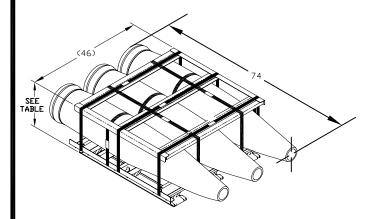
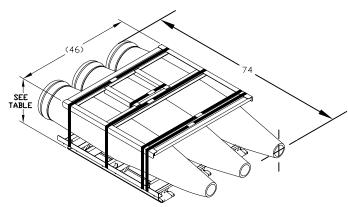
TRUCKLOAD

BOMB, GENERAL PURPOSE: 1000 LB. MK 83 SERIES, BLU-II0 SERIES, BLU-I26 SERIES, BDU-45 SERIES AND BDU-50 SERIES ON MHU-187 SERIES PALLET

UNIT LOAD DATA

DIMENSIONS SEE ILLUSTRATION





UNIT LOAD USING MHU-187/E PALLET UNIT LOAD DRAWING: 7516303 PALLET DRAWING: ADL1454AS100

OVERALL HEIGHT					
NTP BOMB	21.00				
TP BOMB	21.50				

UNIT LOAD USING MHU-187A/E PALLET UNIT LOAD DRAWING: 7516321 PALLET DRAWING: ADL1454AS200

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 AND CONTAINER LOADING MILITARY STANDARDS
 - B) HAZARD CLASSIFICATION

Α	SEE NSWC IHD DET EARLE ECP# 108016				2008-4-21	S/ R SMITH	S/ R SMITH				
-	ORIGINAL ISSUE, SUPERSEDES MIL-STD-1320-112B				7/14/99	S/ AVS	S/ KZ				
REV.	REV. REVISION DESCRIPTION				DATE	TDA	SYSCOM				
TECH DATA MANAGEMENT S/ AVS 7/14/99				DISTRIBUTION STATEMENT A APPROVED FOR PUBLIC RELEASE: DISTRIBUTION IS UNLIMITED							
SYSTEMS ENG. SUPERVISOR S/ GB		7/14/99	REQUIREMENTS FOR CONSTRUCTION OF THIS LOAD SHALL CONSIST OF								
					THIS DOCUMENT & THE LATEST ISSUE OF MIL-STD-1320 (NAVY)						
S/ K.H. ZIMMS 7/14/99					THIS LOAD IS AUTHORIZED & RELEASED FOR						
NAVSEASYSCOM (BY DIRECTION)				HIGHWAY SHIPMENT ONLY							
DEPARTMENT OF THE NAVY NAVAL SEA SYSTEMS COMMAND CAGE CODE 53711			CAGE CODE 53711		DWG	NO. 6	5214	040	REV. A		
ARLINGTON, VA 22242-510		42-5160	SIZE A					PAGE 1	OF 13		

GENERAL NOTES:

- 1. THIS DOCUMENT PROVIDES DETAILED INSTRUCTIONS FOR TRUCKLOADING 1000 LB BOMS (MK 83 SERIES AND BLU-110 SERIES) UNITIZED ON THE MHU-187 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.

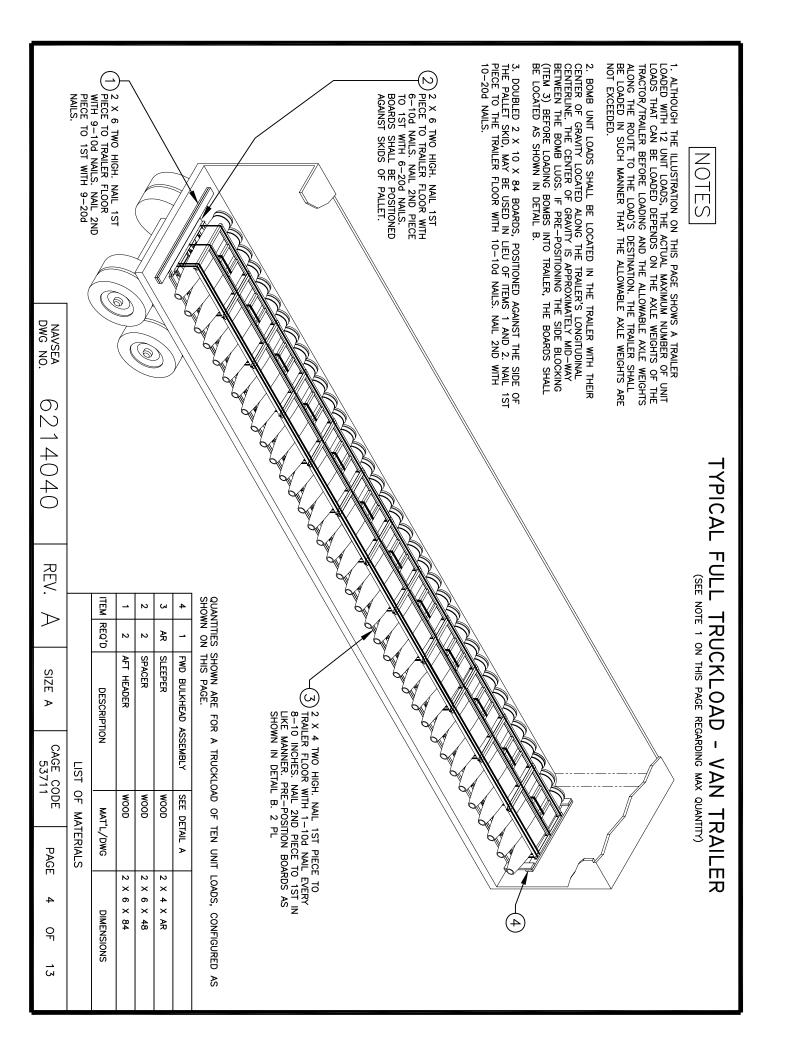
E. DURING PRE-LOADING INSPECTION REQUIRED BY NAVSEA SW020-AG-SAF-010, ALL CHAIN AND WEB STRAP TIEDOWNS SHALL BE INSPECTED FOR DEFECTS. THE INSPECTION PROCEDURE FOR WEB STRAPS SHALL BE AS SPECIFIED IN DRAWING 6214037. CHAINS, FITTINGS AND LOAD BINDERS SHALL BE INSPECTED FOR STRETCH, GOUGING, BENT LINKS, 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.

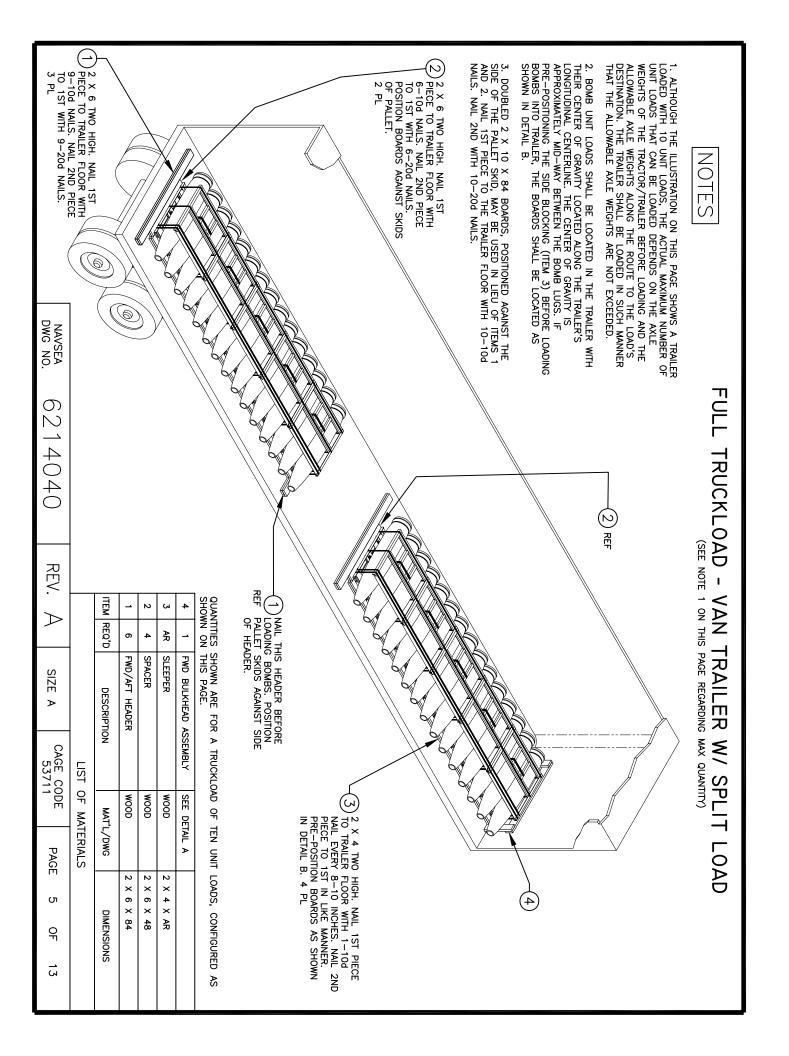
NAVSEA DWG NO. 6214040

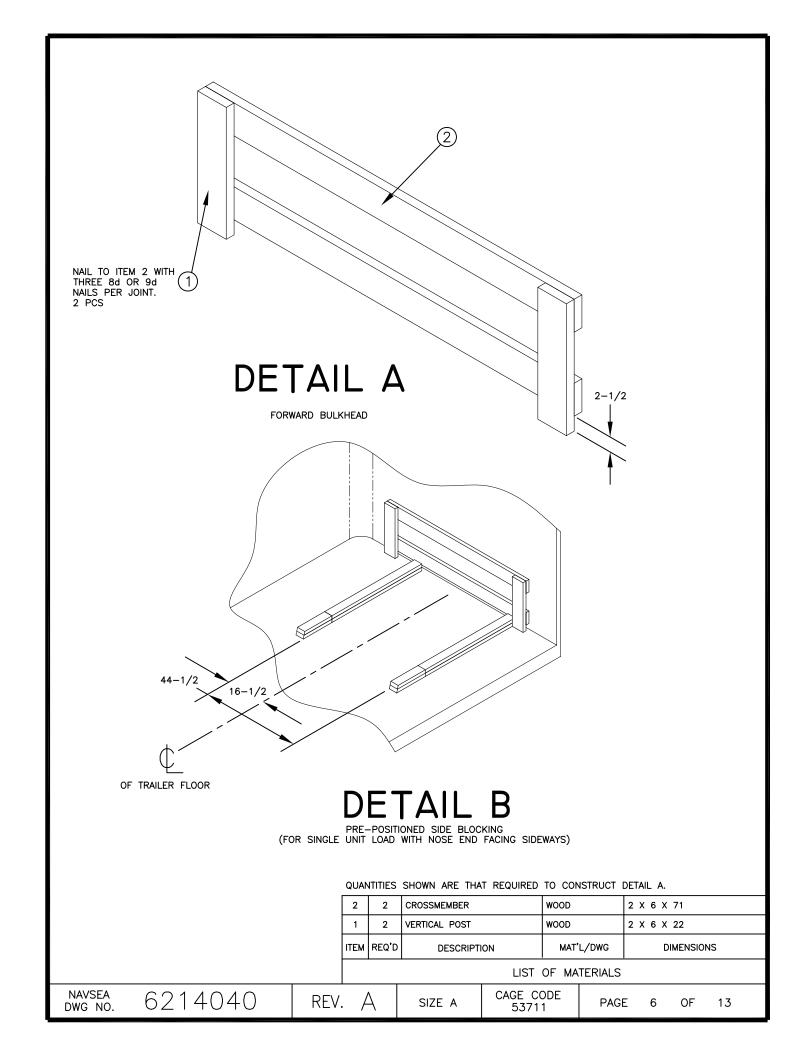
GENERAL NOTES (CONT'D):

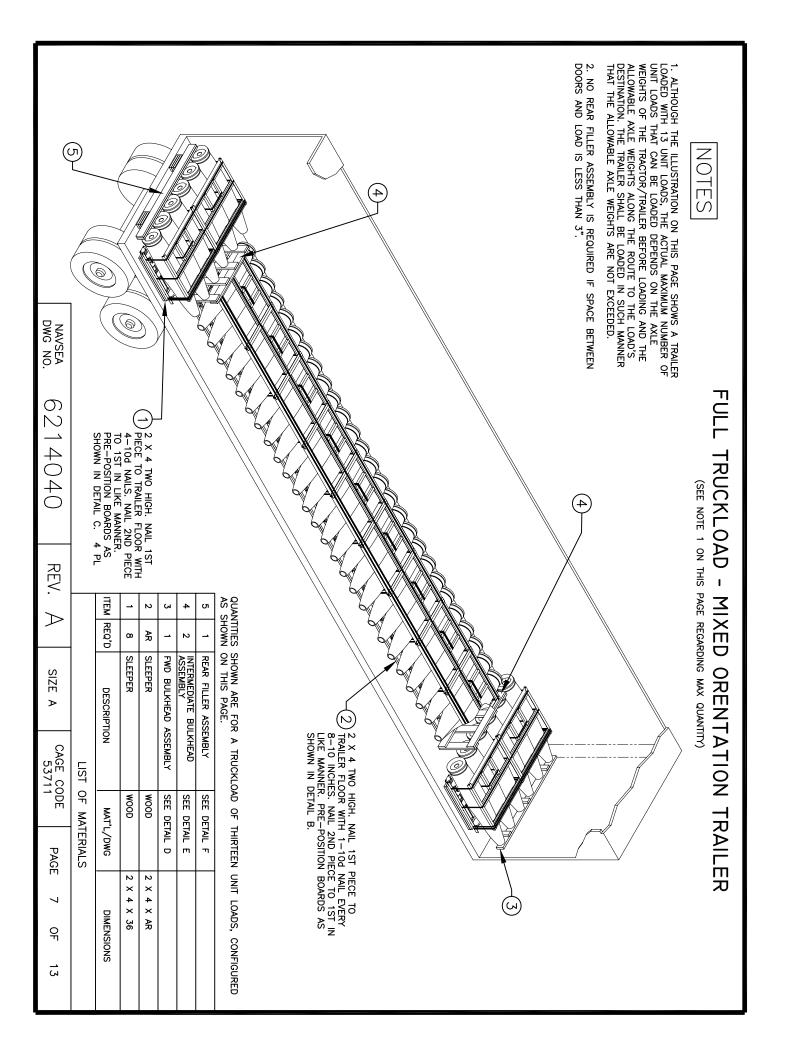
- 7. A STAGGERED NAILING PATTERN WILL BE USED WHEN NAILS ARE DRIVEN INTO FLOOR DUNNAGE. THE NAILING PATTERN WILL BE ADJUSTED AS REQUIRED SO THAT A NAIL DOES NOT PENETRATE INTO OR NEAR A CRACK BETWEEN TRAILER FLOOR BOARDS. THE NAILING FOR AN UPPER PIECE OF FLOOR DUNNAGE WILL BE ADJUSTED AS REQUIRED SO 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. LUMBER SHALL CONFORM TO VOLUNTARY PRODUCT STANDARD PS 20-2005 (AMERICAN SOFTWOOD LUMBER STANDARD).
- 11. NAILS SHALL CONFORM TO ASTM F1667 DESIGNATION F1667 NL CM S XX B, WHERE "XX" DESIGNATES THE SIZE (I.E., 10d, 16d, 20d, ETC.).
- 12. 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.
- 13. APPROPRIATE EXPLOSIVES PLACARDS SHALL BE ATTACHED TO THE BOTH SIDES, AND REAR OF THE TRAILER.
- 14. FOR GENERAL TRUCKLOADING PROCEDURES REFER TO THE GENERAL TRUCKLOADING DOCUMENT, MIL-STD-1320 (NAVY).
- 15. 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 F WOULD BE FORBIDDEN IN THIS TYPE OF TRAILER.

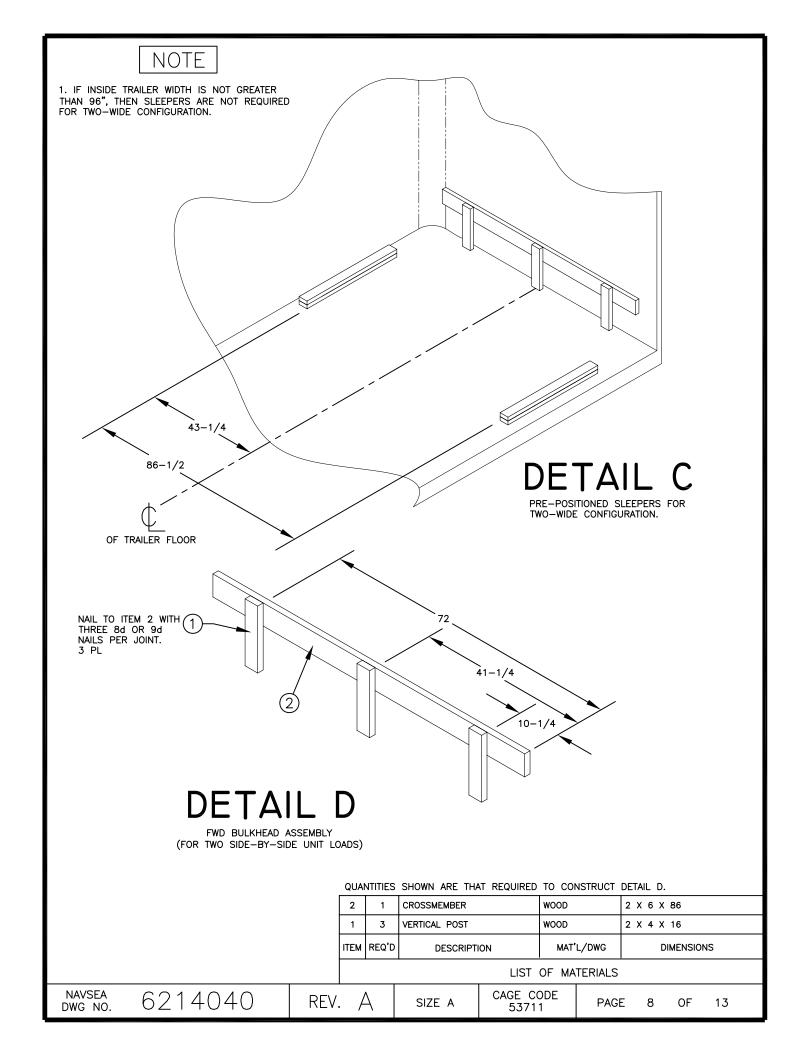
NAVSEA DWG NO. 6214040 REV. A SIZE A CAGE CODE PAGE 3 OF 13

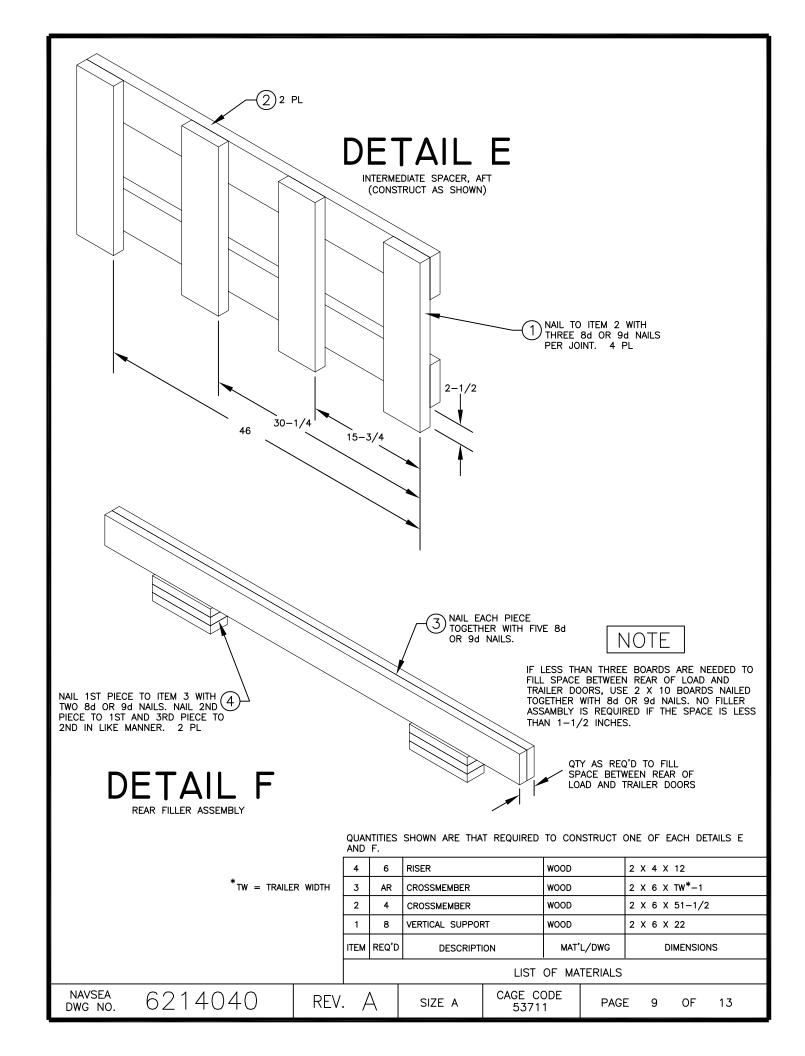


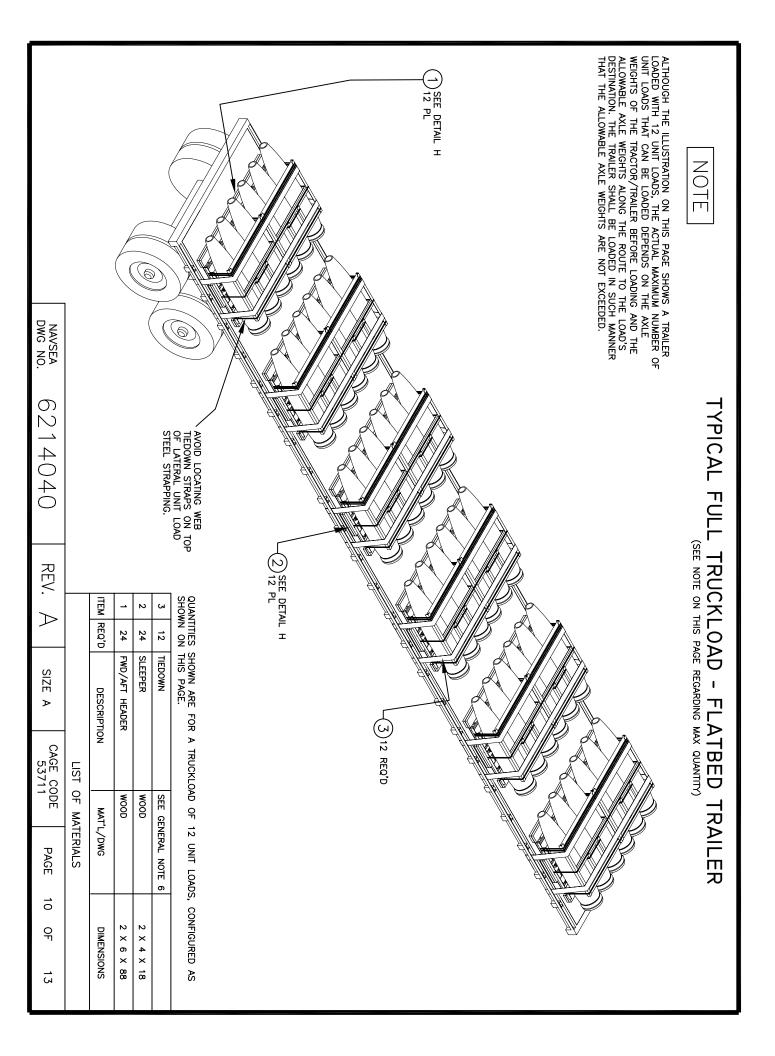


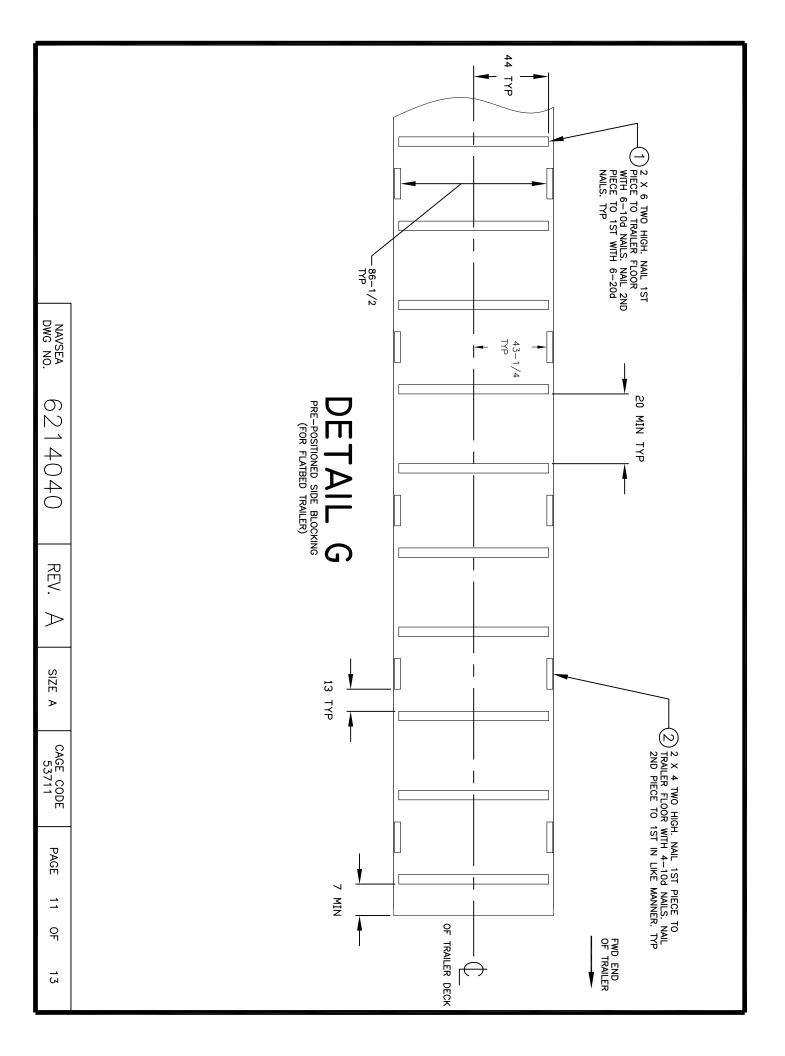


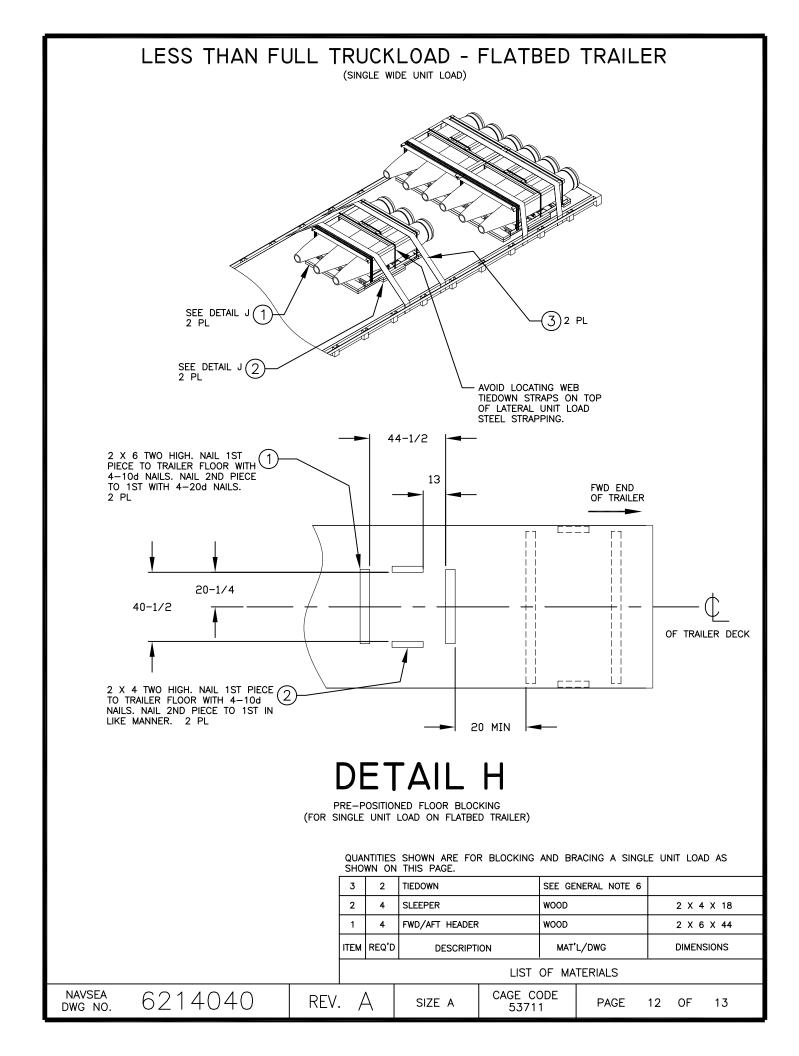


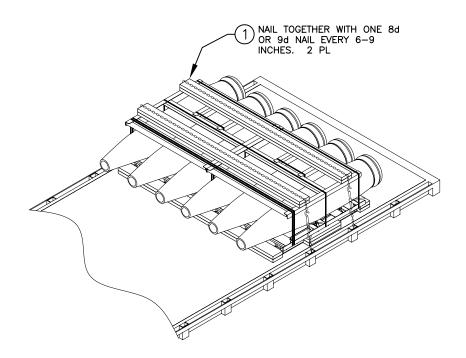












DETAIL J

USE OF PROTECTOR BOARDS UNDERNEATH CHAIN TIEDOWNS

NAVSEA DWG NO.

6214040

NOTE: FOR A SINGLE UNIT LOAD, THE LENGTH OF THE PROTECTOR BOARDS SHALL BE $46^{\prime\prime}$.

	1 4 PROTECTOR BOARD		WOOD		2 X 6 X 92					
	ITEM REQ'D DESCRIPTION		MAT'L/DWG		DIMENSIONS					
	LIST OF MATERIALS									
REV.	. /	7	SIZE A	CAGE C0 5371		PAGI	E 13	OF	13	