TO THE TIE  
PIECES W/3-10d NAILS AT EACH JOINT.



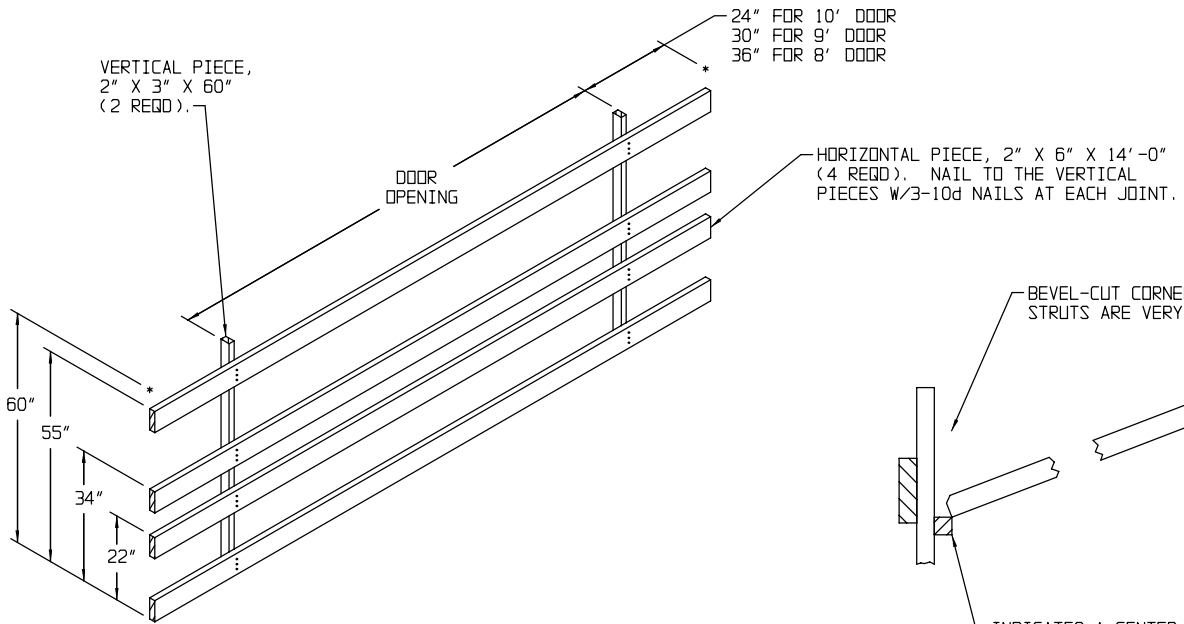
TIE PIECE, 2" X 6" X  
CAR WIDTH MINUS 1" OR  
3-1/2" (3 REQD).

STOP PIECE, 2" X 2" X 48"  
(1 REQD). NAIL TO THE TIE  
PIECES W/2-10d NAILS AT EACH  
JOINT.

STABILIZER ASSEMBLY

8 REQD AT CAR WIDTH MINUS 1"  
4 REQD AT CAR WIDTH MINUS 3-1/2"

DETAILS



**DOORWAY PROTECTION A**

FOR THE SIDE OPPOSITE THE LOADING SIDE OF THE CAR.

**STRUT INSTALLATION**

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

VERTICAL PIECE, 2" X 4" X 42" (2 REQD). NAIL TO THE HORIZONTAL PIECES W/3-10d NAILS AT EACH JOINT.

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

BOMB NOSE END.

STRUT LEDGER, 2" X 2" X 52" (1 REQD). NAIL TO THE VERTICAL PIECES W/2-10d NAILS AT EACH JOINT.

STRUT LEDGER, 2" X 2" OR 2" X 4" X 52" (3 REQD). NAIL TO THE VERTICAL PIECES W/2-10d NAILS AT EACH JOINT.

VERTICAL PIECE, 2" X 6" X 60" (4 REQD).

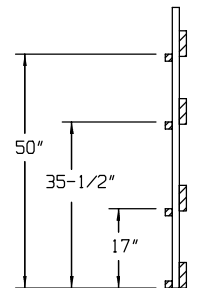
VIEW A

HORIZONTAL PIECE, 2" X 6" X 52" (1 REQD). NAIL TO THE 2" X 6" VERTICAL PIECE W/3-10d NAILS AT EACH JOINT.

HORIZONTAL PIECE, 2" X 6" BY CAR WIDTH MINUS 4" (3 REQD). NAIL TO THE 2" X 6" VERTICAL PIECES W/3-10d NAILS AT EACH JOINT.

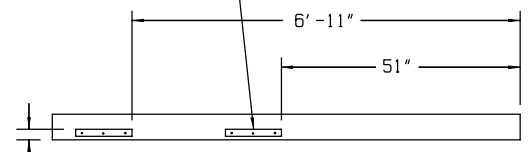
STRUT LEDGER, 2" X 4" X 3-1/2" (2 REQD). NAIL TO THE 2" X 4" VERTICAL PIECES W/2-10d NAILS.

GATE HOLD DOWN, 2" X 2" X 12" (DOUBLED) (2 REQD). NAIL FIRST PIECE TO A HORIZONTAL PIECE W/3-10d NAILS. NAIL THE SECOND PIECE IN A LIKE MANNER.



PARTIAL END VIEW

**CENTER GATE A**  
A RIGHT HAND GATE IS SHOWN. RIGHT HAND AND LEFT HAND GATES ARE REQUIRED FOR THE LOAD SHOWN ON PAGE 4.

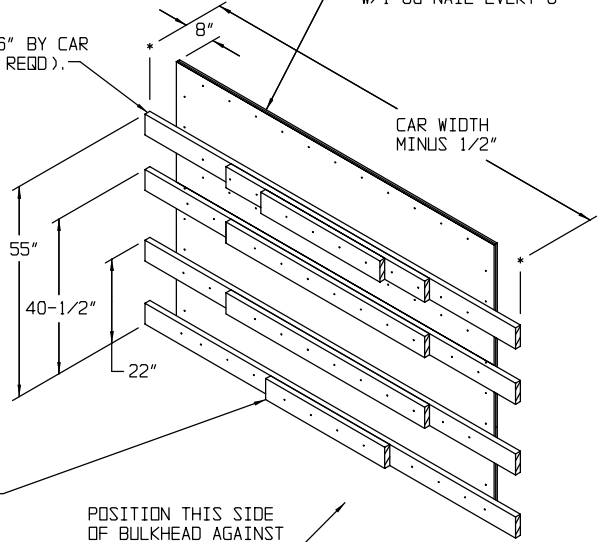


PARTIAL VIEW A

**DETAILS**

FILLER PIECE, 2" X 6" BY CAR WIDTH MINUS 1/2" (4 REQD).

BULKHEAD GATE A (1 REQD). NAIL TO EACH FILLER PIECE W/1-8d NAIL EVERY 6"



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

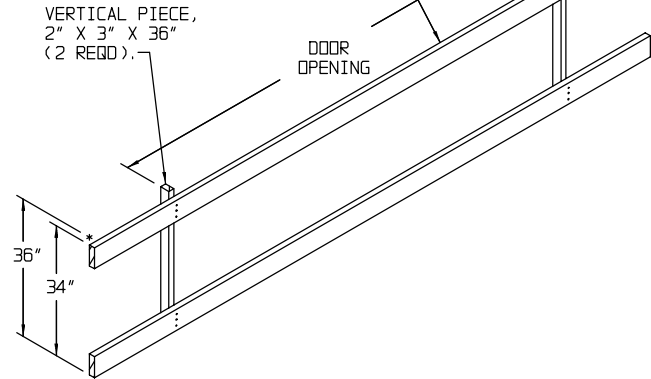
POSITION THIS SIDE OF BULKHEAD AGAINST CAR ENDWALL.

**BULKHEAD GATE A**

FOR USE WITH PALLETIZED BOMBS.

HORIZONTAL PIECE, 2" X 6" X 14'-0" (2 REQD). NAIL TO THE VERTICAL PIECES W/3-10d NAILS AT EACH JOINT.

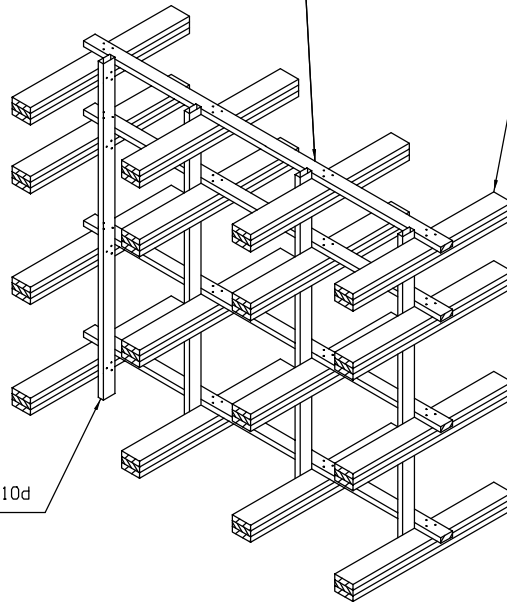
24" FOR 10' DOOR  
30" FOR 9' DOOR  
36" FOR 8' DOOR



**DOORWAY PROTECTION B**

FOR THE LOADING SIDE OF THE CAR.

HORIZONTAL STRUT BRACING, 2" X 4" X 54" (4 REQD). NAIL TO THE STRUTS W/3-10d NAILS AT EACH JOINT.



VERTICAL STRUT BRACING, 2" X 4" X 56" (4 REQD). NAIL TO THE STRUTS W/3-10d NAILS AT EACH JOINT.

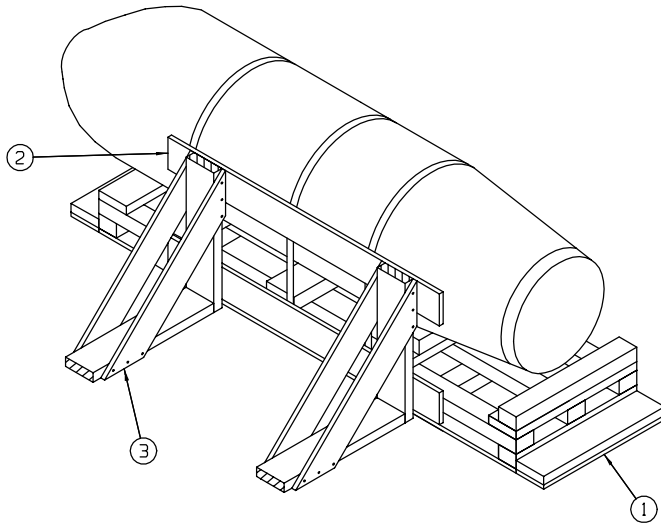
**STRUT BRACING**

FOR USE IN THE LOAD SHOWN ON PAGE 4.



KEY NUMBERS

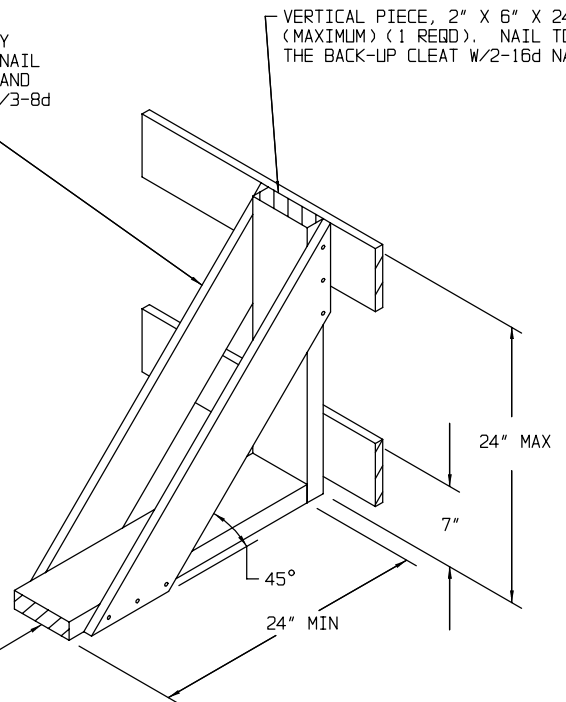
- ① SIDE BLOCKING, 1" X 6" X 24" AND 2" X 6" X 24" (2 EACH REQD). PLACE THE 2" X 6" PIECE ON TOP OF THE 1" X 6" PIECE AND NAIL THRU BOTH PIECES AND INTO THE CAR FLOOR W/4-20d NAILS. SEE GENERAL NOTES "J" AND "Q" ON PAGE 2.
- ② HORIZONTAL PIECE, 1" X 6" X 54" (2 REQD). NAIL TO THE VERTICAL PIECES OF THE LCL BRACES, PIECES MARKED ③, W/3-6d NAILS AT EACH JOINT.
- ③ LCL BRACE (2 REQD). SEE THE DETAIL BELOW. NAIL TO THE CAR FLOOR W/7-16d NAILS. SEE SPECIAL NOTE 2 BELOW.



ISOMETRIC VIEW

ANGLE BRACE, 1" X 6" BY CUT TO FIT (2 REQD). NAIL TO THE VERTICAL PIECE AND TO THE BACK-UP CLEAT W/3-8d NAILS AT EACH END.

VERTICAL PIECE, 2" X 6" X 24" (MAXIMUM) (1 REQD). NAIL TO THE BACK-UP CLEAT W/2-16d NAILS.

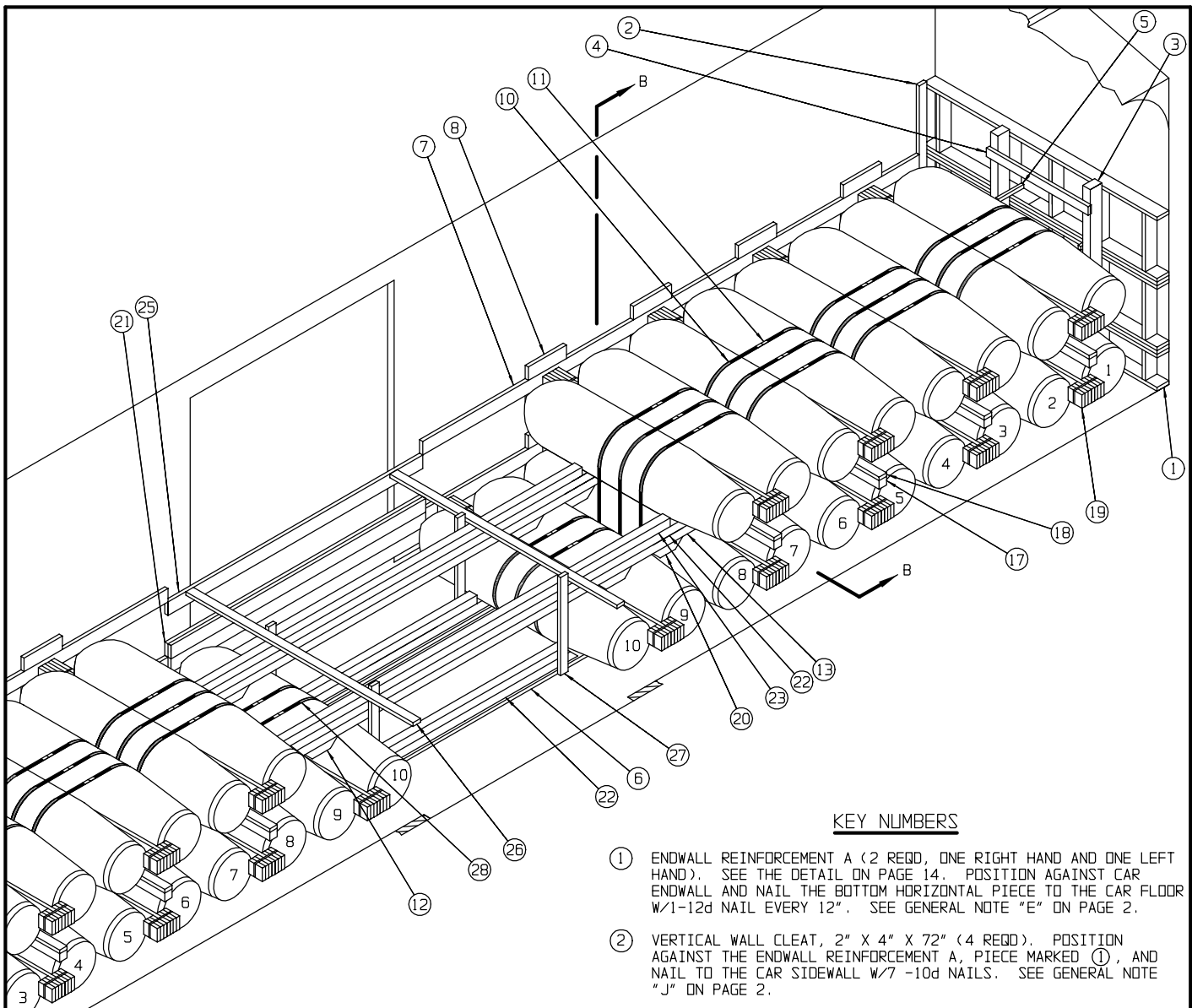


BACK-UP CLEAT, 2" X 6" X 24" (MINIMUM) (1 REQD).

SPECIAL NOTES:

1. A 1-UNIT LOAD OF 3,000-POUND BOMB, PALLETIZED, IS SHOWN IN A 9'-2" WIDE CONVENTIONAL TYPE BOXCAR. WIDER CARS CAN BE USED.
2. EACH LCL BRACE AS APPLIED FOR LONGITUDINAL RETENTION WILL RETAIN NOT MORE THAN APPROXIMATELY 2,000 POUNDS. A MINIMUM OF TWO BRACES WILL BE USED. ADDITIONAL LCL BRACES MAY BE INSTALLED IF IT IS DESIRED TO SHIP MORE THAN ONE PALLET UNIT. THREE LCL BRACES ARE ADEQUATE FOR RETAINING TWO PALLET UNITS. FIVE LCL BRACES WILL BE REQUIRED IF IT IS DESIRED TO SHIP FOUR PALLET UNITS.

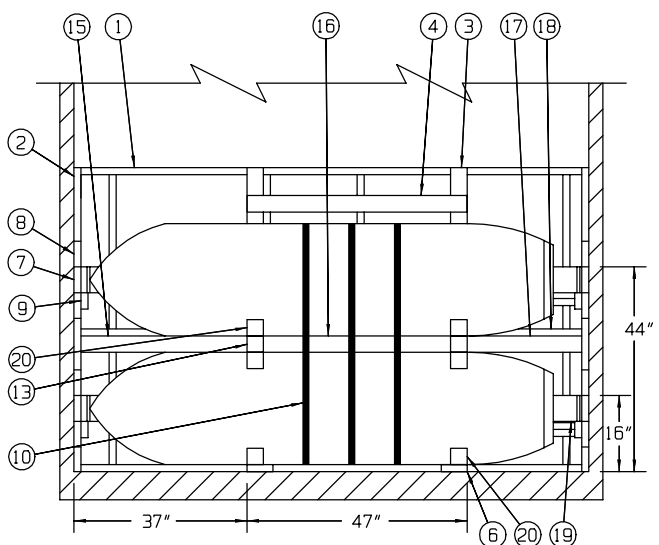
TYPICAL LCL (1-UNIT LOAD) PALLETIZED



ISOMETRIC VIEW

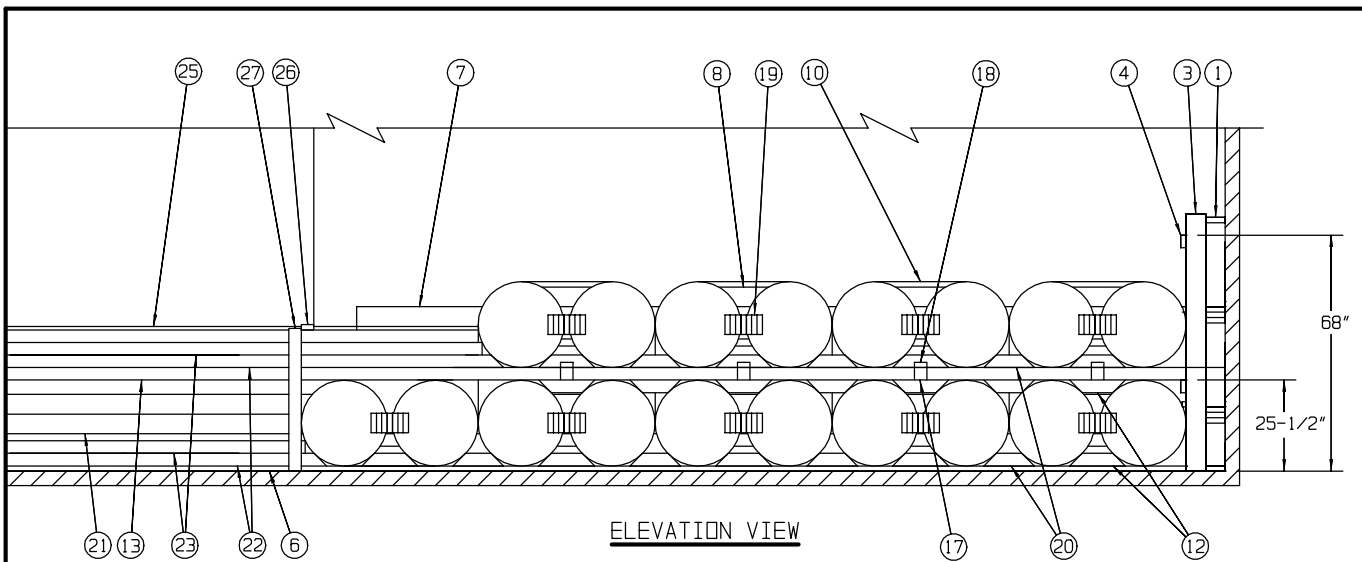
KEY NUMBERS

- ① ENDWALL REINFORCEMENT A (2 REQD, ONE RIGHT HAND AND ONE LEFT HAND). SEE THE DETAIL ON PAGE 14. POSITION AGAINST CAR ENDWALL AND NAIL THE BOTTOM HORIZONTAL PIECE TO THE CAR FLOOR W/1-12d NAIL EVERY 12". SEE GENERAL NOTE "E" ON PAGE 2.
- ② VERTICAL WALL CLEAT, 2" X 4" X 72" (4 REQD). POSITION AGAINST THE ENDWALL REINFORCEMENT A, PIECE MARKED ①, AND NAIL TO THE CAR SIDEWALL W/7 -10d NAILS. SEE GENERAL NOTE "J" ON PAGE 2.
- ③ VERTICAL ENDWALL REINFORCEMENT, 4" X 6" X 72" (4 REQD). POSITION AS SHOWN BY THE "ENDWALL REINFORCEMENT A" DETAIL ON PAGE 14.
- ④ LATERAL CLEAT, 2" X 4" X 48" (4 REQD). POSITION AS SHOWN BY THE "ELEVATION VIEW" ON PAGE 11 AND NAIL TO THE VERTICAL ENDWALL REINFORCEMENT PIECES, PIECES MARKED ③, W/3-10d NAILS AT EACH END.
- ⑤ CLEAT, 2" X 2" X 12" (8 REQD). NAIL TO THE ENDWALL REINFORCEMENT AND VERTICAL ENDWALL REINFORCEMENT PIECES, PIECES MARKED ① AND ③, RESPECTIVELY, W/2-10d NAILS AT EACH JOINT.
- ⑥ FLOOR STRINGER, 2" X 6" X 48'-8" (REF) (2 REQD). SEE "SECTION B-B" AT LEFT FOR LOCATION DIMENSIONS. NAIL TO THE CAR FLOOR W/1-16d NAIL EVERY 12". RANDOM LENGTH MATERIAL MAY BE USED. STAGGER JOINTS IN ADJACENT PIECES AT LEAST 24". SEE GENERAL NOTE "G" ON PAGE 2.
- ⑦ SIDEWALL REINFORCEMENT, 2" X 6" X 19'-6" (8 REQD). POSITION 16" AND/OR 44" ABOVE THE CAR FLOOR AS SHOWN BY THE "SECTION B-B" VIEW. NAIL TO THE CAR SIDEWALL W/1-10d NAIL EVERY 12". RANDOM LENGTH MATERIAL MAY BE USED.
- ⑧ WALL CLEAT, 2" X 6" X 18" (68 REQD). NAIL TO THE CAR SIDEWALL W/5-10d NAILS.
- ⑨ SUPPORT PIECE, 2" X 4" X 18" (36 REQD). NAIL TO THE WALL CLEAT, PIECE MARKED ⑧, AND/OR A DOOR SPANNER, PIECE MARKED ⑳, IF APPLICABLE, W/5-10d NAILS. SEE THE "ISOMETRIC VIEW" ON PAGE 12.

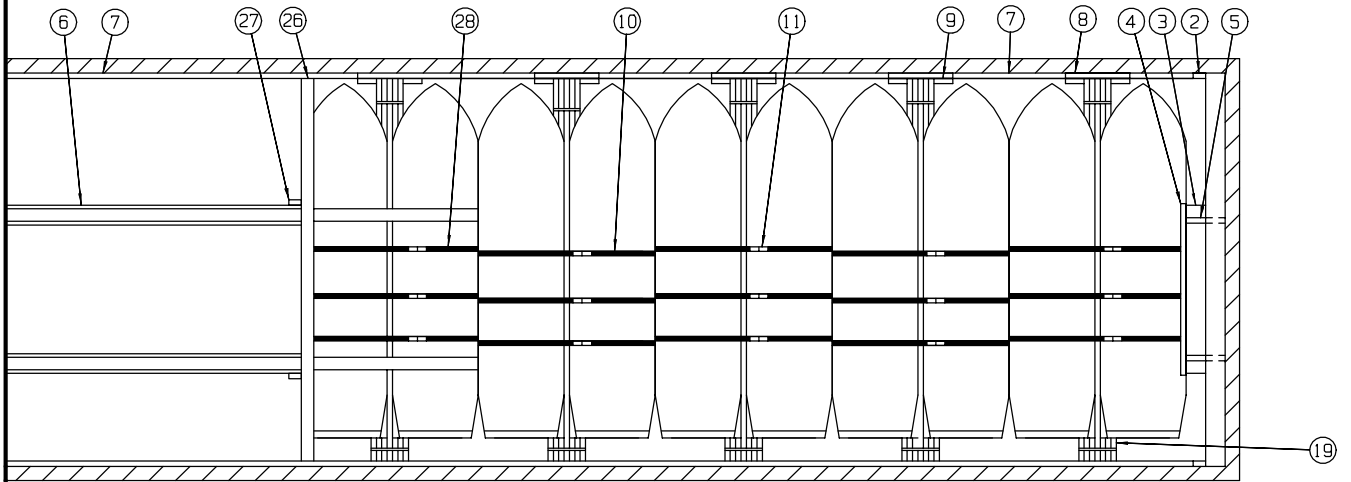


SECTION B-B

(CONTINUED ON PAGE 12)



ELEVATION VIEW



PLAN VIEW

SPECIAL NOTES:

1. A 50'-6" LONG BY 9'-2" WIDE CONVENTIONAL BOXCAR EQUIPPED WITH 8'-0" WIDE DOOR OPENINGS IS SHOWN. WIDER CARS, CARS OF OTHER LENGTHS, AND CARS HAVING WIDER DOOR OPENINGS CAN BE USED.
2. A CAR EQUIPPED WITH 8'-0" WIDE SLIDING DOORS IS SHOWN. THE PROCEDURES ARE ALSO APPLICABLE FOR CARS EQUIPPED WITH PLUG TYPE DOORS.
3. ALL SPLICES IN ADJACENT FLOOR STRINGERS, PIECES MARKED ⑥, SIDEWALL REINFORCEMENT PIECES, PIECES MARKED ⑦, AND THE INTERMEDIATE STRINGERS, PIECES MARKED ⑬, SHOULD BE A MINIMUM OF 24" APART.
4. PROGRESSIVE LOADING VIEWS ARE SHOWN ON PAGES 12 AND 13.
5. THE DEPICTED LOAD CAN BE INCREASED TO SUIT THE QUANTITY TO BE SHIPPED. TWO BOMBS CAN BE ADDED IN EITHER OR BOTH ENDS OF THE CAR BY STRAPPING THE ADDED BOMBS IN THE SECOND LAYER TO THE LOWER BOMBS WITH PIECES MARKED ⑩. A GROUP OF FOUR BOMBS CAN BE ADDED IN THE CENTER OF THE LOAD. ADJUST THE QUANTITIES OF PIECES MARKED ⑧ AND ⑨, AND PIECES MARKED ⑫ THRU ⑲. ADJUST THE LENGTHS OF PIECES MARKED ② AND ④. OMIT PIECES MARKED ⑤ AND ⑦ IF INCREASING THE LOAD BY MORE THAN TWO BOMBS.

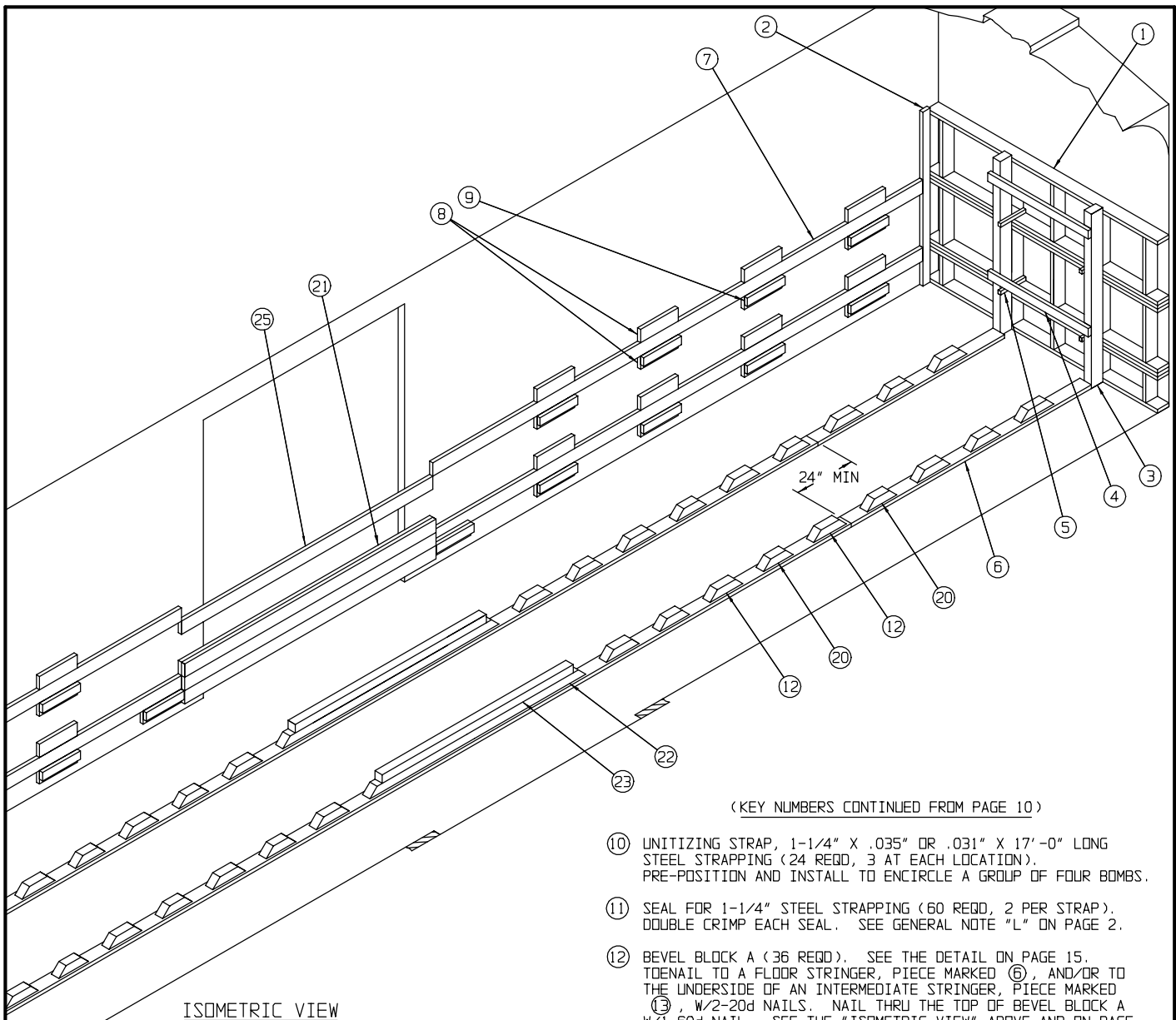
LOAD AS SHOWN

BILL OF MATERIAL		
LUMBER	LINEAR FEET	BOARD FEET
2" X 2"	8	3
2" X 4"	214	143
2" X 6"	1066	1066
4" X 4"	361	482
4" X 6"	24	48
NAILS	NO. REQD	POUNDS
10d (3")	1770	27-1/4
12d (3-1/4")	224	3-3/4
16d (3-1/2")	98	2-1/4
20d (4")	285	10-1/4
60d (6")	193	19-1/2
STEEL STRAPPING, 5-8"	108' REQD	5 LBS
SEAL FOR 5/8" STRAPPING	36 REQD	NIL
STEEL STRAPPING, 1-1/4"	447' REQD	64 LBS
SEAL FOR 1-1/4" STRAPPING	60 REQD	3 LBS

ITEM	QUANTITY	WEIGHT (APPROX)
BOMBS	36	109,764 LBS
DUNNAGE		3,619 LBS

TOTAL WEIGHT - - - - - 113,383 LBS (APPROX)

36-UNIT LOAD IN A 50'-6" LONG BY 9'-2" WIDE CAR (WITH CONICAL NOSE PLUG)



ISOMETRIC VIEW

(KEY NUMBERS CONTINUED)

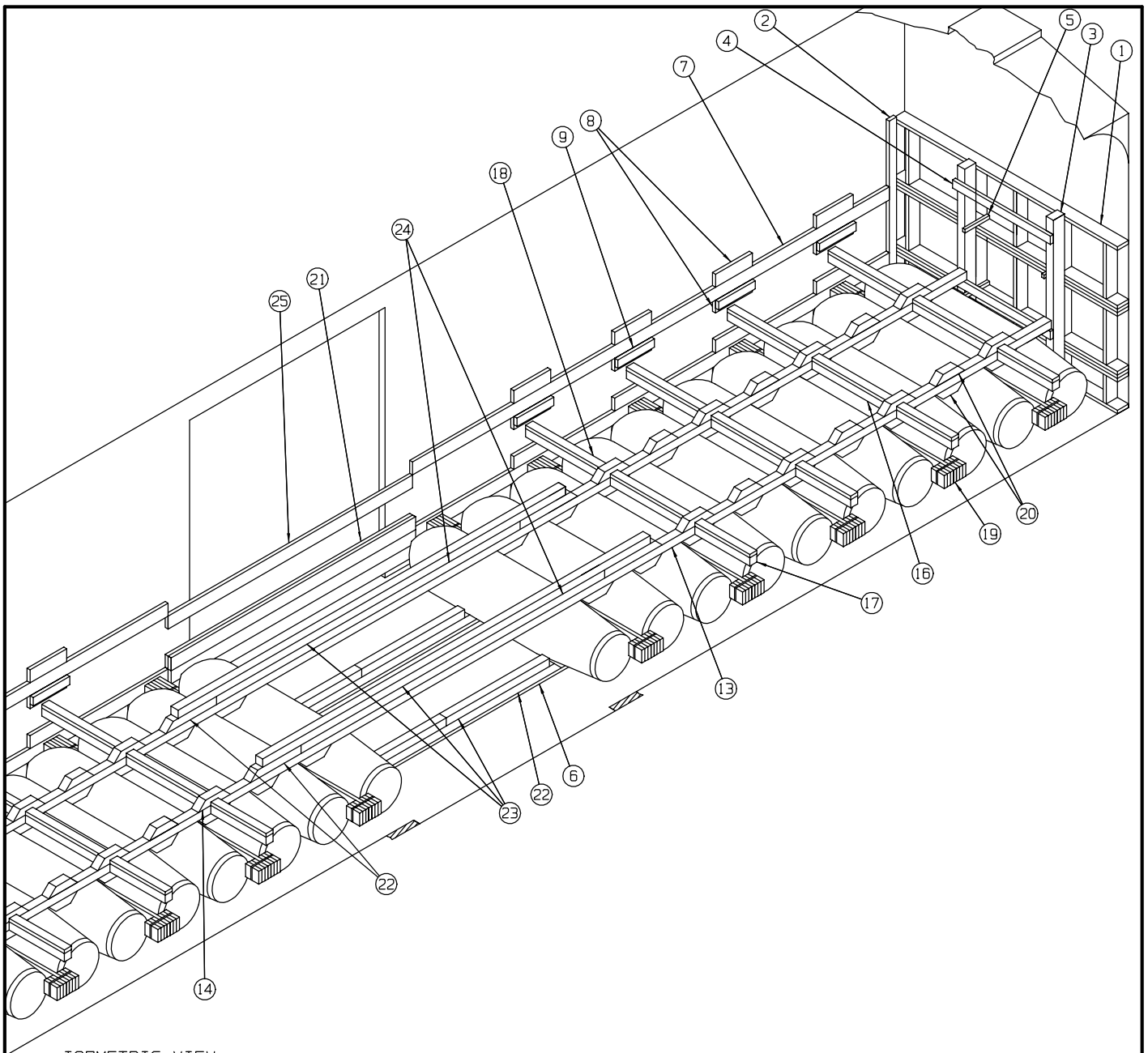
- ⑳ BEVEL BLOCK C (40 REQD). SEE THE DETAIL ON PAGE 15. TOENAIL TO A FLOOR STRINGER, PIECE MARKED ⑥, AND/OR TO THE TOP AND/OR BOTTOM OF AN INTERMEDIATE STRINGER, PIECE MARKED ⑬, W/2-20d NAILS. NAIL THRU THE TOP OF BEVEL BLOCK C W/1-60d NAIL. SEE THE "ISOMETRIC VIEW" ON PAGE 10 AND ON PAGE 13.
- ㉑ DOORWAY SPANNER, 2" X 6" BY DOOR OPENING WIDTH PLUS 24" (DOUBLED) (6 REQD). NAIL THE FIRST PIECE TO THE CAR SIDEWALL W/8-10d NAILS AT EACH END. LAMINATE THE SECOND PIECE TO THE FIRST W/1-10d NAIL EVERY 8".
- ㉒ BEVEL BLOCK D (6 REQD, 2 PIECES CUT TO FIT FOR THE FIRST LAYER, 4 PIECES 32" FOR THE SECOND LAYER). SEE THE DETAIL ON PAGE 15. NAIL TO A FLOOR STRINGER, PIECE MARKED ⑥ W/5-60d NAILS AND TOENAIL W/5-20d NAILS. NAIL TO AN INTERMEDIATE STRINGER, PIECE MARKED ⑬, W/3-60d NAILS AND TOENAIL W/3-20d NAILS.
- ㉓ UPPER CENTER BLOCK, 4" X 4" BY CUT TO FIT BETWEEN BOMBS AT CENTER OF CAR (4 REQD). NAIL TO BEVEL BLOCK D, PIECES MARKED ㉒ W/8-60d NAILS FOR THE LOWER PIECES AND TO BEVEL BLOCK D AND/OR CENTER BLOCK, PIECE MARKED ㉒, W/1-60d NAIL EVERY 12" FOR THE UPPER PIECES. TOENAIL EACH PIECE TO THE SAME PIECES W/1-20d NAIL EVERY 12".

(CONTINUED ON PAGE 13)

(KEY NUMBERS CONTINUED FROM PAGE 10)

- ⑩ UNITIZING STRAP, 1-1/4" X .035" OR .031" X 17'-0" LONG STEEL STRAPPING (24 REQD, 3 AT EACH LOCATION). PRE-POSITION AND INSTALL TO ENCIRCLE A GROUP OF FOUR BOMBS.
- ⑪ SEAL FOR 1-1/4" STEEL STRAPPING (60 REQD, 2 PER STRAP). DOUBLE CRIMP EACH SEAL. SEE GENERAL NOTE "L" ON PAGE 2.
- ⑫ BEVEL BLOCK A (36 REQD). SEE THE DETAIL ON PAGE 15. TOENAIL TO A FLOOR STRINGER, PIECE MARKED ⑥, AND/OR TO THE UNDERSIDE OF AN INTERMEDIATE STRINGER, PIECE MARKED ⑬, W/2-20d NAILS. NAIL THRU THE TOP OF BEVEL BLOCK A W/1-60d NAIL. SEE THE "ISOMETRIC VIEW" ABOVE AND ON PAGE 13.
- ⑬ INTERMEDIATE STRINGER, 4" X 4" X 48'-8" (REF) (2 REQD). POSITION AS SHOWN. RANDOM LENGTH PIECES MAY BE USED. STAGGER JOINTS OF LATERALLY ADJACENT PIECES AT LEAST 24". WHEREVER A JOINT IS MADE, APPLY A 2" X 4" X 24" SPLICE PIECE TO EACH SIDE OF THE STRINGER. NAIL W/6-12d NAILS.
- ⑭ BEVEL BLOCK B (16 REQD). SEE THE DETAIL ON PAGE 15. TOENAIL TO THE INTERMEDIATE STRINGER, PIECE MARKED ⑬, W/2-20d NAILS. NAIL THRU THE TOP OF BEVEL BLOCK B W/1-60d NAIL. SEE THE "ISOMETRIC VIEW" ON PAGE 13.
- ⑮ ANTI-SWAY BRACE, 4" X 4" X 37" (8 REQD). THE ANTI-SWAY BRACE IN THE DOOR AREA WILL BE CUT TO 34". SEE THE "ISOMETRIC VIEW" ON PAGE 13.
- ⑯ ANTI-SWAY BRACE, 4" X 4" X 40" (8 REQD). SEE THE "ISOMETRIC VIEW" ON PAGE 13.
- ⑰ ANTI-SWAY BRACE, 4" X 4" BY CUT TO FIT (8 REQD).
- ⑱ ANTI-SWAY BRACE SUPPORT, 2" X 4" BY CAR WIDTH OR CUT TO FIT (8 REQD). NAIL TO THE ANTI-SWAY BRACE PIECES, PIECES MARKED ⑮, ⑯, AND/OR ⑰ W/6-12d NAILS EACH. NAIL TO THE INTERMEDIATE STRINGERS, PIECES MARKED ⑬, W/2-12d NAILS AT EACH JOINT.
- ⑲ ANTI-SWAY BRACE ASSEMBLY (18 REQD). SEE THE DETAIL ON PAGE 14.

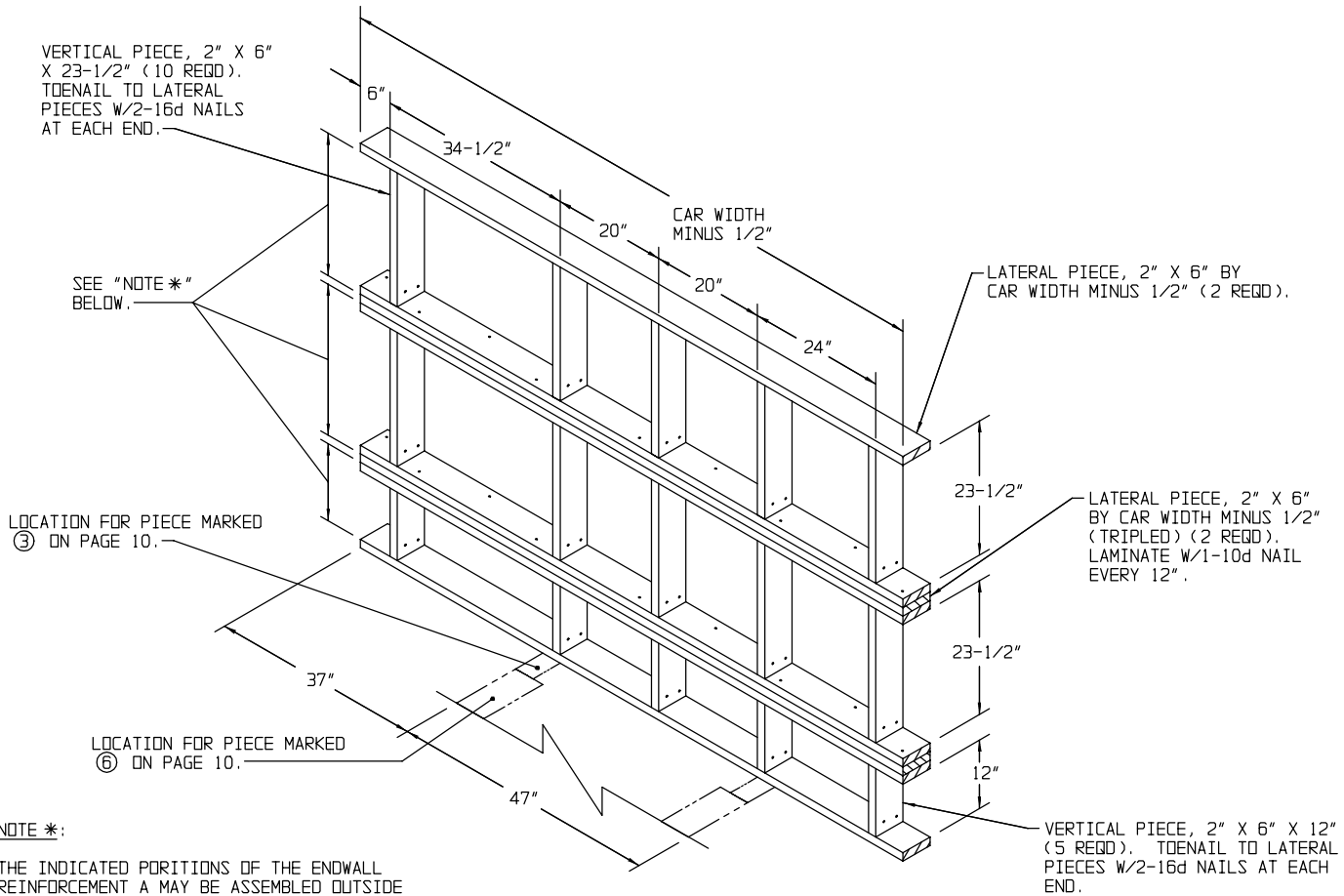
(CONTINUED AT LEFT)



ISOMETRIC VIEW

(KEY NUMBERS CONTINUED FROM PAGE 12)

- ②④ CENTER BLOCK, 4" X 4" BY CUT TO FIT BETWEEN BEVEL BLOCKS D IN THE SECOND LAYER (2 REQD). NAIL TO AN INTERMEDIATE STRINGER, PIECE MARKED ⑬, W/1-60d NAIL EVERY 12". TOENAIL W/1-20d NAIL EVERY 12".
- ②⑤ DOOR SPANNER, 2" X 6" BY DOOR OPENING WIDTH PLUS 24" (2 REQD). NAIL TO THE CAR SIDEWALL W/5-10d NAILS AT EACH END.
- ②⑥ LATERAL STRUT BRACING, 2" X 4" BY CAR WIDTH MINUS 3" (2 REQD). NAIL TO THE CENTER BLOCKS, PIECES MARKED ②④, W/3-10d NAILS AT EACH JOINT.
- ②⑦ VERTICAL STRUT BRACING, 2" X 4" X 40" (4 REQD). NAIL TO THE FLOOR STRINGER, PIECE MARKED ⑥, THE INTERMEDIATE STRINGER, PIECE MARKED ⑬, EACH BEVEL BLOCK D, PIECE MARKED ②, AND EACH CENTER BLOCK, PIECE MARKED ②④, W/2-10d NAILS AT EACH JOINT.
- ②⑧ UNITIZING STRAP, 1-1/4" X .035" OR .031" X 13'-0" LONG STEEL STRAPPING (6 REQD, 3 AT EACH LOCATION). INSTALL TO ENCIRCLE TWO BOMBS IN THE FIRST LAYER AT EACH SIDE OF THE DOOR OPENING.



VERTICAL PIECE, 2" X 6" X 23-1/2" (10 REQD). TOENAIL TO LATERAL PIECES W/2-16d NAILS AT EACH END.

SEE "NOTE\*" BELOW.

LOCATION FOR PIECE MARKED ③ ON PAGE 10.

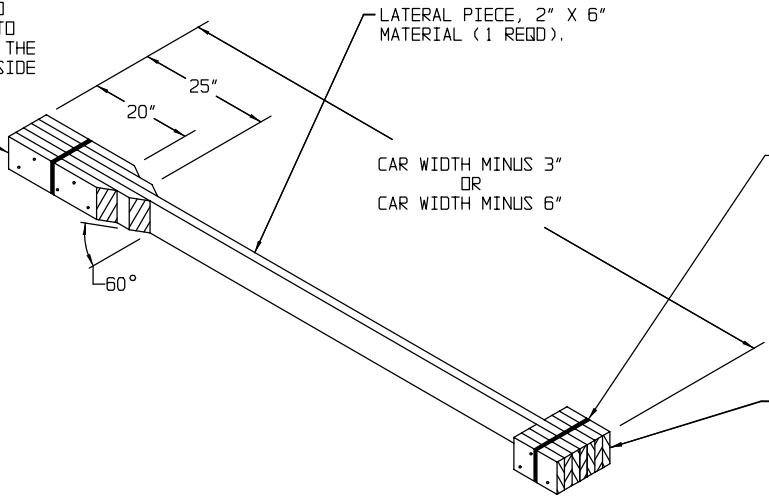
LOCATION FOR PIECE MARKED ⑥ ON PAGE 10.

**NOTE \*:**  
 THE INDICATED PORTIONS OF THE ENDWALL REINFORCEMENT A MAY BE ASSEMBLED OUTSIDE THE CAR AND THESE PRE-ASSEMBLED SECTIONS AND THE ADDED LATERAL PIECES, PUT TOGETHER IN PLACE. OR, THE ENTIRE ENDWALL REINFORCEMENT ASSEMBLY A MAY BE PIECED TOGETHER IN THE END OF THE CAR.

**ENDWALL REINFORCEMENT A**

ENDWALL REINFORCEMENT (2 REQD, ONE AS SHOWN AND ONE OPPOSITE).

NOSE END BLOCK, 2" X 6" MATERIAL (DOUBLED) (2 REQD). NAIL THE FIRST PIECE TO THE LATERAL PIECE W/5-10d NAILS. LAMINATE THE SECOND PIECE TO THE FIRST W/5-10d NAILS. **NOTE:** DIMENSIONS AND ANGLE GIVEN ARE APPROXIMATE AND SHOULD BE FIELD CHECKED AT THE LOADING SITE TO INSURE A TIGHT LOAD AND ALSO TO INSURE THAT THE NOSE PLUGS OF THE BOMBS DO NOT CONTACT THE CAR SIDE WALL OR DUNNAGE.



LATERAL PIECE, 2" X 6" MATERIAL (1 REQD).

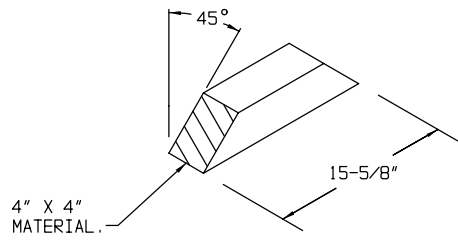
CAR WIDTH MINUS 3" OR CAR WIDTH MINUS 6"

STEEL STRAPPING, 5/8" X .020" BY LENGTH TO SUIT (2 REQD PER ASSEMBLY). SEAL WITH ONE SEAL PER STRAP.

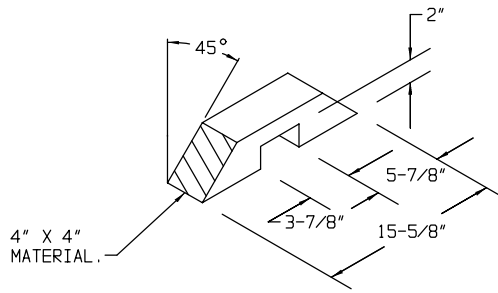
BASE END BLOCK, 2" X 6" BY CUT TO FIT (TRIPLED) (2 REQD). NAIL THE FIRST PIECE TO THE LATERAL PIECE W/3-10d NAILS. NAIL EACH ADDITIONAL PIECE IN A LIKE MANNER.

**ANTI-SWAY BRACE ASSEMBLY**

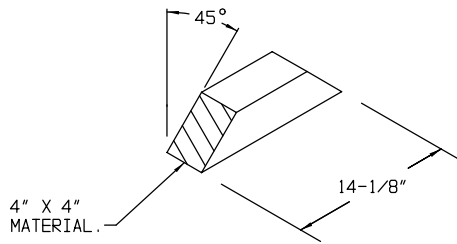
ASSEMBLIES WHICH ARE TO FIT BETWEEN THE DOOR SPANNERS, PIECES MARKED ②, WILL BE CAR WIDTH MINUS 6".



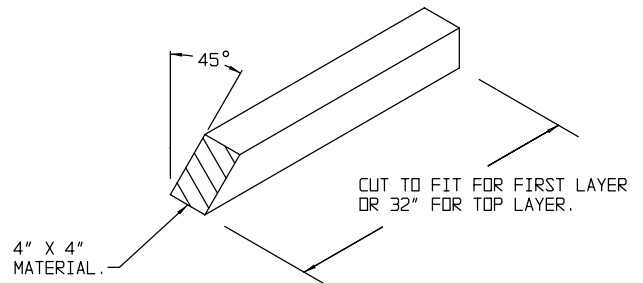
BEVEL BLOCK A



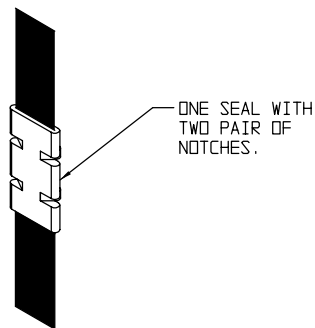
BEVEL BLOCK B



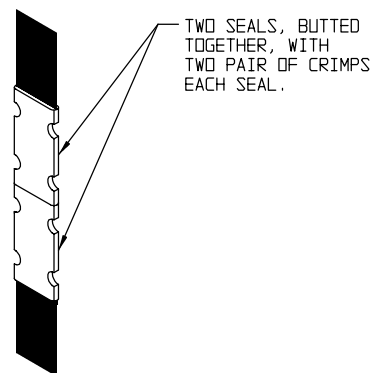
BEVEL BLOCK C



BEVEL BLOCK D



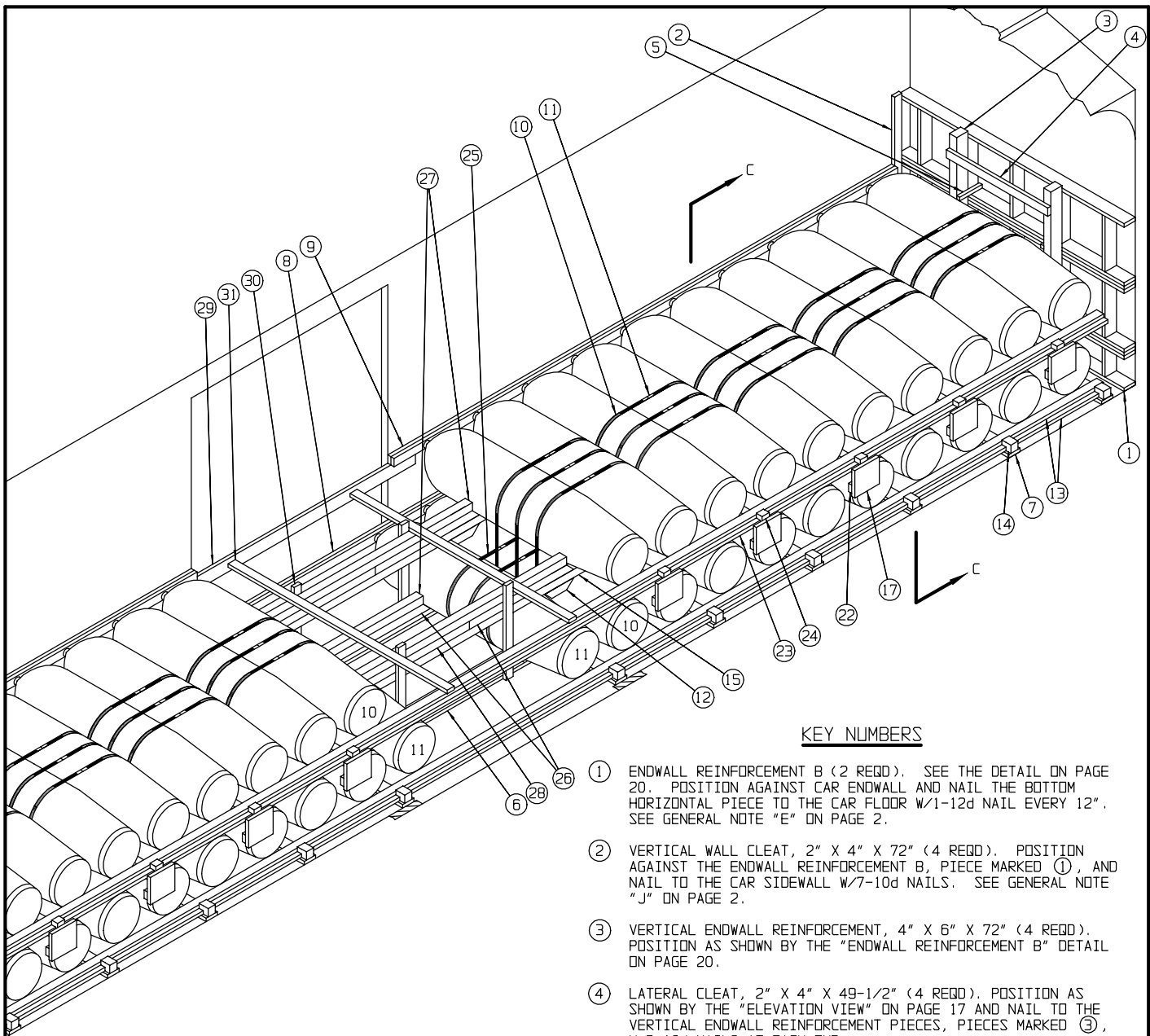
STRAP JOINT A  
METHOD OF SECURING A STRAP JOINT WHEN USING A NOTCH-TYPE SEALER.



STRAP JOINT B  
METHOD OF SECURING A STRAP JOINT WHEN USING A CRIMP-TYPE SEALER.

END-OVER-END LAP JOINT DETAILS

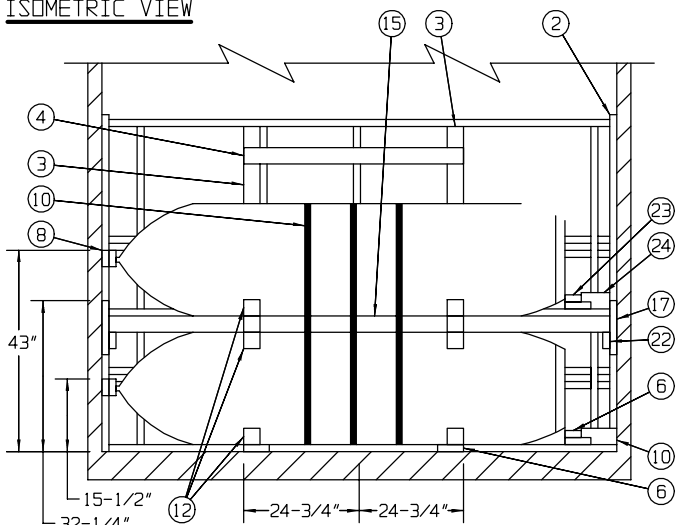
DETAILS



**KEY NUMBERS**

- ① ENDWALL REINFORCEMENT B (2 REQD). SEE THE DETAIL ON PAGE 20. POSITION AGAINST CAR ENDWALL AND NAIL THE BOTTOM HORIZONTAL PIECE TO THE CAR FLOOR W/1-12d NAIL EVERY 12". SEE GENERAL NOTE "E" ON PAGE 2.
- ② VERTICAL WALL CLEAT, 2" X 4" X 72" (4 REQD). POSITION AGAINST THE ENDWALL REINFORCEMENT B, PIECE MARKED ①, AND NAIL TO THE CAR SIDEWALL W/7-10d NAILS. SEE GENERAL NOTE "J" ON PAGE 2.
- ③ VERTICAL ENDWALL REINFORCEMENT, 4" X 6" X 72" (4 REQD). POSITION AS SHOWN BY THE "ENDWALL REINFORCEMENT B" DETAIL ON PAGE 20.
- ④ LATERAL CLEAT, 2" X 4" X 49-1/2" (4 REQD). POSITION AS SHOWN BY THE "ELEVATION VIEW" ON PAGE 17 AND NAIL TO THE VERTICAL ENDWALL REINFORCEMENT PIECES, PIECES MARKED ③, W/3-10d NAILS AT EACH END.
- ⑤ CLEAT, 2" X 2" X 12" (8 REQD). NAIL TO THE ENDWALL REINFORCEMENT B AND THE VERTICAL ENDWALL REINFORCEMENT PIECES, PIECES MARKED ① AND ③, RESPECTIVELY, W/2-10d NAILS AT EACH JOINT.
- ⑥ FLOOR STRINGER, 2" X 6" X 48'-8" (REF) (2 REQD). SEE "SECTION C-C" AT LEFT FOR LOCATION DIMENSIONS. NAIL TO THE CAR FLOOR W/1-16d NAIL EVERY 12". RANDOM LENGTH MATERIAL MAY BE USED. STAGGER JOINTS IN ADJACENT PIECES AT LEAST 24". SEE GENERAL NOTE "Q" ON PAGE 2.
- ⑦ FLOOR STRINGER BRACE, 2" X 6" BY CUT TO FIT BETWEEN A FLOOR STRINGER, PIECE MARKED ⑥, AND A CAR SIDEWALL (24 REQD). NAIL TO THE CAR FLOOR W/5-16d NAILS.
- ⑧ SIDEWALL REINFORCEMENT/DOOR SPANNER, 2" X 4" X 49'-0" (REF) (DOUBLED) (1 REQD). POSITION 15-1/2" ABOVE THE CAR FLOOR AS SHOWN BY THE "SECTION C-C" VIEW. NAIL THE FIRST PIECE TO THE CAR SIDEWALL W/1-10d NAIL EVERY 12". LAMINATE THE SECOND PIECE TO THE FIRST W/1-10d NAIL EVERY 12". RANDOM LENGTH MATERIAL MAY BE USED.
- ⑨ SIDEWALL REINFORCEMENT, 2" X 4" X 19'-6" (DOUBLED) (2 REQD). POSITION ABOVE THE CAR FLOOR AS SHOWN BY THE "SECTION C-C" VIEW. NAIL THE FIRST PIECE TO THE CAR SIDEWALL W/1-10d NAIL EVERY 12". LAMINATE THE SECOND PIECE IN A LIKE MANNER. RANDOM LENGTH MATERIAL MAY BE USED.

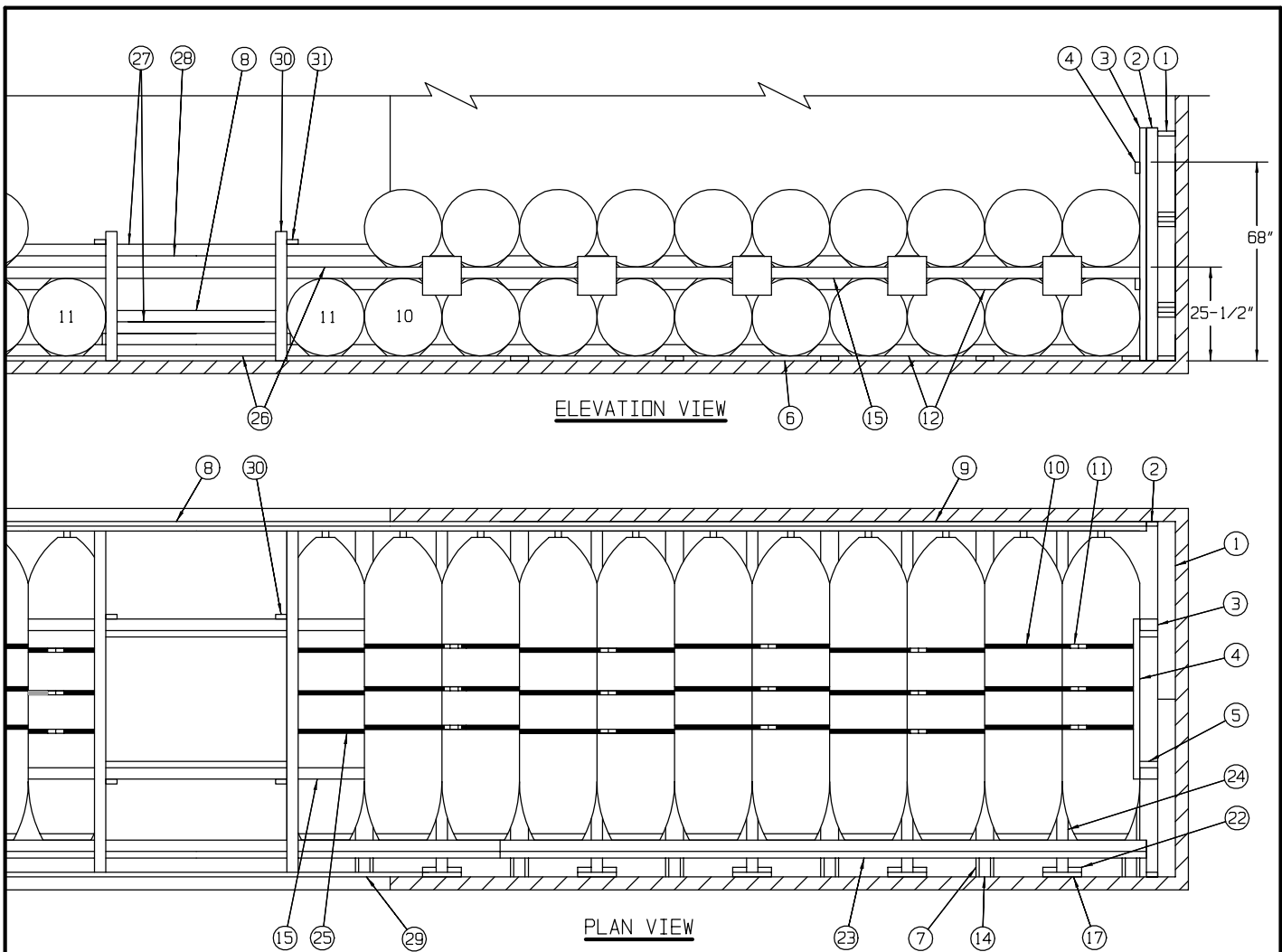
**ISOMETRIC VIEW**



**SECTION C-C**

(KEY NUMBERS CONTINUED ON PAGE 18)





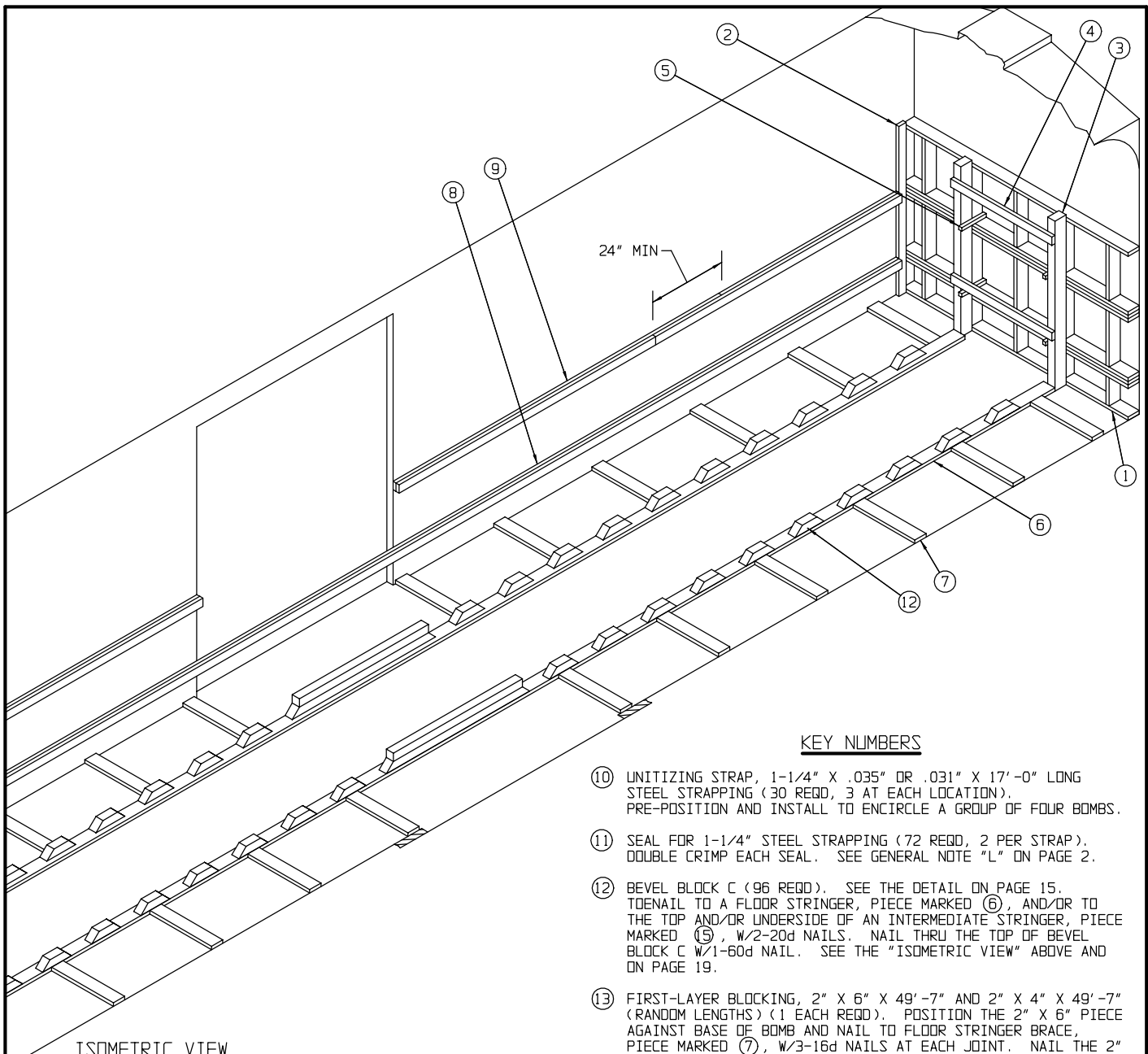
**SPECIAL NOTES:**

1. A 50'-6" LONG BY 9'-2" WIDE CONVENTIONAL BOXCAR EQUIPPED WITH 8'-0" WIDE DOOR OPENINGS IS SHOWN. WIDER CARS, CARS OF OTHER LENGTHS, AND CARS HAVING WIDER DOOR OPENINGS CAN BE USED.
2. A CAR EQUIPPED WITH 8'-0" WIDE SLIDING DOORS IS SHOWN. THE PROCEDURES ARE ALSO APPLICABLE FOR CARS EQUIPPED WITH PLUG TYPE DOORS.
3. ALL SPLICES IN ADJACENT FLOOR STRINGERS, PIECES MARKED ⑥, SIDEWALL REINFORCEMENT PIECES, PIECES MARKED ⑧, THE FIRST-LAYER BLOCKING, PIECE MARKED ⑫, THE INTERMEDIATE STRINGERS, PIECES MARKED ⑭, AND THE SECOND-LAYER BLOCKING, PIECE MARKED ⑳, SHOULD BE A MINIMUM OF 24" APART.
4. PROGRESSIVE LOADING VIEWS ARE SHOWN ON PAGES 18 AND 19.
5. THE DEPICTED LOAD CAN BE INCREASED TO SUIT THE QUANTITY TO BE SHIPPED IF THE LOAD LIMIT OF THE CAR PERMITS. ONE BOMB CAN BE ADDED IN EITHER OR BOTH ENDS OF THE CAR BY STRAPPING THE ADDED BOMBS IN THE SECOND LAYER TO THE LONGITUDINALLY ADJACENT BOMBS WITH ADDITIONAL PIECES MARKED ㉕. ADJUST THE QUANTITIES OF PIECES MARKED ⑫. CHANGE PIECE MARKED ⑨ TO EXTEND ACROSS THE DOOR OPENING. ADJUST THE LENGTHS OF PIECES MARKED ㉗ AND ㉙.

BILL OF MATERIAL		
LUMBER	LINEAR FEET	BOARD FEET
2" X 2"	8	3
2" X 4"	545	364
2" X 6"	473	473
2" X 12"	20	40
4" X 4"	307	410
4" X 6"	24	48
NAILS	NO. REQD	POUNDS
10d (3")	853	13-1/4
12d (3-1/4")	96	1-3/4
16d (3-1/2")	630	13-3/4
20d (4")	338	12-1/4
40d (5")	132	8
60d (6")	182	18-1/4
STEEL STRAPPING, 1-1/4" -- 588' REQD ---- 84 LBS		
SEAL FOR 1-1/4" STRAPPING -- 72 REQD ---- 3 LBS		

**LOAD AS SHOWN**

ITEM	QUANTITY	WEIGHT (APPROX)
BOMBS	42	128,058 LBS
DUNNAGE		2,831 LBS
TOTAL WEIGHT		130,889 LBS (APPROX)



ISOMETRIC VIEW

(KEY NUMBERS CONTINUED)

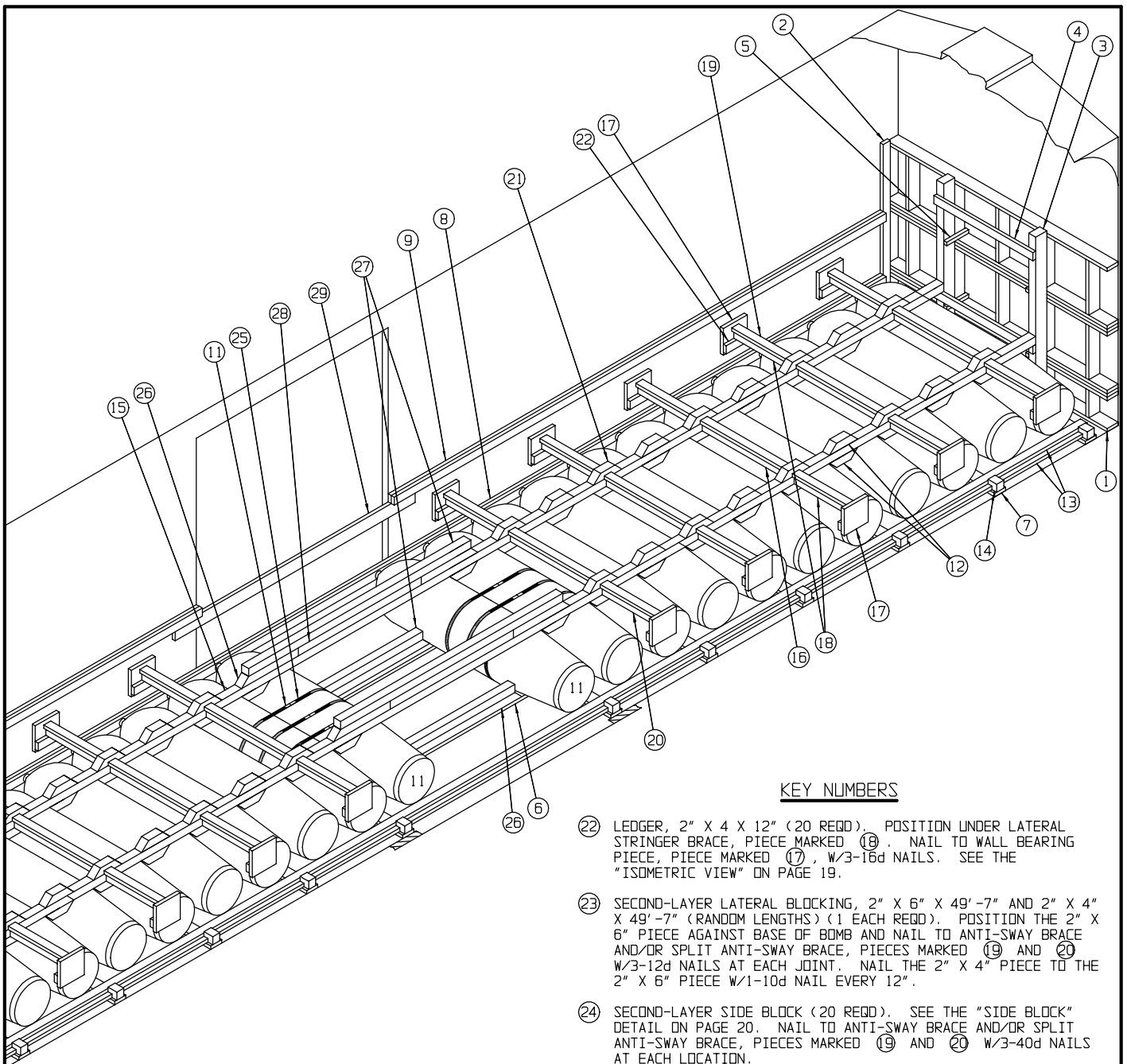
- ⑱ ANTI-SWAY BRACE, 2" X 4" BY CAR WIDTH MINUS 3" (8 REQD). CENTER ON INTERMEDIATE STRINGER BRACE, PIECE MARKED ⑯, AND LATERAL STRINGER BRACES, PIECES MARKED ⑲. NAIL TO THE INTERMEDIATE STRINGERS, PIECES MARKED ⑮ W/2-16d NAILS AT EACH LOCATION. NAIL TO PIECES MARKED ⑮ AND ⑲ W/1-10d NAIL EVERY 6". SEE THE "ISOMETRIC VIEW" ON PAGE 19.
- ⑳ SPLIT ANTI-SWAY BRACE, 2" X 4" BY CUT TO EXTEND FROM THE INSIDE EDGE OF AN INTERMEDIATE STRINGER, PIECE MARKED ⑮, TO A WALL BEARING PIECE, PIECE MARKED ⑰ (4 REQD). CENTER ON LATERAL STRINGER BRACE, PIECE MARKED ⑲. NAIL TO PIECE MARKED ⑮ W/2-16d NAILS AND NAIL TO PIECE MARKED ⑰ W/1-10d NAIL EVERY 6". SEE THE "ISOMETRIC VIEW" ON PAGE 19.
- ㉑ BEVEL BLOCK E (20 REQD). SEE THE DETAIL ON PAGE 20. POSITION OVER ANTI-SWAY BRACE AND/OR SPLIT ANTI-SWAY BRACE, PIECES MARKED ⑲ AND ⑳. TOENAIL TO AN INTERMEDIATE STRINGER, PIECE MARKED ⑮, W/2-20d NAILS AND NAIL THRU THE TOP OF BEVEL BLOCK E W/1-60d NAIL.

(KEY NUMBERS CONTINUED ON PAGE 19)

KEY NUMBERS

- ⑩ UNITIZING STRAP, 1-1/4" X .035" OR .031" X 17'-0" LONG STEEL STRAPPING (30 REQD, 3 AT EACH LOCATION). PRE-POSITION AND INSTALL TO ENIRCLE A GROUP OF FOUR BOMBS.
- ⑪ SEAL FOR 1-1/4" STEEL STRAPPING (72 REQD, 2 PER STRAP). DOUBLE CRIMP EACH SEAL. SEE GENERAL NOTE "L" ON PAGE 2.
- ⑫ BEVEL BLOCK C (96 REQD). SEE THE DETAIL ON PAGE 15. TOENAIL TO A FLOOR STRINGER, PIECE MARKED ⑥, AND/OR TO THE TOP AND/OR UNDERSIDE OF AN INTERMEDIATE STRINGER, PIECE MARKED ⑮, W/2-20d NAILS. NAIL THRU THE TOP OF BEVEL BLOCK C W/1-60d NAIL. SEE THE "ISOMETRIC VIEW" ABOVE AND ON PAGE 19.
- ⑬ FIRST-LAYER BLOCKING, 2" X 6" X 49'-7" AND 2" X 4" X 49'-7" (RANDOM LENGTHS) (1 EACH REQD). POSITION THE 2" X 6" PIECE AGAINST BASE OF BOMB AND NAIL TO FLOOR STRINGER BRACE, PIECE MARKED ⑦, W/3-16d NAILS AT EACH JOINT. NAIL THE 2" X 4" PIECE TO THE 2" X 6" PIECE W/1-10d NAIL EVERY 12".
- ⑭ FIRST-LAYER SIDE BLOCK (24 REQD). SEE THE "SIDE BLOCK" DETAIL ON PAGE 20. NAIL TO FLOOR STRINGER BRACE, PIECE MARKED ⑦, W/3-40d NAILS AT EACH LOCATION.
- ⑮ INTERMEDIATE STRINGER, 4" X 4" X 48'-8" (REF) (2 REQD). POSITION AS SHOWN. RANDOM LENGTH PIECES MAY BE USED. STAGGER JOINTS OF Laterally ADJACENT PIECES AT LEAST 24". WHEREVER A JOINT IS MADE, APPLY A 2" X 4" X 24" SPLICE PIECE TO EACH SIDE OF THE STRINGER. NAIL W/6-12d NAILS.
- ⑯ INTERMEDIATE STRINGER BRACE, 2" X 4" X 42'-1/2" (10 REQD). POSITION AS SHOWN IN THE "ISOMETRIC VIEW" ON PAGE 19. TOENAIL TO THE INTERMEDIATE STRINGERS, PIECES MARKED ⑮, W/2-16d NAILS AT EACH END.
- ⑰ WALL BEARING PIECE, 2" X 12" X 12" (20 REQD). POSITION AT 32'-1/4" AS SHOWN BY THE "SECTION C-C" VIEW. NAIL TO THE CAR SIDEWALL W/8-10d NAILS. SEE THE "ISOMETRIC VIEW" ON PAGE 19.
- ⑲ LATERAL STRINGER BRACE, 2" X 4" BY CUT TO FIT BETWEEN AN INTERMEDIATE STRINGER, PIECE MARKED ⑮, AND A WALL BEARING PIECE, PIECE MARKED ⑰ (20 REQD). TOENAIL TO PIECES MARKED ⑮ AND ⑰ W/2-16d NAILS AT EACH END. SEE THE "ISOMETRIC VIEW" ON PAGE 19.

(CONTINUED AT LEFT)



ISOMETRIC VIEW

(KEY NUMBERS CONTINUED)

- 29 DOOR SPANNER, 2" X 6" BY DOOR OPENING WIDTH PLUS 24" (2 REQD). NAIL TO CAR SIDEWALL W/5-10d NAILS AT EACH END. THESE PIECES PROVIDE BEARING SURFACE FOR THE LATERAL STRUT BRACING, PIECES MARKED 31.
- 30 VERTICAL STRUT BRACING, 2" X 4" X 40" (4 REQD). NAIL TO THE FLOOR STRINGER, PIECE MARKED 6, THE INTERMEDIATE STRINGER, PIECE MARKED 15, EACH BEVEL BLOCK D, PIECE MARKED 26, THE UPPER CENTER BLOCK, PIECE MARKED 27, AND THE CENTER BLOCK, PIECE MARKED 28, W/2-10d NAILS AT EACH JOINT. SEE THE "ISOMETRIC VIEW" ON PAGE 16.
- 31 LATERAL STRUT BRACING, 2" X 4" BY CAR WIDTH MINUS 3" (2 REQD). NAIL TO THE UPPER CENTER BLOCKS, PIECES MARKED 27, W/3-10d NAILS AT EACH JOINT. SEE THE "ISOMETRIC VIEW" ON PAGE 16.

KEY NUMBERS

- 22 LEDGER, 2" X 4" X 12" (20 REQD). POSITION UNDER LATERAL STRINGER BRACE, PIECE MARKED 19. NAIL TO WALL BEARING PIECE, PIECE MARKED 17, W/3-16d NAILS. SEE THE "ISOMETRIC VIEW" ON PAGE 19.
- 23 SECOND-LAYER LATERAL BLOCKING, 2" X 6" X 49'-7" AND 2" X 4" X 49'-7" (RANDOM LENGTHS) (1 EACH REQD). POSITION THE 2" X 6" PIECE AGAINST BASE OF BOMB AND NAIL TO ANTI-SWAY BRACE AND/OR SPLIT ANTI-SWAY BRACE, PIECES MARKED 19 AND 21 W/3-12d NAILS AT EACH JOINT. NAIL THE 2" X 4" PIECE TO THE 2" X 6" PIECE W/1-10d NAIL EVERY 12".
- 24 SECOND-LAYER SIDE BLOCK (20 REQD). SEE THE "SIDE BLOCK" DETAIL ON PAGE 20. NAIL TO ANTI-SWAY BRACE AND/OR SPLIT ANTI-SWAY BRACE, PIECES MARKED 19 AND 20 W/3-40d NAILS AT EACH LOCATION.
- 25 UNITIZING STRAP, 1-1/4" X .035" OR .031" X 13'-0" LONG STEEL STRAPPING (6 REQD, 3 AT EACH LOCATION). PRE-POSITION TO ENIRCLE THE BOMB NUMBER 11 IN THE BOTTOM LAYER AND THE LOWER BOMB IN STACK NUMBER 10.
- 26 BEVEL BLOCK D (8 REQD, 4 PIECES CUT TO FIT FOR THE FIRST LAYER, 4 PIECES 32" LONG FOR THE SECOND LAYER. SEE THE DETAIL ON PAGE 15. NAIL TO A FLOOR STRINGER, PIECE MARKED 6, W/5-60d NAILS AND TOENAIL W/5-20d NAILS. NAIL TO AN INTERMEDIATE STRINGER, PIECE MARKED 15, W/3-60d NAILS AND TOENAIL W/3-20d NAILS.
- 27 UPPER CENTER BLOCK, 4" X 4" BY CUT TO FIT BETWEEN BOMBS AT CENTER OF CAR (4 REQD). NAIL TO BEVEL BLOCK D, PIECES MARKED 26 W/8-60d NAILS FOR THE LOWER PIECES. NAIL TO BEVEL BLOCK D AND/OR CENTER BLOCK, PIECE MARKED 28, W/1-60d NAIL EVERY 12" FOR THE UPPER PIECES. TOENAIL EACH PIECE TO THE SAME PIECES W/1-20d NAIL EVERY 12".
- 28 CENTER BLOCK, 4" X 4" BY CUT TO FIT BETWEEN BEVEL BLOCKS D, PIECES MARKED 26, IN THE SECOND LAYER (2 REQD). NAIL TO AN INTERMEDIATE STRINGER, PIECE MARKED 15, W/1-60d NAIL EVERY 12". TOENAIL W/1-20d NAIL EVERY 12".

(KEY NUMBERS CONTINUED AT LEFT)

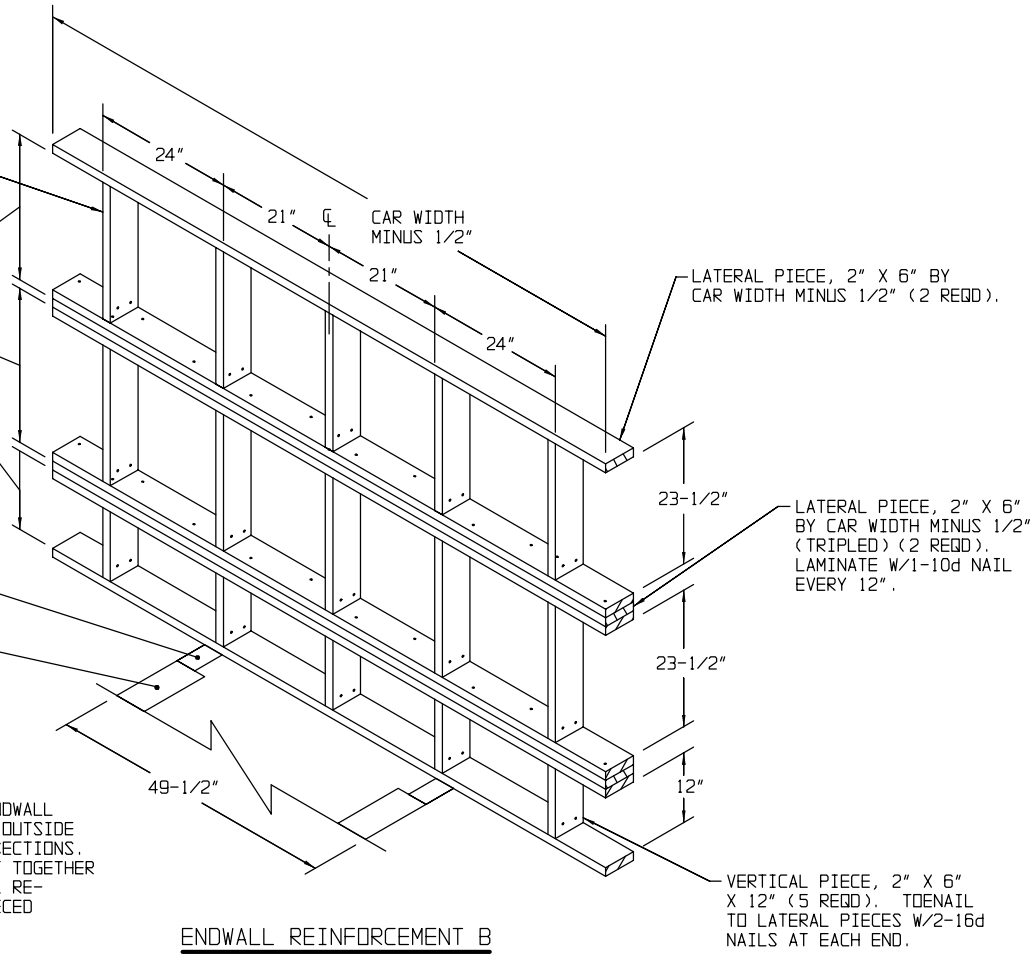
VERTICAL PIECE, 2" X 6"  
X 23-1/2" (10 REQD).  
TOENAIL TO LATERAL  
PIECES W/2-16d NAILS  
AT EACH END.

SEE "NOTE \*"  
BELOW.

LOCATION FOR PIECE MARKED  
③ ON PAGE 16.

LOCATION FOR PIECE MARKED  
⑥ ON PAGE 16.

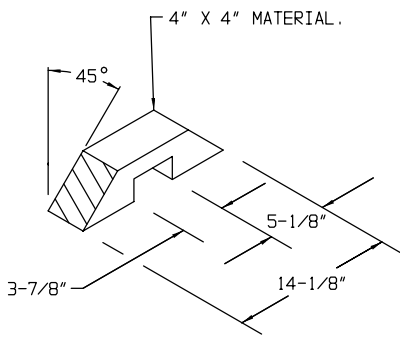
NOTE \*:  
THE INDICATED PORTIONS OF THE ENDWALL  
REINFORCEMENT B MAY BE ASSEMBLED OUTSIDE  
THE CAR AND THESE PRE-ASSEMBLED SECTIONS,  
AND THE ADDED LATERAL PIECES, PUT TOGETHER  
IN PLACE. OR, THE ENTIRE ENDWALL RE-  
INFORCEMENT ASSEMBLY B MAY BE PIECED  
TOGETHER IN THE END OF THE CAR.



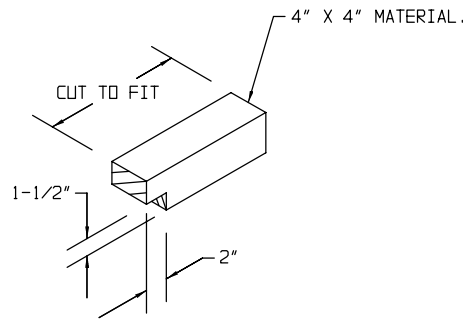
**ENDWALL REINFORCEMENT B**

ENDWALL REINFORCEMENT B (2 REQD, ONE AS  
SHOWN AND ONE OPPOSITE). PIECE MARKED  
① ON PAGE 16.

VERTICAL PIECE, 2" X 6"  
X 12" (5 REQD). TOENAIL  
TO LATERAL PIECES W/2-16d  
NAILS AT EACH END.

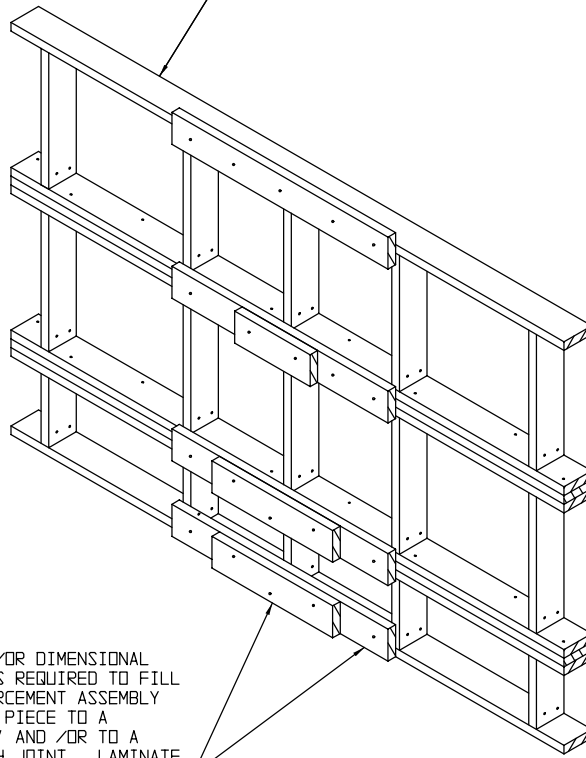


**BEVEL BLOCK E**



**SIDE BLOCK**

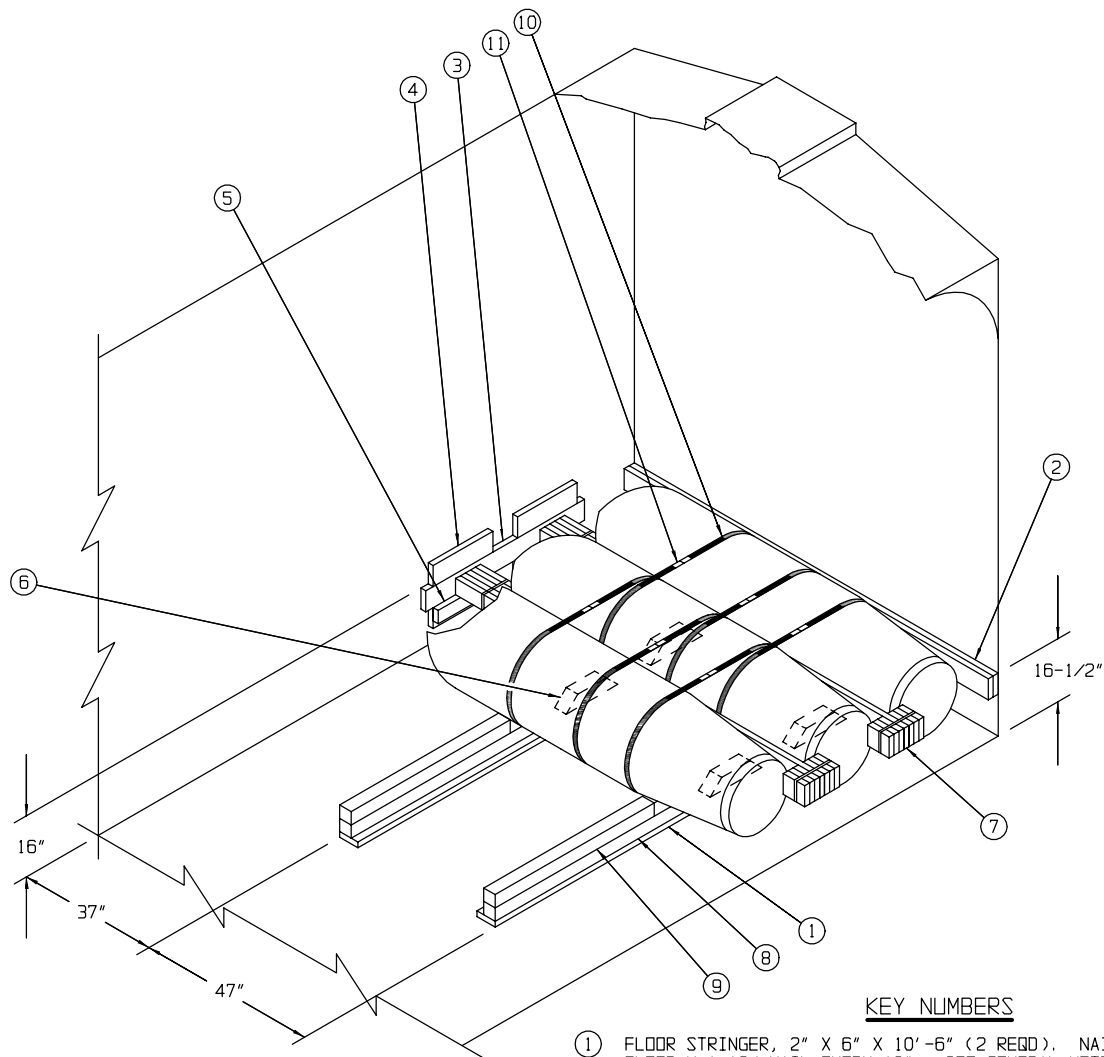
ENDWALL REINFORCEMENT A IS SHOWN. THE PROCEDURES ARE ALSO APPLICABLE FOR ENDWALL REINFORCEMENT B.



SHIM MATERIAL, 6" WIDE PLYWOOD AND/OR DIMENSIONAL LUMBER OF A THICKNESS AND LENGTH AS REQUIRED TO FILL THE VOID BETWEEN AN ENDWALL REINFORCEMENT ASSEMBLY AND A CAR ENDWALL. NAIL THE FIRST PIECE TO A LATERAL PIECE W/1-10d NAIL EVERY 6" AND /OR TO A VERTICAL PIECE W/1-10d NAIL AT EACH JOINT. LAMINATE EACH ADDED PIECE W/1 APPLICABLY SIZED NAIL EVERY 6".

BULKHEAD GATE B

FOR USE WITH UNPALLETIZED BOMBS.



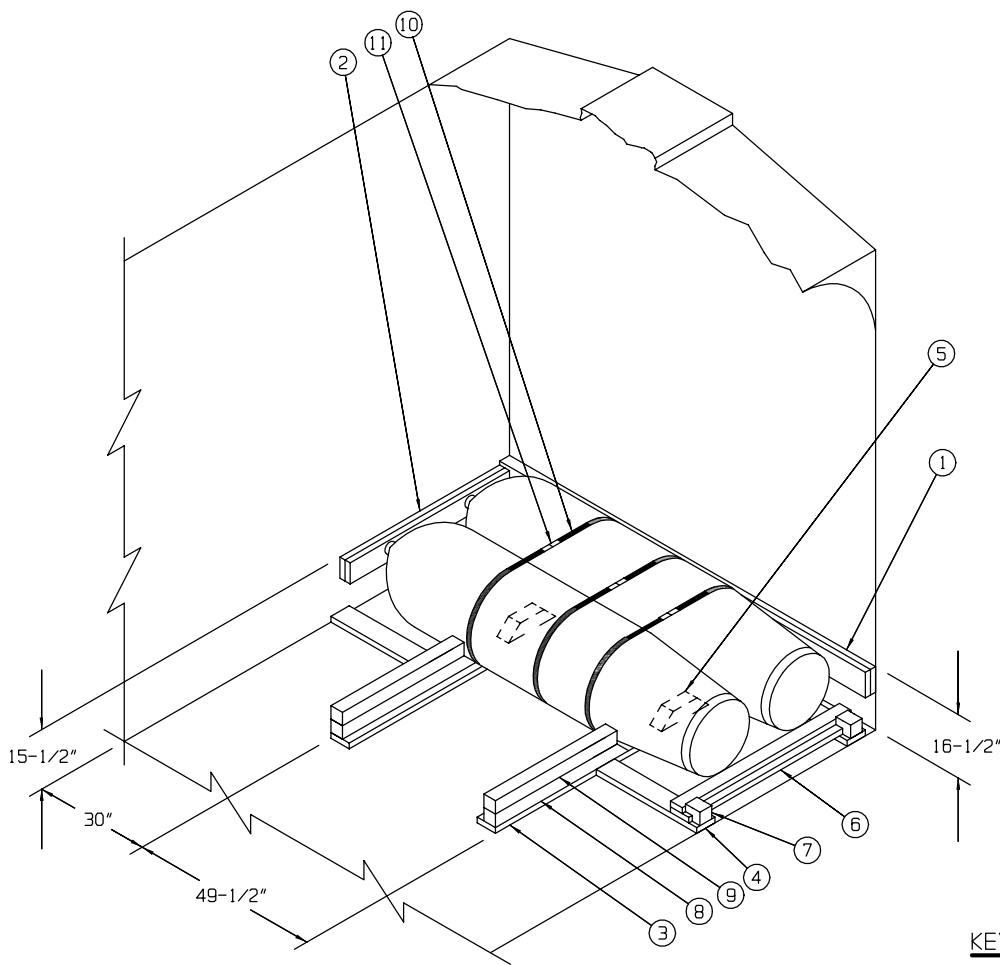
ISOMETRIC VIEW

KEY NUMBERS

- ① FLOOR STRINGER, 2" X 6" X 10'-6" (2 REQD). NAIL TO THE CAR FLOOR W/1-16d NAIL EVERY 12". SEE GENERAL NOTES "J" AND "G" ON PAGE 2.
- ② ENDWALL REINFORCEMENT, 2" X 6" BY CAR WIDTH MINUS 1/2" (DOUBLED) (1 REQD). POSITION 16-1/2" ABOVE CAR FLOOR. NAIL THE FIRST PIECE TO THE CAR ENDWALL W/1-10d NAIL EVERY 12". NAIL THE SECOND PIECE TO THE FIRST IN A LIKE MANNER.
- ③ SIDEWALL REINFORCEMENT, 2" X 6" X 48" (2 REQD). POSITION AT 16" ABOVE CAR FLOOR AND NAIL TO THE CAR SIDEWALL W/5-10d NAILS.
- ④ WALL CLEAT, 2" X 6" X 18" (8 REQD). NAIL TO THE CAR SIDEWALL W/5-10d NAILS.
- ⑤ SUPPORT PIECE, 2" X 4" X 18" (4 REQD). NAIL TO A WALL CLEAT, PIECE MARKED ④, W/5-10d NAILS.
- ⑥ BEVEL BLOCK A (4 REQD). SEE THE DETAIL ON PAGE 15. NAIL TO A FLOOR STRINGER, PIECE MARKED ①, W/1-60d NAIL. TOENAIL W/2-20d NAILS.
- ⑦ ANTI-SWAY BRACE ASSEMBLY (2 REQD AT CAR WIDTH MINUS 3"). SEE THE DETAIL ON PAGE 14.
- ⑧ BEVEL BLOCK, 4" X 4" X 54" (2 REQD). BEVEL ONE END AT A 45° ANGLE AND POSITION AGAINST THE SURFACE OF THE LAST BOMB. NAIL TO A FLOOR STRINGER, PIECE MARKED ①, W/9-60d NAILS. TOENAIL W/9-20d NAILS.
- ⑨ BACK-UP CLEAT, 4" X 4" X 48" (2 REQD). NAIL TO A BEVEL BLOCK, PIECE MARKED ⑧, W/9-60d NAILS. TOENAIL W/9-20d NAILS.
- ⑩ UNITIZING STRAP, 1-1/4" X .035" DR .031" X 13'-0" (6 REQD, 3 AT EACH LOCATION). PRE-POSITION AND INSTALL TO ENCIRCLE TWO BOMBS, AS SHOWN.
- ⑪ SEAL FOR 1-1/4" STEEL STRAPPING (12 REQD, 2 PER STRAP). DOUBLE CRIMP EACH SEAL. SEE GENERAL NOTE "L" ON PAGE 2.

SPECIAL NOTES:

1. A 3-UNIT LOAD OF 3,000-POUND BOMBS HAVING CONICAL NOSE PLUGS IS SHOWN IN A 9'-2" WIDE CONVENTIONAL TYPE BOXCAR. WIDER CARS CAN BE USED.
2. TWO BEVEL BLOCKS AND TWO BACK-UP CLEATS, PIECES MARKED ⑧ AND ⑨, ARE ADEQUATE FOR RETAINING A MAXIMUM LCL LOAD OF NOT MORE THAN THREE BOMBS.



ISOMETRIC VIEW

KEY NUMBERS

- ① ENDWALL REINFORCEMENT, 2" X 6" BY CAR WIDTH MINUS 1/2" (DOUBLED) (1 REQD). POSITION AS SHOWN. NAIL THE FIRST PIECE TO THE CAR ENDWALL W/1-10d NAIL EVERY 12".
- ② SIDEWALL REINFORCEMENT, 2" X 4" X 48" (DOUBLED) (1 REQD). NAIL THE FIRST PIECE TO THE CAR SIDEWALL W/5-10d NAILS. NAIL THE SECOND PIECE TO THE FIRST IN A LIKE MANNER.
- ③ FLOOR STRINGER, 2" X 6" X 7'-0" (2 REQD). POSITION AS SHOWN. NAIL TO THE CAR FLOOR W/1-16d NAIL EVERY 12". SEE GENERAL NOTES "J" AND "G" ON PAGE 2.
- ④ FLOOR STRINGER BRACE, 2" X 6" BY CUT TO FIT BETWEEN FLOOR STRINGER, PIECE MARKED ③, AND A CAR SIDEWALL (4 REQD). NAIL TO THE CAR FLOOR W/5-16d NAILS.
- ⑤ BEVEL BLOCK C (2 REQD). SEE THE DETAIL ON PAGE 15. TOENAIL TO A FLOOR STRINGER, PIECE MARKED ③, W/2-20d NAILS AND NAIL THRU THE TOP W/1-60d NAIL.
- ⑥ LATERAL BLOCKING, 2" X 6" X 48" AND 2" X 4" X 48" (1 EACH REQD). POSITION THE 2" X 6" PIECE AGAINST BASE OF BOMB AND NAIL TO FLOOR STRINGER BRACE, PIECE MARKED ④, W/3-16d NAILS AT EACH END. NAIL THE 2" X 4" PIECE TO THE 2" X 6" PIECE W/5-10d NAILS.
- ⑦ SIDE BLOCK (2 REQD). SEE THE DETAIL ON PAGE 20. NAIL TO THE FLOOR STRINGER BRACE, PIECE MARKED ④, W/3-40d NAILS.
- ⑧ BEVEL BLOCK, 4" X 4" X 42" (2 REQD). BEVEL ONE END AT A 45° ANGLE AND POSITION AGAINST THE SURFACE OF THE LAST BOMB. NAIL TO THE FLOOR STRINGER, PIECE MARKED ③, W/6-60d NAILS. TOENAIL W/6-20d NAILS.
- ⑨ BACK-UP CLEAT, 4" X 4" X 36" (2 REQD). NAIL TO BEVEL BLOCK, PIECE MARKED ⑧, W/6-60d NAILS. TOENAIL W/6-20d NAILS.
- ⑩ UNITIZING STRAP, 1-1/4" X .035" OR .031" X 13'-0" LONG STEEL STRAPPING (3 REQD).
- ⑪ SEAL FOR 1-1/4" STEEL STRAPPING (6 REQD, 2 PER STRAP). DOUBLE CRIMP. SEE GENERAL NOTE "L" ON PAGE 2.

SPECIAL NOTES:

1. A 2-UNIT LOAD IS SHOWN IN A 9'-2" WIDE BOXCAR. A WIDER CAR CAN BE USED.
2. TWO BEVEL BLOCKS AND TWO BACK-UP CLEATS, PIECES MARKED ⑧ AND ⑨, ARE ADEQUATE FOR RETAINING A MAXIMUM LCL LOAD OF NOT MORE THAN TWO BOMBS.

