

REV NO.1 APPROVED BY
 BUREAU OF EXPLOSIVES
M. R. Miller
 SUPERVISOR, MILITARY & INTERMODAL SERVICES
 DATE *12/2/81*

LOADING AND BRACING IN VAN TYPE TRAILERS OF PROPELLANTS PACKED IN FIBERBOARD DRUMS FOR TRAILER-ON-FLAT-CAR (TOFC) SHIPMENT[●]

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● SHIPMENTS ARE RESTRICTED TO TRAILER-ON-FLAT-CAR (TOFC) MOVEMENTS; SHIPMENTS BY CONTAINER-ON-FLAT-CAR (COFC) IS PROHIBITED.

THIS DRAWING, INCLUDING REVISION 1, SUPERSEDES DRAWING 19-48-4085-15N1000, DATED AUGUST 1969.

REVISIONS				DRAFTSMAN	PROJ. ENG.
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				U. S. ARMY DEFENSE AMMUNITION CENTER AND SCHOOL	
				U. S. ARMY DARCOM DRAWING	
				AUGUST 1981	
	CLASS	DIVISION	DRAWING	FILE	
	19	48	4085	15N1000	

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. THIS PROCEDURAL DRAWING IS APPLICABLE TO TRAILERS EQUIPPED WITH SPECIAL BULKHEAD BRACES AS SPECIFIED WITHIN THE BUREAU OF EXPLOSIVES PAMPHLET NO. 6C AND APPENDICES THERETO. FOR TOFC SHIPMENTS, ONLY RAILCARS WHICH ARE SPECIFIED BY THE BUREAU OF EXPLOSIVES PAMPHLET NO. 6C, OR THE AFOREMENTIONED APPENDICES, WILL BE USED. CAUTION: ONLY TRAILERS WILL BE USED FOR THE LOADING OF FIBERBOARD DRUMS. CONTAINERS (TRAILERS WHICH ARE REMOVED FROM THEIR CHASSIS FOR POSITIONING ON SPECIAL CONTAINER CARS FOR COFC SHIPMENT) MUST NOT BE USED.
- C. ALL LOADS SHOWN ARE BASED ON TRAILERS WHICH ARE 40'-0" LONG BY 7'-8-1/2" WIDE (INSIDE DIMENSION) WITH WOOD, WOOD AND METAL, OR METAL FLOORS. THE DELINEATED OUTLOADING PROCEDURES ARE ALSO APPLICABLE TO TRAILERS WHICH ARE EIGHTY-NINE INCHES (89") THRU NINETY-THREE INCHES (93") IN WIDTH.
- D. THE LOADS SHOWN ON PAGES 4 THRU 9 ARE BASED ON TRAILERS WHICH ARE EQUIPPED WITH SPECIAL BULKHEAD BRACES HAVING 35'-0" (420") BETWEEN THE BULKHEAD BOARDS. THESE LOADS REQUIRE THE USE OF 2" STEEL STRAPPING TO SECURE THE UPRIGHT BRACES.
- E. THE LOADS SHOWN ON PAGES 10 THRU 14 ARE BASED ON TRAILERS WHICH ARE EQUIPPED WITH SPECIAL BULKHEAD BRACES HAVING 34'-4" (412") BETWEEN THE BULKHEAD BOARDS. THESE LOADS REQUIRE THE USE OF 2" STEEL STRAPPING TO SECURE THE UPRIGHT BRACES.
- F. THE LOADS SHOWN ON PAGES 18 THRU 25 AND PAGES 32 AND 33 ARE BASED ON TRAILERS WHICH HAVE A BULKHEAD BUILT INTO THE FRONT WALL AND ARE EQUIPPED WITH A SPECIAL BULKHEAD BRACE AT THE REAR OF THE TRAILER. THE DISTANCE FROM THE FRONT WALL TO THE BULKHEAD BOARDS AT THE REAR IS 38'-6" (462"). STEEL STRAPPING IS NOT REQUIRED FOR THESE LOADS.
- G. DETAILS OF DRUM:
- DRUM DIMENSIONS (APPROX) --- 16" DIAMETER X 27" HIGH.
GROSS WEIGHT ----- VARIABLE FROM APPROXIMATELY
121 POUNDS TO 161 POUNDS.
- H. SELECTION OF A VEHICLE TO BE USED TO TRANSPORT THE DESIGNATED ITEM MUST COMPLY WITH AR 55-355, CHAPTER 213, FOR EXPLOSIVES AND OTHER DANGEROUS ARTICLES, IN FULL.
- J. THE GROSS WEIGHT AND AXLE DISTRIBUTION OF WEIGHT FOR A LOAD WILL BE THE RESPONSIBILITY OF THE CARRIER. THE CARRIER WILL ADVISE THE SHIPPER OF THE APPLICABLE LOADING REQUIREMENTS, AND THE SHIPPER WILL LOAD ACCORDINGLY. NOTICE: A SHIPMENT WILL BE POSITIONED IN A TRAILER CONSISTENT WITH THE WEIGHT LAWS OF THE STATES THROUGH WHICH THE TRAILER WILL BE TRANSPORTED BY HIGHWAY (MOTOR CARRIER).
- K. THE NUMBER OF DRUMS MAY BE ADJUSTED TO FIT THE SIZE OF THE TRAILER TO BE LOADED OR THE QUANTITY TO BE SHIPPED; HOWEVER, THE APPROVED METHODS SHOWN HEREIN MUST BE FOLLOWED AS CLOSELY AS POSSIBLE FOR BLOCKING, BRACING, AND STAYING OF THE DESIGNATED ITEM. SEE GENERAL NOTE "O".
- L. WHEN ANY STRAP IS SEALED, A MINIMUM OF TWO (2) SEALS (BUTTED TOGETHER) WITH TWO (2) PAIR OF CRIMPS PER SEAL MUST BE USED.
- M. DUNNAGE LUMBER SPECIFIED THROUGHOUT THIS PROCEDURAL DRAWING IS OF NOMINAL SIZE. FOR EXAMPLE, 2" X 4" MATERIAL IS ACTUALLY 1-5/8" THICK BY 3-5/8" WIDE OR 1-1/2" THICK BY 3-1/2" WIDE AND 2" X 6" MATERIAL IS ACTUALLY 1-5/8" THICK BY 5-5/8" WIDE OR 1-1/2" THICK BY 5-1/2" WIDE.
- N. PORTIONS OF THE TRAILER BODY DEPICTED WITHIN THIS PROCEDURAL DRAWING, SUCH AS ONE OF THE SIDEWALLS, HAVE NOT BEEN SHOWN IN THE LOAD VIEWS FOR CLARITY PURPOSES.
- O. A LOAD QUANTITY MAY BE DECREASED BY INSTALLING ADDITIONAL DIVISIONAL GATES WITHIN THE LOAD, THEREBY FORMING MORE, BUT SHORTER BAYS THAT REDUCE THE AVAILABLE LOADING AREA FOR DRUMS THROUGHOUT THE LENGTH OF A TRAILER. FOR THE SIZE DRUM DEPICTED, AN ADDED DIVISIONAL GATE WITHIN THE 5-5-5 PATTERN WILL INCREASE THE LOAD LENGTH BY APPROXIMATELY 3", AND AN ADDED GATE WITHIN THE 5-4-5 PATTERN WILL INCREASE THE LOAD LENGTH BY APPROXIMATELY 3-1/2". IF A DIVISIONAL GATE IS INSTALLED AT A LOCATION WHERE THERE WILL BE A 4-WIDE STACK ON EACH SIDE OF THE GATE, THE LOAD QUANTITY WILL BE DECREASED BY TWO (2) DRUMS. NOTE: A BAY MUST BE AT LEAST TWO (2) DRUM STACKS IN LENGTH SO THAT THE "NESTING" WILL PROVIDE FOR LATERAL STABILITY.
- P. FOR ADDITIONAL GUIDANCE, ATTENTION IS DIRECTED TO THE SPECIAL NOTES SECTIONS IMMEDIATELY ADJACENT TO THE DEPICTED OUTLOADING METHODS.
- Q. EVEN THOUGH THE LOADS SHOWN ARE BASED ON THE SPECIFIC DRUM DEPICTED ON PAGE 3, THE PRINCIPLES USED HEREIN (NESTED PATTERNS, LOAD DIVIDED INTO BAYS, ETC.) MAY BE APPLIED FOR SHIPMENT OF DRUMS OF A DIFFERENT SIZE. FOR PLANNING PURPOSES, A LOAD MUST CONTAIN FULL LAYERS, AND MUST NOT EXTEND ABOVE THE TOP OF THE BULKHEAD BOARDS. LIKEWISE, A BAY SHOULD NOT BE MORE THAN SIX (6) DRUM STACKS IN LENGTH, AND MUST NOT BE LESS THAN TWO (2) STACKS IN LENGTH.
- R. IT IS THE RESPONSIBILITY OF THE SHIPPER TO CHOOSE THE PROPER OUTLOADING PROCEDURES TO COINCIDE WITH THE TYPE AND/OR SIZE OF TRAILER EQUIPMENT FURNISHED FOR LOADING. FROM THE DEPICTED LOADS OR LOADING PATTERNS FOR THE PARTICULAR TYPE AND/OR SIZE OF TRAILER EQUIPMENT, THE SHIPPER MUST SELECT A LOADING PATTERN WHICH MOST NEARLY SATISFIES THE REQUIREMENTS FOR A SHIPMENT. THE IDEAL PATTERN SHOULD SATISFY THE QUANTITY TO BE SHIPPED AND BE WITHIN THE MAXIMUM GROSS WEIGHT AND AXLE DISTRIBUTION OF WEIGHT LIMITATIONS OF THE STATES THROUGH WHICH THE TRAILER WILL BE TRANSPORTED BY HIGHWAY (MOTOR CARRIER).

(CONTINUED AT RIGHT)

MATERIAL SPECIFICATIONS

LUMBER ----- : SEE TM 743-200-1, DUNNAGE LUMBER; FED SPEC MM-L-751.

NAILS ----- : COMMON, FED SPEC FF-N-105.

STRAPPING, STEEL : TYPE I OR IV, CLASS A OR B, FED SPEC QQ-5-781.

PLYWOOD, 1/4" - : GROUP B OR C, GRADE *A-C (EXTERIOR); FED SPEC NN-P-530.

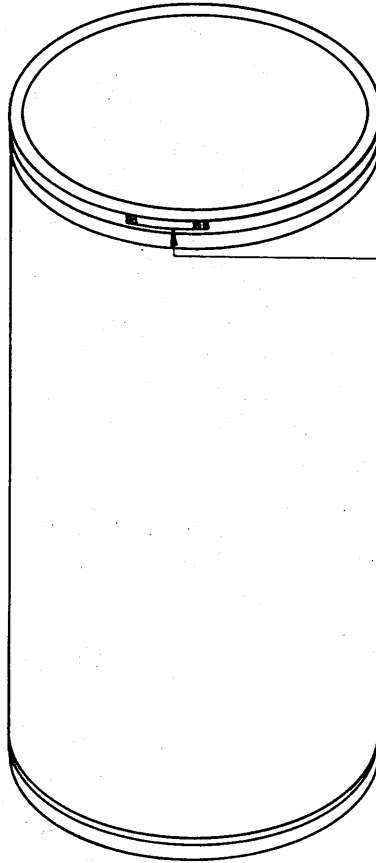
PLYWOOD, 1/2" - : GROUP B OR C, GRADE *C-C (EXTERIOR); FED SPEC NN-P-530.

* IF SPECIFIED GRADE IS NOT AVAILABLE, A BETTER EXTERIOR GRADE MAY BE SUBSTITUTED.

REVISIONS

REVISION NO. 1, DATED AUGUST 1981, CONSISTS OF:

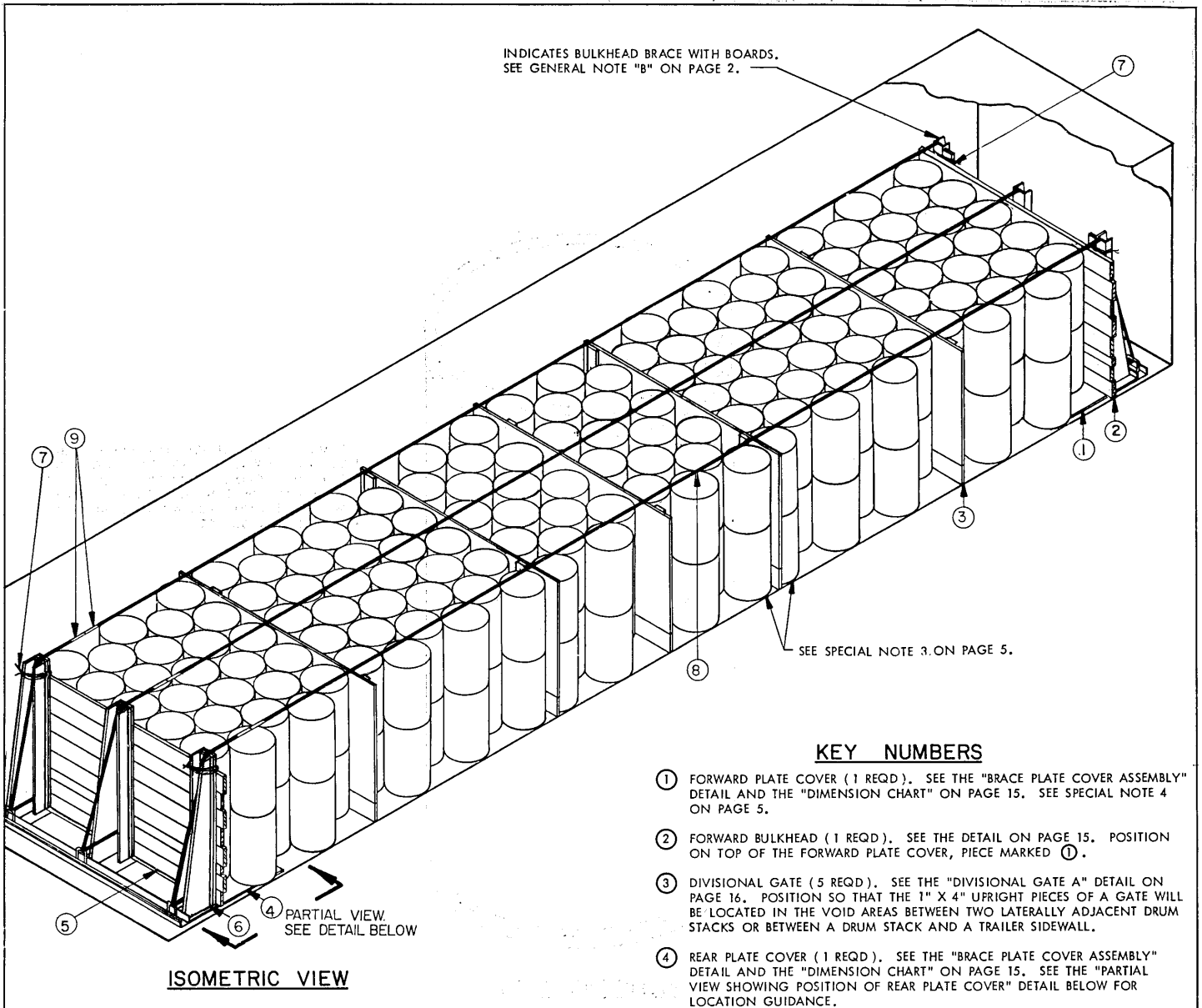
1. INCLUDING ADDITIONAL LOADING PATTERNS FOR TRAILERS HAVING 35'-0" BETWEEN BULKHEADS.
2. ADDING PROCEDURES FOR TRAILERS HAVING 34'-4" BETWEEN BULKHEADS.
3. ADDING PROCEDURES FOR TRAILERS HAVING 38'-6" BETWEEN BULKHEADS.



INDICATES LOCKING DEVICE ON COVER LOCKING RING. A DRUM WILL BE POSITIONED IN A TRAILER SO THAT THE LOCKING DEVICE WILL BE IN A VOID AREA, AND NOT IN CONTACT WITH AN ADJACENT DRUM, A TRAILER SIDEWALL, A DIVISIONAL GATE, OR THE BULKHEAD BOARDS.

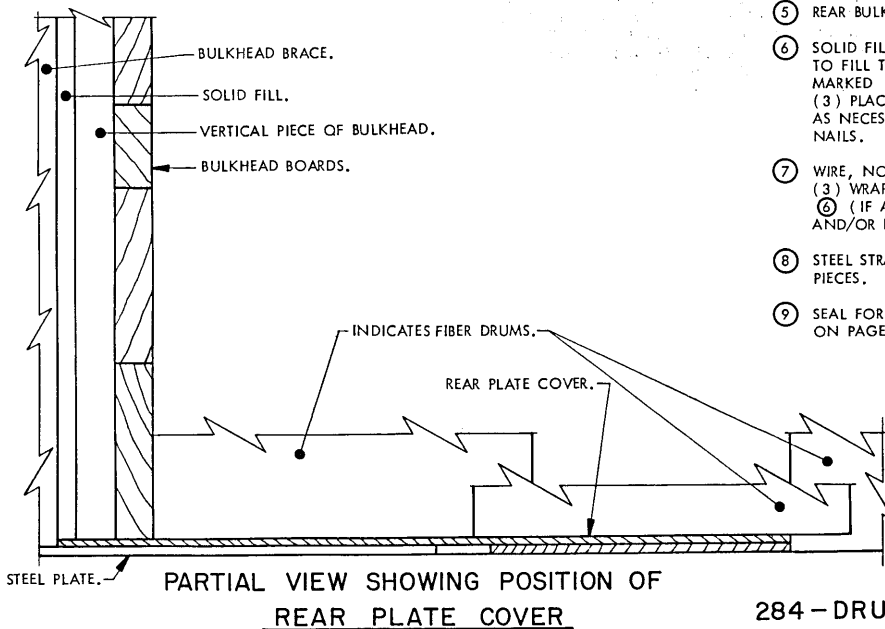
ISOMETRIC VIEW

THE SPECIFIC FIBERBOARD DRUM DEPICTED ABOVE IS SHOWN IN ALL LOADS THROUGHOUT THIS DRAWING. THE DRUM SHOWN IS APPROXIMATELY 16" DIAMETER BY 27" HIGH. THE GROSS WEIGHT IS VARIABLE, DEPENDING UPON THE TYPE OF PROPELLANT AND/OR THE METHOD OF FILLING, FROM APPROXIMATELY 121 TO 161 POUNDS.

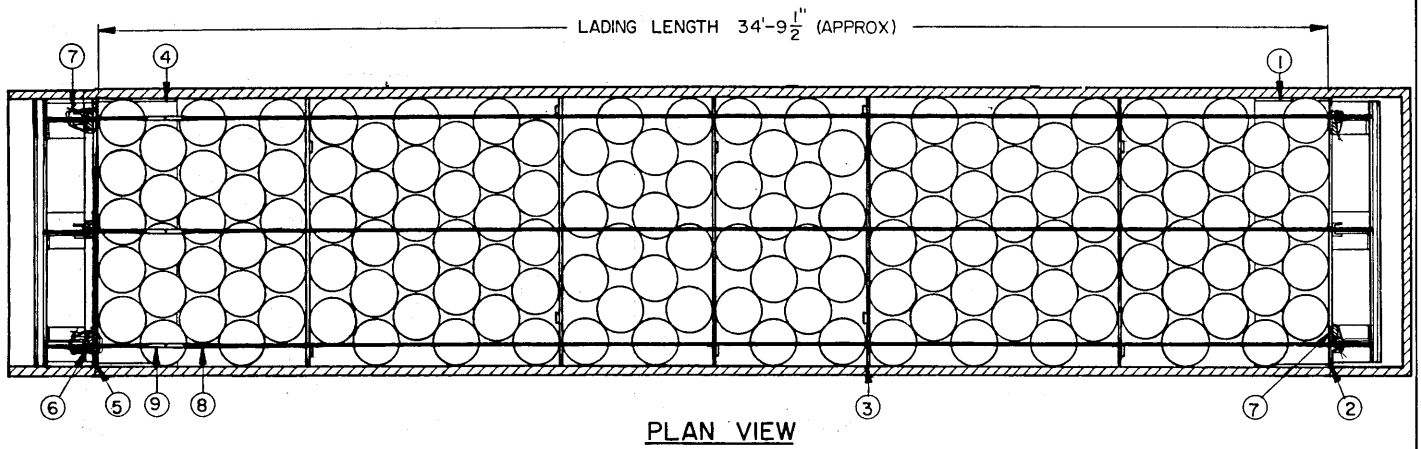


KEY NUMBERS

- ① FORWARD PLATE COVER (1 REQD). SEE THE "BRACE PLATE COVER ASSEMBLY" DETAIL AND THE "DIMENSION CHART" ON PAGE 15. SEE SPECIAL NOTE 4 ON PAGE 5.
- ② FORWARD BULKHEAD (1 REQD). SEE THE DETAIL ON PAGE 15. POSITION ON TOP OF THE FORWARD PLATE COVER, PIECE MARKED ①.
- ③ DIVISIONAL GATE (5 REQD). SEE THE "DIVISIONAL GATE A" DETAIL ON PAGE 16. POSITION SO THAT THE 1" X 4" UPRIGHT PIECES OF A GATE WILL BE LOCATED IN THE VOID AREAS BETWEEN TWO LATERALLY ADJACENT DRUM STACKS OR BETWEEN A DRUM STACK AND A TRAILER SIDEWALL.
- ④ REAR PLATE COVER (1 REQD). SEE THE "BRACE PLATE COVER ASSEMBLY" DETAIL AND THE "DIMENSION CHART" ON PAGE 15. SEE THE "PARTIAL VIEW SHOWING POSITION OF REAR PLATE COVER" DETAIL BELOW FOR LOCATION GUIDANCE.
- ⑤ REAR BULKHEAD (1 REQD). SEE THE DETAIL ON PAGE 15.
- ⑥ SOLID FILL, 6" WIDE BY 60" LONG MATERIAL OF A THICKNESS AS NECESSARY TO FILL THE SPACE BETWEEN A VERTICAL PIECE OF THE REAR BULKHEAD, PIECE MARKED ⑤, AND A STEEL UPRIGHT BRACE (REF: 1-1" X 6" X 60" AT THREE (3) PLACES). SOLID FILL MAY CONSIST OF ONE OR MORE LAMINATIONS, AS NECESSARY. NAIL TO A VERTICAL PIECE AND/OR TOGETHER W/4-10d NAILS.
- ⑦ WIRE, NO. 14 GAGE, ANNEALED, 7'-0" LONG (4 REQD). INSTALL THREE (3) WRAPS SO AS TO ENCIRCLE A STEEL UPRIGHT BRACE, A PIECE MARKED ⑥ (IF APPLICABLE), AND THE ADJACENT VERTICAL PIECE OF THE FORWARD AND/OR REAR BULKHEAD. TWIST THE ENDS TOGETHER TIGHTLY.
- ⑧ STEEL STRAPPING, 2" X .050" X 60'-0" (3 REQD). INSTALL FROM TWO (2) PIECES.
- ⑨ SEAL FOR 2" STRAPPING (18 REQD, 2 PER JOINT). SEE GENERAL NOTE "L" ON PAGE 2.



**284-DRUM LOAD IN A TRAILER HAVING
35'-0" (420") BETWEEN INSTALLED BULKHEADS**



PLAN VIEW

SPECIAL NOTES:

1. A 284-DRUM LOAD IS SHOWN IN A TRAILER HAVING 35'-0" CLEARANCE BETWEEN INSTALLED BULKHEAD BRACES AND 7'-8-1/2" INSIDE WIDTH.
2. **NOTE:** THE LOADING PATTERN FOR THE LOAD SHOWN IS TWO BAYS OF 4-4-4-4, TWO BAYS OF 5-5-5-5-5-5, AND TWO BAYS OF 5-5-5-5-5.
3. STACKS WITHIN A BAY WILL BE LOADED IN A NESTED PATTERN AS SHOWN. THE FIRST INDIVIDUAL STACK OF TWO (2) DRUMS WHICH IS PLACED ADJACENT TO A DIVISIONAL GATE WILL BE PLACED IN CONTACT WITH A TRAILER SIDE WALL AND ALSO SO THAT THE DRUMS ARE DIRECTLY OPPOSITE THE TWO (2) DRUMS WHICH ARE ON THE OTHER SIDE OF THE DIVISIONAL GATE AND IN CONTACT WITH THE TRAILER SIDE WALL AS SHOWN.
4. THE FORWARD PLATE COVER AND THE REAR PLATE COVER MUST BE POSITIONED IN CONTACT WITH THE INSIDE FACE OF THE ADJACENT METAL UPRIGHT BRACES, AND WITH THE BOTTOM OF A BULKHEAD RESTING ON TOP OF THE PLYWOOD.
5. A DRUM WILL BE POSITIONED IN A TRAILER SO THAT THE LOCKING DEVICE ON THE COVER LOCKING RING WILL BE IN A VOID AREA, AND NOT IN CONTACT WITH AN ADJACENT DRUM, A TRAILER SIDE WALL, A DIVISIONAL GATE, OR THE BULKHEAD BOARDS.
6. THE "LOAD AS SHOWN" IS BASED ON DRUMS HAVING A GROSS WEIGHT OF 151 POUNDS. THE DEPICTED LOADING PATTERN CAN BE USED FOR DRUMS HAVING A LESSER GROSS WEIGHT, AND MAY ALSO BE USED FOR DRUMS SOMEWHAT HEAVIER, PROVIDING THE GROSS WEIGHT AND AXLE DISTRIBUTION OF WEIGHT LIMITATIONS FOR A LOAD ARE NOT EXCEEDED. IF A DIFFERENT QUANTITY THAN SHOWN IS DESIRED, REFER TO THE PROCDFURES ON PAGES 6 AND 7, OR SELECT A LOADING PATTERN FROM THOSE DEPICTED ON PAGES 8 AND 9, FOR GUIDANCE IN THE DEVELOPMENT OF A LOAD QUANTITY OTHER THAN 284 DRUMS.

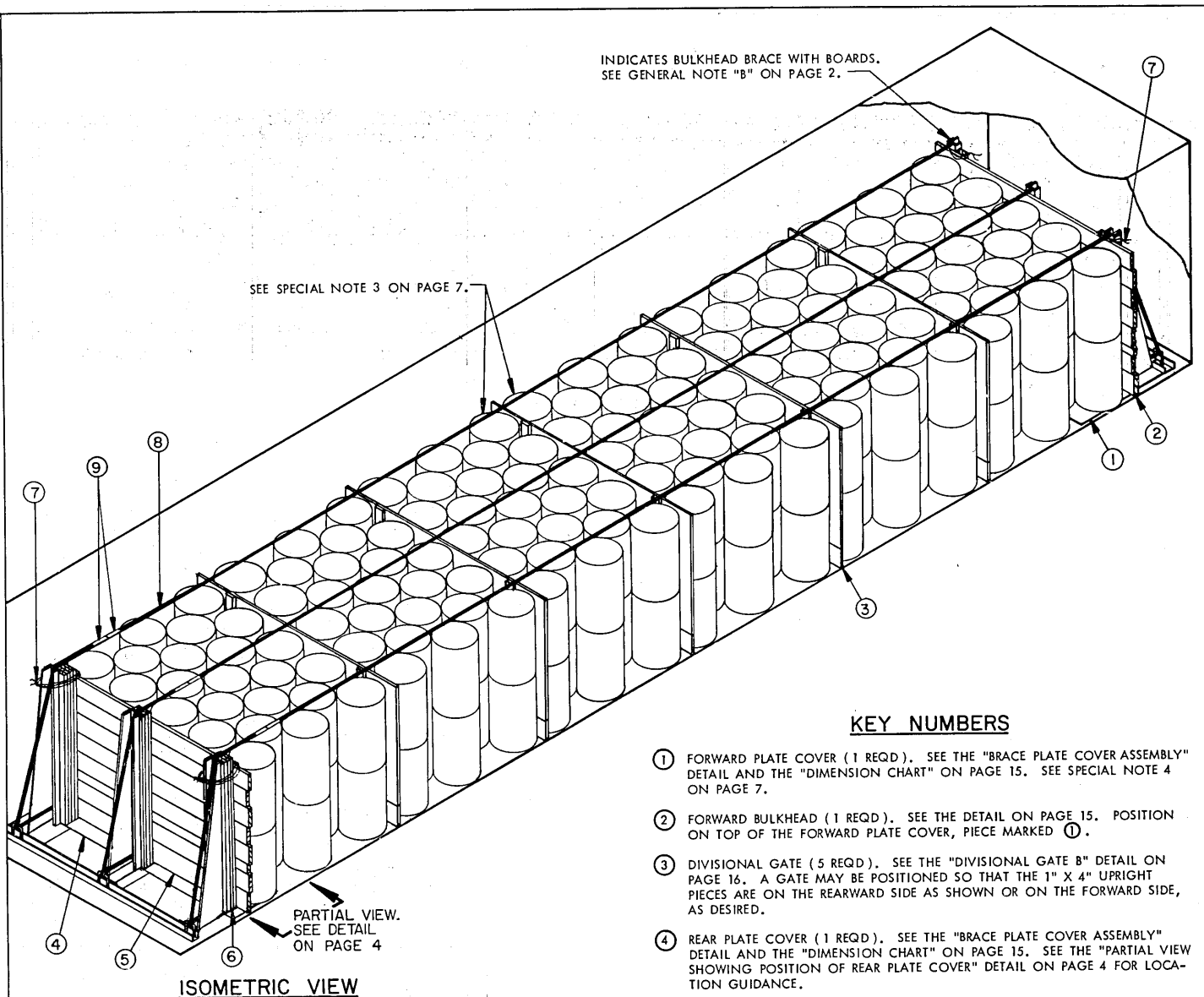
BILL OF MATERIAL		
LUMBER	LINEAR FEET	BOARD FEET
1" X 6"	15	8
1" X 4"	47	16
2" X 4"	10	7
2" X 6"	15	15
NAILS	NO. REQD	POUNDS
6d (2")	100	1
10d (3")	55	1
PLYWOOD, 1/4"	49 SQ FT	34 LBS
PLYWOOD, 1/2"	175 SQ FT	240 LBS
STEEL STRAPPING, 2" X .050"	180' REQD	60 LBS
SEALS FOR 2" STRAPPING	18 REQD	4 LBS
WIRE, NO. 14 GAGE	28' REQD	NIL

* SEE SPECIAL NOTE 6 ABOVE.

LOAD AS SHOWN

ITEM	QUANTITY	WEIGHT (APPROX)
DRUM	284	42,884 LBS *
DUNNAGE		459 LBS
TOTAL WEIGHT		43,343 LBS

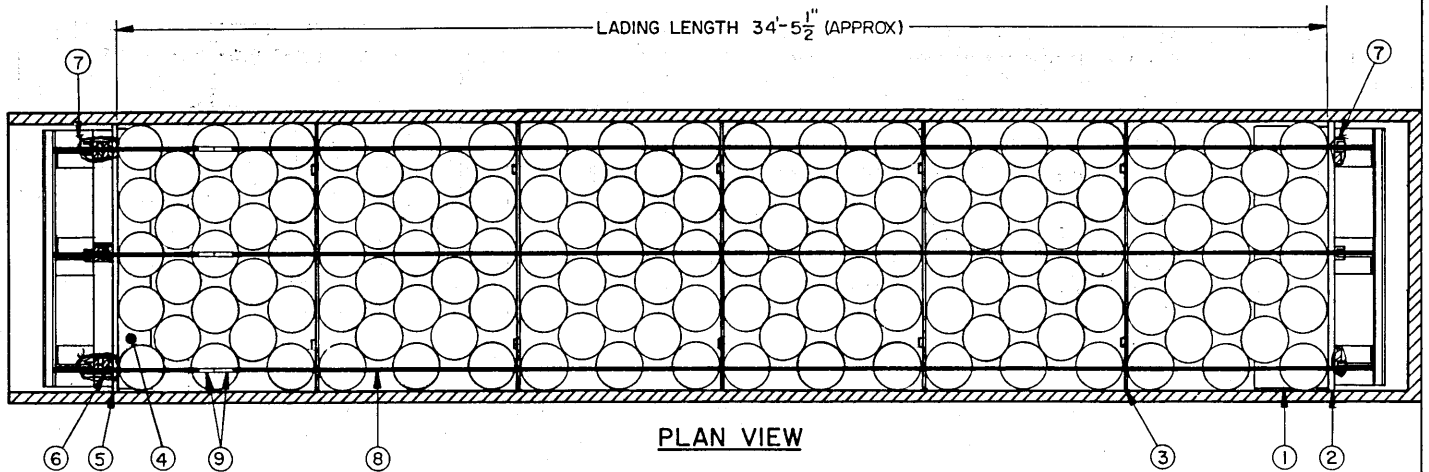
284-DRUM LOAD IN A TRAILER HAVING 35'-0" (420") BETWEEN INSTALLED BULKHEADS



KEY NUMBERS

- ① FORWARD PLATE COVER (1 REQD). SEE THE "BRACE PLATE COVER ASSEMBLY" DETAIL AND THE "DIMENSION CHART" ON PAGE 15. SEE SPECIAL NOTE 4 ON PAGE 7.
- ② FORWARD BULKHEAD (1 REQD). SEE THE DETAIL ON PAGE 15. POSITION ON TOP OF THE FORWARD PLATE COVER, PIECE MARKED ①.
- ③ DIVISIONAL GATE (5 REQD). SEE THE "DIVISIONAL GATE B" DETAIL ON PAGE 16. A GATE MAY BE POSITIONED SO THAT THE 1" X 4" UPRIGHT PIECES ARE ON THE REARWARD SIDE AS SHOWN OR ON THE FORWARD SIDE, AS DESIRED.
- ④ REAR PLATE COVER (1 REQD). SEE THE "BRACE PLATE COVER ASSEMBLY" DETAIL AND THE "DIMENSION CHART" ON PAGE 15. SEE THE "PARTIAL VIEW SHOWING POSITION OF REAR PLATE COVER" DETAIL ON PAGE 4 FOR LOCATION GUIDANCE.
- ⑤ REAR BULKHEAD (1 REQD). SEE THE DETAIL ON PAGE 15.
- ⑥ SOLID FILL, 6" WIDE BY 60" LONG MATERIAL OF A THICKNESS AS NECESSARY TO FILL THE SPACE BETWEEN A VERTICAL PIECE OF THE REAR BULKHEAD, PIECE MARKED ⑤, AND A STEEL UPRIGHT BRACE (REF: 3-2" X 6" X 60" AT THREE (3) PLACES). SOLID FILL MAY CONSIST OF ONE OR MORE LAMINATIONS, AS NECESSARY. NAIL TO A VERTICAL PIECE AND/OR TOGETHER W/4-10d NAILS.
- ⑦ WIRE, NO. 14 GAGE, ANNEALED, 7'-0" LONG FOR THE FORWARD BULKHEAD AND 9'-0" LONG FOR THE REAR BULKHEAD (4 REQD). INSTALL THREE (3) WRAPS SO AS TO ENCIRCLE A STEEL UPRIGHT BRACE A PIECE MARKED ⑥ (IF APPLICABLE), AND THE ADJACENT VERTICAL PIECE OF THE FORWARD AND/OR REAR BULKHEAD. TWIST THE ENDS TOGETHER TIGHTLY.
- ⑧ STEEL STRAPPING, 2" X .050" X 60'-0" (3 REQD). INSTALL FROM TWO (2) PIECES.
- ⑨ SEAL FOR 2" STRAPPING (18 REQD, 2 PER JOINT). SEE GENERAL NOTE "L" ON PAGE 2.

276-DRUM LOAD IN A TRAILER HAVING
35'-0" (420") BETWEEN INSTALLED BULKHEADS



PLAN VIEW

SPECIAL NOTES:

1. A 276-DRUM LOAD IS SHOWN IN A TRAILER HAVING 35'-0" CLEARANCE BETWEEN INSTALLED BULKHEAD BRACES AND 7'-8-1/2" INSIDE WIDTH.
2. **NOTE:** THE LOADING PATTERN FOR THE LOAD SHOWN IS SIX BAYS OF 5-4-5-4-5.
3. STACKS WITHIN A BAY WILL BE LOADED IN A NESTED PATTERN AS SHOWN. THE FIRST INDIVIDUAL STACK OF TWO (2) DRUMS WHICH IS PLACED ADJACENT TO A DIVISIONAL GATE WILL BE PLACED IN CONTACT WITH A TRAILER SIDE WALL AND ALSO SO THAT THE DRUMS ARE DIRECTLY OPPOSITE THE TWO (2) DRUMS WHICH ARE ON THE OTHER SIDE OF THE DIVISIONAL GATE AND IN CONTACT WITH THE TRAILER SIDE WALL AS SHOWN.
4. THE FORWARD PLATE COVER AND THE REAR PLATE COVER MUST BE POSITIONED IN CONTACT WITH THE INSIDE FACE OF THE ADJACENT METAL UPRIGHT BRACES, AND WITH THE BOTTOM OF THE BULKHEAD RESTING ON TOP OF THE PLYWOOD.
5. A DRUM WILL BE POSITIONED IN A TRAILER SO THAT THE LOCKING DEVICE ON THE COVER LOCKING RING WILL BE IN A VOID AREA, AND NOT IN CONTACT WITH AN ADJACENT DRUM, A TRAILER SIDE WALL, A DIVISIONAL GATE, OR THE BULKHEAD BOARDS.
6. THE "LOAD AS SHOWN" IS BASED ON DRUMS HAVING A GROSS WEIGHT OF 151 POUNDS. THE DEPICTED LOADING PATTERN CAN BE USED FOR DRUMS HAVING A LESSER GROSS WEIGHT, AND MAY ALSO BE USED FOR DRUMS SOMEWHAT HEAVIER, PROVIDING THE GROSS WEIGHT AND AXLE DISTRIBUTION OF WEIGHT LIMITATIONS FOR A LOAD ARE NOT EXCEEDED. IF A DIFFERENT QUANTITY THAN SHOWN IS DESIRED, REFER TO THE PROCEDURES ON PAGES 4 AND 5, OR SELECT A LOADING PATTERN FROM THOSE DEPICTED ON PAGES 8 AND 9, FOR GUIDANCE IN THE DEVELOPMENT OF A LOAD QUANTITY OTHER THAN 276 DRUMS.

BILL OF MATERIAL		
LUMBER	LINEAR FEET	BOARD FEET
1" X 4"	47	16
2" X 4"	10	7
2" X 6"	60	60
NAILS	NO. REQD	POUNDS
6d (2")	100	1
10d (3")	112	2
PLYWOOD, 1/4"	51 SQ FT	35 LBS
PLYWOOD, 1/2"	175 SQ FT	240 LBS
STEEL STRAPPING, 2" X .050"	180' REQD	60 LBS
SEALS FOR 2" STRAPPING	18 REQD	4 LBS
WIRE, NO. 14 GAGE	32' REQD	1 LB

*SEE SPECIAL NOTE 6 ABOVE.

LOAD AS SHOWN

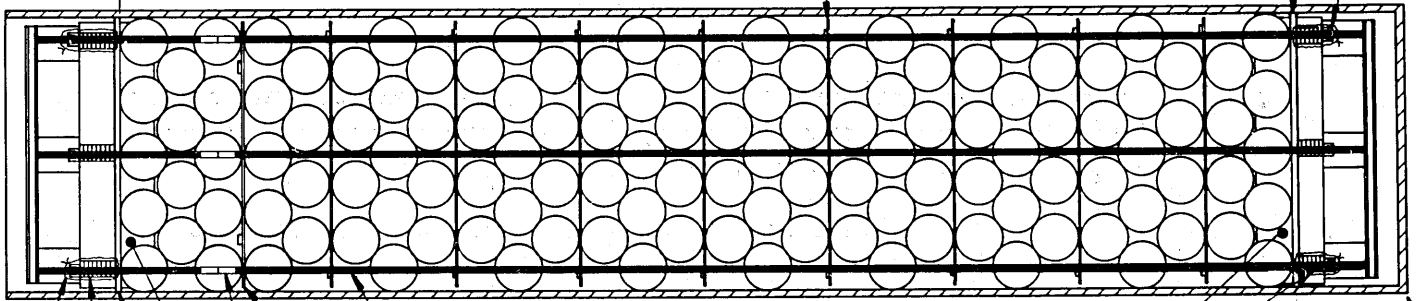
ITEM	QUANTITY	WEIGHT (APPROX)
DRUM	276	41,676 LBS.*
DUNNAGE		546 LBS
TOTAL WEIGHT		42,222 LBS

**276-DRUM LOAD IN A TRAILER HAVING
35'-0" (420") BETWEEN INSTALLED BULKHEADS**

DIVISIONAL GATE (8 REQD). SEE THE "DIVISIONAL GATE C" DETAIL ON PAGE 16.

FORWARD BULKHEAD (1 REQD). USE 2" X 6" X 60" VERTICAL PIECES POSITIONED AS SHOWN BY THE "REAR BULKHEAD" DETAIL ON PAGE 15.

LADING LENGTH 33'-7 $\frac{1}{2}$ " (APPROX)

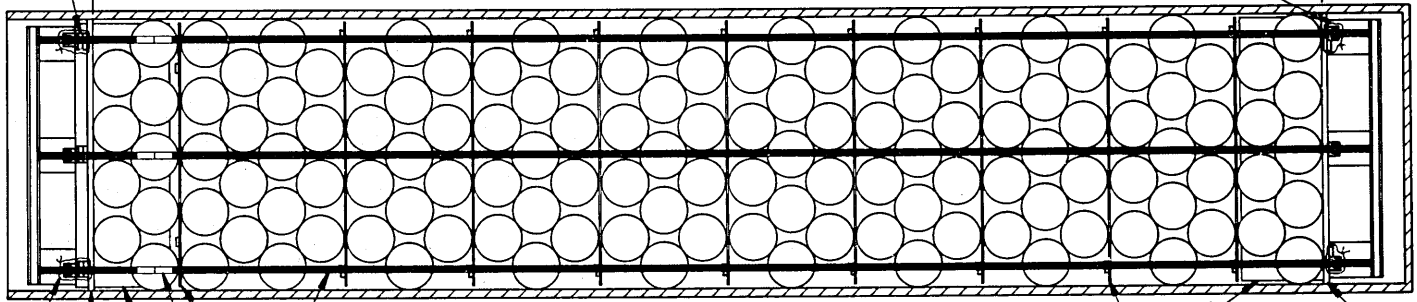


PLAN VIEW

A 246-DRUM LOADING PATTERN IS SHOWN AS AN ALTERNATIVE TO THE LOADS SHOWN ON PAGES 4 AND 6. THE DUNNAGE REQUIREMENTS WHICH ARE DIFFERENT THAN THE DUNNAGE FOR THE LOAD ON PAGE 6 ARE IDENTIFIED WITH LEADERED NOTES THAT INCLUDE A DESCRIPTION OF THE MATERIAL AS WELL AS THE QUANTITY REQUIRED. FOR A DESCRIPTION OF THE DUNNAGE PIECES IDENTIFIED BY THE KEY NUMBER BALLOONS, REFER TO THE "KEY NUMBERS" ON PAGE 6. THE QUANTITY REQUIRED OF THE KEY NUMBERED PIECES WILL BE THE SAME AS ON PAGE 6 EXCEPT THAT THE QUANTITY FOR PIECE MARKED ④ WILL BE CHANGED TO READ "REF: 4-2" X 6" X 60" AT THREE (3) PLACES", AND ONLY ONE (1) PIECE MARKED ③ IS REQUIRED. NOTE THAT PIECES MARKED ⑦ MUST BE 10'-0" LONG IN LIEU OF 7'-0".

① SOLID FILL, FIVE (5) PIECES OF 2" X 6" X 60" AT THREE (3) PLACES. NAIL TO A VERTICAL PIECE AND/OR TOGETHER W/4-10d NAILS.

LADING LENGTH 34'-8" (APPROX)

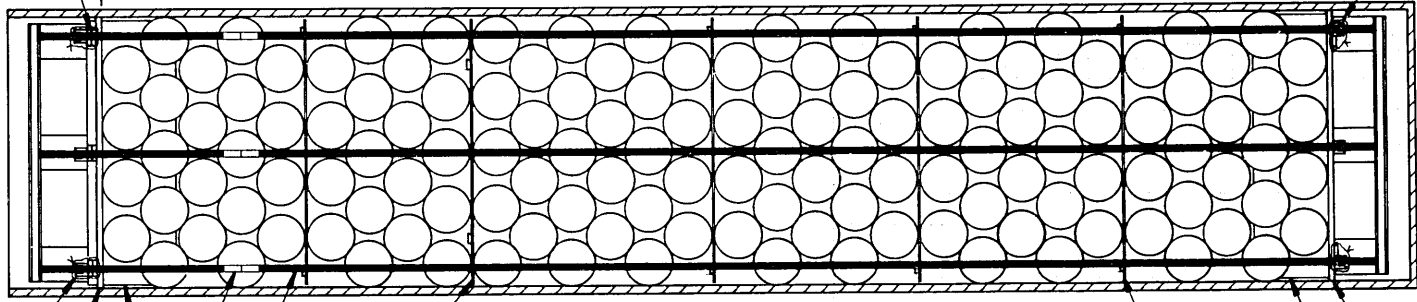


PLAN VIEW

A 254-DRUM LOADING PATTERN IS SHOWN AS AN ALTERNATIVE TO THE LOADS SHOWN ON PAGES 4 AND 6. THE DUNNAGE REQUIREMENTS WHICH ARE DIFFERENT THAN THE DUNNAGE FOR THE LOAD ON PAGE 6 ARE IDENTIFIED WITH LEADERED NOTES THAT INCLUDE A DESCRIPTION OF THE MATERIAL AS WELL AS THE QUANTITY REQUIRED. FOR A DESCRIPTION OF THE DUNNAGE PIECES IDENTIFIED BY THE KEY NUMBER BALLOONS, REFER TO THE "KEY NUMBERS" ON PAGE 6. THE QUANTITY REQUIRED OF THE KEY NUMBERED PIECES WILL BE THE SAME AS ON PAGE 6 EXCEPT THAT ONLY ONE (1) PIECE MARKED ③ IS REQUIRED, AND THE QUANTITY FOR PIECE MARKED ④ WILL READ "REF: 1-2" X 6" X 60" AT THREE (3) PLACES". NOTE THAT PIECES MARKED ⑦ AT THE REAR OF THE LOAD MUST BE 7'-6" LONG IN LIEU OF 7'-0".

① DIVISIONAL GATE (8 REQD). SEE THE "DIVISIONAL GATE C" DETAIL ON PAGE 16.

LADING LENGTH 34'-9" (APPROX)

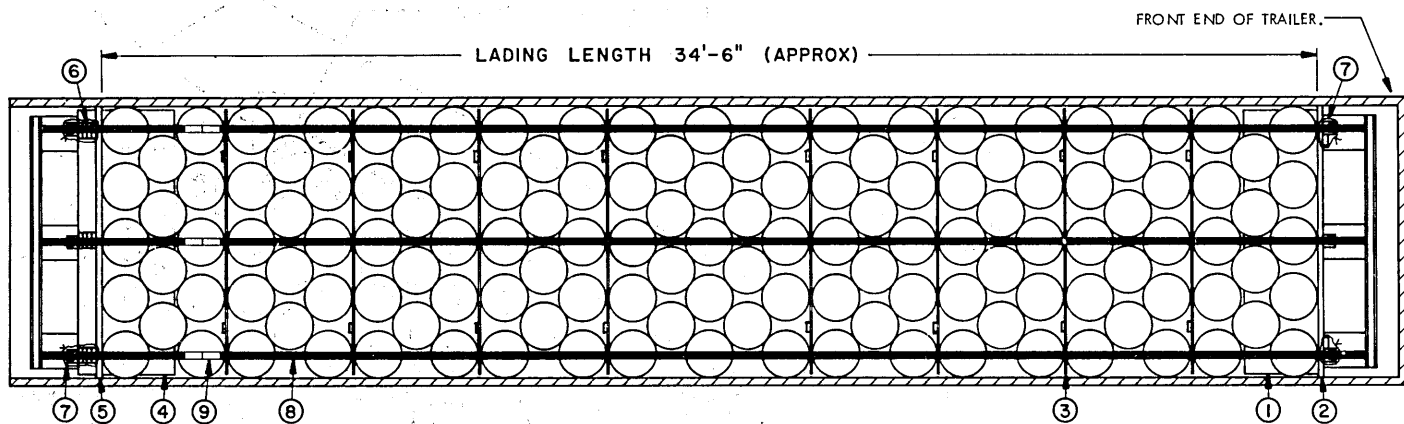


PLAN VIEW

A 266-DRUM LOADING PATTERN IS SHOWN AS AN ALTERNATIVE TO THE LOADS SHOWN ON PAGES 4 AND 6. THE DUNNAGE REQUIREMENTS WHICH ARE DIFFERENT THAN THE DUNNAGE FOR THE LOAD ON PAGE 6 ARE IDENTIFIED WITH LEADERED NOTES THAT INCLUDE A DESCRIPTION OF THE MATERIAL AS WELL AS THE QUANTITY REQUIRED. FOR A DESCRIPTION OF THE DUNNAGE PIECES IDENTIFIED BY THE KEY NUMBER BALLOONS, REFER TO THE "KEY NUMBERS" ON PAGE 6. THE QUANTITY REQUIRED OF THE KEY NUMBERED PIECES WILL BE THE SAME AS ON PAGE 6 EXCEPT THAT ONLY ONE (1) PIECE MARKED ④ IS REQUIRED. NOTE THAT PIECES MARKED ⑦ AT THE REAR OF THE LOAD MUST BE 7'-6" LONG IN LIEU OF 7'-0".

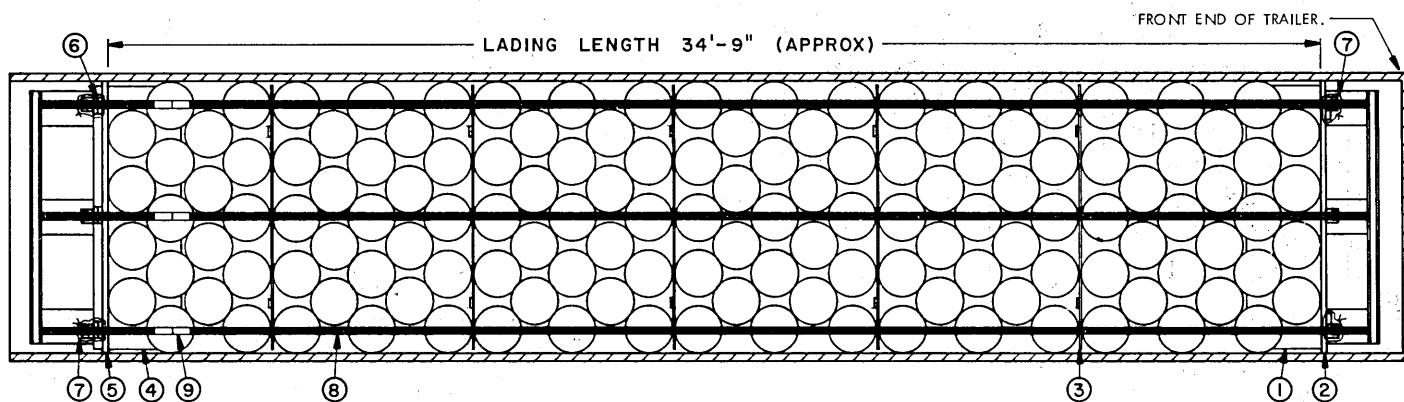
① DIVISIONAL GATE (4 REQD). SEE THE "DIVISIONAL GATE C" DETAIL ON PAGE 16.

ADDITIONAL LOADING PATTERNS FOR TRAILERS HAVING 35'-0" (420") BETWEEN INSTALLED BULKHEADS



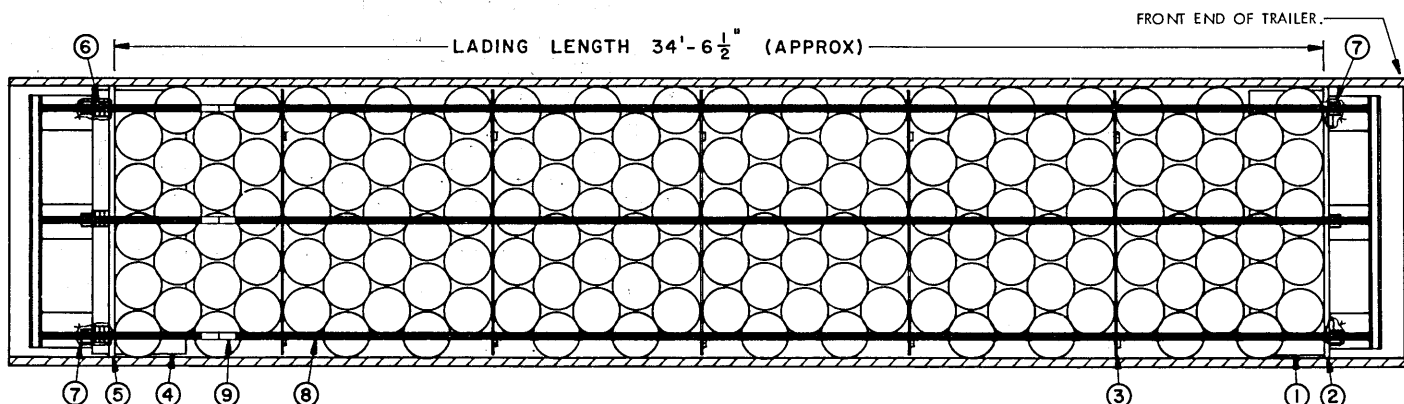
PLAN VIEW

A 270-DRUM LOADING PATTERN IS SHOWN AS AN ALTERNATIVE TO THE LOADS SHOWN ON PAGES 4 AND 6. FOR A DESCRIPTION OF THE DUNNAGE PIECES IDENTIFIED BY THE KEY NUMBER BALLOONS, REFER TO THE "KEY NUMBERS" ON PAGE 6. THE QUANTITY REQUIRED OF THE KEY NUMBERED PIECES WILL BE THE SAME AS ON PAGE 6 EXCEPT THAT EIGHT (8) PIECES MARKED ③ WILL BE REQUIRED IN LIEU OF FIVE AND THE QUANTITY FOR PIECE MARKED ⑥ WILL BE CHANGED TO READ "REF: 3-2" X 6" X 60" AT THREE (3) PLACES". NOTE THAT PIECES MARKED ⑦ AT THE REAR OF THE LOAD MUST BE 9'-0" LONG IN LIEU OF 7'-0".



PLAN VIEW

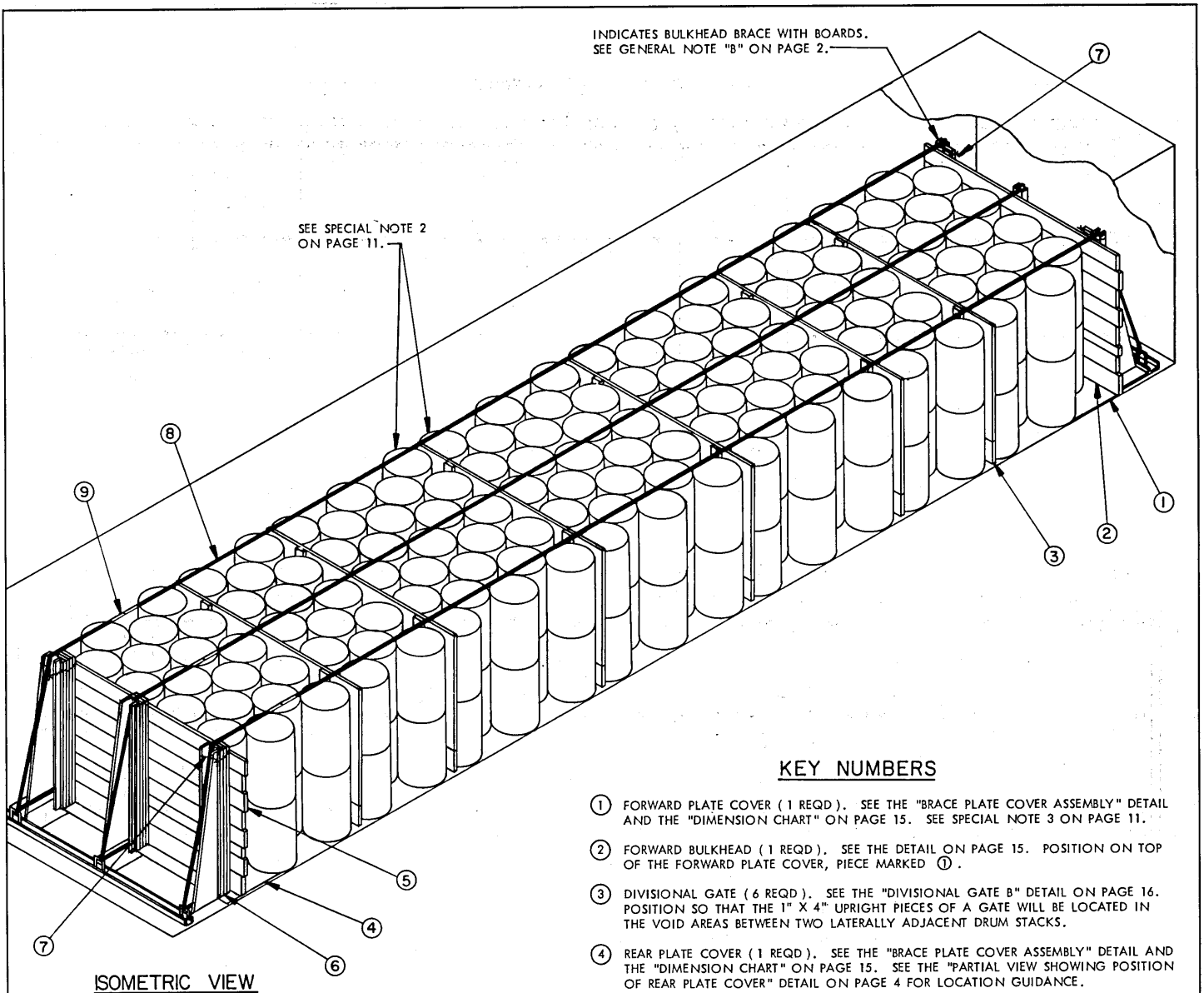
A 274-DRUM LOADING PATTERN IS SHOWN AS AN ALTERNATIVE TO THE LOADS SHOWN ON PAGES 4 AND 6. FOR A DESCRIPTION OF THE DUNNAGE PIECES IDENTIFIED BY THE KEY NUMBER BALLOONS, REFER TO THE "KEY NUMBERS" ON PAGE 6. THE QUANTITY REQUIRED OF THE DUNNAGE PIECES WILL BE THE SAME AS ON PAGE 6 EXCEPT THAT THE QUANTITY FOR PIECE MARKED ⑥ WILL READ "REF: 1-2" X 6" X 60" AT THREE (3) PLACES". NOTE THAT PIECES MARKED ⑦ AT THE REAR OF THE LOAD MUST BE 7'-6" LONG IN LIEU OF 7'-0".



PLAN VIEW

A 290-DRUM LOADING PATTERN IS SHOWN AS AN ALTERNATIVE TO THE LOADS SHOWN ON PAGES 4 AND 6. FOR A DESCRIPTION OF THE DUNNAGE PIECES IDENTIFIED BY THE KEY NUMBER BALLOONS, REFER TO THE "KEY NUMBERS" ON PAGE 4. THE QUANTITY REQUIRED OF THE DUNNAGE PIECES WILL BE THE SAME AS ON PAGE 4 EXCEPT THAT THE QUANTITY FOR PIECE MARKED ③ WILL READ "REF: 2-2" X 6" X 60" AND 1-1" X 6" X 60" AT THREE (3) PLACES". NOTE THAT PIECES MARKED ⑦ AT THE REAR OF THE LOAD MUST BE 9'-0" LONG IN LIEU OF 7'-0".

ADDITIONAL LOADING PATTERNS FOR TRAILERS HAVING
35'-0" (420") BETWEEN INSTALLED BULKHEADS

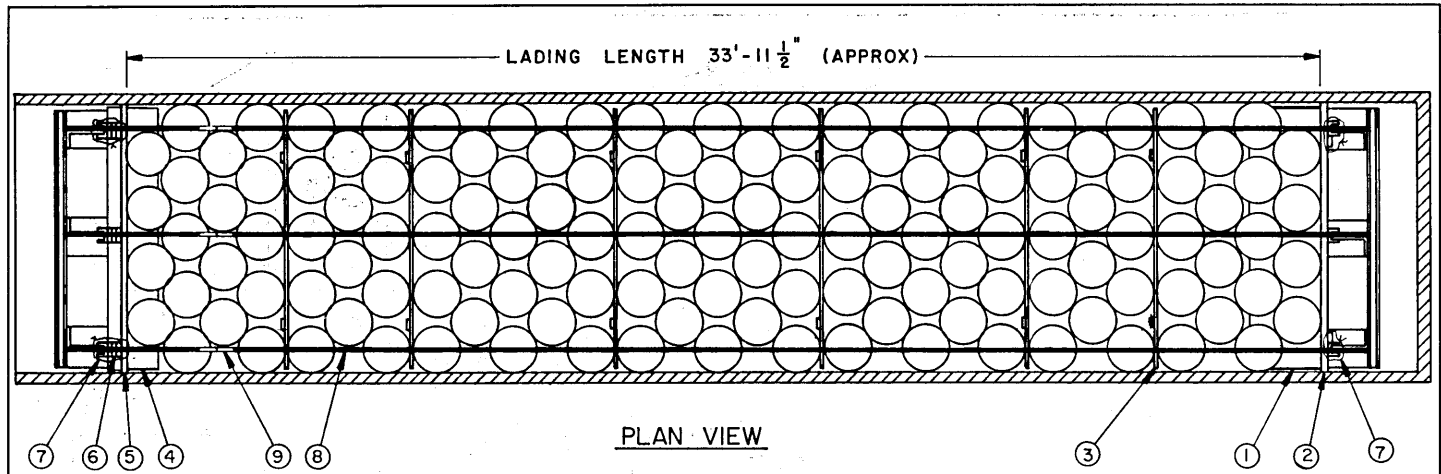


KEY NUMBERS

- ① FORWARD PLATE COVER (1 REQD). SEE THE "BRACE PLATE COVER ASSEMBLY" DETAIL AND THE "DIMENSION CHART" ON PAGE 15. SEE SPECIAL NOTE 3 ON PAGE 11.
- ② FORWARD BULKHEAD (1 REQD). SEE THE DETAIL ON PAGE 15. POSITION ON TOP OF THE FORWARD PLATE COVER, PIECE MARKED ①.
- ③ DIVISIONAL GATE (6 REQD). SEE THE "DIVISIONAL GATE B" DETAIL ON PAGE 16. POSITION SO THAT THE 1" X 4" UPRIGHT PIECES OF A GATE WILL BE LOCATED IN THE VOID AREAS BETWEEN TWO LATERALLY ADJACENT DRUM STACKS.
- ④ REAR PLATE COVER (1 REQD). SEE THE "BRACE PLATE COVER ASSEMBLY" DETAIL AND THE "DIMENSION CHART" ON PAGE 15. SEE THE "PARTIAL VIEW SHOWING POSITION OF REAR PLATE COVER" DETAIL ON PAGE 4 FOR LOCATION GUIDANCE.
- ⑤ REAR BULKHEAD (1 REQD). SEE THE DETAIL ON PAGE 15.
- ⑥ SOLID FILL, 6" WIDE BY 60" LONG MATERIAL OF A THICKNESS AS NECESSARY TO FILL THE SPACE BETWEEN A VERTICAL PIECE OF THE REAR BULKHEAD, PIECE MARKED ⑤, AND A STEEL UPRIGHT BRACE (REF: 2-2" X 6" X 60" AT THREE (3) PLACES). SOLID FILL MAY CONSIST OF ONE OR MORE LAMINATIONS, AS NECESSARY. NAIL TO A VERTICAL PIECE AND/OR TOGETHER W/4-10d NAILS.
- ⑦ WIRE, NO. 14 GAGE, ANNEALED, 7'-0" LONG FOR THE FORWARD BULKHEAD AND 8'-6" LONG FOR THE REAR BULKHEAD (2 EACH REQD). INSTALL THREE (3) WRAPS SO AS TO ENCIRCLE A STEEL UPRIGHT BRACE, A PIECE MARKED ⑥ (AS APPLICABLE), AND THE ADJACENT VERTICAL PIECE OF THE FORWARD AND/OR REAR BULKHEAD. TWIST THE ENDS TOGETHER TIGHTLY.
- ⑧ STEEL STRAPPING, 2" X .050" X 60'-0" (3 REQD). INSTALL FROM TWO (2) PIECES.
- ⑨ SEAL FOR 2" STRAPPING (18 REQD, 2 PER JOINT). SEE GENERAL NOTE "L" ON PAGE 2.

ISOMETRIC VIEW

266-DRUM LOAD IN A TRAILER HAVING
34'-4" (412") BETWEEN INSTALLED BULKHEADS



PLAN VIEW

SPECIAL NOTES:

1. A 266-DRUM LOAD IS SHOWN IN A 7'-8-1/2" WIDE TRAILER HAVING 34'-4" BETWEEN THE INSTALLED BULKHEADS.
2. THE LOAD SHOWN CONSISTS OF SEVEN (7) BAYS HAVING ALTERNATE STACKS OF 4-DRUMS WIDE AND 5-DRUMS WIDE WITHIN A BAY. STACKS WITHIN A BAY WILL BE LOADED IN A NESTED PATTERN. BAYS MUST BEGIN AND END WITH THE NUMBER OF DRUM STACKS WIDE SHOWN TO PROVIDE FOR A STABLE LOAD. IF A BAY STARTS WITH A 4-DRUM WIDE STACK, THE OUTER INDIVIDUAL STACKS OF TWO (2) DRUMS WILL BE POSITIONED APPROXIMATELY 9-1/2" FROM THE TRAILER SIDEWALLS, AND THE REMAINING TWO INDIVIDUAL STACKS WILL BE EQUALLY SPACED BETWEEN THEM. IF A BAY STARTS WITH A 5-WIDE DRUM STACK, THE OUTER INDIVIDUAL STACKS WILL BE PLACED IN CONTACT WITH THE TRAILER SIDEWALLS, AND THE REMAINING THREE INDIVIDUAL STACKS WILL BE EQUALLY SPACED BETWEEN THEM. CAUTION: DRUMS ON OPPOSITE SIDES OF A DIVISIONAL GATE MUST BE OPPOSED TO EACH OTHER; IF A BAY ENDS WITH A 5-DRUM WIDE STACK, THE NEXT BAY MUST START WITH A 5-DRUM WIDE STACK.
3. THE FORWARD PLATE COVER AND THE REAR PLATE COVER MUST BE POSITIONED IN CONTACT WITH THE INSIDE FACE OF THE ADJACENT METAL UPRIGHT BRACES, AND WITH THE BOTTOM OF THE BULKHEAD RESTING ON TOP OF THE PLYWOOD.
4. A DRUM WILL BE POSITIONED IN A TRAILER SO THAT THE LOCKING DEVICE ON THE COVER LOCKING RING WILL BE IN A VOID AREA, AND NOT IN CONTACT WITH AN ADJACENT DRUM, A TRAILER SIDEWALL, A DIVISIONAL GATE, OR THE BULKHEAD BOARDS.
5. THE "LOAD AS SHOWN" IS BASED ON DRUMS HAVING A GROSS WEIGHT OF 161 POUNDS. THE DEPICTED LOADING PATTERN CAN BE USED FOR DRUMS HAVING A LESSER GROSS WEIGHT, AND CAN ALSO BE USED FOR DRUMS SOMEWHAT HEAVIER, PROVIDING THE GROSS WEIGHT AND AXLE DISTRIBUTION OF WEIGHT LIMITATIONS FOR A LOAD ARE NOT EXCEEDED. IF A DIFFERENT QUANTITY THAN SHOWN IS DESIRED, REFER TO THE PROCEDURES ON PAGES 12 AND 13, OR SELECT A LOADING PATTERN FROM THOSE DEPICTED ON PAGE 14, FOR GUIDANCE IN THE DEVELOPMENT OF A LOAD QUANTITY OTHER THAN 266 DRUMS.

BILL OF MATERIAL

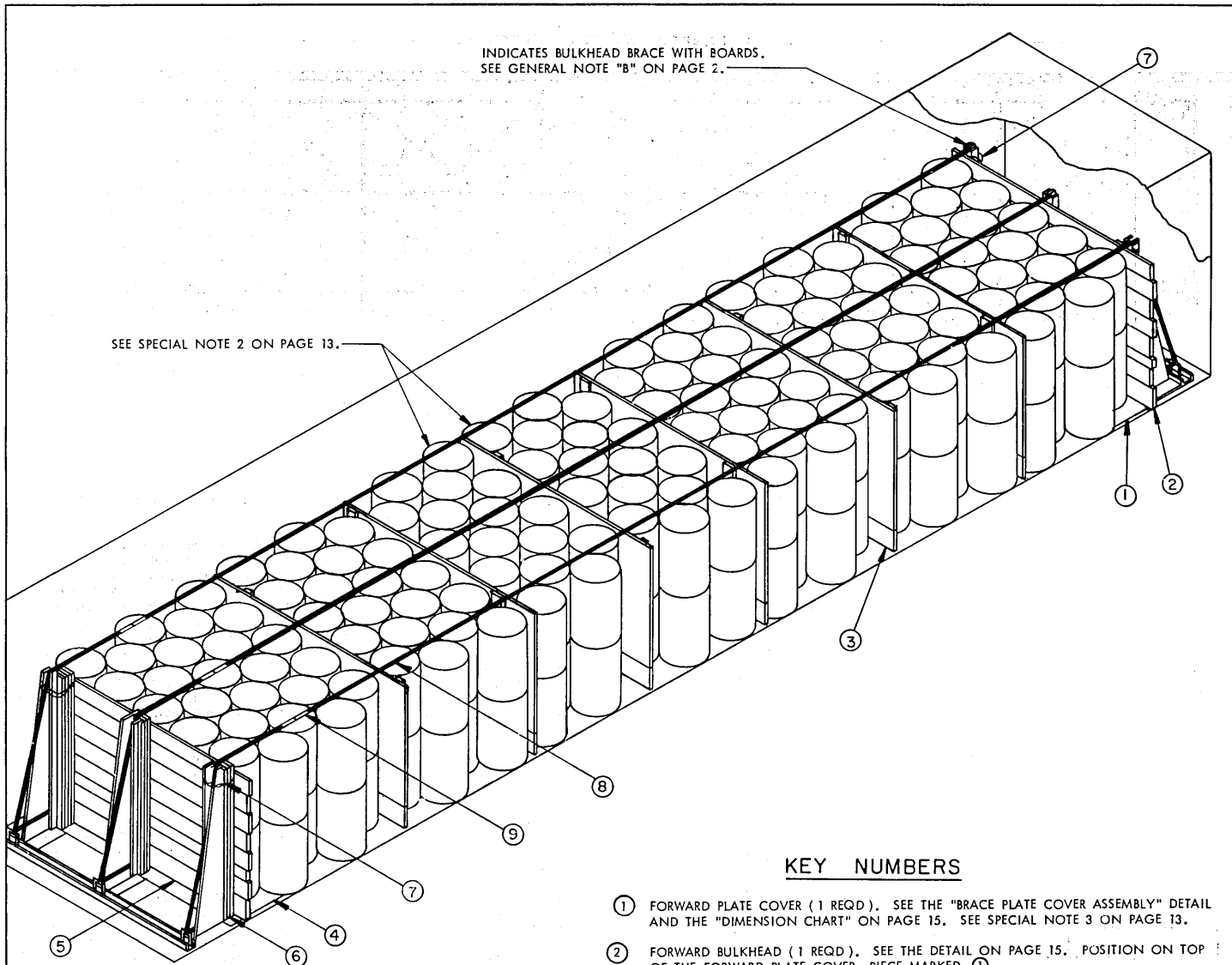
LUMBER	LINEAR FEET	BOARD FEET
1" X 4"	56	19
2" X 4"	10	7
2" X 6"	45	45
NAILS	NO. REQD	POUNDS
6d (2")	144	1
10d (3")	64	1
PLYWOOD, 1/4"	36 SQ FT	25 LBS
PLYWOOD, 1/2"	210 SQ FT	290 LBS
STEEL STRAPPING, 2" X .050"	180' REQD	60 LBS
SEAL FOR 2" STRAPPING	18 REQD	4 LBS
WIRE, NO. 14 GAGE	31' REQD	1 LB

*SEE SPECIAL NOTE 5 ABOVE.

LOAD AS SHOWN

ITEM	QUANTITY	WEIGHT (APPROX)
DRUM	266	42,826 LBS *
DUNNAGE		560 LBS
TOTAL WEIGHT		43,386 LBS

266-DRUM LOAD IN A TRAILER HAVING 34'-4" (412") BETWEEN INSTALLED BULKHEADS



INDICATES BULKHEAD BRACE WITH BOARDS.
SEE GENERAL NOTE "B" ON PAGE 2.

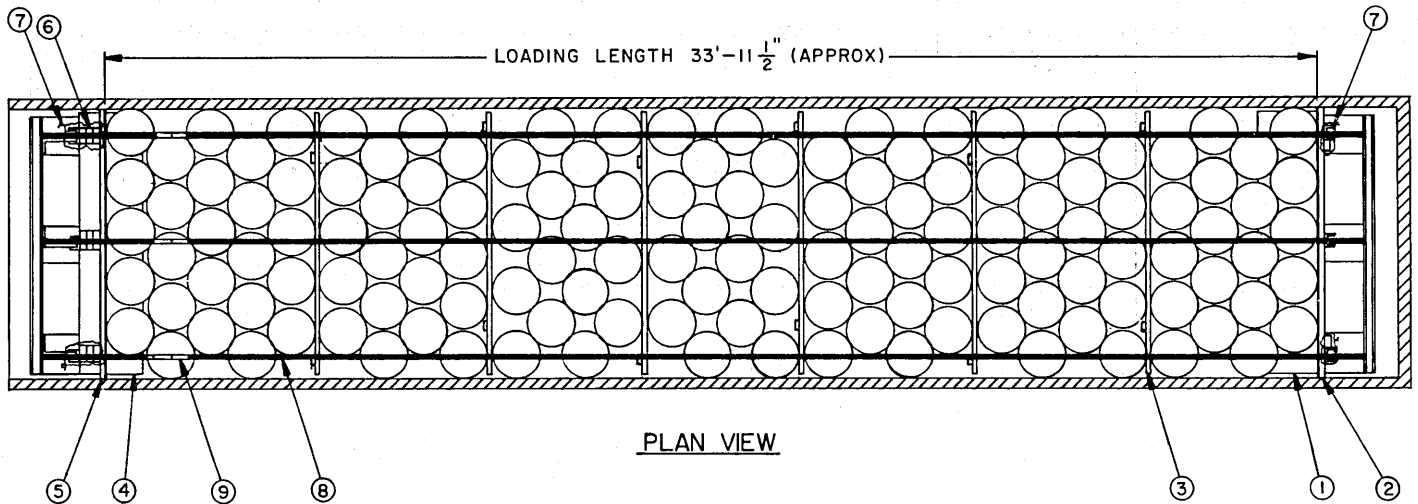
SEE SPECIAL NOTE 2 ON PAGE 13.

ISOMETRIC VIEW

KEY NUMBERS

- ① FORWARD PLATE COVER (1 REQD). SEE THE "BRACE PLATE COVER ASSEMBLY" DETAIL AND THE "DIMENSION CHART" ON PAGE 15. SEE SPECIAL NOTE 3 ON PAGE 13.
- ② FORWARD BULKHEAD (1 REQD). SEE THE DETAIL ON PAGE 15. POSITION ON TOP OF THE FORWARD PLATE COVER, PIECE MARKED ①.
- ③ DIVISIONAL GATE (6 REQD). SEE THE "DIVISIONAL GATE A" DETAIL ON PAGE 16. POSITION SO THAT THE 1" X 4" UPRIGHT PIECES OF A GATE WILL BE LOCATED IN THE VOID AREAS BETWEEN TWO LATERALLY ADJACENT DRUM STACKS OR BETWEEN A DRUM STACK AND A TRAILER SIDEWALL.
- ④ REAR PLATE COVER (1 REQD). SEE THE "BRACE PLATE COVER ASSEMBLY" DETAIL AND THE "DIMENSIONAL CHART" ON PAGE 15. SEE THE "PARTIAL VIEW SHOWING POSITION OF REAR PLATE COVER" DETAIL ON PAGE 4 FOR LOCATION GUIDANCE.
- ⑤ REAR BULKHEAD (1 REQD). SEE THE DETAIL ON PAGE 15.
- ⑥ SOLID FILL, 6" WIDE BY 60" LONG MATERIAL OF A THICKNESS AS NECESSARY TO FILL THE SPACE BETWEEN A VERTICAL PIECE OF THE REAR BULKHEAD, PIECE MARKED ⑤, AND A STEEL UPRIGHT BRACE (REF: 2-2" X 6" X 60" AT THREE (3) PLACES). SOLID FILL MAY CONSIST OF ONE OR MORE LAMINATIONS, AS NECESSARY. NAIL TO A VERTICAL PIECE AND/OR TOGETHER W/4-10d NAILS.
- ⑦ WIRE, NO. 14 GAGE, ANNEALED, 7'-0" LONG FOR THE FORWARD BULKHEAD AND 8'-6" LONG FOR THE REAR BULKHEAD (2 EACH REQD). INSTALL THREE (3) WRAPS SO AS TO ENCIRCLE A STEEL UPRIGHT BRACE, A PIECE MARKED ④, AS APPLICABLE, AND THE ADJACENT VERTICAL PIECE OF THE FORWARD AND/OR REAR BULKHEAD. TWIST THE ENDS TOGETHER TIGHTLY.
- ⑧ STEEL STRAPPING, 2" X .050" X 60'-0" (3 REQD). INSTALL FROM (2) PIECES.
- ⑨ SEAL FOR 2" STRAPPING (18 REQD, 2 PER JOINT). SEE GENERAL NOTE "L" ON PAGE 2.

274-DRUM LOAD IN A TRAILER HAVING
34'-4" (412") BETWEEN INSTALLED BULKHEADS



PLAN VIEW

SPECIAL NOTES:

1. A 274-DRUM LOAD IS SHOWN IN A 7'-8-1/2" WIDE TRAILER HAVING 34'-4" BETWEEN THE INSTALLED BULKHEADS.
2. THE LOAD SHOWN CONSISTS OF SEVEN (7) BAYS. FIVE (5) BAYS HAVE 5-WIDE DRUM STACKS POSITIONED ALTERNATELY AS SHOWN AND TWO (2) BAYS HAVE 4-WIDE DRUM STACKS POSITIONED ALTERNATELY. STACKS WITHIN A BAY WILL BE LOADED IN A NESTED PATTERN. FOR A 5-WIDE DRUM STACK, ONE OUTER INDIVIDUAL STACK OF TWO (2) DRUMS WILL BE POSITIONED APPROXIMATELY 8-1/2" FROM A TRAILER SIDEWALL AND THE OTHER OUTER INDIVIDUAL STACK WILL BE POSITIONED AGAINST THE OPPOSITE SIDEWALL. THE REMAINING THREE INDIVIDUAL STACKS WILL BE EQUALLY SPACED BETWEEN THEM. FOR A 4-WIDE DRUM STACK, ONE OUTER INDIVIDUAL STACK OF TWO (2) DRUMS WILL BE POSITIONED APPROXIMATELY 12" FROM A TRAILER SIDEWALL AND THE OTHER OUTER INDIVIDUAL STACK WILL BE POSITIONED AGAINST THE OPPOSITE SIDEWALL. THE REMAINING TWO INDIVIDUAL STACKS WILL BE EQUALLY SPACED BETWEEN THEM. CAUTION: DRUMS ON OPPOSITE SIDES OF A DIVISIONAL GATE SHOULD BE OPPOSED TO EACH OTHER TO THE MAXIMUM EXTENT POSSIBLE; A BAY MUST BE STARTED WITH A DRUM STACK IN CONTACT WITH THE SAME TRAILER SIDEWALL AS IS CONTACTED BY THE LAST 4-WIDE OR 5-WIDE STACK IN THE PREVIOUS BAY.
3. THE FORWARD PLATE COVER AND THE REAR PLATE COVER MUST BE POSITIONED IN CONTACT WITH THE INSIDE FACE OF THE ADJACENT METAL UPRIGHT BRACES, AND WITH THE BOTTOM OF THE BULKHEAD RESTING ON TOP OF THE PLYWOOD.
4. A DRUM WILL BE POSITIONED IN A TRAILER SO THAT THE LOCKING DEVICE ON THE COVER LOCKING RING WILL BE IN A VOID AREA, AND NOT IN CONTACT WITH AN ADJACENT DRUM, A TRAILER SIDEWALL, A DIVISIONAL GATE, OR THE BULKHEAD BOARDS.
5. THE "LOAD AS SHOWN" IS BASED ON DRUMS HAVING A GROSS WEIGHT OF 156 POUNDS. THE DEPICTED LOADING PATTERN CAN BE USED FOR DRUMS HAVING A LESSER GROSS WEIGHT, AND CAN ALSO BE USED FOR DRUMS SOMEWHAT HEAVIER, PROVIDING THE GROSS WEIGHT AND AXLE DISTRIBUTION OF WEIGHT LIMITATIONS FOR A LOAD ARE NOT EXCEEDED. IF A DIFFERENT QUANTITY THAN SHOWN IS DESIRED, REFER TO THE PROCEDURES ON PAGES 10 AND 11, OR SELECT A LOADING PATTERN FROM THOSE DEPICTED ON PAGE 14, FOR GUIDANCE IN THE DEVELOPMENT OF A LOAD QUANTITY OTHER THAN 274 DRUMS. ADDITIONALLY, THE LOADING PATTERN FOR 246 DRUMS, AS SHOWN AT THE TOP OF PAGE 8, MAY BE ADAPTED TO TRAILERS HAVING 34'-4" BETWEEN THE INSTALLED BULKHEADS BY REDUCING THE AMOUNT OF SOLID FILL MATERIAL AT THE FRONT AND/OR REAR OF THE LOAD.

BILL OF MATERIAL

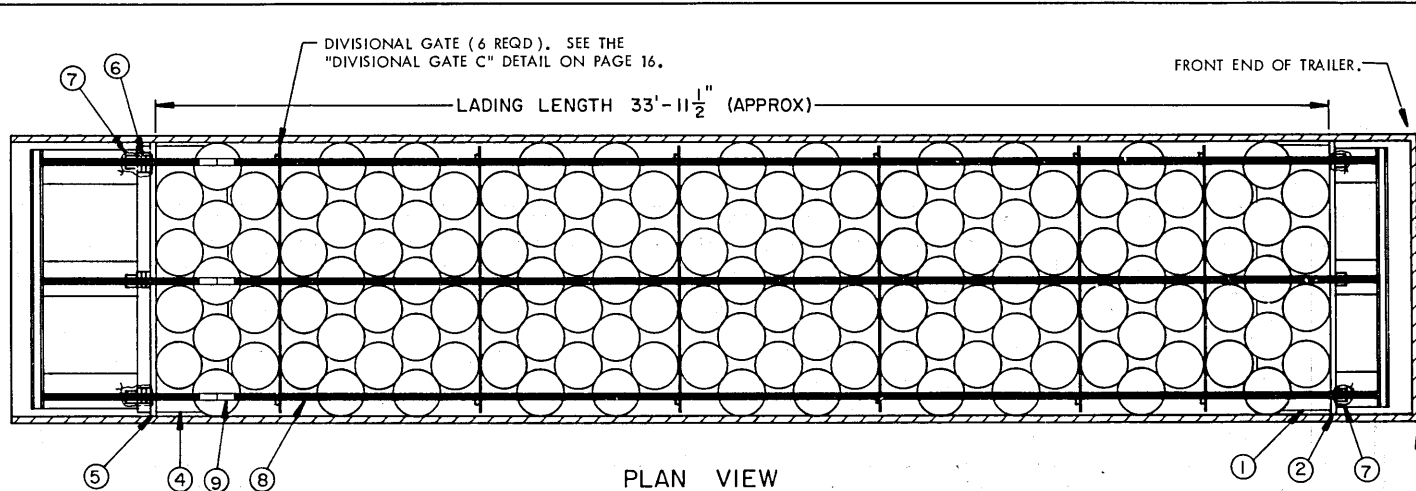
LUMBER	LINEAR FEET	BOARD FEET
1" X 4"	56	19
2" X 4"	10	7
2" X 6"	45	45
NAILS	NO. REQD	POUNDS
6d (2")	144	1
10d (3")	64	1
PLYWOOD, 1/4" -----	36 SQ FT -----	25 LBS
PLYWOOD, 1/2" -----	210 SQ FT -----	290 LBS
STEEL STRAPPING, 2" X .050"-180" REQD -----		60 LBS
SEAL FOR 2" STRAPPING -----	18 REQD -----	4 LBS
WIRE, NO. 14 GAGE -----	31' REQD -----	1 LB

* SEE SPECIAL NOTE 5 ABOVE.

LOAD AS SHOWN

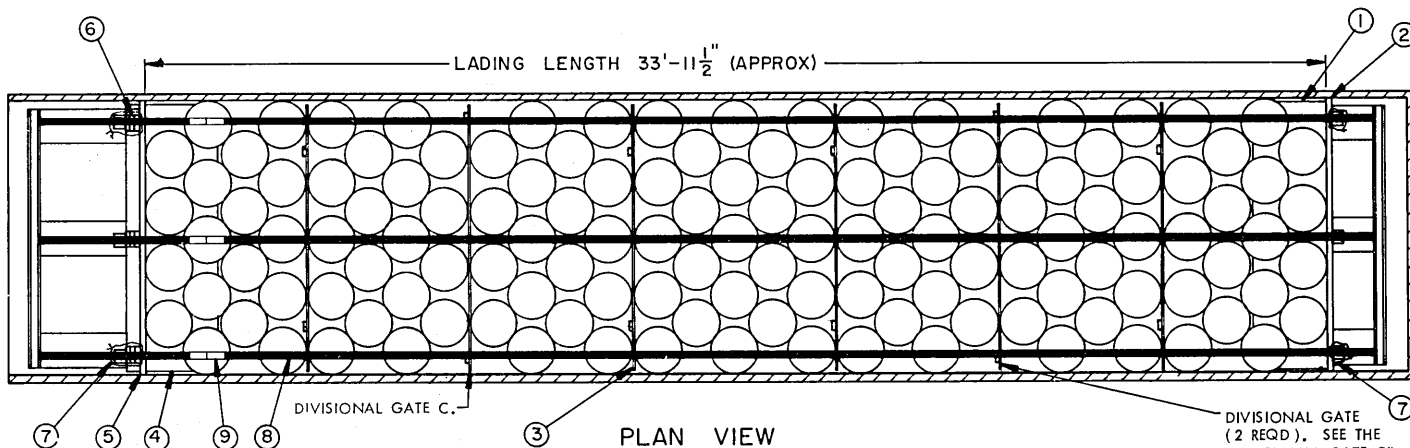
ITEM	QUANTITY	WEIGHT (APPROX)
DRUMS -----	274 -----	42,744 LBS *
DUNNAGE -----		560 LBS
TOTAL WEIGHT -----		43,304 LBS

**274-DRUM LOAD IN A TRAILER HAVING
34'-4" (412") BETWEEN INSTALLED BULKHEADS**



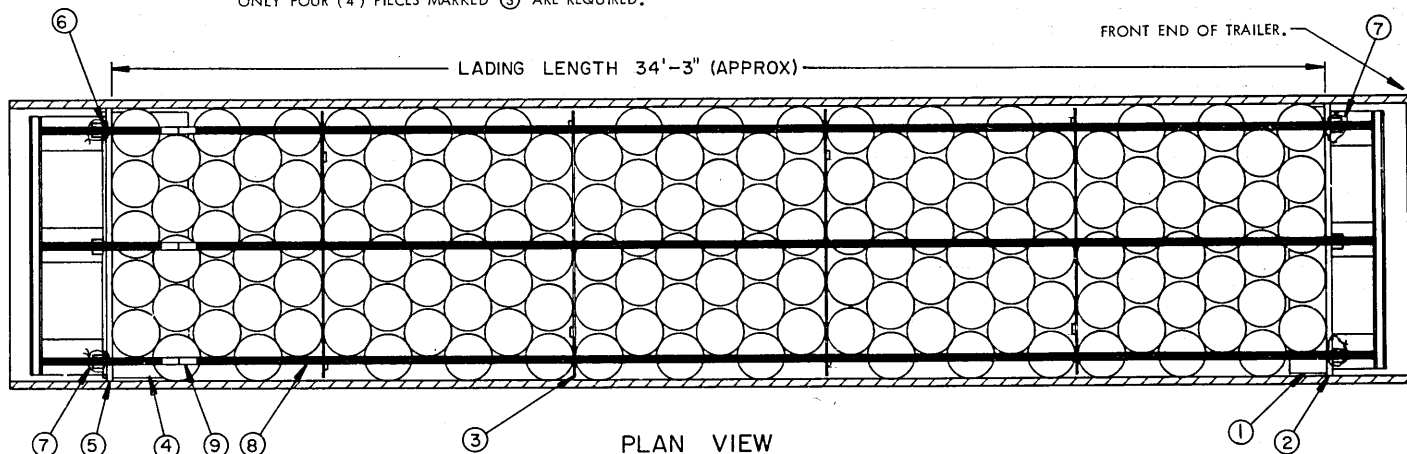
PLAN VIEW

A 254-DRUM LOADING PATTERN IS SHOWN AS AN ALTERNATIVE TO THE LOADS SHOWN ON PAGES 10 AND 12. THE DUNNAGE REQUIREMENT WHICH IS DIFFERENT THAN THE DUNNAGE FOR THE LOAD ON PAGE 10 IS IDENTIFIED WITH A LEADERED NOTE THAT INCLUDES A DESCRIPTION OF THE MATERIAL AS WELL AS THE QUANTITY REQUIRED. FOR A DESCRIPTION OF THE DUNNAGE PIECES IDENTIFIED BY THE KEY NUMBER BALLOONS, REFER TO THE "KEY NUMBERS" ON PAGE 10. THE QUANTITY REQUIRED OF THE KEY NUMBERED PIECES WILL BE THE SAME AS ON PAGE 10.



PLAN VIEW

A 262-DRUM LOADING PATTERN IS SHOWN AS AN ALTERNATIVE TO THE LOADS SHOWN ON PAGES 10 AND 12. THE DUNNAGE REQUIREMENT WHICH IS DIFFERENT THAN THE DUNNAGE FOR THE LOAD ON PAGE 10 IS IDENTIFIED WITH A LEADERED NOTE THAT INCLUDES A DESCRIPTION OF THE MATERIAL AS WELL AS THE QUANTITY REQUIRED. REFER TO THE "KEY NUMBERS" ON PAGE 10 FOR A DESCRIPTION OF THE DUNNAGE PIECES IDENTIFIED BY THE KEY NUMBER BALLOONS. THE QUANTITY REQUIRED OF THE KEY NUMBERED PIECES WILL BE THE SAME AS ON PAGE 10 EXCEPT THAT ONLY FOUR (4) PIECES MARKED ③ ARE REQUIRED.

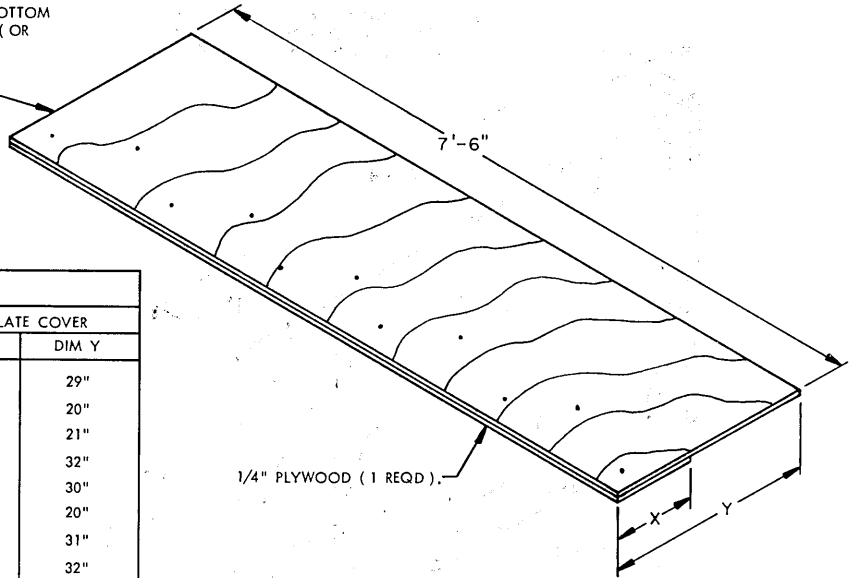


PLAN VIEW

A 290-DRUM LOADING PATTERN IS SHOWN AS AN ALTERNATIVE TO THE LOADS SHOWN ON PAGES 10 AND 12. FOR A DESCRIPTION OF THE DUNNAGE PIECES IDENTIFIED BY THE KEY NUMBER BALLOONS, REFER TO THE "KEY NUMBERS" ON PAGE 12. THE QUANTITY REQUIRED OF THE KEY NUMBERED PIECES WILL BE THE SAME AS ON PAGE 12 EXCEPT THAT ONLY FOUR (4) PIECES MARKED ③ ARE REQUIRED. NOTE THAT THE VERTICAL PIECES OF THE REAR BULKHEAD, PIECE MARKED ⑤, MAY NEED TO BE 1" X 6" MATERIAL IN LIEU OF THE 2" X 6" MATERIAL SPECIFIED BY THE DETAIL ON PAGE 15. IF THERE IS NOT SUFFICIENT SPACE FOR THE APPLICATION OF VERTICAL PIECES ALIGNED WITH THE UPRIGHT BRACES, THE BULKHEAD BOARDS MUST BE SECURED WITH 2" X 4" VERTICAL PIECES POSITIONED AS SHOWN BY THE "FORWARD BULKHEAD" DETAIL ON PAGE 15. ALSO, THE PIECES MARKED ⑦ AT THE REAR OF THE LOAD NEED BE ONLY 7'-0" LONG IN LIEU OF 8'-6".

ADDITIONAL LOADING PATTERNS FOR TRAILERS HAVING
34'-4" (412") BETWEEN INSTALLED BULKHEADS

1/4" PLYWOOD (1 REQD). NAIL TO BOTTOM PIECE W/11 SMALL NAILS AND CLINCH (OR USE STAPLES).



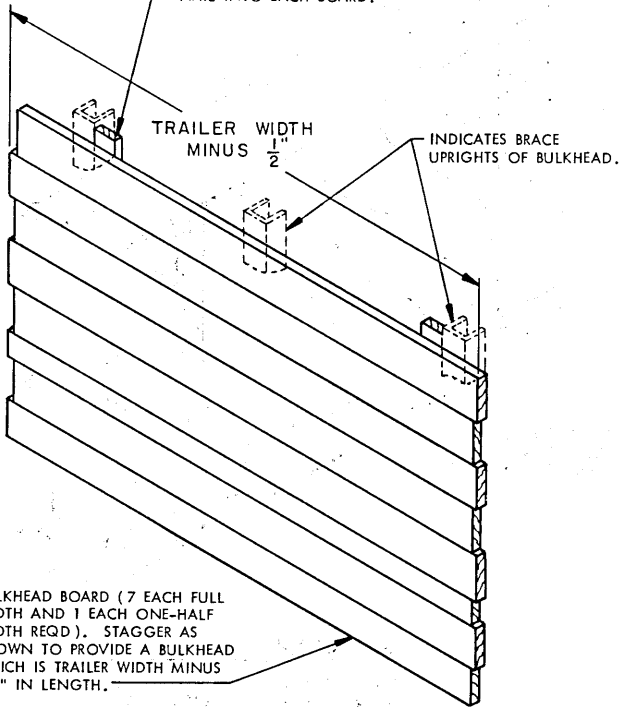
1/4" PLYWOOD (1 REQD).

BRACE PLATE COVER ASSEMBLY

REFER TO THE "DIMENSION CHART" AT THE LEFT FOR THE FIGURES REPRESENTED BY THE LETTERS "X" AND "Y" ABOVE.

DIMENSION CHART					
PAGE REF	NO. OF DRUMS	FORWARD PLATE COVER		REAR PLATE COVER	
		DIM X	DIM Y	DIM X	DIM Y
4	284	9-1/2"	27"	11-1/2"	29"
6	276	9-1/2"	27"	3-1/2"	20"
8	246	20-1/2"	23"	4"	21"
8	254	12-1/2"	30"	14-1/2"	32"
8	266	9-1/2"	27"	12-1/2"	30"
9	270	9-1/2"	27"	3-1/2"	20"
9	274	9-1/2"	27"	14"	31"
9	290	9-1/2"	27"	14-1/2"	32"
10	266	9-1/2"	27"	2-1/2"	19"
12	274	9-1/2"	27"	2-1/2"	19"
14	254	9-1/2"	27"	14"	31-1/2"
14	262	9-1/2"	27"	14"	31-1/2"
14	290	9-1/2"	27"	10-1/2"	28"

VERTICAL PIECE, 2" X 4" X 60" (2 REQD). NAIL TO THE BULKHEAD BOARDS W/1-10d NAIL INTO EACH BOARD.

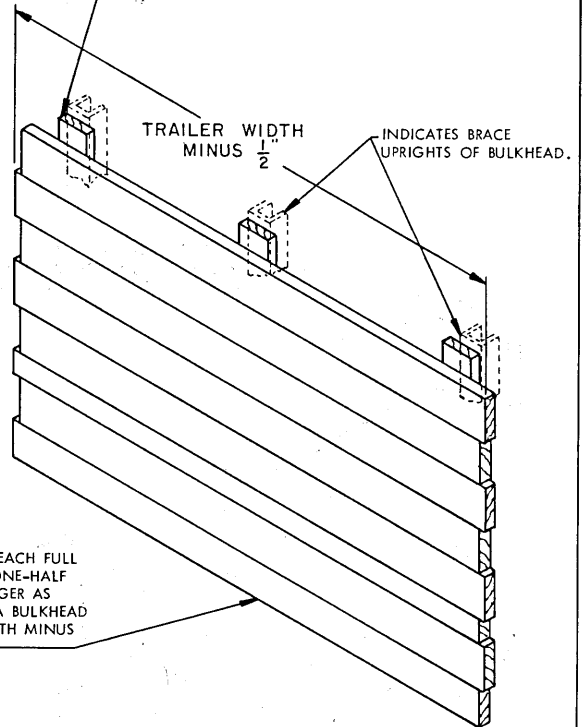


FORWARD BULKHEAD

BULKHEAD BOARD (7 EACH FULL WIDTH AND 1 EACH ONE-HALF WIDTH REQD). STAGGER AS SHOWN TO PROVIDE A BULKHEAD WHICH IS TRAILER WIDTH MINUS 1/2" IN LENGTH.

THIS FORWARD BULKHEAD IS APPLICABLE FOR ALL THE LOADS ON PAGES 4 THRU 14 EXCEPT THE 246-DRUM LOADING PATTERN AT THE TOP OF PAGE 8. FOR THE 246-DRUM LOAD, THREE (3) 2" X 6" VERTICAL PIECES WILL BE REQUIRED, POSITIONED AS SHOWN BY THE "REAR BULKHEAD" DETAIL AT RIGHT, IN ADDITION TO THE FILL MATERIAL SPECIFIED BY THE "PLAN VIEW" OF THE LOAD.

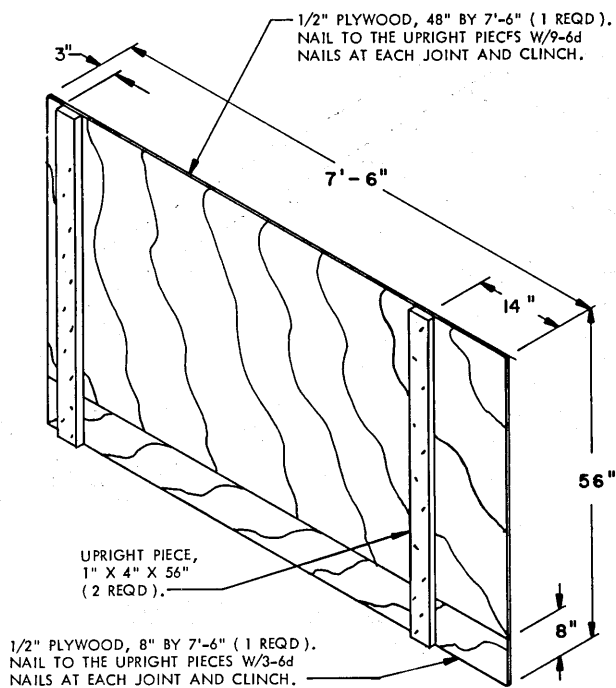
VERTICAL PIECE, 2" X 6" X 60" (3 REQD). POSITION WITH ONE EDGE FLUSH WITH ONE SIDE OF AN UPRIGHT BRACE AS SHOWN TO FACILITATE NAILING. NAIL TO THE BULKHEAD BOARDS W/1-10d NAIL INTO EACH BOARD.



REAR BULKHEAD

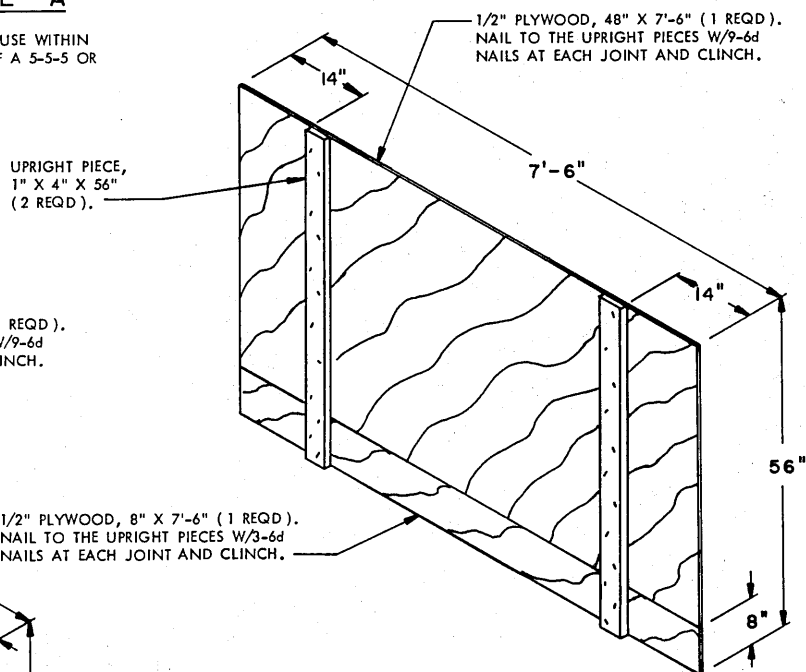
BULKHEAD BOARD (7 EACH FULL WIDTH AND 1 EACH ONE-HALF WIDTH REQD). STAGGER AS SHOWN TO PROVIDE A BULKHEAD WHICH IS TRAILER WIDTH MINUS 1/2" IN LENGTH.

THIS REAR BULKHEAD IS APPLICABLE FOR ALL THE LOADS ON PAGES 4 THRU 14 EXCEPT FOR THE LOADING PATTERN FOR 290 DRUMS SHOWN AT THE BOTTOM OF PAGE 14. THE LADING LENGTH OF THAT LOAD MAY REQUIRE THE USE OF 1" X 6" X 60" VERTICAL PIECES IN LIEU OF 2" X 6" PIECES.



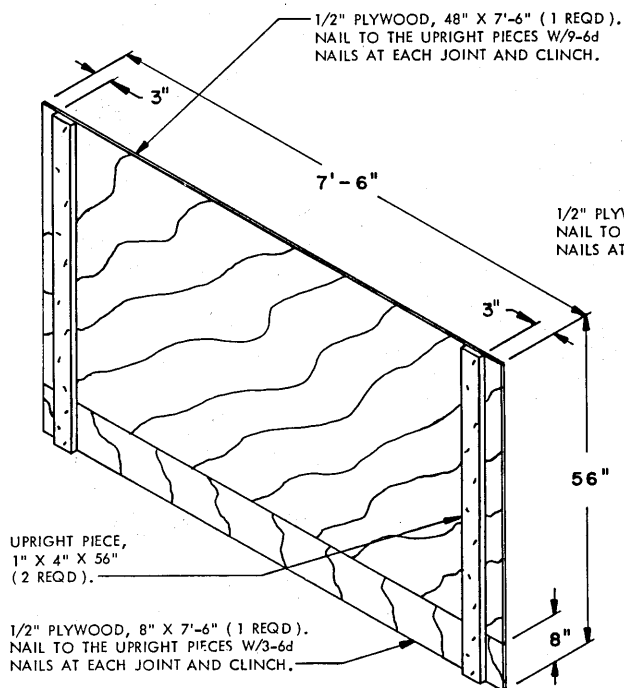
DIVISIONAL GATE A

THIS GATE IS DESIGNED FOR USE WITHIN
A LOAD WHICH CONSISTS OF A 5-5-5 OR
A 4-4-4 LOADING PATTERN.



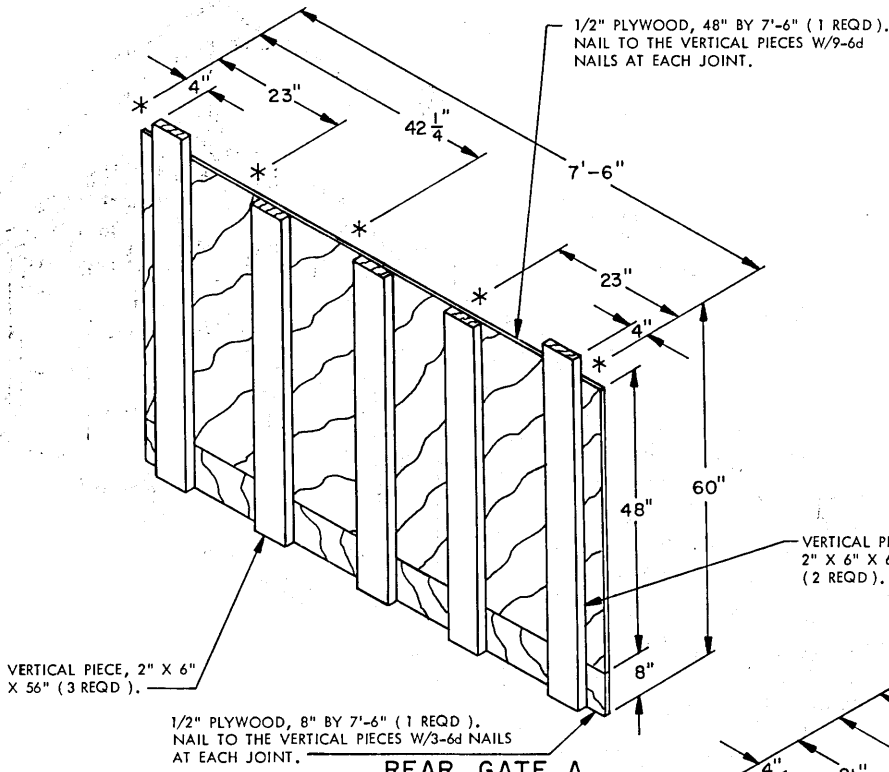
DIVISIONAL GATE B

THIS GATE IS DESIGNED FOR USE WITHIN
A 5-4-5 PATTERN LOAD WHEN THERE ARE
FIVE (5) DRUM STACKS ADJACENT TO THE
GATE.



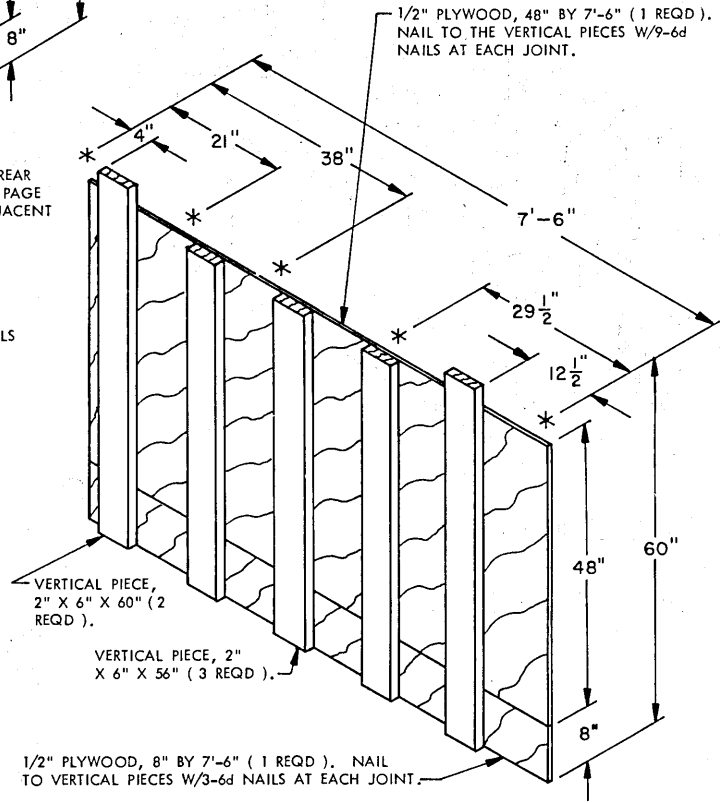
DIVISIONAL GATE C

THIS GATE IS DESIGNED FOR USE WITHIN
A 4-5-4 PATTERN LOAD WHEN THERE ARE
FOUR (4) DRUM STACKS ADJACENT TO
THE GATE.



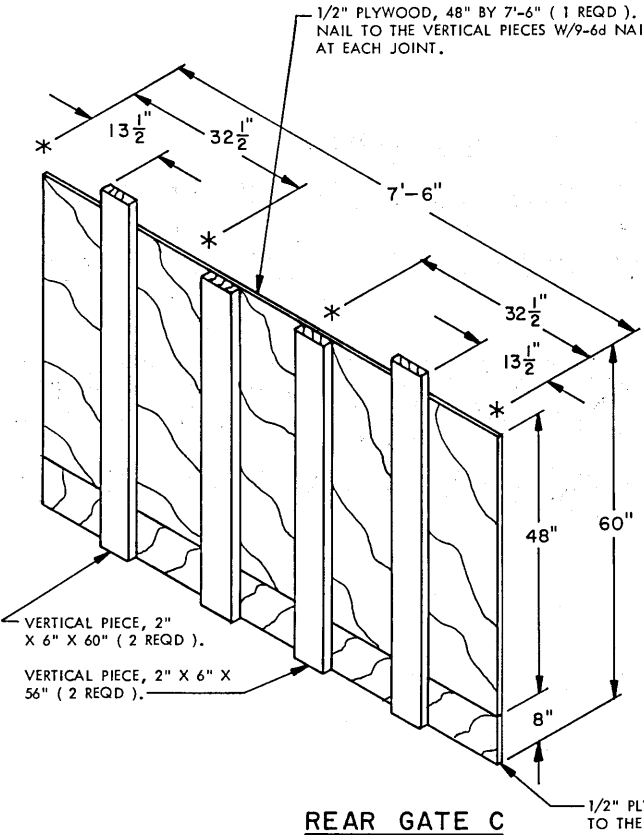
REAR GATE A

THIS GATE IS DESIGNED FOR USE AT THE REAR OF THE 5-4-5 PATTERN LOAD SHOWN ON PAGE 18 WHERE THERE ARE FIVE (5) DRUMS ADJACENT TO THE GATE.



REAR GATE B

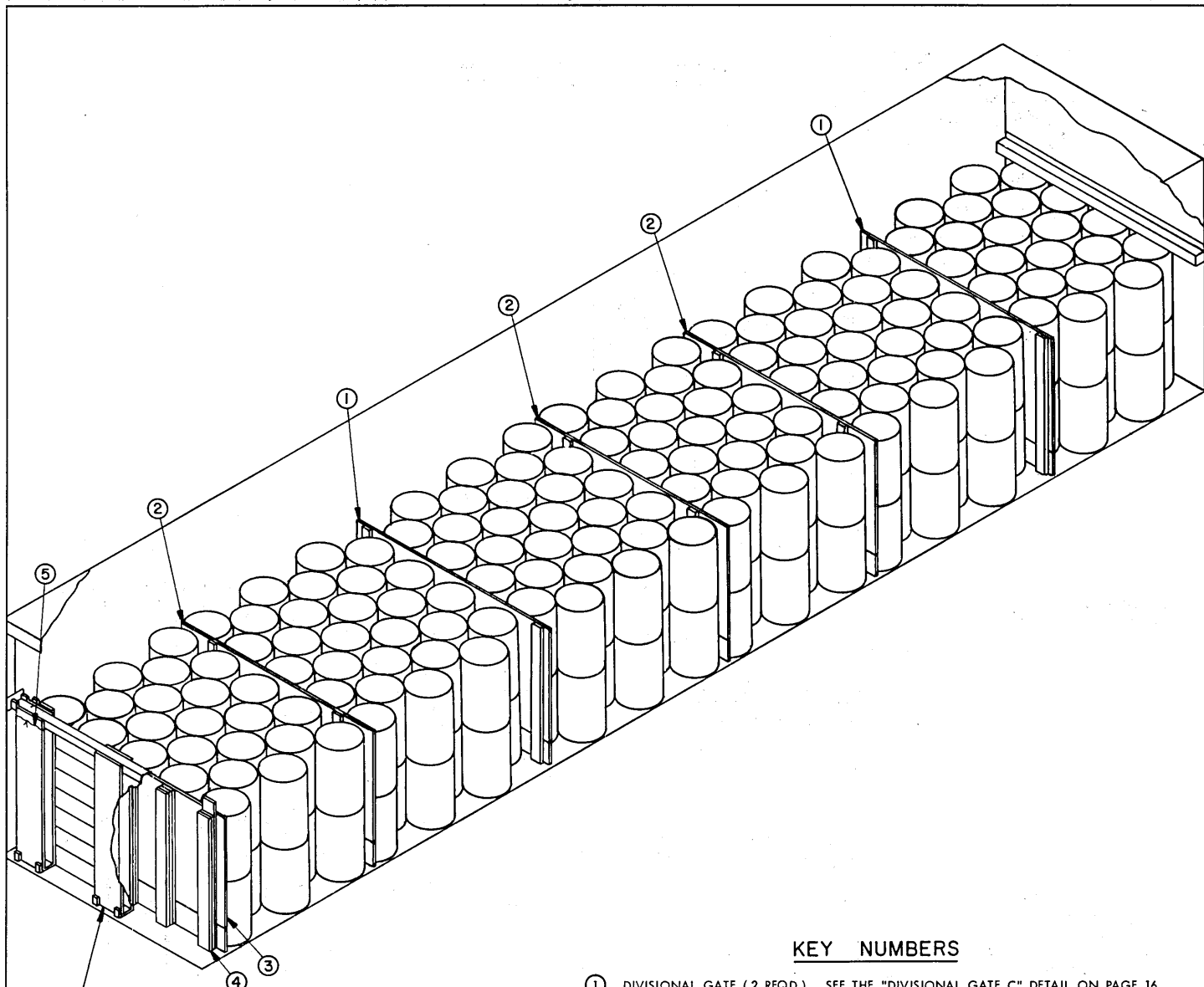
THIS GATE IS DESIGNED FOR USE AT THE REAR OF THE 5-5-5 PATTERN LOAD SHOWN ON PAGES 20, 24 AND 32.



REAR GATE C

THIS GATE IS DESIGNED FOR USE AT THE REAR OF THE LOADS REPRESENTED BY THE LOADING PATTERNS ON PAGE 22 WHERE THERE ARE FOUR (4) DRUM STACKS ADJACENT TO THE GATE.

DETAILS

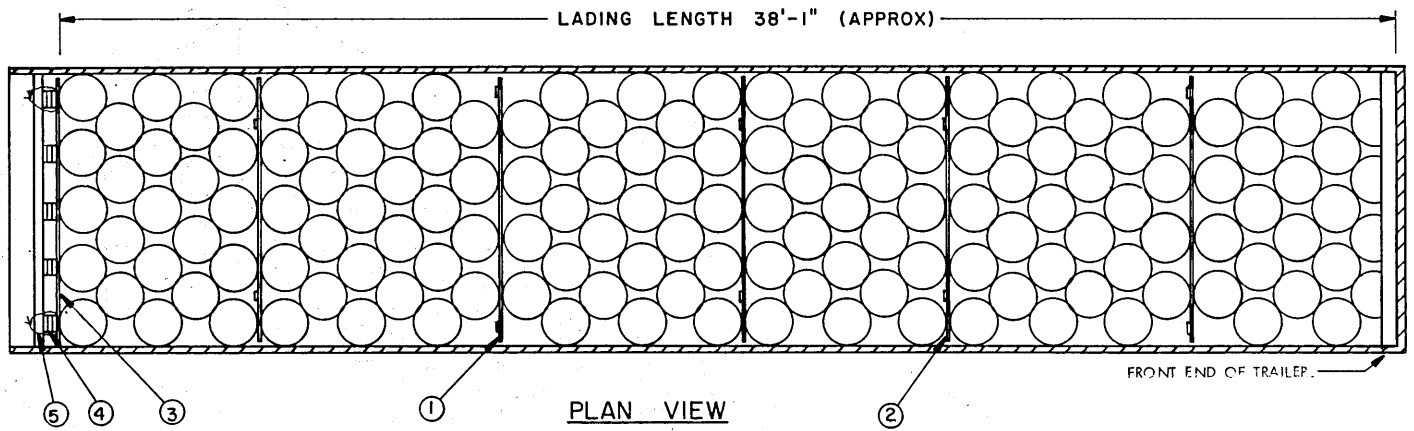


ISOMETRIC VIEW

INDICATES SPECIAL BULKHEAD BRACE WITH BOARDS. SEE GENERAL NOTE "B" ON PAGE 2.

KEY NUMBERS

- ① DIVISIONAL GATE (2 REQD). SEE THE "DIVISIONAL GATE C" DETAIL ON PAGE 16. A GATE MAY BE POSITIONED SO THAT THE 1" X 4" UPRIGHT PIECES ARE ON THE REARWARD SIDE AS SHOWN OR ON THE FORWARD SIDE, AS DESIRED.
- ② DIVISIONAL GATE (3 REQD). SEE THE "DIVISIONAL GATE B" DETAIL ON PAGE 16. A GATE MAY BE POSITIONED SO THAT THE 1" X 4" UPRIGHT PIECES ARE ON THE REARWARD SIDE AS SHOWN OR ON THE FORWARD SIDE, AS DESIRED.
- ③ REAR GATE (1 REQD). SEE THE "REAR GATE A" DETAIL ON PAGE 17.
- ④ SOLID FILL, 6" WIDE BY 56" LONG MATERIAL OF A THICKNESS AS NECESSARY TO FILL THE SPACE BETWEEN A VERTICAL PIECE OF THE REAR GATE, PIECE MARKED ③, AND THE BOARDS OF THE INSTALLED REAR BULKHEAD (REF: 2-2" X 6" X 56" AT FIVE (5) PLACES). SOLID FILL MAY CONSIST OF ONE OR MORE LAMINATIONS, AS NECESSARY. NAIL TO A VERTICAL PIECE AND/OR TOGETHER W/4-10d NAILS.
- ⑤ WIRE, NO. 14 GAGE, ANNEALED, 12'-0" LONG (2 REQD). INSTALL THREE (3) WRAPS SO AS TO ENCIRCLE A REAR BRACE ASSEMBLY AND A 60" LONG VERTICAL PIECE OF THE REAR GATE, PIECE MARKED ③.



SPECIAL NOTES:

1. A 298-DRUM LOAD IS SHOWN IN A 7'-8-1/2" WIDE TRAILER HAVING 38'-6" BETWEEN THE BULKHEAD AT THE FRONT (BUILT INTO THE FRONT WALL) AND THE INSTALLED BULKHEAD AT THE REAR.
2. STEEL STRAPPING BETWEEN THE BULKHEADS IS NOT REQUIRED FOR THIS SYSTEM PROVIDING THE BULKHEAD RETAINER TUBE ASSEMBLY OF THE REAR BULKHEAD IS CONSTRUCTED OF 3/8" THICK WALL STEEL. IF THE BULKHEAD RETAINER TUBE ASSEMBLY IS MADE FROM 3/16" THICK WALL STEEL, THREE (3) EACH 2" X .050" X 44'-0" LONG STEEL STRAPS WILL BE EMPLOYED FOR TYING THE BULKHEADS TOGETHER.
3. THE LOAD SHOWN CONSISTS OF SIX (6) BAYS HAVING ALTERNATE STACKS OF 4-DRUMS WIDE AND 5-DRUMS WIDE WITHIN A BAY. STACKS WITHIN A BAY WILL BE LOADED IN A NESTED PATTERN. BAYS MUST BEGIN AND END WITH THE NUMBER OF DRUM STACKS WIDE SHOWN TO PROVIDE FOR A STABLE LOAD. IF THE BAY STARTS WITH A 4-DRUM WIDE STACK, THE OUTER INDIVIDUAL STACKS OF TWO (2) DRUMS WILL BE POSITIONED APPROXIMATELY 9-1/2" FROM THE TRAILER SIDEWALLS AND THE REMAINING TWO INDIVIDUAL STACKS WILL BE EQUALLY SPACED BETWEEN THEM. IF A BAY STARTS WITH A 5-WIDE DRUM STACK, THE OUTER STACKS WILL BE PLACED IN CONTACT WITH THE TRAILER SIDEWALLS AND THE REMAINING THREE INDIVIDUAL STACKS WILL BE EQUALLY SPACED BETWEEN THEM. CAUTION: DRUMS ON OPPOSITE SIDES OF A DIVISIONAL GATE MUST BE OPPOSED TO EACH OTHER; IF A BAY ENDS WITH A 5-DRUM WIDE STACK, THE NEXT BAY MUST START WITH A 5-DRUM WIDE STACK.
4. A DRUM WILL BE POSITIONED IN A TRAILER SO THAT THE LOCKING DEVICE ON THE COVER LOCKING RING WILL BE IN A VOID AREA, AND NOT IN CONTACT WITH AN ADJACENT DRUM, A TRAILER SIDEWALL, A DIVISIONAL GATE, OR THE BULKHEAD BOARDS.
5. THE "LOAD AS SHOWN" IS BASED ON DRUMS HAVING A GROSS WEIGHT OF 146 POUNDS. THE DEPICTED LOADING PATTERN CAN BE USED FOR DRUMS HAVING A LESSER GROSS WEIGHT, BUT PROBABLY CANNOT BE USED FOR HEAVIER DRUMS WITHOUT EXCEEDING THE GROSS WEIGHT AND AXLE DISTRIBUTION OF WEIGHT LIMITATIONS FOR A LOAD. IF A LESSER QUANTITY THAN SHOWN IS DESIRED, SELECT A LOADING PATTERN FROM THOSE DEPICTED ON PAGE 22 FOR GUIDANCE IN THE DEVELOPMENT OF A LOAD QUANTITY OTHER THAN 298 DRUMS.

BILL OF MATERIAL

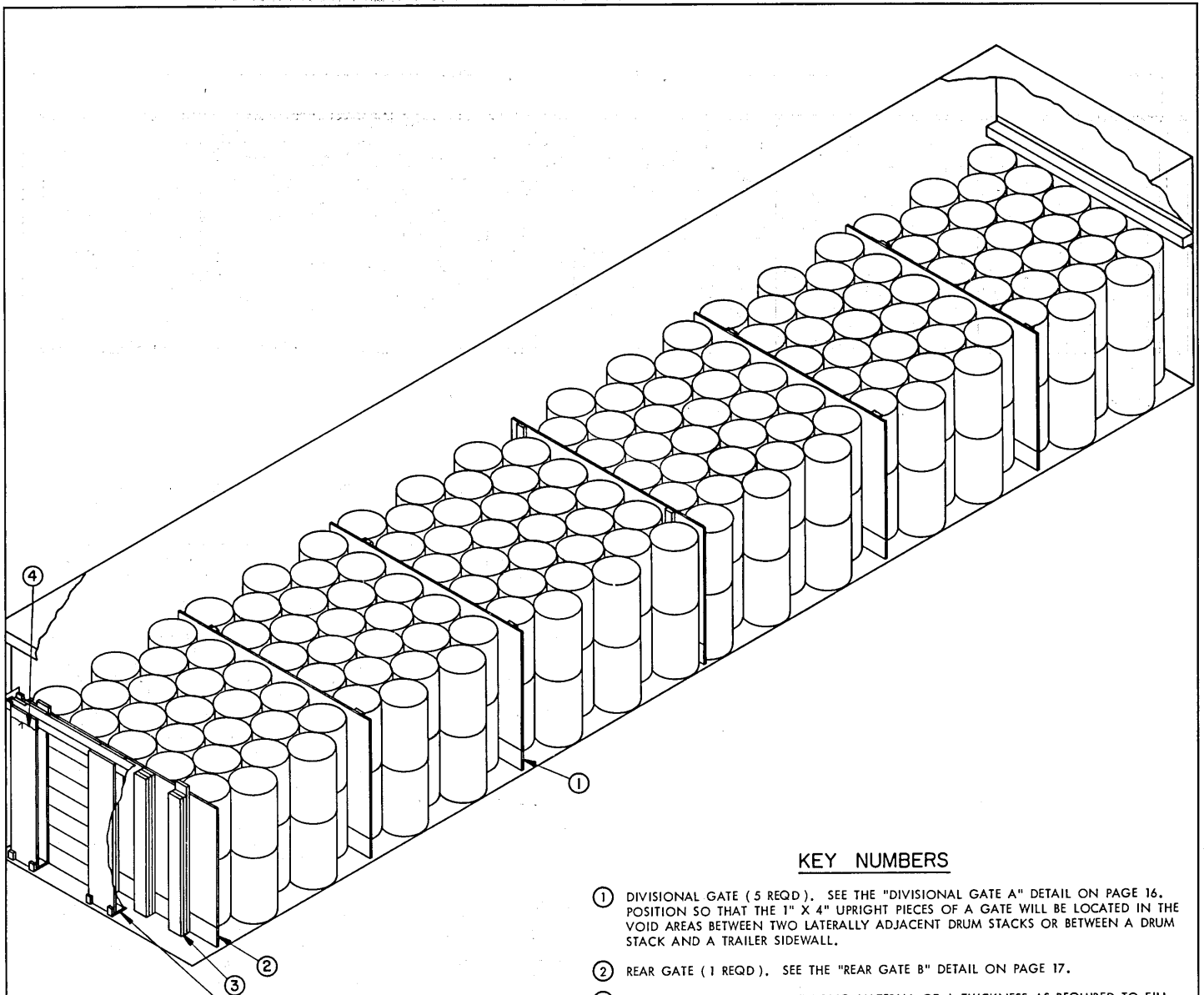
LUMBER	LINEAR FEET	BOARD FEET
1" X 4"	47	16
2" X 6"	71	71
NAILS	NO. REQD	POUNDS
6d (2")	135	1
10d (3")	40	3/4
PLYWOOD, 1/2" ----- 210 SQ. FT. -----		288 LBS
WIRE, NO. 14 GAGE ----- 24' REQD -----		NIL

* SEE SPECIAL NOTE 5 ABOVE.

LOAD AS SHOWN

ITEM	QUANTITY	WEIGHT (APPROX)
DRUM -----	298	43,508 LBS *
DUNNAGE -----		507 LBS
TOTAL WEIGHT -----		44,015 LBS

**298-DRUM LOAD IN A TRAILER HAVING
38'-6" (462") BETWEEN INSTALLED BULKHEADS**



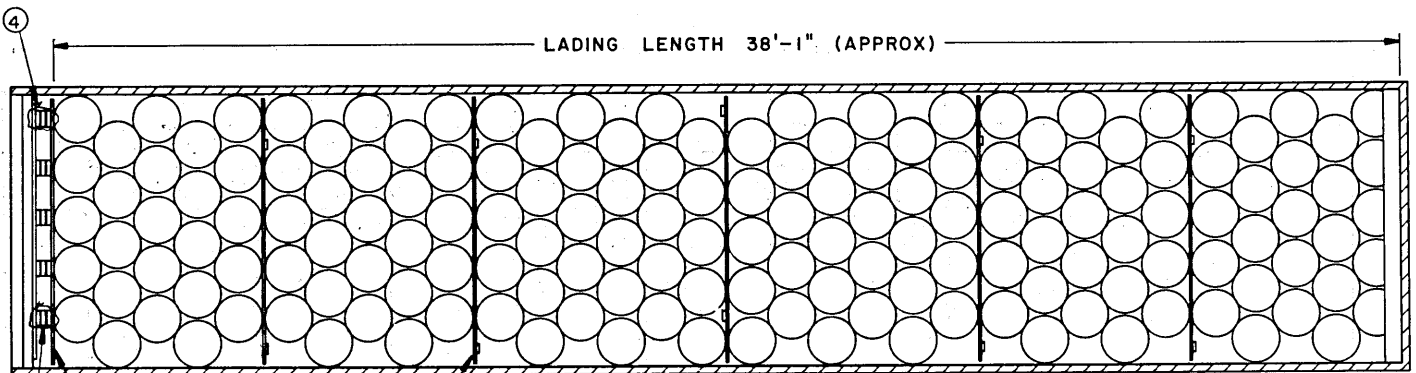
ISOMETRIC VIEW

INDICATES SPECIAL BULKHEAD BRACE WITH BOARDS. SEE GENERAL NOTE "B" ON PAGE 2.

KEY NUMBERS

- ① DIVISIONAL GATE (5 REQD). SEE THE "DIVISIONAL GATE A" DETAIL ON PAGE 16. POSITION SO THAT THE 1" X 4" UPRIGHT PIECES OF A GATE WILL BE LOCATED IN THE VOID AREAS BETWEEN TWO LATERALLY ADJACENT DRUM STACKS OR BETWEEN A DRUM STACK AND A TRAILER SIDEWALL.
- ② REAR GATE (1 REQD). SEE THE "REAR GATE B" DETAIL ON PAGE 17.
- ③ SOLID FILL, 6" WIDE BY 56" LONG MATERIAL OF A THICKNESS AS REQUIRED TO FILL THE SPACE BETWEEN A VERTICAL PIECE OF THE REAR GATE, PIECE MARKED ②, AND THE BOARDS OF THE INSTALLED REAR BULKHEAD (REF: 2-2" X 6" X 56" AT FIVE (5) PLACES). SOLID FILL MAY CONSIST OF ONE OR MORE LAMINATIONS, AS NECESSARY. NAIL TO A VERTICAL PIECE AND/OR TOGETHER W/4-10d NAILS.
- ④ WIRE, NO. 14 GAGE, ANNEALED, 12'-0" LONG (2 REQD). INSTALL THREE (3) WRAPS SO AS TO ENCIRCLE A REAR BRACE ASSEMBLY AND A VERTICAL PIECE OF THE REAR GATE, PIECE MARKED ②.

320-DRUM LOAD IN A TRAILER HAVING
38'-6" (462") BETWEEN INSTALLED BULKHEADS



PLAN VIEW

SPECIAL NOTES:

1. A 320-DRUM LOAD IS SHOWN IN A 7'-8-1/2" WIDE TRAILER HAVING 38'-6" BETWEEN THE BULKHEAD AT THE FRONT (BUILT INTO THE FRONT WALL) AND THE INSTALLED BULKHEAD AT THE REAR.
2. STEEL STRAPPING BETWEEN THE BULKHEADS IS NOT REQUIRED FOR THIS SYSTEM PROVIDING THE BULKHEAD RETAINER TUBE ASSEMBLY OF THE REAR BULKHEAD IS CONSTRUCTED OF 3/8" THICK WALL STEEL. IF THE RETAINER TUBE ASSEMBLY IS MADE FROM 3/16" THICK WALL STEEL, THREE (3) EACH 2" X .050" X 44'-0" LONG STEEL STRAPS WILL BE EMPLOYED FOR TYING THE BULKHEADS TOGETHER.
3. THE LOAD SHOWN CONSISTS OF SIX (6) BAYS HAVING 5-WIDE DRUM STACKS POSITIONED ALTERNATELY AS SHOWN. STACKS WITHIN A BAY WILL BE LOADED IN A NESTED PATTERN. ONE OUTER INDIVIDUAL STACK OF TWO (2) DRUMS IN A 5-WIDE STACK WILL BE POSITIONED APPROXIMATELY 8-1/2" FROM A TRAILER SIDEWALL AND THE OTHER OUTER INDIVIDUAL STACK WILL BE POSITIONED AGAINST THE OPPOSITE SIDEWALL. THE REMAINING THREE INDIVIDUAL STACKS WILL BE EQUALLY SPACED BETWEEN THEM. EACH SUCCESSIVE 5-WIDE DRUM STACK WILL CONTACT THE OPPOSITE TRAILER SIDEWALL THAN IS CONTACTED BY THE PREVIOUSLY POSITIONED 5-WIDE STACK. **CAUTION:** DRUMS ON OPPOSITE SIDES OF A DIVISIONAL GATE MUST BE OPPOSED TO EACH OTHER; A BAY MUST BE STARTED WITH A DRUM STACK IN CONTACT WITH THE SAME TRAILER SIDEWALL AS IS CONTACTED BY THE LAST 5-WIDE STACK IN THE PREVIOUS BAY.
4. A DRUM WILL BE POSITIONED IN A TRAILER SO THAT THE LOCKING DEVICE ON THE COVER LOCKING RING WILL BE IN A VOID AREA, AND NOT IN CONTACT WITH AN ADJACENT DRUM, A TRAILER SIDEWALL, A DIVISIONAL GATE, OR THE BULKHEAD BOARDS.
5. THE "LOAD AS SHOWN" IS BASED ON DRUMS HAVING A GROSS WEIGHT OF 121 POUNDS. THE DEPICTED LOADING PATTERN CAN BE USED FOR DRUMS HAVING A LESSER GROSS WEIGHT, AND MAY ALSO BE USED FOR DRUMS SOMEWHAT HEAVIER, PROVIDING THE GROSS WEIGHT AND AXLE DISTRIBUTION OF WEIGHT LIMITATIONS FOR A LOAD ARE NOT EXCEEDED. IF A LESSER QUANTITY THAN SHOWN IS DESIRED, REFER TO THE PROCEDURES ON PAGES 18 AND 19, OR SELECT A LOADING PATTERN FROM THOSE DEPICTED ON PAGE 22, FOR GUIDANCE IN THE DEVELOPMENT OF A LOAD QUANTITY OTHER THAN 320 DRUMS.

BILL OF MATERIAL

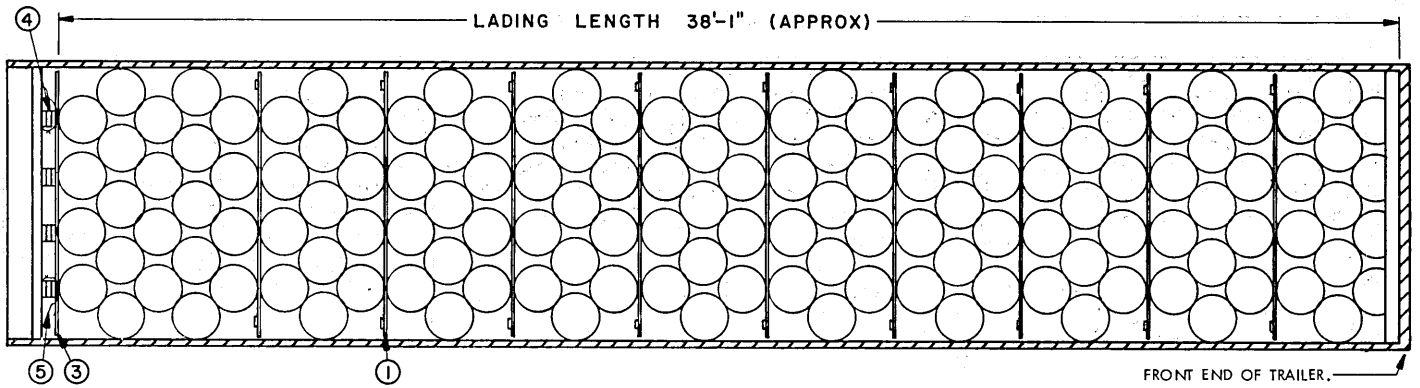
LUMBER	LINEAR FEET	BOARD FEET
1" X 4"	47	16
2" X 6"	71	71
NAILS	NO. REQD	POUNDS
6d (2")	135	1
10d (3")	40	3/4
PLYWOOD, 1/2" ----- 210 SQ. FT. -----		288 LBS
WIRE, NO. 14 GAGE ----- 24' REQD -----		NIL

*SEE SPECIAL NOTE 5 ABOVE.

LOAD AS SHOWN

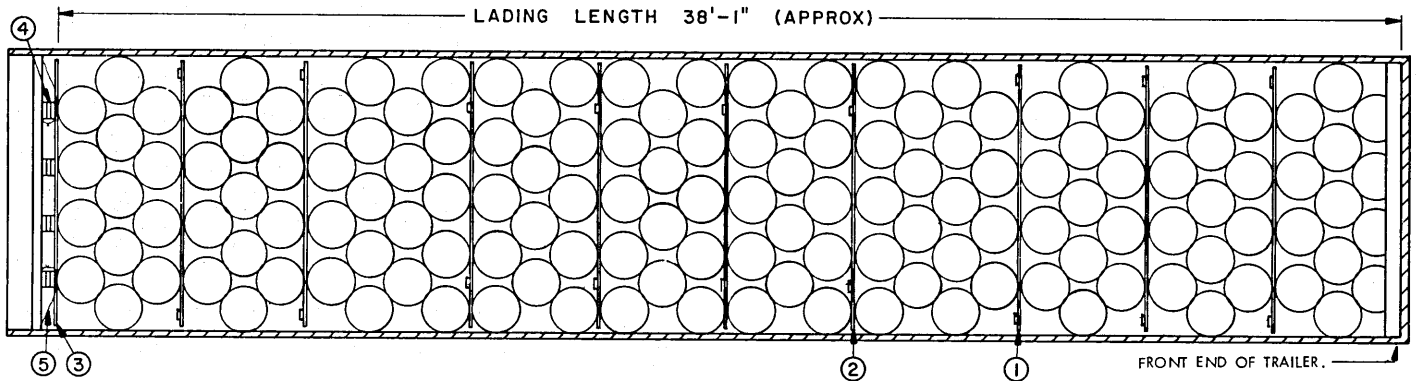
ITEM	QUANTITY	WEIGHT (APPROX)
DRUM -----	320 -----	38,720 LBS *
DUNNAGE -----	-----	507 LBS
TOTAL WEIGHT -----		39,227 LBS

**320-DRUM LOAD IN A TRAILER HAVING
38'-6" (462") BETWEEN INSTALLED BULKHEADS**



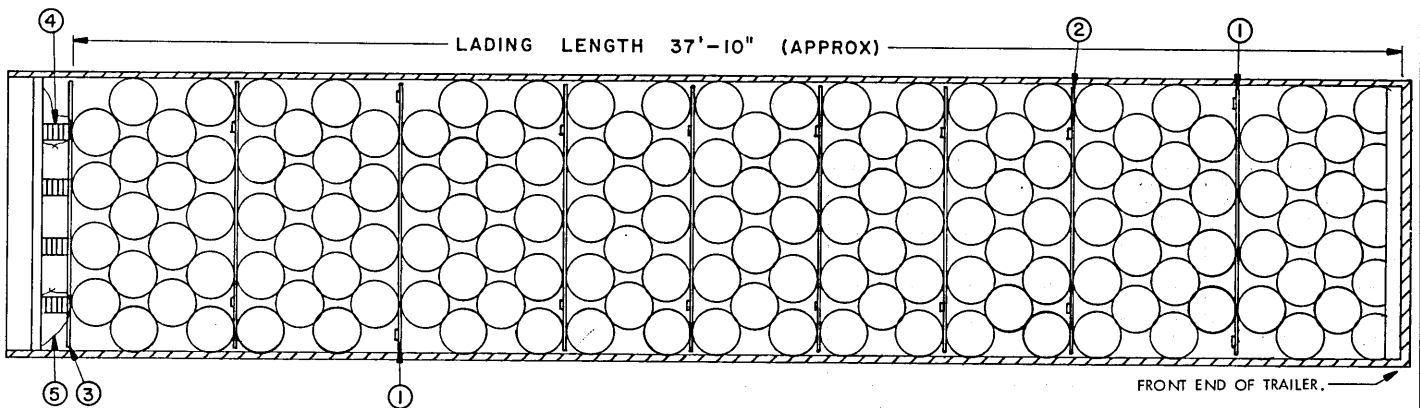
PLAN VIEW

A 276-DRUM LOADING PATTERN IS SHOWN AS AN ALTERNATIVE TO THE LOADS SHOWN ON PAGES 18 AND 20. FOR A DESCRIPTION OF THE DUNNAGE PIECES IDENTIFIED BY THE KEY NUMBER BALLOONS, REFER TO THE "KEY NUMBERS" ON PAGE 18. THE QUANTITY REQUIRED OF THE KEY NUMBERED PIECES WILL BE THE SAME AS ON PAGE 18, EXCEPT THAT NINE (9) PIECES MARKED ① WILL BE REQUIRED IN LIEU OF TWO. NOTE THAT PIECES MARKED ⑤ MUST BE 14'-0" LONG IN LIEU OF 12'-0".



PLAN VIEW

A 286-DRUM LOADING PATTERN IS SHOWN AS AN ALTERNATIVE TO THE LOADS SHOWN ON PAGES 18 AND 20. FOR A DESCRIPTION OF THE DUNNAGE PIECES IDENTIFIED BY THE KEY NUMBER BALLOONS, REFER TO THE "KEY NUMBERS" ON PAGE 18. THE QUANTITY REQUIRED OF THE KEY NUMBERED PIECES WILL BE THE SAME AS ON PAGE 18 EXCEPT THAT FIVE (5) PIECES MARKED ① WILL BE REQUIRED IN LIEU OF TWO, AND FOUR (4) PIECES MARKED ② WILL BE REQUIRED IN LIEU OF THREE. NOTE THAT PIECES MARKED ⑤ MUST BE 14'-0" LONG IN LIEU OF 12'-0".

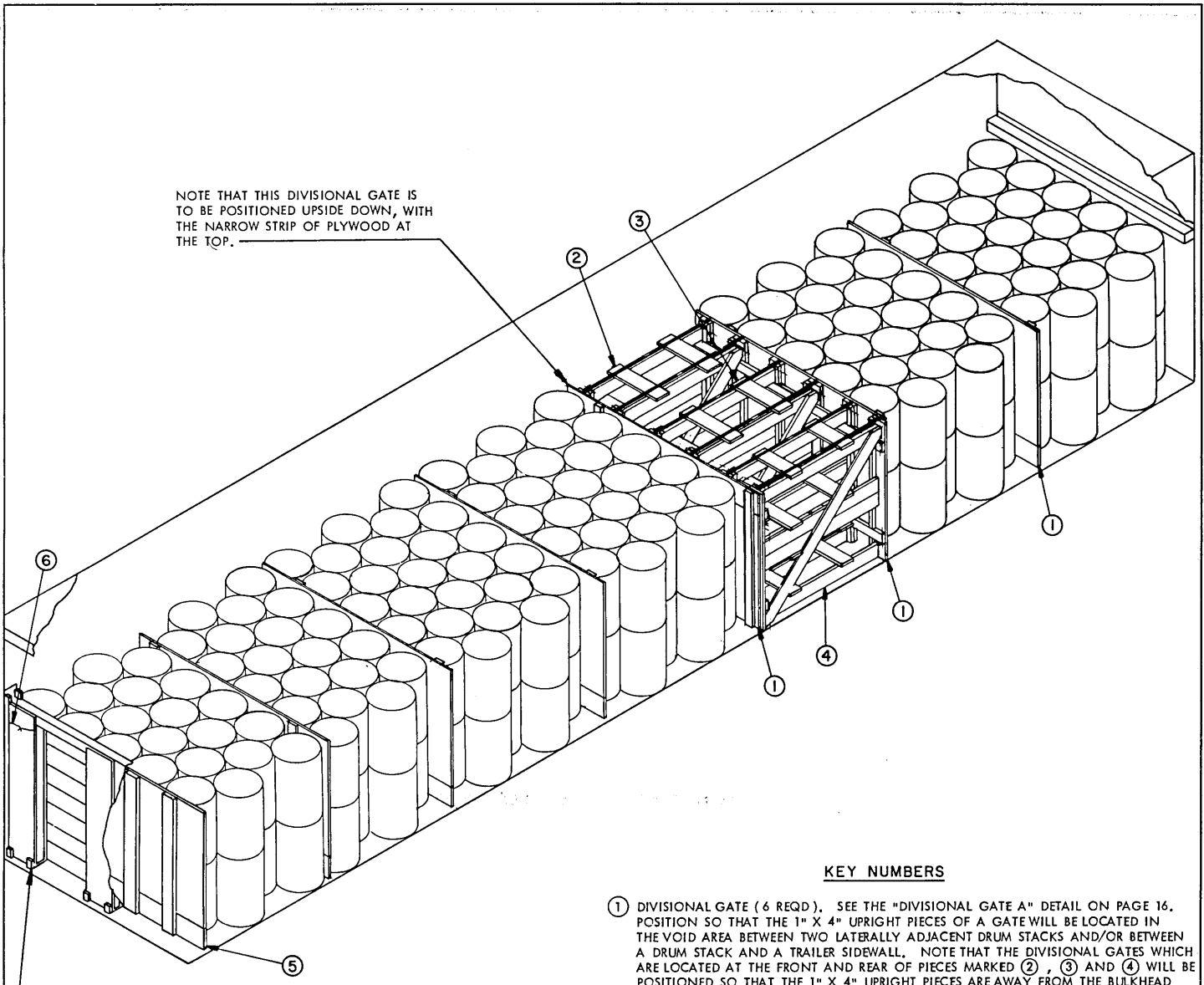


PLAN VIEW

A 292-DRUM LOADING PATTERN IS SHOWN AS AN ALTERNATIVE TO THE LOADS SHOWN ON PAGES 18 AND 20. FOR A DESCRIPTION OF THE DUNNAGE PIECES IDENTIFIED BY THE KEY NUMBER BALLOONS, REFER TO THE "KEY NUMBERS" ON PAGE 18. THE QUANTITY REQUIRED OF THE KEY NUMBERED PIECES WILL BE THE SAME AS ON PAGE 18 EXCEPT THAT SIX (6) PIECES MARKED ② WILL BE REQUIRED IN LIEU OF THREE, AND THE QUANTITY FOR PIECE MARKED ④ WILL READ "REF: 4-2" X 6" X 56" AT FOUR (4) PLACES". NOTE THAT PIECES MARKED ⑤ MUST BE 16'-0" LONG IN LIEU OF 12'-0".

ADDITIONAL LOADING PATTERNS FOR TRAILERS HAVING 38'-6" (462") BETWEEN INSTALLED BULKHEADS

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NOTE THAT THIS DIVISIONAL GATE IS TO BE POSITIONED UPSIDE DOWN, WITH THE NARROW STRIP OF PLYWOOD AT THE TOP.

ISOMETRIC VIEW

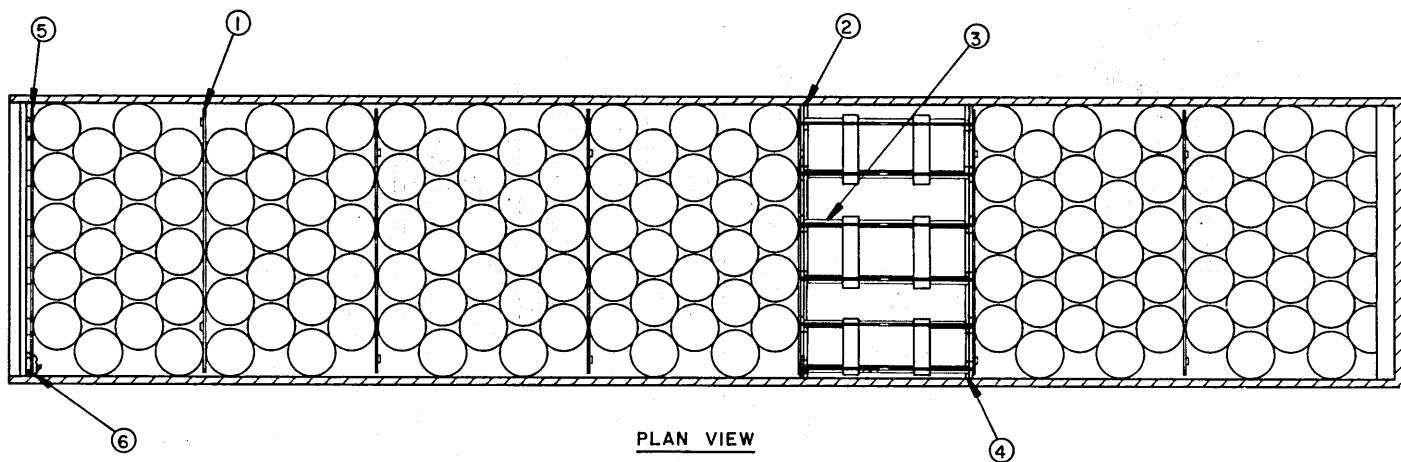
INDICATES SPECIAL BULKHEAD BRACE WITH BOARDS. SEE GENERAL NOTE "B" ON PAGE 2.

KEY NUMBERS

- ① DIVISIONAL GATE (6 REQD). SEE THE "DIVISIONAL GATE A" DETAIL ON PAGE 16. POSITION SO THAT THE 1" X 4" UPRIGHT PIECES OF A GATE WILL BE LOCATED IN THE VOID AREA BETWEEN TWO LATERALLY ADJACENT DRUM STACKS AND/OR BETWEEN A DRUM STACK AND A TRAILER SIDEWALL. NOTE THAT THE DIVISIONAL GATES WHICH ARE LOCATED AT THE FRONT AND REAR OF PIECES MARKED ②, ③ AND ④ WILL BE POSITIONED SO THAT THE 1" X 4" UPRIGHT PIECES ARE AWAY FROM THE BULKHEAD SECTIONS. NOTE THAT THE REARWARD GATE MUST BE POSITIONED UPSIDE DOWN.
- ② LEFT SECTION OF 3-PIECE BULKHEAD (1 REQD). SEE THE DETAIL AND KEY LETTERS ON PAGE 26 AND THE DETAILS AND SPECIAL NOTES ON PAGE 27.
- ③ CENTER SECTION OF 3-PIECE BULKHEAD (1 REQD). SEE THE DETAIL AND KEY LETTERS ON PAGE 28 AND THE DETAILS AND SPECIAL NOTES ON PAGE 29.
- ④ RIGHT SECTION OF 3-PIECE BULKHEAD (1 REQD). SEE THE DETAIL AND KEY LETTERS ON PAGE 30 AND THE DETAILS AND SPECIAL NOTES ON PAGE 31.
- ⑤ REAR GATE (1 REQD). SEE THE "REAR GATE "B" DETAIL ON PAGE 17. SEE SPECIAL NOTE 5 ON PAGE 25.
- ⑥ WIRE, NO. 14 GAGE, ANNEALED, 12'-0" LONG (2 REQD). INSTALL THREE (3) WRAPS SO AS TO ENCIRCLE A REAR BRACE ASSEMBLY AND A 60" LONG VERTICAL PIECE OF THE REAR GATE, PIECE MARKED ⑤. TWIST THE ENDS TOGETHER TIGHTLY.

● SEE SPECIAL NOTE 2 ON PAGE 25.

**280-DRUM LOAD IN A "WESTERN" TRAILER HAVING
38'-6" (462") BETWEEN INSTALLED BULKHEADS**



PLAN VIEW

SPECIAL NOTES:

1. A 280-DRUM LOAD IS SHOWN IN A 7'-8-1/2" WIDE TRAILER HAVING 38'-6" BETWEEN THE BULKHEAD AT THE FRONT (BUILT INTO THE FRONT WALL) AND THE INSTALLED BULKHEAD AT THE REAR.
2. THIS LOAD IS APPLICABLE FOR A SHIPMENT IN A TRAILER HAVING THE TANDEM AXLES LOCATED IN THE "WESTERN" FIXED POSITION. THE "WESTERN" FIXED POSITION IS IDENTIFIED AS THE BOGIE POSITION WHEN THE CENTER OF THE TANDEM AXLES IS LOCATED APPROXIMATELY 53" FROM THE EXTREME REAR OF THE TRAILER. TRAILERS WHICH ARE EQUIPPED WITH SLIDING TANDEM MAY ALSO BE USED, PROVIDING THE TANDEM ARE LOCATED AT OR NEAR THE REAR MOST POSITION.
3. STEEL STRAPPING BETWEEN THE BULKHEADS IS NOT REQUIRED FOR THIS SYSTEM PROVIDING THE BULKHEAD RETAINER TUBE ASSEMBLY OF THE REAR BULKHEAD IS CONSTRUCTED OF 3/8" THICK WALL STEEL. IF THE RETAINER TUBE ASSEMBLY IS MADE FROM 3/16" THICK WALL STEEL, THREE (3) EACH 2" X .050" X 44'-0" LONG STEEL STRAPS WILL BE EMPLOYED FOR TYING THE BULKHEADS TOGETHER.
4. THE LOAD SHOWN CONSISTS OF SIX (6) BAYS HAVING 5-WIDE DRUM STACKS POSITIONED ALTERNATELY AS SHOWN. THE TWO (2) BAYS BETWEEN THE FRONT OF THE TRAILER AND THE 3-PIECE BULKHEAD ARE EACH FIVE (5) STACKS LONG. THE FIRST TWO (2) BAYS BEHIND THE 3-PIECE BULKHEAD ARE EACH FIVE (5) STACKS LONG AND THE LAST TWO (2) BAYS ARE EACH FOUR (4) STACKS LONG.
5. WHEN INSTALLED, THE REAR GATE, PIECE MARKED ⑤, SHOULD PROVIDE FOR A REASONABLY TIGHT LOAD, ONE-HALF INCH (1/2") BEING THE MAXIMUM ALLOWABLE REMAINING SPACE. AS NECESSARY TO SATISFY THIS MANDATORY REQUIREMENT, APPLY 2" X 6" X 56" MATERIAL, 1" X 6" X 56" MATERIAL, 6" WIDE BY 56" LONG STRIPS OF 1/2" PLYWOOD, OR A COMBINATION THEREOF, TO EACH OF THE VERTICAL PIECES OF THE REAR GATE. LAMINATE EACH PIECE W/5 APPLICABLY SIZED NAILS.

BILL OF MATERIAL		
LUMBER	LINEAR FEET	BOARD FEET
1" X 4"	56	19
1" X 6"	84	42
2" X 2"	49	17
2" X 4"	80	54
2" X 6"	197	197
NAILS	NO. REQD	POUNDS
6d (2")	516	3
10d (3")	72	1-1/4
16d (3-1/2")	404	9
PLYWOOD, 1/2" -----	245 SQ FT -----	336 LBS
WIRE, NO. 14 GAGE -----	24' REQD -----	NIL
STEEL STRAPPING, PUNCHED, 3/4" -----	33' REQD -----	2 LBS
STEEL STRAPPING, 1-1/4" X .035" -----	123' REQD -----	18 LBS
SEAL FOR 1-1/4" STRAPPING -----	6 REQD -----	NIL

● SEE SPECIAL NOTE 2 ABOVE.

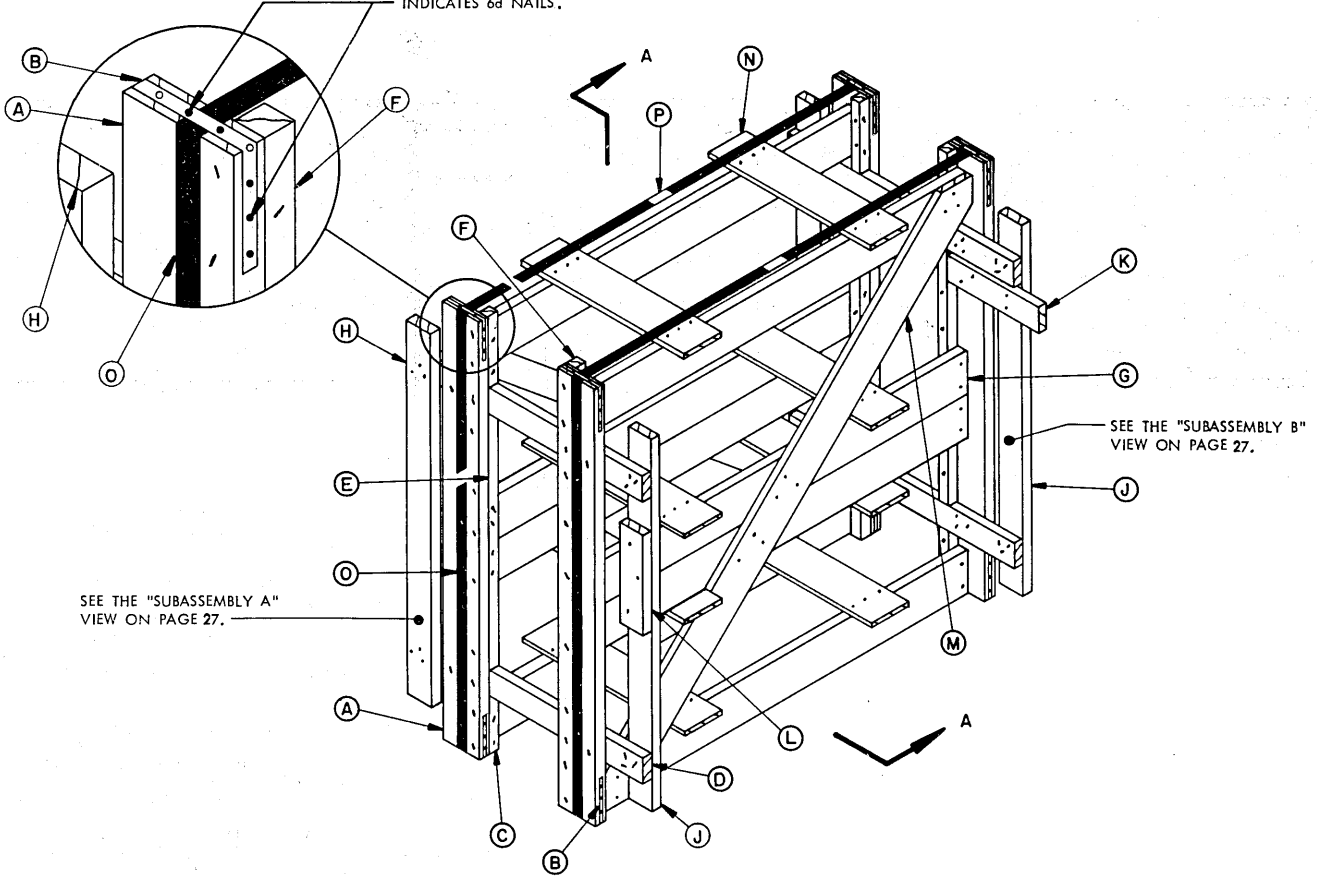
LOAD AS SHOWN

ITEM	QUANTITY	WEIGHT (APPROX)
DRUM -----	280 -----	42,260 LBS
DUNNAGE -----	-----	1,050 LBS

TOTAL WEIGHT ----- 43,310 LBS

280-DRUM LOAD IN A "WESTERN" TRAILER HAVING 38'-6" (462") BETWEEN INSTALLED BULKHEAD

INDICATES 6d NAILS.



ISOMETRIC VIEW

SEE THE "SUBASSEMBLY A" VIEW ON PAGE 27.

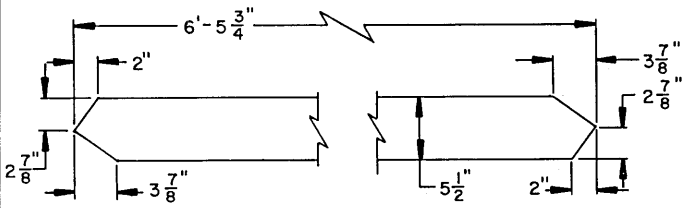
SEE THE "SUBASSEMBLY B" VIEW ON PAGE 27.

KEY LETTERS

(KEY LETTERS CONTINUED)

- (O) UNITIZING STRAP, 1-1/4" X .035" X 20'-6" STEEL STRAPPING (2 REQD.). INSTALL TO EXTEND UNDER PIECES MARKED (B) AND TO ENCIRCLE THE BULKHEAD. SECURE IN POSITION W/1-6d NAIL ON EACH SIDE OF THE STRAP, DRIVEN THRU PIECE MARKED (B). SEE THE ENLARGED VIEW ABOVE FOR GUIDANCE.
- (P) SEAL FOR 1-1/4" STRAPPING (2 REQD, 1 PER STRAP). CRIMP SEAL WITH TWO (2) PAIR OF CRIMPS.

- (A) VERTICAL PIECE, 2" X 6" X 56" (4 REQD).
- (B) REINFORCING STRAP, 3/4" X .015" X 16-1/2" LONG PUNCHED STEEL STRAPPING (8 REQD). SEE SPECIAL NOTES 2 AND 3 ON PAGE 27.
- (C) STRUT SUPPORT PIECE, 2" X 2" X 7' (4 REQD). NAIL TO A PIECE MARKED (A) W/2-16d NAILS AND CLINCH.
- (D) TIE PIECE, 2" X 4" X 33-1/4" (4 REQD). NAIL TO PIECES MARKED (A) W/3-16d NAILS AT EACH JOINT AND CLINCH.
- (E) STRUT SUPPORT PIECE, 2" X 2" X 33" (4 REQD). NAIL TO A PIECE MARKED (A) W/5-16d NAILS AND CLINCH.
- (F) STRUT SUPPORT PIECE, 2" X 2" X 9" (4 REQD). NAIL TO A PIECE MARKED (A) W/2-16d NAILS AND CLINCH.
- (G) STRUT, 2" X 6" X 56" (8 REQD). NAIL TO PIECES MARKED (C), (E), OR (F) W/2-16d NAILS AT EACH END AND CLINCH.
- (H) BUFFER PIECE, 2" X 4" X 48" (2 REQD). POSITION SO AS TO EXTEND 4" ABOVE THE UPPER PIECE MARKED (D). NAIL TO PIECES MARKED (D) W/3-16d NAILS AT EACH JOINT AND CLINCH.
- (J) SPANNER PIECE, 2" X 4" X 48" (2 REQD). POSITION SO AS TO EXTEND 4" ABOVE THE UPPER PIECE MARKED (D). NAIL TO PIECES MARKED (D) W/3-16d NAILS AT EACH JOINT AND CLINCH.
- (K) HOLD-DOWN PIECE, 2" X 4" X 13" (1 REQD). POSITION HORIZONTALLY AS SHOWN AND NAIL TO PIECES MARKED (A) AND (J) W/2-16d NAILS AT EACH JOINT AND CLINCH.
- (L) HOLD-DOWN PIECE, 2" X 4" X 13" (1 REQD). POSITION VERTICALLY AS SHOWN AND NAIL TO A PIECE MARKED (J) W/3-16d NAILS AND CLINCH.
- (M) DIAGONAL BRACE, 1" X 6" X 6'-5-3/4" (2 REQD). SEE THE "DIAGONAL BRACE A" DETAIL AT LEFT FOR BEVEL CUTS REQUIRED. POSITION AS SHOWN AND NAIL TO PIECES MARKED (C) W/3-10d NAILS AT EACH JOINT AND CLINCH.
- (N) STRUT BRACE, 1" X 6" X 24" (8 REQD). POSITION AS SHOWN AND NAIL TO PIECES MARKED (C) W/3-6d NAILS AT EACH JOINT.

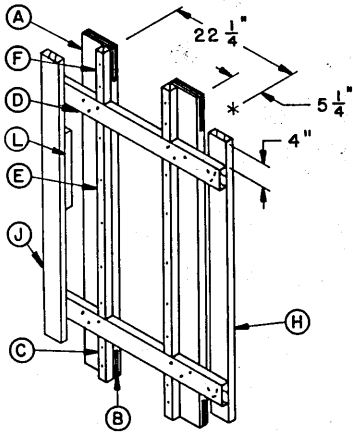


DIAGONAL BRACE A

(CONTINUED AT LEFT)

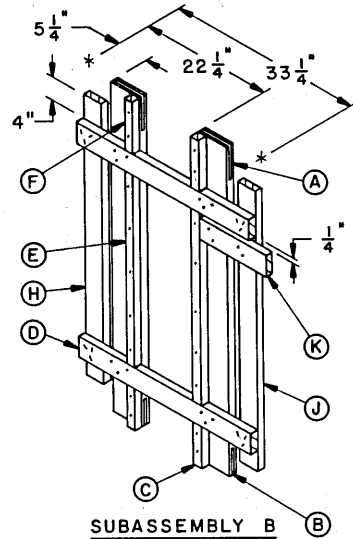
SPECIAL NOTES:

1. THE LEFT SECTION OF A 3-PIECE BULKHEAD, AS SHOWN IN THE ISOMETRIC VIEW ON PAGE 26, IS DESIGNED FOR USE AGAINST THE LEFT SIDEWALL OF A TRAILER AS VIEWED FROM THE REAR DOOR OPENING. THE ADJACENT DRUM STACK (S) MUST HAVE DRUMS IN CONTACT WITH THE LEFT SIDEWALL WHEN THE LEFT SECTION IS USED IN THIS POSITION. NOTE THAT THIS SECTION MUST THEN BE POSITIONED FOR USE PRIOR TO THE POSITIONING OF THE OTHER TWO SECTIONS. IF THE ADJACENT DRUM STACKS ARE IN CONTACT WITH THE RIGHT SIDE OF THE TRAILER, THIS ASSEMBLY MUST BE ROTATED 180° FOR USE AGAINST THE OPPOSITE SIDEWALL. THE LEFT SECTION WILL BE POSITIONED LAST WHEN USED AGAINST THE RIGHT SIDEWALL.
2. PUNCHED STRAPPING, .015" OR THICKER, WITH HOLES SPACED 1-1/2" ON CENTER IS PREFERRED FOR PIECES MARKED (B). HOWEVER, PLAIN STRAPPING, 3/4" OR WIDER, UP TO AND INCLUDING 1-1/4", MAY BE USED IN LIEU OF THE PREFERRED STRAPPING. PUNCH OR DRILL AT THE LOCATIONS REQUIRED IN ORDER TO ACCOMPLISH THE NAILING.
3. THE FOLLOWING GUIDANCE, PROVIDED FOR APPLICATION OF THE PUNCHED STRAPPING, PIECE MARKED (B), IS APPLICABLE FOR STRAPS WITH HOLES SPACED 1-1/2" ON CENTER. CUT STRAPS MIDWAY BETWEEN HOLES AND TO A LENGTH OF 16-1/2". FORM A 90° BEND AT THE FOURTH HOLE FROM ONE END. PLACE THE LONG END ACROSS THE END OF A PIECE MARKED (A) SO THAT THE HOLE AT THE BEND WILL BE ON THE CORNER OF THE 2" X 6" ADJACENT TO THE SIDE WHERE A PIECE MARKED (C) OR (F) WILL BE NAILED. NAIL THE STRAP TO THE EDGE OF PIECE MARKED (A) W/3-6d NAILS. BEND THE LONG END OVER THE OPPOSITE CORNER AND NAIL TO THE OPPOSITE EDGE IN A LIKE MANNER. THIS POSITIONING OF THE PUNCHED STRAP WILL PROVIDE FOR HOLES AT THE PROPER LOCATION FOR SECURING THE UNITIZING STRAP.

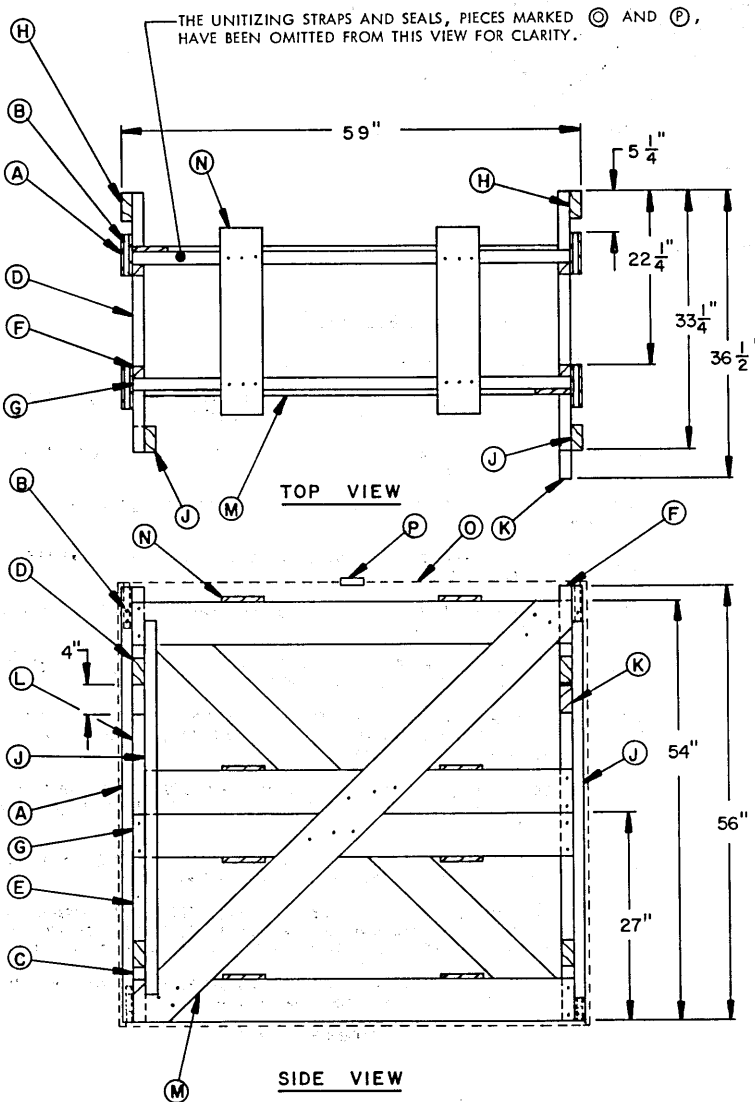


SUBASSEMBLY A

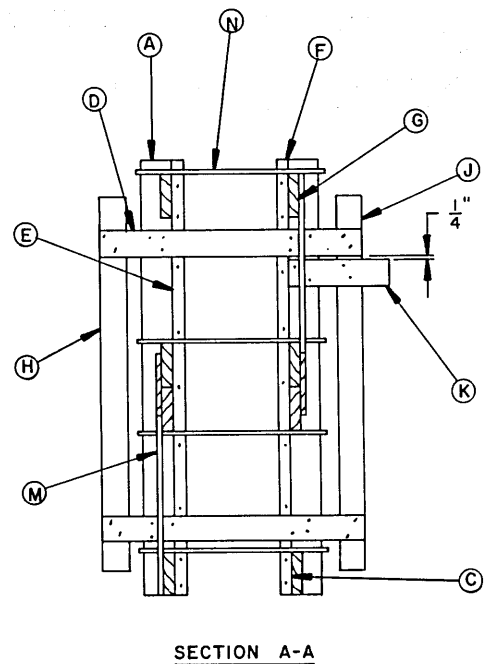
THE SUBASSEMBLY IN THIS VIEW IS ROTATED 180° TO THE POSITION SHOWN IN THE ISOMETRIC VIEW ON PAGE 26.



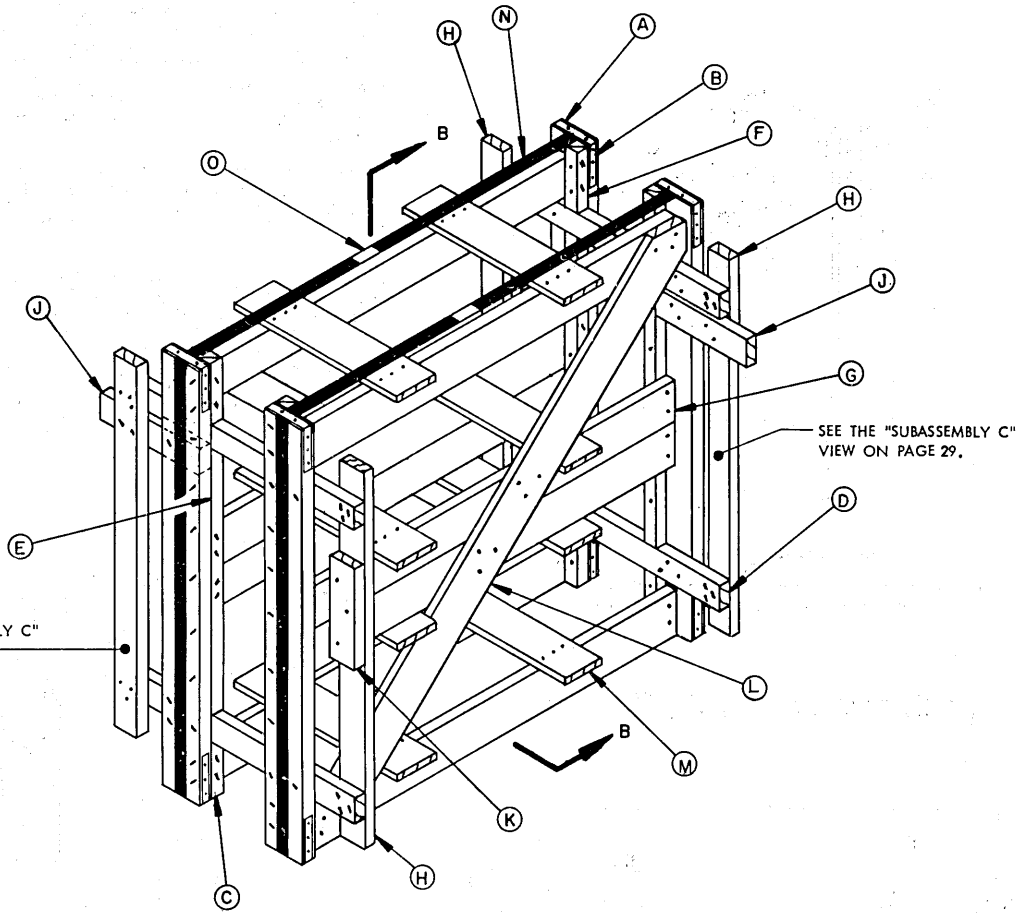
SUBASSEMBLY B



LEFT SECTION OF 3-PIECE BULKHEAD



SECTION A-A



ISOMETRIC VIEW

KEY LETTERS

(KEY LETTERS CONTINUED)

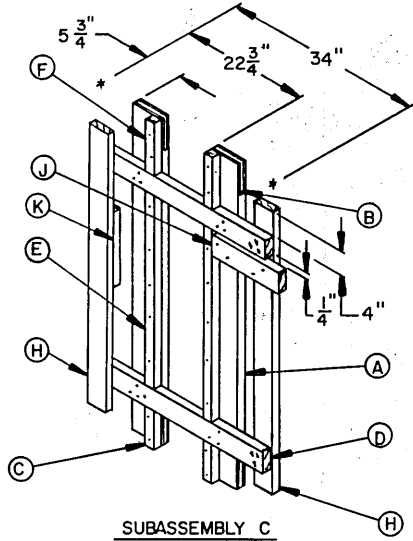
- (N) UNITIZING STRAP, 1-1/4" X .035" X 20'-6" STEEL STRAPPING (2 REQD). INSTALL TO EXTEND UNDER PIECES MARKED (B) AND TO ENCIRCLE THE BULKHEAD. SECURE IN POSITION W/1-6d NAIL ON EACH SIDE OF THE STRAP, DRIVEN THRU PIECE MARKED (B). SEE THE ENLARGED VIEW ON PAGE 26 FOR GUIDANCE.
- (O) SEAL FOR 1-1/4" STRAPPING (2 REQD, 1 PER STRAP). CRIMP SEAL WITH TWO (2) PAIR OF CRIMPS.

- (A) VERTICAL PIECE, 2" X 6" X 56" (4 REQD).
- (B) REINFORCING STRAP, 3/4" X .015" X 16-1/2" LONG PUNCHED STEEL STRAPPING (8 REQD). SEE SPECIAL NOTES 2 AND 3 ON PAGE 27.
- (C) STRUT SUPPORT PIECE, 2" X 2" X 7" (4 REQD). NAIL TO A PIECE MARKED (A) W/2-16d NAILS AND CLINCH.
- (D) TIE PIECE, 2" X 4" X 34" (4 REQD). NAIL TO PIECES MARKED (A) W/3-16d NAILS AT EACH JOINT AND CLINCH.
- (E) STRUT SUPPORT PIECE, 2" X 2" X 33" (4 REQD). NAIL TO A PIECE MARKED (A) W/5-16d NAILS AND CLINCH.
- (F) STRUT SUPPORT PIECE, 2" X 2" X 9" (4 REQD). NAIL TO A PIECE MARKED (A) W/2-16d NAILS AND CLINCH.
- (G) STRUT, 2" X 6" X 56" (8 REQD). NAIL TO PIECES MARKED (C), (E), OR (F) W/2-16d NAILS AT EACH END AND CLINCH.
- (H) SPANNER PIECE, 2" X 4" X 48" (4 REQD). POSITION SO AS TO EXTEND 4" ABOVE THE UPPER PIECE MARKED (D). NAIL TO PIECES MARKED (D) W/3-16d NAILS AT EACH JOINT AND CLINCH.
- (J) HOLD-DOWN PIECE, 2" X 4" X 13" (2 REQD): POSITION HORIZONTALLY AS SHOWN AND NAIL TO PIECES MARKED (A) AND (B) W/2-16d NAILS AT EACH JOINT AND CLINCH.
- (K) HOLD-DOWN PIECE, 2" X 4" X 13" (2 REQD). POSITION VERTICALLY AS SHOWN AND NAIL TO A PIECE MARKED (H) W/3-16d NAILS AND CLINCH.
- (L) DIAGONAL BRACE, 1" X 6" X 6'-5-3/4" (2 REQD). SEE THE "DIAGONAL BRACE A" DETAIL ON PAGE 26 FOR BEVEL CUTS REQUIRED. POSITION AS SHOWN AND NAIL TO PIECES MARKED (C) W/3-10d NAILS AT EACH JOINT AND CLINCH.
- (M) STRUT BRACE, 1" X 6" X 24" (8 REQD). POSITION AS SHOWN AND NAIL TO PIECES MARKED (C) W/3-6d NAILS AT EACH JOINT.

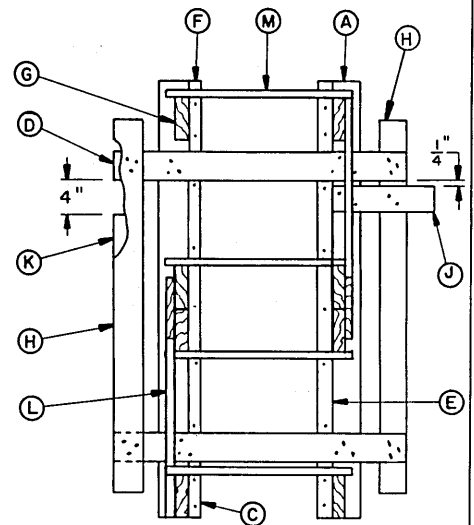
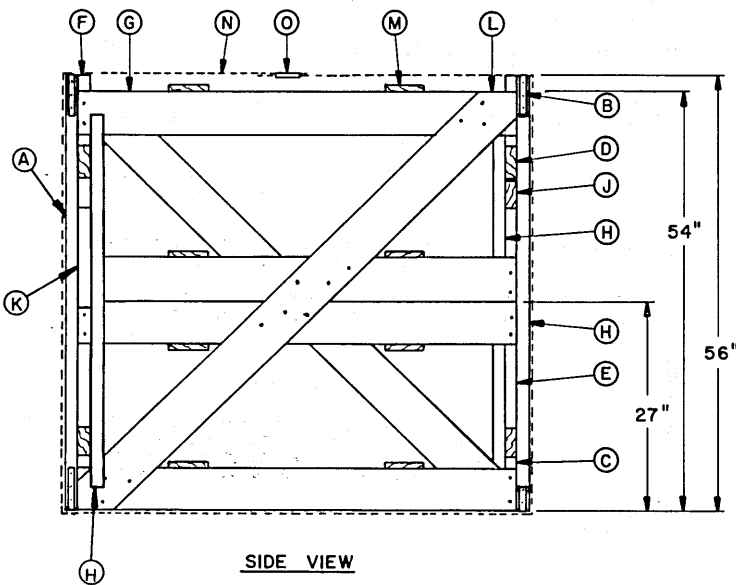
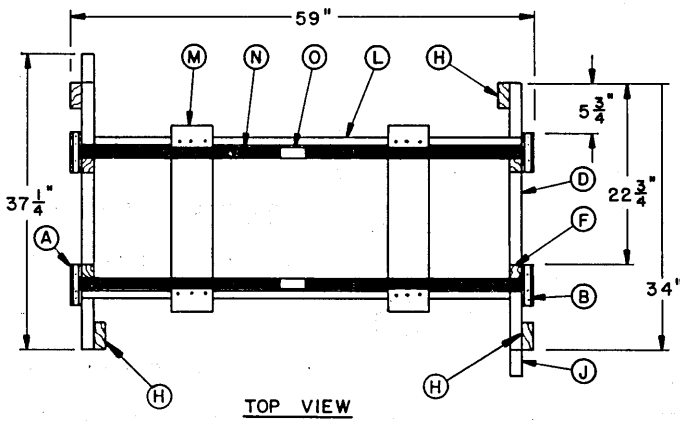
(CONTINUED AT LEFT)

SPECIAL NOTES:

1. THE CENTER SECTION OF A 3-PIECE BULKHEAD IS DESIGNED FOR USE BETWEEN THE LEFT AND RIGHT SECTIONS. THE CENTER SECTION IS REVERSIBLE AND MAY BE POSITIONED WITH EITHER END FORWARD. NOTE THAT WHEN THE ADJACENT DRUM STACKS ARE IN CONTACT WITH THE LEFT SIDEWALL, THIS SECTION MUST BE POSITIONED AFTER THE LEFT SECTION IS IN PLACE AND PRIOR TO THE POSITIONING OF THE RIGHT SECTION. WHEN THE ADJACENT DRUM STACKS ARE IN CONTACT WITH THE RIGHT SIDEWALL OF THE TRAILER, THE CENTER SECTION MUST BE POSITIONED AFTER THE RIGHT SECTION IS IN PLACE AND PRIOR TO THE POSITIONING OF THE LEFT SECTION.

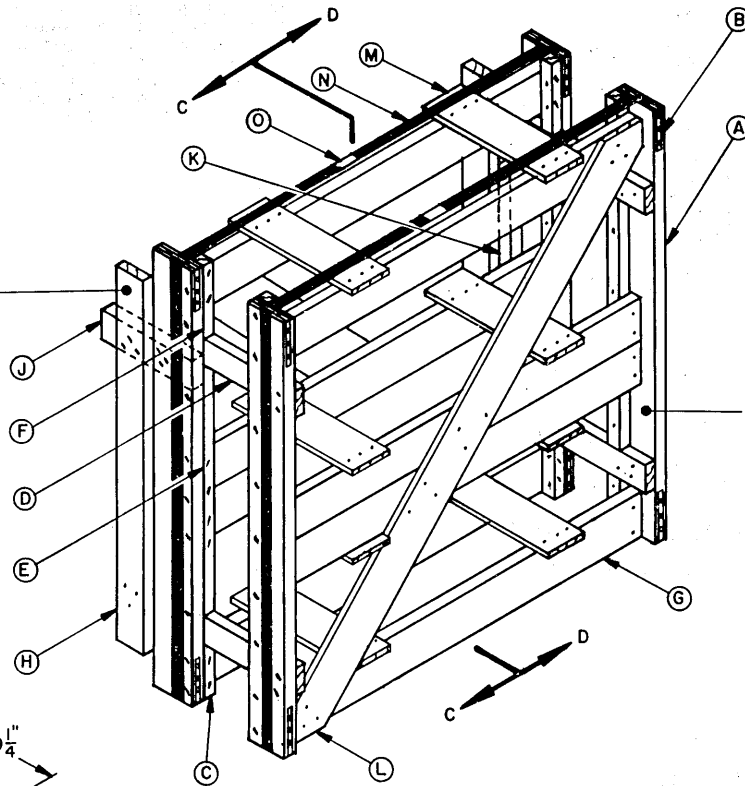


THIS VIEW IS OF THE SUBASSEMBLY ON THE BACK SIDE OF THE CENTER SECTION SHOWN IN THE ISOMETRIC VIEW ON PAGE 28.



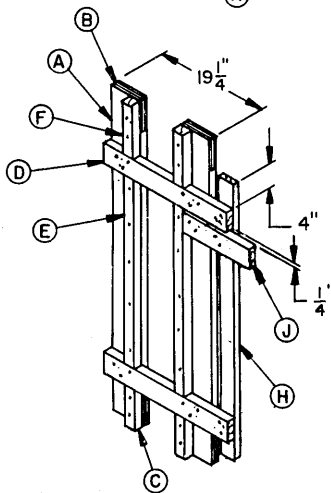
CENTER SECTION OF 3-PIECE BULKHEAD

SEE THE "SUBASSEMBLY D"
VIEW BELOW.



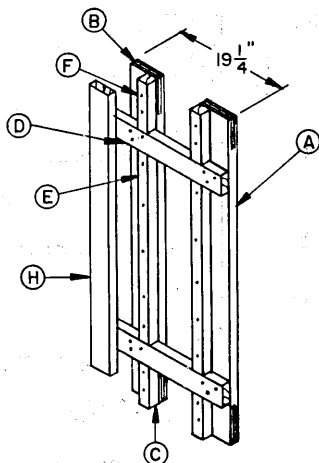
SEE THE "SUBASSEMBLY E"
VIEW BELOW.

ISOMETRIC VIEW



SUBASSEMBLY D

THE SUBASSEMBLY IN THIS VIEW IS ROTATED 180° TO THAT SHOWN
IN THE ISOMETRIC VIEW ABOVE.



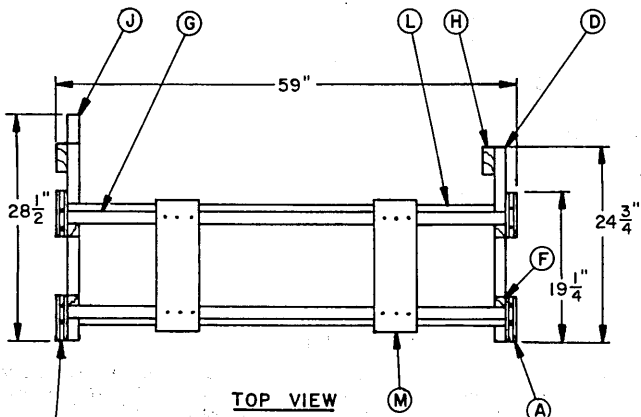
SUBASSEMBLY E

KEY LETTERS

- (A) VERTICAL PIECE, 2" X 6" X 56" (4 REQD).
- (B) REINFORCING STRAP, 3/4" X .015" X 16-1/2" LONG PUNCHED STEEL STRAPPING (8 REQD). SEE SPECIAL NOTES 2 AND 3 ON PAGE 27.
- (C) STRUT SUPPORT PIECE, 2" X 2" X 7" (4 REQD). NAIL TO A PIECE MARKED (A) W/2-16d NAILS AND CLINCH.
- (D) TIE PIECE, 2" X 4" X 24-3/4" (4 REQD). NAIL TO PIECES MARKED (A) W/3-16d NAILS AT EACH JOINT AND CLINCH.
- (E) STRUT SUPPORT PIECE, 2" X 2" X 33" (4 REQD). NAIL TO A PIECE MARKED (A) W/5-16d NAILS AND CLINCH.
- (F) STRUT SUPPORT PIECE, 2" X 2" X 9" (4 REQD). NAIL TO A PIECE MARKED (A) W/2-16d NAILS AND CLINCH.
- (G) STRUT, 2" X 6" X 56" (8 REQD). NAIL TO PIECES MARKED (C), (E), OR (F) W/2-16d NAILS AT EACH END AND CLINCH.
- (H) SPANNER PIECE, 2" X 4" X 48" (2 REQD). POSITION SO AS TO EXTEND 4" ABOVE THE UPPER PIECE MARKED (D). NAIL TO PIECES MARKED (D) W/3-16d NAILS AT EACH JOINT AND CLINCH.
- (J) HOLD-DOWN PIECE, 2" X 4" X 13" (1 REQD). POSITION HORIZONTALLY AS SHOWN AND NAIL TO PIECES MARKED (A) AND (H) W/2-16d NAILS AT EACH JOINT AND CLINCH.
- (K) HOLD-DOWN PIECE, 2" X 4" X 13" (1 REQD). POSITION VERTICALLY AS SHOWN AND NAIL TO A PIECE MARKED (H) W/3-16d NAILS AND CLINCH.
- (L) DIAGONAL BRACE, 1" X 6" X 6'-5-3/4" (2 REQD). SEE THE "DIAGONAL BRACE A" DETAIL ON PAGE 26 FOR BEVEL CUTS REQUIRED. POSITION AS SHOWN AND NAIL TO PIECES MARKED (C) W/3-10d NAILS AT EACH JOINT AND CLINCH.
- (M) STRUT BRACE, 1" X 6" X 18" (8 REQD). POSITION AS SHOWN AND NAIL TO PIECES MARKED (C) W/3-6d NAILS AT EACH JOINT.
- (N) UNITIZING STRAP, 1-1/4" X .035" X 20'-6" STEEL STRAPPING (2 REQD). INSTALL TO EXTEND UNDER PIECES MARKED (B) AND TO ENCIRCLE THE BULKHEAD. SECURE IN POSITION W/1-6d NAIL ON EACH SIDE OF THE STRAP, DRIVEN THRU PIECE MARKED (B). SEE THE ENLARGED VIEW ON PAGE 26 FOR GUIDANCE.
- (O) SEAL FOR 1-1/4" STRAPPING (2 REQD, 1 PER STRAP). CRIMP SEAL WITH TWO (2) PAIR OF CRIMPS.

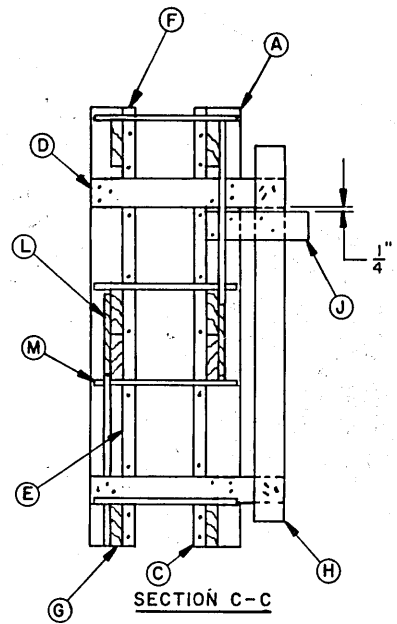
SPECIAL NOTES:

1. THE RIGHT SECTION OF A 3-PIECE BULKHEAD, AS SHOWN IN THE ISOMETRIC VIEW ON PAGE 30, IS DESIGNED FOR USE AGAINST THE RIGHT SIDEWALL OF A TRAILER AS VIEWED FROM THE REAR DOOR OPENING. THE ADJACENT DRUM STACK (S) MUST NOT BE IN CONTACT WITH THE RIGHT SIDEWALL (APPROXIMATELY 8-1/2" VOID) WHEN THE RIGHT SECTION IS USED IN THIS POSITION. NOTE THAT THIS SECTION MUST BE POSITIONED AFTER THE OTHER TWO SECTIONS ARE IN PLACE. IF THE VOID SPACE IS ADJACENT TO THE LEFT SIDEWALL, THIS ASSEMBLY MUST BE ROTATED 180° FOR USE AGAINST THE OPPOSITE SIDEWALL. THE RIGHT SECTION WILL BE POSITIONED FIRST WHEN USED AGAINST THE LEFT SIDEWALL.

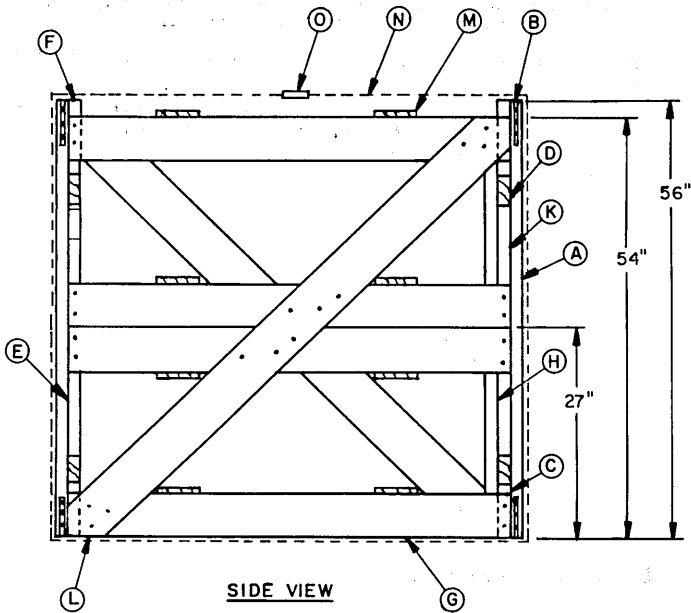


TOP VIEW

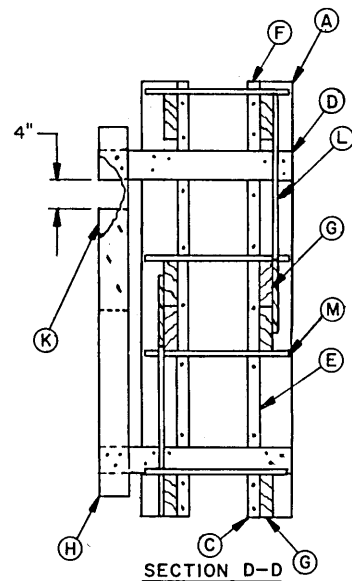
THE UNITIZING STRAPS AND SEALS, PIECES MARKED (N) AND (O), HAVE BEEN OMITTED FROM THIS VIEW FOR CLARITY.



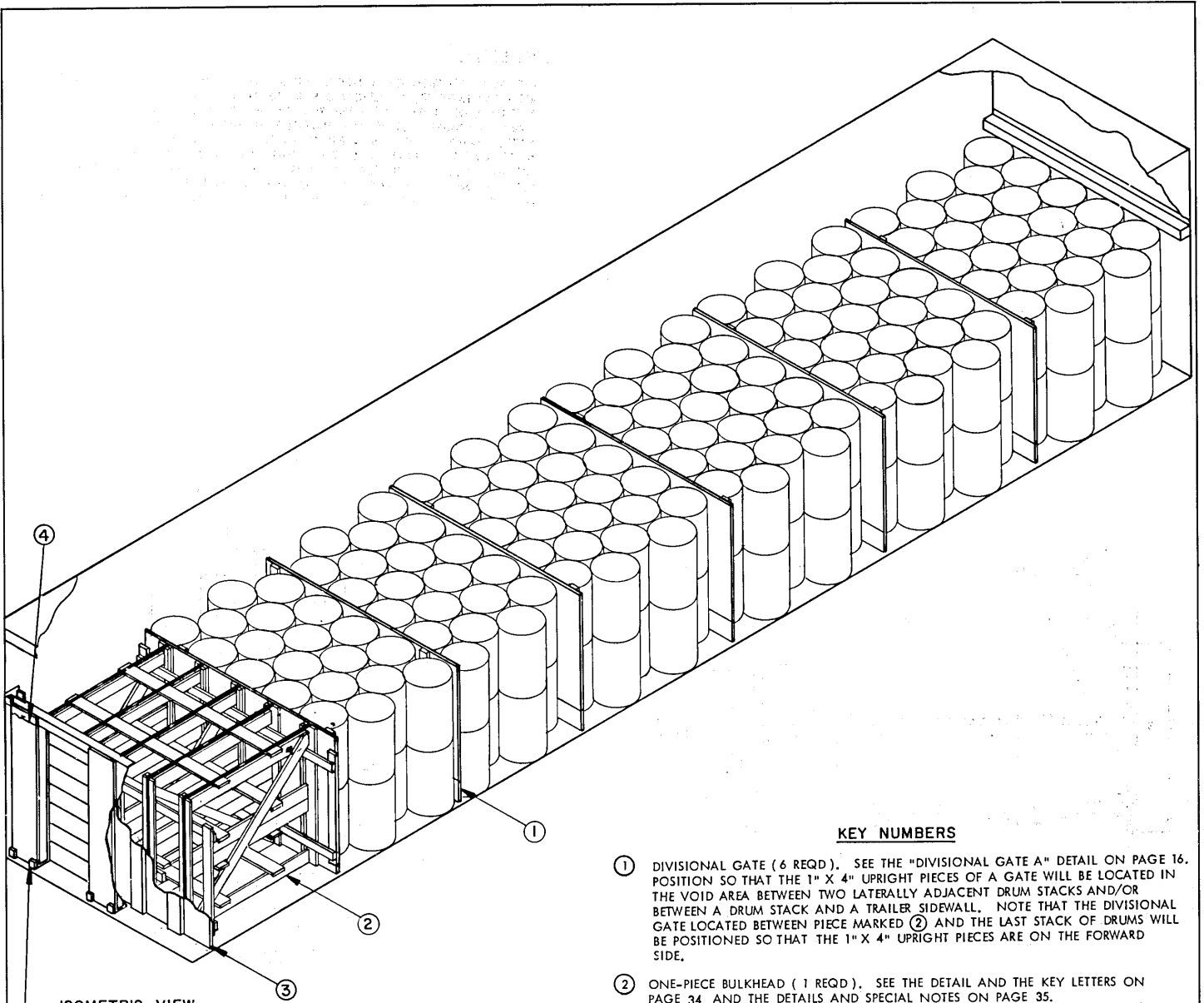
SECTION C-C



SIDE VIEW



SECTION D-D



ISOMETRIC VIEW

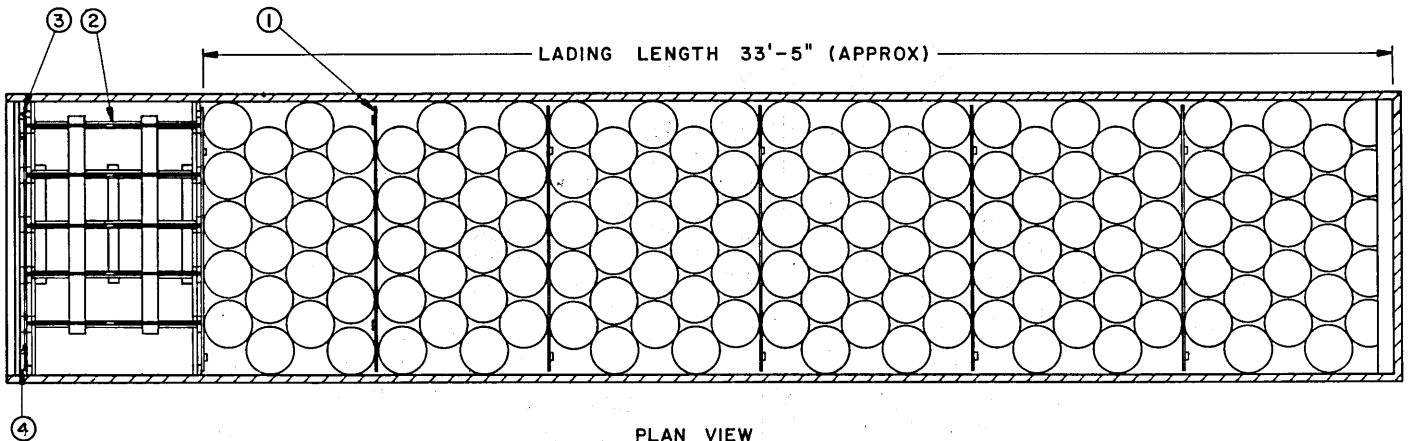
INDICATES SPECIAL BULKHEAD BRACE WITH BOARDS.
SEE GENERAL NOTE "B" ON PAGE 2.

KEY NUMBERS

- ① DIVISIONAL GATE (6 REQD). SEE THE "DIVISIONAL GATE A" DETAIL ON PAGE 16. POSITION SO THAT THE 1" X 4" UPRIGHT PIECES OF A GATE WILL BE LOCATED IN THE VOID AREA BETWEEN TWO LATERALLY ADJACENT DRUM STACKS AND/OR BETWEEN A DRUM STACK AND A TRAILER SIDEWALL. NOTE THAT THE DIVISIONAL GATE LOCATED BETWEEN PIECE MARKED ② AND THE LAST STACK OF DRUMS WILL BE POSITIONED SO THAT THE 1" X 4" UPRIGHT PIECES ARE ON THE FORWARD SIDE.
- ② ONE-PIECE BULKHEAD (1 REQD). SEE THE DETAIL AND THE KEY LETTERS ON PAGE 34 AND THE DETAILS AND SPECIAL NOTES ON PAGE 35.
- ③ REAR GATE (1 REQD). SEE THE "REAR GATE B" DETAIL ON PAGE 17. SEE SPECIAL NOTE 5 ON PAGE 33.
- ④ WIRE, NO. 14 GAGE, ANNEALED, 12'-0" LONG (2 REQD). INSTALL THREE (3) WRAPS SO AS TO ENCIRCLE A REAR BRACE ASSEMBLY AND A VERTICAL PIECE OF THE REAR GATE, PIECE MARKED ③.

● SEE SPECIAL NOTE 2 ON PAGE 33.

**280-DRUM LOAD IN AN "EASTERN" TRAILER ●
HAVING 38'-6" (462") BETWEEN INSTALLED BULKHEADS**



PLAN VIEW

SPECIAL NOTES:

1. A 280-DRUM LOAD IS SHOWN IN A 7"-8-1/2" WIDE TRAILER HAVING 38'-6" BETWEEN THE BULKHEAD AT THE FRONT (BUILT INTO THE FRONT WALL) AND THE INSTALLED BULKHEAD AT THE REAR.
2. THIS LOAD IS APPLICABLE FOR A SHIPMENT IN A TRAILER HAVING THE TANDEM AXLES LOCATED IN THE "EASTERN" FIXED POSITION. THE "EASTERN" FIXED POSITION IS IDENTIFIED AS THE BOGIE POSITION WHEN THE CENTER OF THE TANDEM AXLES IS LOCATED APPROXIMATELY 104" FROM THE EXTREME REAR OF THE TRAILER. TRAILERS WHICH ARE EQUIPPED WITH SLIDING TANDEM MAY ALSO BE USED, PROVIDING THE TANDEM ARE LOCATED AT LEAST SIX (6) HOLES FORWARD FROM THE REAR MOST POSITION.
3. STEEL STRAPPING BETWEEN THE BULKHEADS IS NOT REQUIRED FOR THIS SYSTEM PROVIDING THE BULKHEAD RETAINER TUBE ASSEMBLY OF THE REAR BULKHEAD IS CONSTRUCTED OF 3/8" THICK WALL STEEL. IF THE RETAINER TUBE ASSEMBLY IS MADE FROM 3/16" THICK WALL STEEL, THREE (3) EACH 2" X .050" X 44'-0" LONG STEEL STRAPS WILL BE EMPLOYED FOR TYING THE BULKHEADS TOGETHER.
4. THE LOAD SHOWN CONSISTS OF SIX (6) BAYS HAVING 5-WIDE DRUM STACKS POSITIONED ALTERNATELY AS SHOWN. THE FIRST FOUR (4) BAYS ARE EACH FIVE (5) STACKS LONG AND THE LAST TWO (2) BAYS ARE EACH FOUR (4) STACKS LONG.
5. WHEN INSTALLED, THE REAR GATE, PIECE MARKED ③, SHOULD PROVIDE FOR A REASONABLY TIGHT LOAD, ONE-HALF INCH (1/2") BEING THE MAXIMUM ALLOWABLE REMAINING SPACE. AS NECESSARY TO SATISFY THIS MANDATORY REQUIREMENT, APPLY 2" X 6" X 56" MATERIAL, 1" X 6" X 56" MATERIAL, 6" WIDE BY 56" LONG STRIPS OF 1/2" PLYWOOD, OR A COMBINATION THEREOF, TO EACH OF THE VERTICAL PIECES OF THE REAR GATE. LAMINATE EACH PIECE W/5 APPLICABLY SIZED NAILS.

BILL OF MATERIAL

LUMBER	LINEAR FEET	BOARD FEET
1" X 4"	57	19
1" X 6"	81	41
2" X 2"	41	14
2" X 4"	64	43
2" X 6"	169	169
NAILS	NO. REQD	POUNDS
6d (2")	496	3
10d (3")	60	1
16d (3-1/2")	276	6
PLYWOOD, 1/2"	245 SQ FT	336 LBS
STEEL STRAPPING, PUNCHED, 3/4"	28' REQD	2 LBS
STEEL STRAPPING, 1-1/4" X .035"	103' REQD	15 LBS
SEAL FOR 1-1/4" STRAPPING	5 REQD	NIL
WIRE, NO. 14 GAGE	24' REQD	NIL

● SEE SPECIAL NOTE 2 ABOVE.

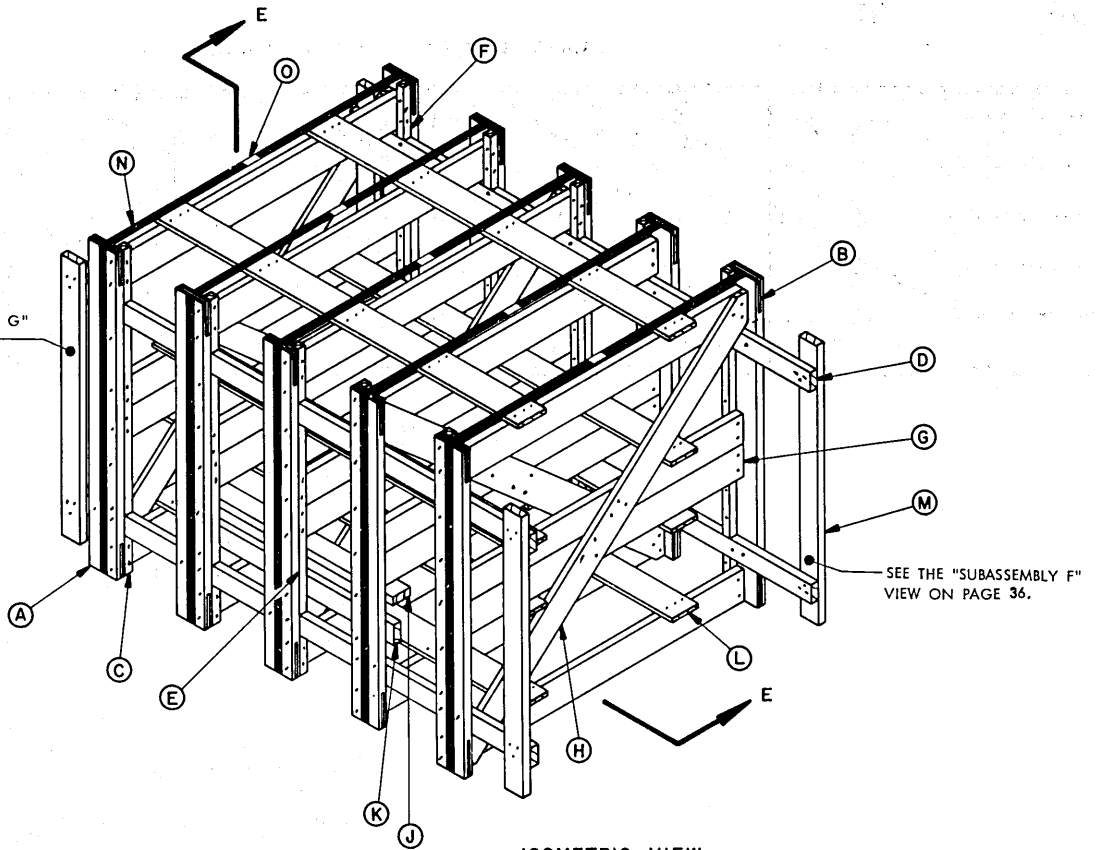
LOAD AS SHOWN

ITEM	QUANTITY	WEIGHT (APPROX)
DRUM	280	42,280 LBS
DUNNAGE		923 LBS

TOTAL WEIGHT ----- 43,203 LBS

**280-DRUM LOAD IN AN "EASTERN" TRAILER
HAVING 38'-6" (462") BETWEEN INSTALLED BULKHEADS**

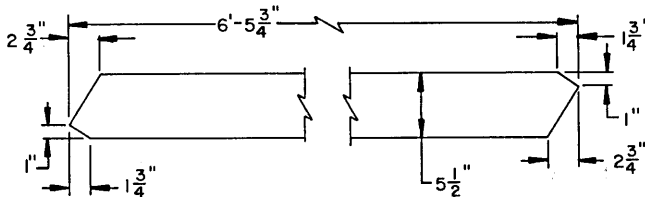
SEE THE "SUBASSEMBLY G"
VIEW ON PAGE 36.



ISOMETRIC VIEW

KEY LETTERS

- (A) VERTICAL PIECE, 2" X 6" X 56" (10 REQD). SEE THE "SUBASSEMBLY" VIEWS ON PAGE 36.
- (B) REINFORCING STRAP, 3/4" X .015" X 16-1/2" LONG PUNCHED STEEL STRAPPING (20 REQD). SEE SPECIAL NOTES 2 AND 3 ON PAGE 27.
- (C) STRUT SUPPORT PIECE, 2" X 2" X 7" (10 REQD). NAIL TO A PIECE MARKED (A) W/2-16d NAILS AND CLINCH.
- (D) TIE PIECE, 2" X 4" X 7'-8" (4 REQD). NAIL TO PIECES MARKED (A) W/3-16d NAILS AT EACH JOINT AND CLINCH.
- (E) STRUT SUPPORT PIECE, 2" X 2" X 33" (10 REQD). NAIL TO A PIECE MARKED (A) W/5-16d NAILS AND CLINCH.
- (F) STRUT SUPPORT PIECE, 2" X 2" X 9" (10 REQD). NAIL TO A PIECE MARKED (A) W/2-16d NAILS AND CLINCH.
- (G) STRUT, 2" X 6" X 56" (20 REQD). NAIL TO PIECES MARKED (C), (E), OR (F) W/2-16d NAILS AT EACH END AND CLINCH.
- (H) DIAGONAL BRACE, 1" X 6" X 6'-5-3/4" (5 REQD). SEE THE "DIAGONAL BRACE B" DETAIL BELOW AT LEFT FOR BEVEL CUTS REQUIRED. POSITION AS SHOWN AND NAIL TO PIECES MARKED (C) W/3-10d NAILS AT EACH JOINT AND CLINCH.
- (J) FORK TINE SUPPORT PIECE, 2" X 4" X 40" (3 REQD). POSITION AS SHOWN AND NAIL TO PIECES MARKED (C) W/2-16d NAILS AT EACH JOINT.
- (K) ANTI-TIP PIECE, 2" X 4" X 40" (2 REQD). POSITION AS SHOWN AND NAIL TO PIECES MARKED (E) W/2-16d NAILS AT EACH JOINT.
- (L) STRUT BRACE, 1" X 6" X 72" (8 REQD). POSITION AS SHOWN AND NAIL TO PIECES MARKED (C) W/3-6d NAILS AT EACH JOINT.
- (M) BUFFER PIECE, 2" X 4" X 48" (4 REQD). POSITION SO AS TO EXTEND 4" ABOVE THE UPPER PIECE MARKED (D). NAIL TO PIECES MARKED (D) W/3-16d NAILS AT EACH JOINT AND CLINCH. SEE SPECIAL NOTE 2 ON PAGE 35.
- (N) UNITIZING STRAP, 1-1/4" X .035" X 20'-6" STEEL STRAPPING (5 REQD). INSTALL TO EXTEND UNDER PIECES MARKED (B) AND TO ENCIRCLE THE BULKHEAD. SECURE IN POSITION W/1-6d NAIL ON EACH SIDE OF THE STRAP, DRIVEN THRU PIECE MARKED (B). SEE THE ENLARGED VIEW ON PAGE 26 FOR GUIDANCE.
- (O) SEAL FOR 1-1/4" STRAPPING (5 REQD, 1-PER STRAP). CRIMP SEAL WITH TWO (2) PAIR OF CRIMPS.

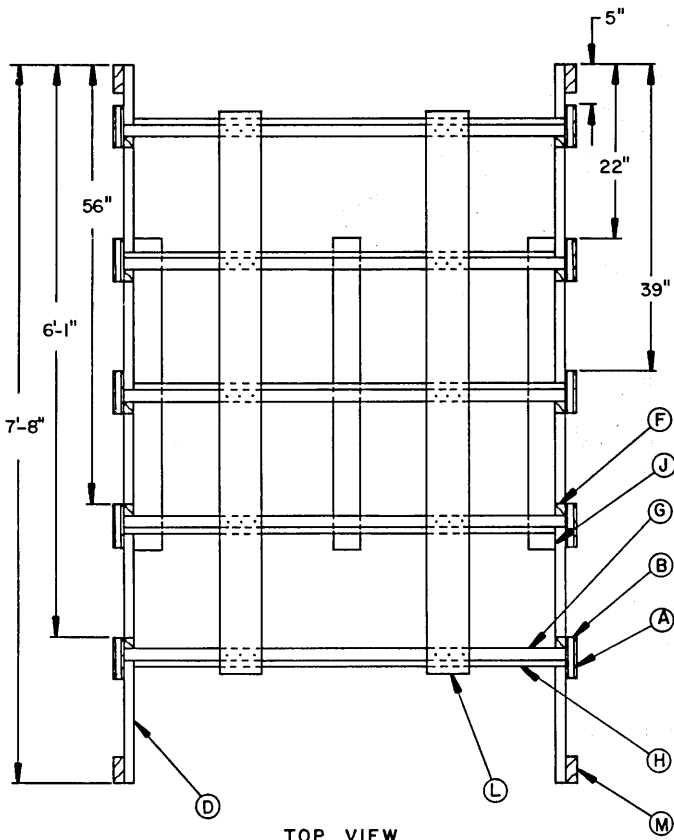


DIAGONAL BRACE B

ONE-PIECE BULKHEAD

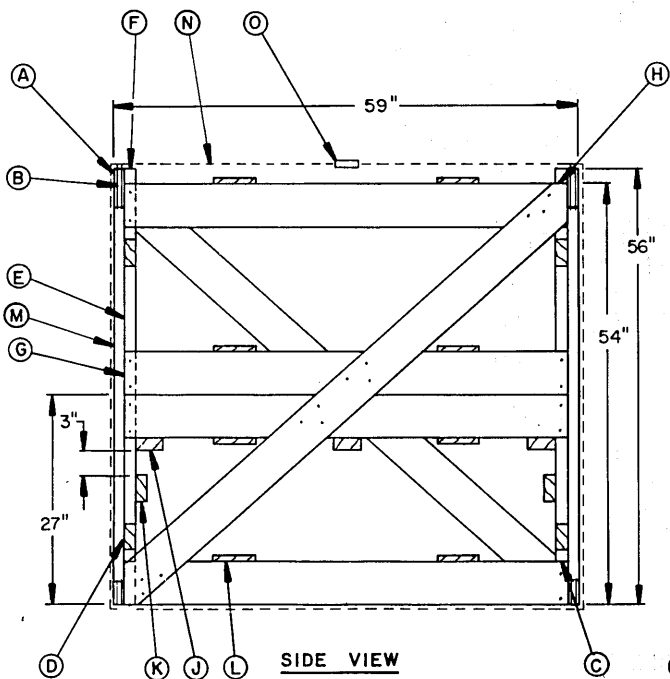
SPECIAL NOTES:

1. THE ONE-PIECE BULKHEAD, AS SHOWN IN THE ISOMETRIC VIEW ON PAGE 34, IS DESIGNED FOR USE WHEN THE ADJACENT DRUM STACK IS IN CONTACT WITH THE LEFT SIDEWALL OF THE TRAILER. IF THE ADJACENT DRUM STACK IS IN CONTACT WITH THE RIGHT SIDEWALL OF THE TRAILER, THE ASSEMBLY MUST BE ROTATED 180° FOR USE.
2. TO FACILITATE NAILING OF THE BUFFER PIECE IDENTIFIED AS PIECE MARKED (M), IT MAY BE SECURED BY NAILING THRU THE TIE PIECE, PIECE MARKED (D), INTO THE BUFFER PIECE AT THE SAME TIME AS THE TIE PIECES ARE BEING NAILED TO THE VERTICAL PIECES, PIECES MARKED (A), IN LIEU OF THE NAILING SPECIFIED WITHIN THE KEY LETTERS.
3. THE FOLLOWING GUIDANCE IS PROVIDED FOR CONSTRUCTION OF THE ONE-PIECE BULKHEAD. ASSEMBLY CAN BE IN THE SEQUENCE SPECIFIED BY THE KEY LETTERS FROM (A) THRU (L), WITH PIECE MARKED (M) BEING OPTIONAL AS SPECIFIED IN SPECIAL NOTE 2 ABOVE. AT THAT POINT, ASSEMBLY CAN BEST BE ACCOMPLISHED BY FIRST INSTALLING THE STRUTS AND DIAGONAL BRACES, PIECES MARKED (G) AND (H), BETWEEN THE CENTER VERTICAL PIECES, AND THEN BETWEEN THE VERTICAL PIECES ON EITHER SIDE. WITH THESE THREE SETS OF STRUTS AND DIAGONAL BRACES IN PLACE, THE FORK TINE SUPPORT PIECES, PIECES MARKED (J), AND THE ANTI-TIP PIECES, PIECES MARKED (K), SHOULD BE APPLIED. THEN THE STRUTS AND DIAGONAL BRACES CAN BE INSTALLED BETWEEN THE OUTER VERTICAL PIECES, AND THE BUFFER PIECES MARKED (M) APPLIED IF NOT PREVIOUSLY DONE. THE UNITIZING STRAPS WILL BE INSTALLED AS THE LAST STEP.

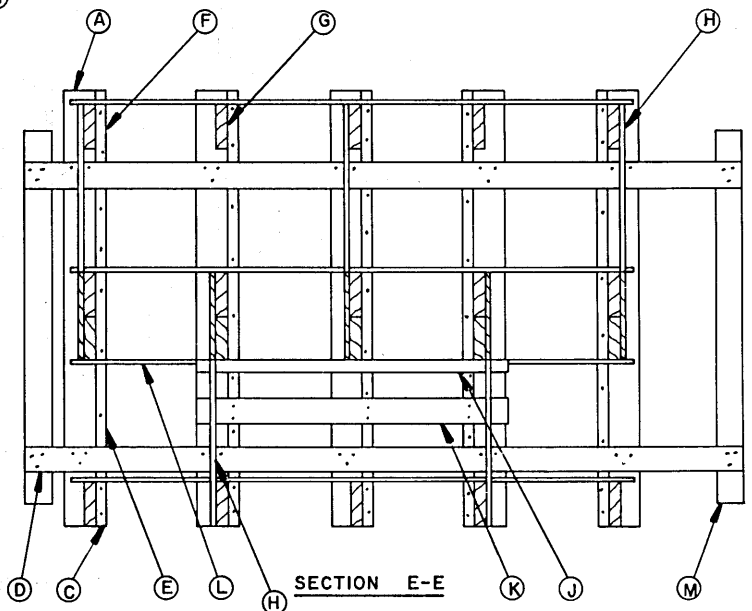


TOP VIEW

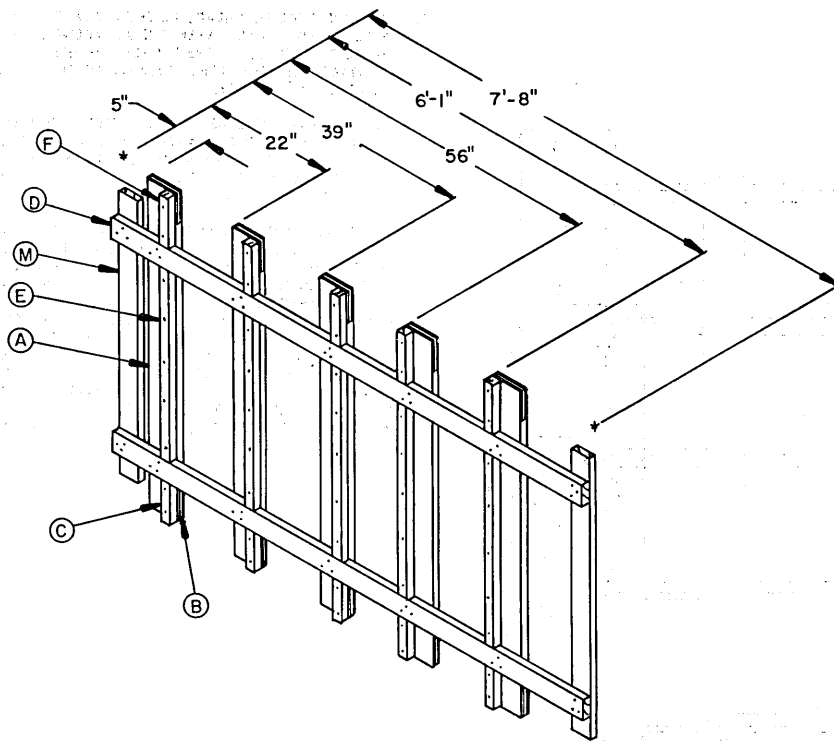
THE UNITIZING STRAPS AND SEALS, PIECES MARKED (N) AND (O), HAVE BEEN OMITTED FROM THIS VIEW FOR CLARITY.



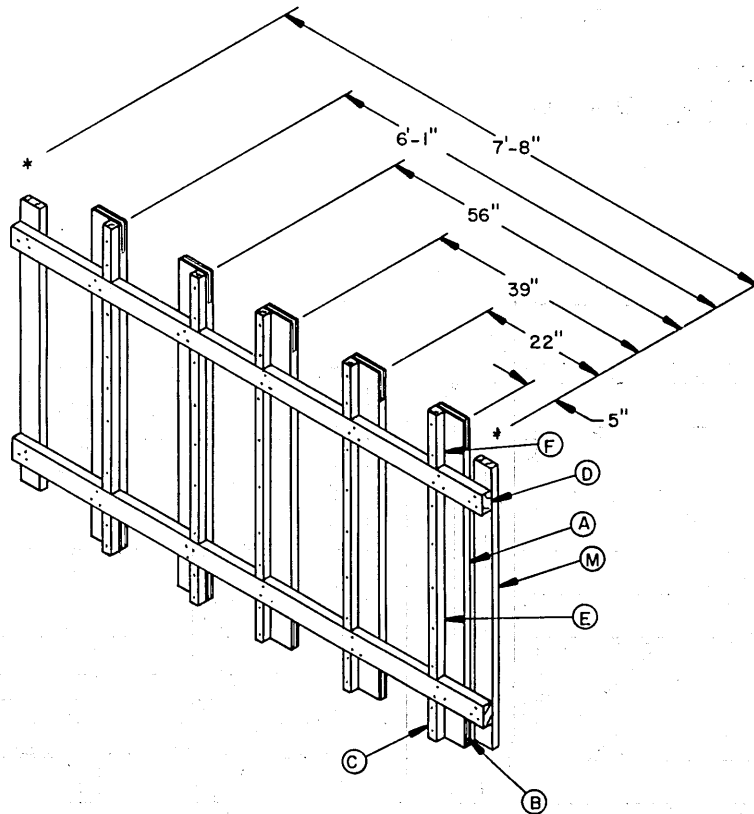
SIDE VIEW



SECTION E-E



SUBASSEMBLY F



SUBASSEMBLY G

THE SUBASSEMBLY IN THIS VIEW IS ROTATED 180° TO THE POSITION SHOWN IN THE ISOMETRIC VIEW ON PAGE 34.