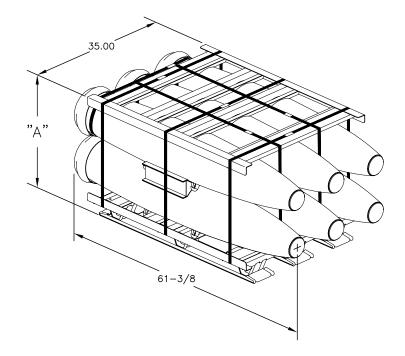
TRUCKLOAD

BOMB, GENERAL PURPOSE: 500 LB. MK 82 SERIES, BLU-III SERIES, BLU-I26 SERIES, BDU-45 SERIES, AND BDU-50 SERIES ON MHU-I22 SERIES PALLET (ADL 623ASI00)

| <u>UNIT LOAD DATA</u> | COATED | <u>UNCOATED</u> |
|-----------------------|---------------------|--------------------|
| UNIT LOAD DOCUMENT | .NAVSEA DWG 6214275 | NAVSEA DWG 6214275 |
| DIMENSIONS | .SEE ILLUSTRATION | SEE ILLUSTRATION |
| GROSS WEIGHT | .3,149 LBS | . 3,149 LBS |
| CUBE | .36.1 CU-FT | .35.4 CU-FT |



| | | "A" HEIGHT | | |
|----------|---|------------|--|--|
| 4, 5, OR | THERMALLY PROTECTED BOMB OR THERMAL PROTECTION REMOVED | 29 | | |
| 6 BOMBS | NON-THERMALLY PROTECTED BOMB | 28-1/2 | | |
| 1, 2, OR | THERMALLY PROTECTED BOMB OR THERMAL PROTECTION REMOVED | 17-1/2 | | |
| 3 BOMBS | NON-THERMALLY PROTECTED BOMB | 17 | | |

NOTES:

- 1. GROSS WEIGHT IS ESTIMATED ONLY. DO NOT USE FOR SHIPPING WEIGHT.
- 2. UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES.
- 3. SEE SW020-AC-SAF-010 FOR THE FOLLOWING INFORMATION:
 - A) CROSS REFERENCE TO ASSOCIATED RAILCAR LOADING, PALLETIZING, AND CONTAINER LOADING MILITARY STANDARDS
 - B) HAZARD CLASSIFICATION

| - | ORIGINAL ISSUE, SUPE | | 2008-4-18 | S/ R SMITH | S/ R SMITH | | | | | |
|---|--------------------------------------|--|---|---|---|-------|------|------|------|----|
| REV. | R | | DATE | TDA | SYSCOM | | | | | |
| TECH DATA MANAGEMENT SUPERVISOR 2008-4-17 S/ R. SMITH | | | | | DISTRIBUTION STATEMENT A APPROVED FOR PUBLIC RELEASE: DISTRIBUTION IS UNLIMITED | | | | | |
| SYSTEMS ENG. SUPERVISOR 2008-4-18 S/ VAN SCHAACK | | | | REQUIREMENTS FOR CONSTRUCTION OF THIS LOAD SHALL CONSIST OF | | | | | | |
| S/ ROY A. SMITH 2008-4-18 | | | THIS DOCUMENT & THE LATEST ISSUE OF MIL—STD—1320 (NAVY) | | | | | | | |
| | | | THIS LOAD IS AUTHORIZED & RELEASED FOR | | | | | | | |
| NAVSEASYSCOM (BY DIRECTION) | | | | HIGHWAY SHIPMENT ONLY | | | | | | |
| | DEPARTMENT OF TH AVAL SEA SYSTEMS | | CAGE CODE 53711 | | DWG | NO. / | 7517 | 082 | REV. | |
| , | ARLINGTON, VA 22242-5160 | | SIZE A | | | | | PAGE | 1 OF | 13 |

GENERAL NOTES:

- 1. THIS DOCUMENT PROVIDES DETAILED INSTRUCTIONS FOR TRUCKLOADING 500 LB BOMS (MK 82 SERIES, BLU-111 SERIES, BLU-126 SERIES, BDU-45 SERIES, AND BDU-50 SERIES) UNITIZED ON THE MHU-122 SERIES PALLET.
- 2. THE PROCEDURES AND PRACTICES CONTAINED HEREIN ARE INTENDED FOR 40 FT AND LONGER TRAILERS (BOTH FLATBED AND ENCLOSED VAN) 96 TO 102 INCHES WIDE.
- 3. BECAUSE THIS LOADING PLAN RELIES SIGNIFICANTLY ON WOOD DUNNAGE NAILED TO THE TRAILER FLOOR, THE FLOOR OF THE TRAILER (EITHER FLATBED OR VAN) SHALL BE PREDOMINANTLY WOOD.
- 4. STACKING IS NOT PERMITTED EITHER ON FLATBEDS OR IN VAN TRAILERS.
- 5. A PARTIAL UNIT LOAD WITH ONLY ONE BOMB SHALL BE TRANSPORTED IN VAN TRAILERS ONLY.
- 6. TIEDOWN (FLATBED TRAILERS ONLY):
 - A. THE QUANTITY OF TIEDOWN ASSEMBLIES REQUIRED SHALL BE AS SHOWN IN THE ILLUSTRATIONS. EITHER CHAIN, 4-INCH WEB STRAPS, OR STEEL STRAPPING MAY BE USED FOR TIEDOWN.
 - B. WEB STRAPS:
 - 1) WEB STRAPS ARE THE PREFERRED METHOD OF TIEDOWN, BEING THAT THEY ARE THE EASIEST TO APPLY AND DON'T REQUIRE THE USE OF PROTECTOR BOARDS.
 - 2) WEB STRAP TIEDOWNS SHALL CONFORM TO AND BE APPLIED AS SPECIFIED IN NAVSEA DRAWING 6214037 AND IN THIS DRAWING.
 - 3) ONLY ASSEMBLIES WITH 4-INCH STRAPPING SHALL BE USED.
 - 4) AVOID LOCATING WEB TIEDOWNS ON TOP OF THE LATERAL STEEL STRAPPING OF THE UNIT LOAD, AS TEARING OR FRAYING COULD RESULT.

C. CHAINS:

- 1) CHAIN SHALL CONFORM TO THE NATIONAL ASSOCIATION OF CHAIN MANUFACTURERS WELDED STEEL CHAIN SPECIFICATION. CHAIN SHALL BE GRADE 70 OR BETTER, SIZE 3/8 OR 5/16. GRABHOOKS, LOADBINDERS, AND OTHER LOAD BEARING HARDWARE SHALL HAVE A WORKING LOAD LIMIT AT LEAST THAT OF THE CHAIN AND SHALL BE COMPATIBLE WITH THE SIZE CHAIN BEING USED.
- 2) CHAINS SHALL BE ATTACHED TO THE TRAILER'S STAKE POCKETS, NOT AROUND THE RUBRAIL.
- 3) RATCHET TYPE LOADBINDERS ARE PREFERRED. HOWEVER, IF USING OVER-THE-CENTER TYPE LOADBINDERS, THE HANDLES SHALL BE SECURED IN THE CLOSED POSITION USING .08 DIA OR THICKER STEEL WIRE (ASTM A853; ANNEALED AT FINISH, BLACK OXIDE FINISH, GRADE 1006 OR BETTER).
- 4) TO PREVENT DAMAGE TO THE PALLET FRAMES, DOUBLED 2 X 6 PROTECTOR BOARDS SHALL BE PLACED UNDER THE CHAINS AS SHOWN IN DETAIL K. NAILS SHALL BE USED TO KEEP THE CHAINS IN PLACE ON TOP OF THE PROTECTOR BOARDS. THIS IS ACCOMPLISHED BY DRIVING A NAIL THROUGH ONE CHAIN LINK AND PARTIALLY INTO THE PROTECTOR BOARD ASSEMBLY AND THEN CLINCHING THE NAIL OVER THE CHAIN. USE ONE NAIL NEAR EACH END OF THE PROTECTOR BOARD ASSEMBLIES. DO NOT APPLY NAILS UNTIL AFTER THE CHAINS ARE TENSIONED.

D. STEEL STRAPPING:

- 1) STRAPPING SHALL BE 2 X .044 OR 2 X .050 AND SHALL CONFORM TO ASTM D3953, TYPE 1, HEAVY DUTY, FINISH A, B (ANY GRADE), C, OR D. SEALS SHALL CONFORM TO ASTM D3953, CLASS H, FINISH A, B (ANY GRADE), OR C, STYLE I, II, III, OR IV.
- 2) STEEL STRAP TIEDOWNS SHALL BE ATTACHED TO THE SIDES OF THE TRAILER BY LOOPING THE STRAP AROUND THE RUB RAIL OR STAKE POCKET AND BACK ONTO ITSELF. A MINIMUM OF ONE SEAL WITH TWO PAIR OF NOTCHES WILL BE USED TO SEAL THE JOINT WHEN A NOTCH—TYPE SEALER IS USED. A MINIMUM OF ONE SEAL WITH TWO PAIR OF CRIMPS WILL BE USED WHEN CRIMP—TYPE SEALERS ARE USED.
- 3) WHERE STRAPPING IS JOINED IN AN END-OVER-END LAP JOINT, A MINIMUM OF ONE SEAL WITH TWO PAIR OF NOTCHES WHEN A NOTCH-TYPE SEALER IS USED. WHEN USING A CRIMP-TYPE SEAL, TWO SEALS WITH TWO PAIR OF CRIMPS SHALL BE USED.
- 4) TO PROTECT THE STRAP FROM POSSIBLE SHARP EDGES OF THE RUB RAIL OR STAKE POCKET, AN ADDITIONAL PIECE OF STRAPPING (APPROXIMATELY 18 INCHES) SHALL BE PLACED UNDERNEATH THE STRAP AT THIS LOCATION. IT SHALL BE SECURED TO THE LOAD BEARING STRAP USING ONE SEAL WITH EITHER A SINGLE NOTCH OR A SINGLE CRIMP.
- 5) PROTECTOR BOARDS ARE NOT REQUIRED FOR STEEL STRAP TIEDOWNS.

E. DURING PRE-LOADING INSPECTION REQUIRED BY NAVSEA SW020-AG-SAF-010, ALL CHAIN AND WEB STRAP TIEDOWNS SHALL BE INSPECTED FOR DEFECTS. THE INSPECTION PROCEDURE FOR WEB STRAPS SHALL BE AS SPECIFIED IN DRAWING 6214037. CHAINS, FITTINGS AND LOAD BINDERS SHALL BE INSPECTED FOR STRETCH, GOUGING, BENT LINKS, WEAR, AND ANY OTHER NOTICEABLE DEFECTS THAT WOULD AFFECT THE STRENGTH OF THE ASSEMBLY. RESULTS OF THESE INSPECTIONS SHALL BE RECORDED IN ITEM 12-T OF DD FORM 626. ANY DEFICIENCY SHALL BE CAUSE FOR REJECTION OF THE CHAINS, FITTINGS, BINDERS, OR WEB STRAPPING ASSEMBLIES.

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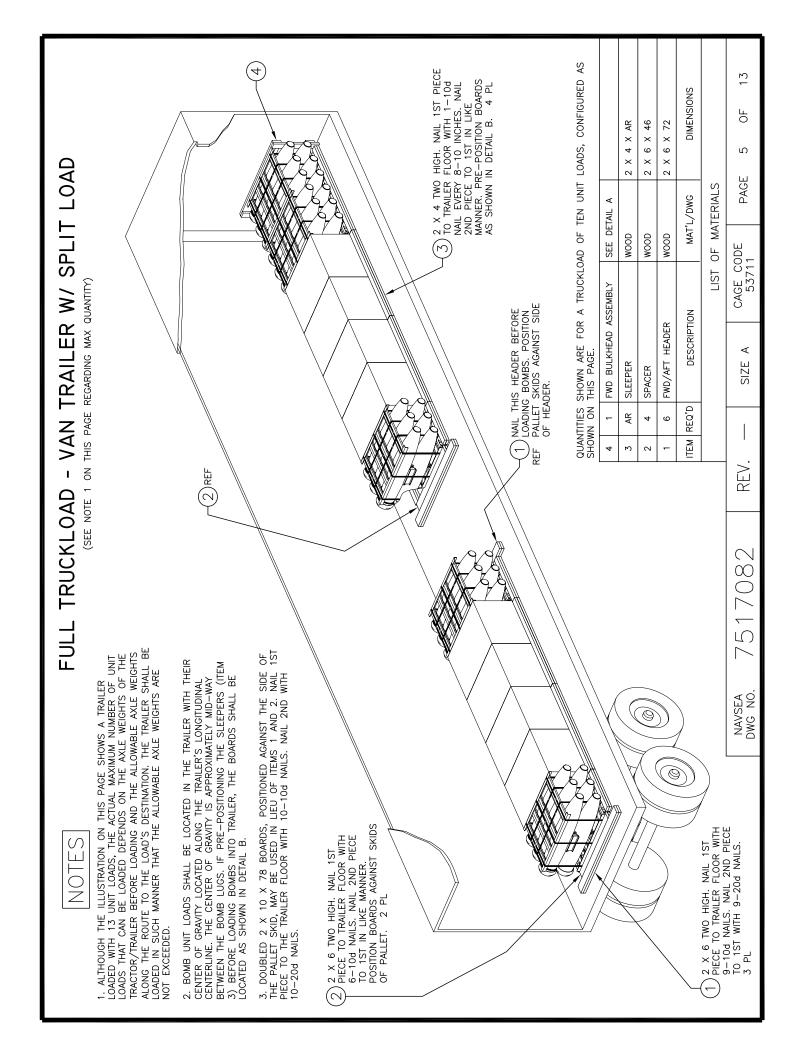
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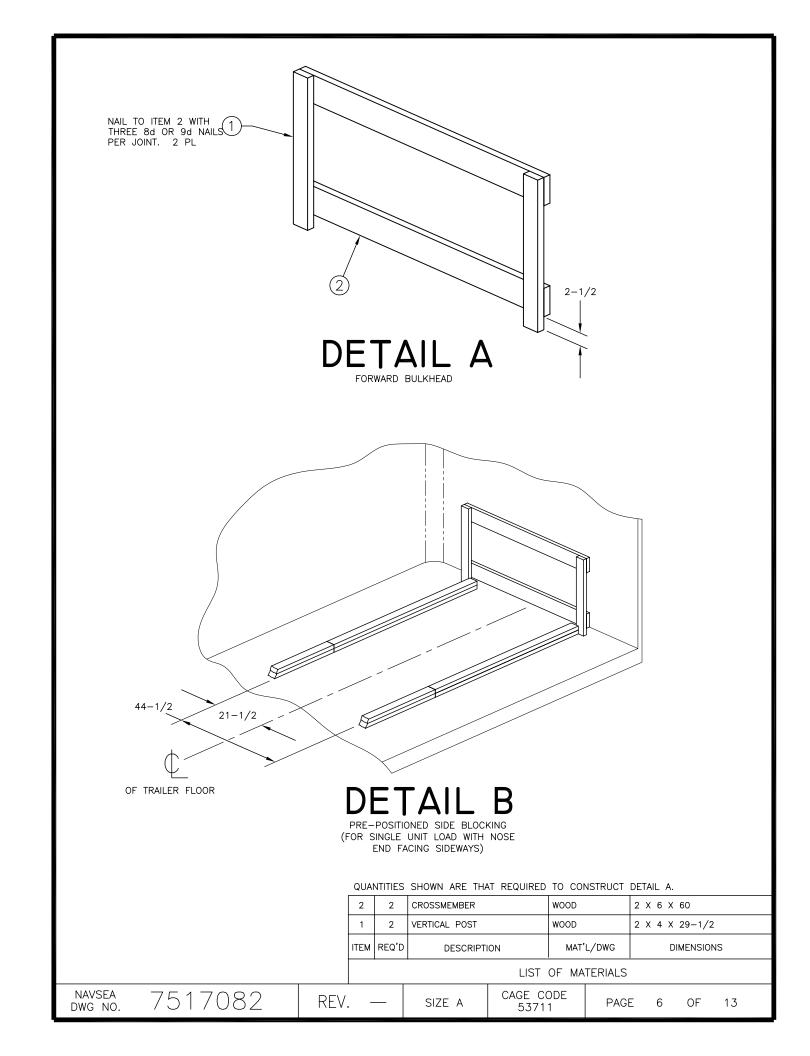
GENERAL NOTES (CONT'D):

- 7. A STAGGERED NAILING PATTERN WILL BE USED WHEN NAILS ARE DRIVEN INTO FLOOR DUNNAGE. THE NAILING PATTERN WILL BE ADJUSTED AS REQUIRED SO THAT A NAIL DOES NOT PENETRATE INTO OR NEAR A CRACK BETWEEN TRAILER FLOOR BOARDS. THE NAILING FOR AN UPPER PIECE OF FLOOR DUNNAGE WILL BE ADJUSTED AS REQUIRED SO THAT A NAIL FOR THAT PIECE WILL NOT BE DRIVEN NEAR A NAIL IN A LOWER PIECE.
- 8. THE MAXIMUM NUMBER OF UNIT LOADS THAT CAN BE LOADED INTO/ONTO A TRAILER DEPENDS ON THE AXLE WEIGHTS OF THE TRACTOR/TRAILER BEFORE LOADING AND THE ALLOWABLE WEIGHTS ALONG THE ROUTE TO THE LOAD'S DESTINATION. THE MAXIMUM ALLOWABLE GROSS WEIGHT OF THE TRACTOR—TRAILER AND THE ALLOWABLE AXLE WEIGHTS ARE THE RESPONSIBILITY OF THE CARRIER. THE CARRIER WILL ADVISE THE SHIPPER OF THESE LIMITATIONS AND THE SHIPPER SHALL LOAD THE TRAILER IN SUCH A MANNER THAT THE TRACTOR—TRAILER WILL NOT EXCEED THESE LIMITATIONS.
- 9. WHEN USING FLATBED TRAILERS, THE UNIT LOADS SHALL BE COMPLETELY COVERED WITH FIRE RESISTANT AND WATERPROOF TARPAULINS. THE TARPAULINS MAY BE UNDER THE TIEDOWNS.
- 10. IF USING A VAN TRAILER WITH A ROLL-UP REAR DOOR, THE TRAILER SHALL BE LOADED IN SUCH MANNER THAT THE LOAD CANNOT SHIFT AND BEAR AGAINST THE REAR DOOR. THUS, USE OF DETAIL G WOULD BE FORBIDDEN IN THIS TYPE OF TRAILER.
- 11. LUMBER SHALL CONFORM TO VOLUNTARY PRODUCT STANDARD PS 20-2005 (AMERICAN SOFTWOOD LUMBER STANDARD).
- 12. NAILS SHALL CONFORM TO ASTM F1667 DESIGNATION F1667 NL CM S XX B, WHERE "XX" DESIGNATES THE SIZE (I.E., 10d, 16d, 20d, ETC.).
- 13. AFTER THE BLOCKING AND BRACING HAS BEEN INSPECTED, ATTACH THE SHIPPING DOCUMENTS TO AN ACCESSIBLE AREA INSIDE THE TRAILER, OR IF USING A FLATBED, ON THE REAR DECK OF THE TRAILER.
- 14. APPROPRIATE EXPLOSIVES PLACARDS SHALL BE ATTACHED TO THE BOTH SIDES, AND REAR OF THE TRAILER.
- 15. FOR GENERAL TRUCKLOADING PROCEDURES REFER TO THE GENERAL TRUCKLOADING DOCUMENT, MIL-STD-1320 (NAVY).

NAVSEA DWG NO. 7517082 REV. — SIZE A CAGE CODE PAGE 3 OF 13

QUANTITIES SHOWN ARE FOR A TRUCKLOAD OF TEN UNIT LOADS, CONFIGURED AS SHOWN ON THIS PAGE. 13 DIMENSIONS 2 X 4 TWO HIGH. NAIL 1ST PIECE TO TRAILER FLOOR WITH 1-10d NAIL EVERY 8-10 INCHES. NAIL SUD PIECE TO 1ST IN LIKE MANNER. PRE-POSITION BOARDS AS SHOWN IN DETAIL B. 2 PL 9 2 X 4 X AR 2 X 6 X 46 2 X 6 X 72 4 PAGE LIST OF MATERIALS MAT'L/DWG SEE DETAIL A FULL TRUCKLOAD - VAN TRAILER WOOD WOOD WOOD CAGE CODE 53711 (SEE NOTE ON THIS PAGE REGARDING MAX QUANTITY) FWD BULKHEAD ASSEMBLY DESCRIPTION FWD/AFT HEADER SIZE A SLEEPER SPACER REQ'D AR 7 ITEM REV. 7517082 1. ALTHOUGH THE ILLUSTRATION ON THIS PAGE SHOWS A TRAILER LOADED WITH 13 UNIT LOADS, THE ACTUAL MAXIMUM NUMBER OF UNIT LOADS THAT CAN BE LOADED DEPENDS ON THE AXLE WEIGHTS OF THE TRACTOR/TRAILER BEFORE LOADING AND THE ALLOWABLE AXLE WEIGHTS ALONG THE ROUTE TO THE LOAD'S DESTINATION. THE TRAILER SHALL BE LOADED IN SUCH MANNER THAT THE ALLOWABLE AXLE WEIGHTS ARE NOT EXCEEDED. 2. BOMB UNIT LOADS SHALL BE LOCATED IN THE TRAILER WITH THEIR CENTER OF GRAVITY LOCATED ALONG THE TRAILER'S LONGITUDINAL CENTERLINE. THE CENTER OF GRAVITY IS APPROXIMATELY MID-WAY BETWEEN THE BOMB LUGS. IF PRE—POSITIONING THE SLEEPERS (ITEM 3) BEFORE LOADING BOMBS INTO TRAILER, THE BOARDS SHALL BE LOCATED AS SHOWN IN DETAIL B. 3. DOUBLED 2 X 10 X 78 BOARDS, POSITIONED AGAINST THE SIDE OF THE PALLET SKID, MAY BE USED IN LIEU OF ITEMS 1 AND 2. NAIL 1ST PIECE TO THE TRAILER FLOOR WITH 10-10d NAILS. NAIL 2ND WITH 10-20d NAILS. (®) NAVSEA DWG NO. NOTES 2 X 6 TWO HIGH. NAIL 1ST PIECE TO TRAILER FLOOR WITH 6-10d NAILS. NAIL 2ND PIECE TO 1ST IN LIKE MANNER. POSTITON BOARDS AGAINST SKIDS OF PALLET. 2 X 6 TWO HIGH. NAIL 1ST PIECE TO TRAILER FLOOR WITH 9-10d NAILS. NAIL 2ND PIECE TO 1ST WITH 9-20d NAILS.





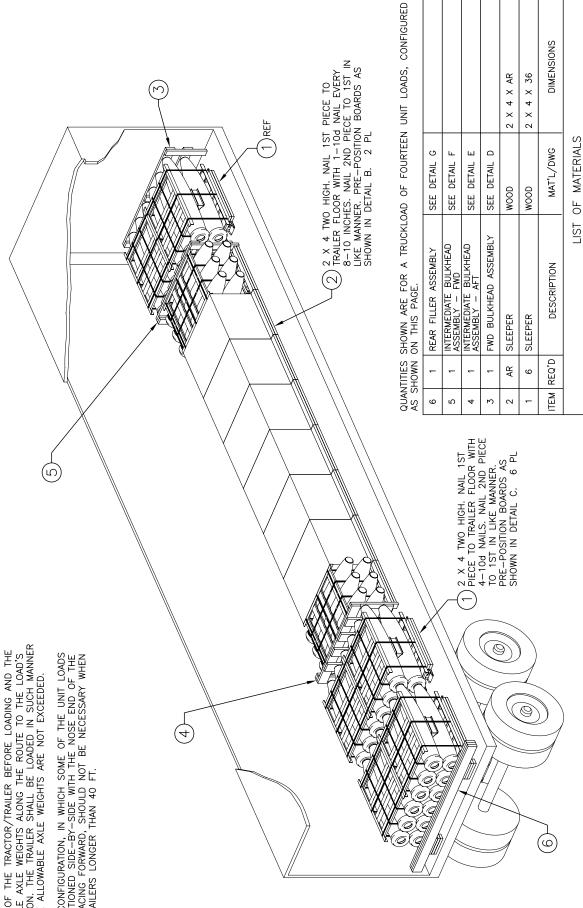
NOTES

FULL TRUCKLOAD - 40 FT VAN TRAILER

(SEE NOTE 1 ON THIS PAGE REGARDING MAX QUANTITY)



2. THIS CONFIGURATION, IN WHICH SOME OF THE UNIT LOADS ARE POSITIONED SIDE—BY—SIDE WITH THE NOSE END OF THE BOMBS FACING FORWARD, SHOULD NOT BE NECESSARY WHEN USING TRAILERS LONGER THAN 40 FT.



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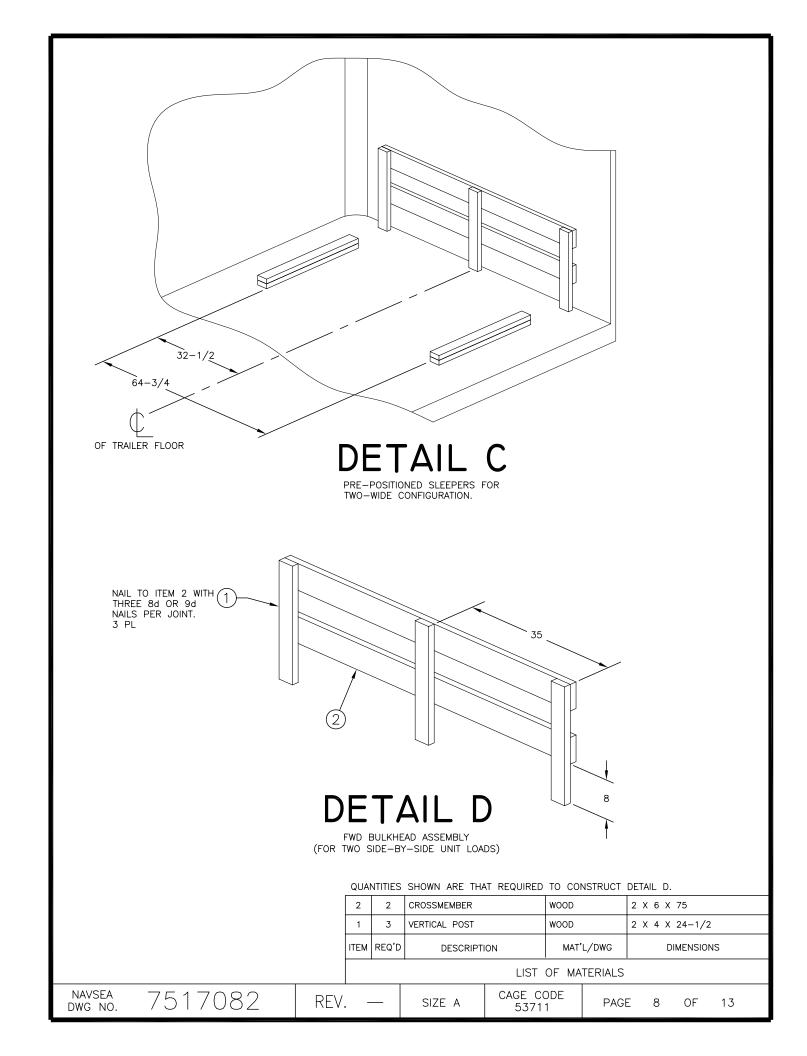
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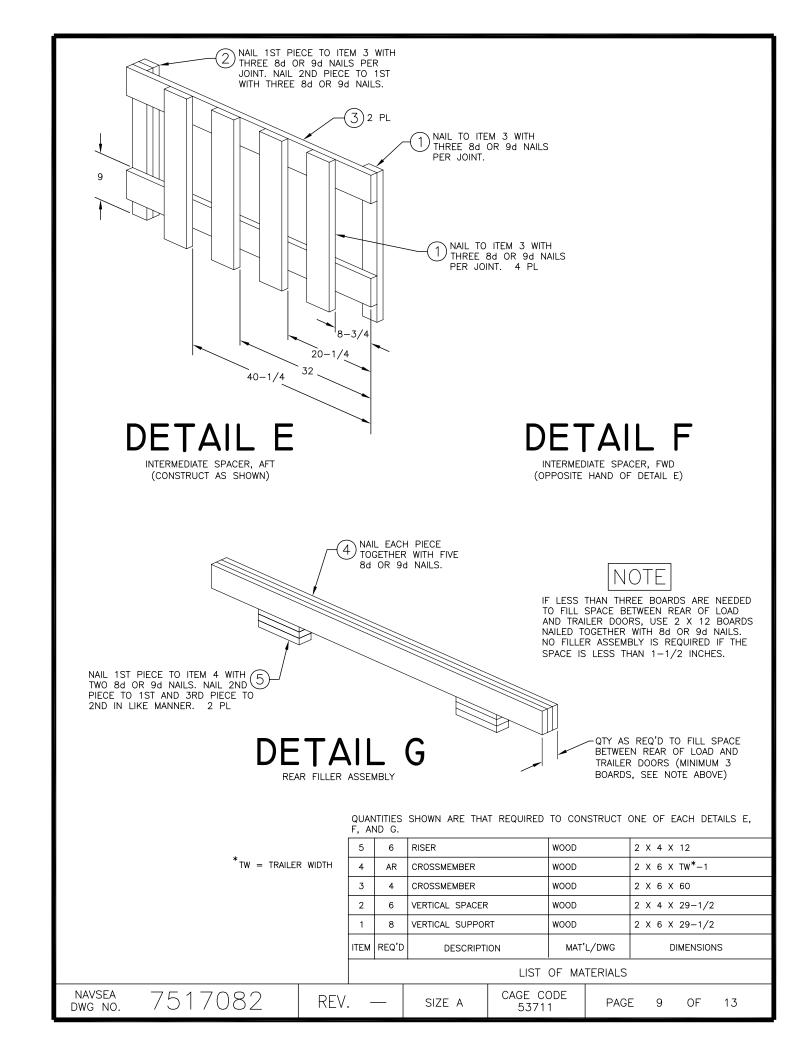
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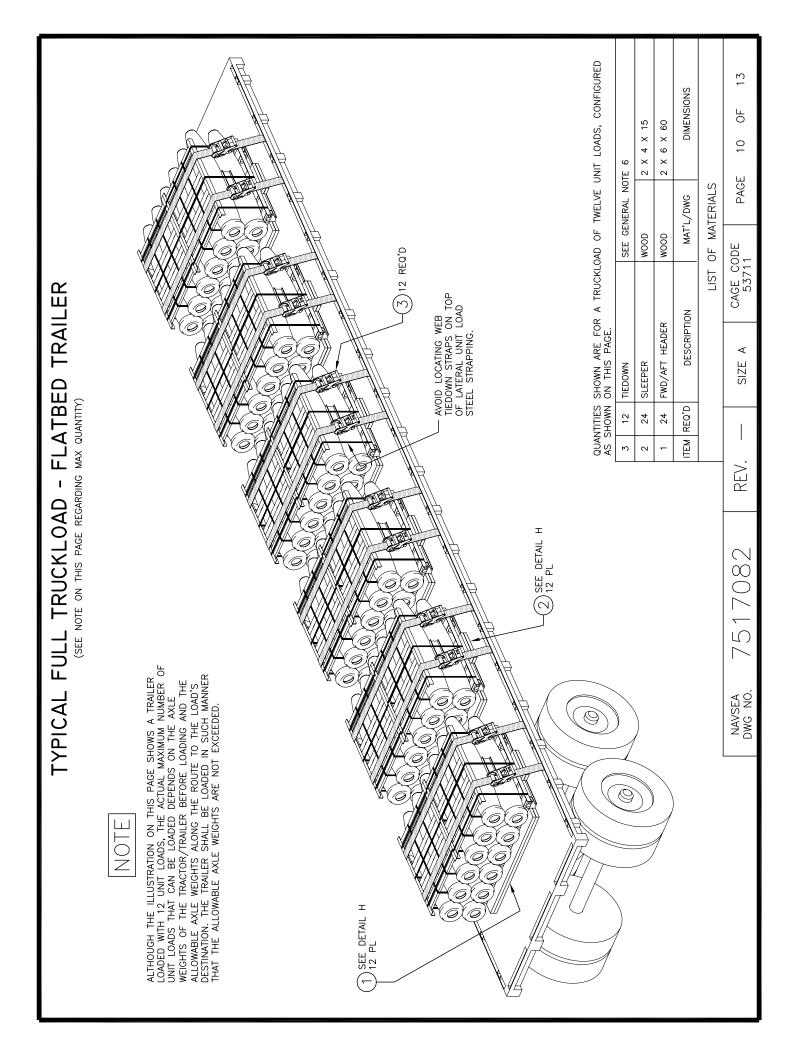
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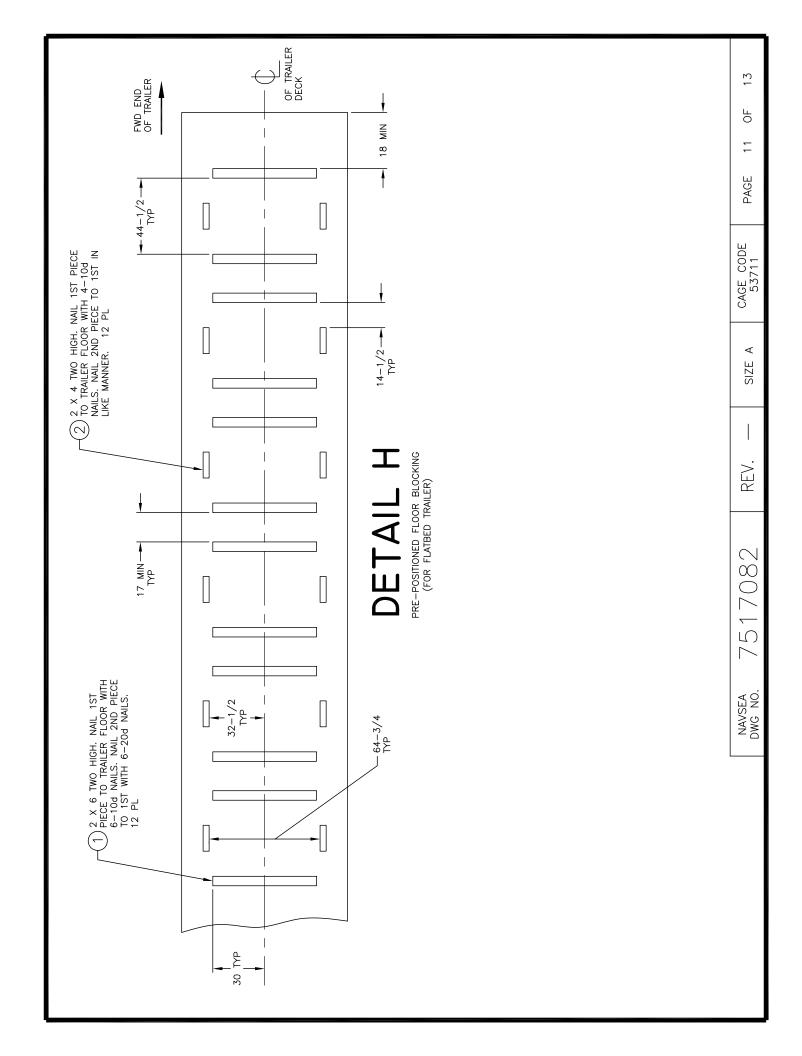
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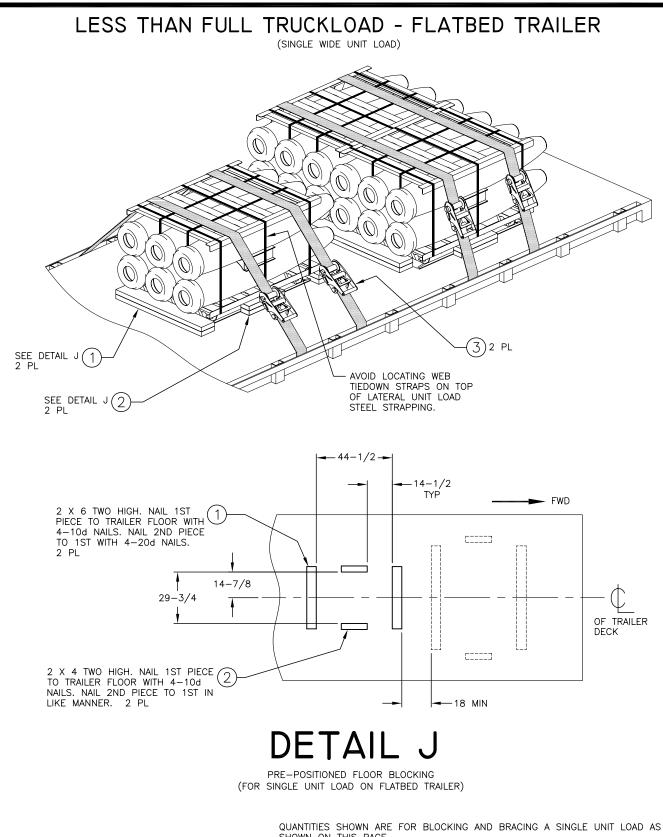
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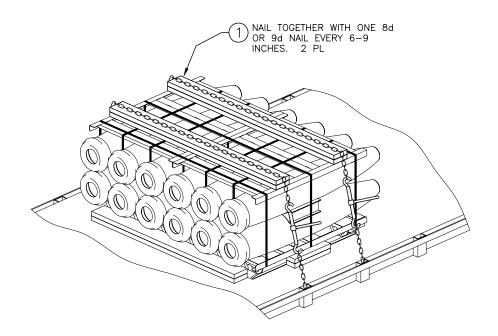




SHOWN ON THIS PAGE.

| 3 | 2 | TIEDOWN | SEE GENERAL NO | TE 6 | | | | | |
|------|-------------------|----------------|----------------|------------|--|--|--|--|--|
| 2 | 4 | SLEEPER | WOOD | 2 X 4 X 15 | | | | | |
| 1 | 4 | FWD/AFT HEADER | WOOD | 2 X 6 X 36 | | | | | |
| ITEM | REQ'D | DESCRIPTION | MAT'L/DWG | DIMENSIONS | | | | | |
| | LIST OF MATERIALS | | | | | | | | |

NAVSEA CAGE CODE 7517082 REV. SIZE A PAGE 12 OF 13 DWG NO. 53711



DETAIL K

USE OF PROTECTOR BOARDS UNDERNEATH CHAIN TIEDOWNS

7517082

NAVSEA

DWG NO.

NOTE: FOR A SINGLE UNIT LOAD, THE LENGTH OF THE PROTECTOR BOARDS SHALL BE 35° .

| | 1 4 PROTECTOR BOARD | | WOOD | | 2 X 6 X 70 | | | | | |
|------|------------------------|---|--------|-----------------|------------|---------|------|----|----|--|
| | ITEM REQ'D DESCRIPTION | | MAT' | L/DWG | DIMENSIONS | | | | | |
| | LIST | | | | OF MA | TERIALS | | | | |
| REV. | | _ | SIZE A | CAGE C0 5371 | | PAGI | Ξ 13 | OF | 13 | |