

APPROVED BY
MTMTS

Frank L. Paul
TEA, MTMTS

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LANCE

MINIMUM REQUIREMENTS FOR THE HANDLING, STOWAGE, AND BRACING ABOARD SHIPS OF HANDLING UNIT, GUIDED MISSILE, XM39E1

REVISIONS				DRAFTER	PROJ. ENG.	AMCPM-LCSM
				<i>C&K</i>	<i>JNW</i>	<i>CSM</i>
				<i>LRS</i>	<i>John Smith</i>	<i>MS</i>
				APPROVED		
				<i>Andrew W. Reid</i>		
				U. S. ARMY MISSILE COMMAND		
				APPROVED BY CHIEF OF CHEMICALS GENERAL		
				<i>W. E. Hines</i>		
				U. S. ARMY MATERIEL COMMAND		
				U. S. ARMY MATERIEL COMMAND		
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DO NOT SCALE

NOTES

GENERAL:

- A. THIS DOCUMENT HAS BEEN PREPARED AND ISSUED IN ACCORDANCE WITH AMCR 740-13.
- B. THIS DRAWING DEPICTS MINIMUM PROCEDURES APPLICABLE TO THE HANDLING, STOWAGE, AND BRACING ABOARD SHIPS OF HANDLING UNIT, GUIDED MISSILE, XM39E1, WHICH CONSISTS OF THE BASE ASSEMBLY (CRATED) AND BOOM ASSEMBLY (WOODEN CONTAINER), FOR THE LANCE MISSILE SYSTEM.
- C. OTHER TYPES OF CARGO MAY BE STOWED IN THE SAME HOLD OR TWEEN DECK WITH THE ITEMS SHOWN HEREIN.

D. LADING DATA:

1. BASE ASSEMBLY:

CRATE DIMENSIONS (TYPICAL) -----8'-1" LONG X 6'-4" WIDE X 6'-1" HIGH.
GROSS WEIGHT -----1,298 LBS (APPROX).
CUBE -----237 CU. FT.

2. BOOM ASSEMBLY:

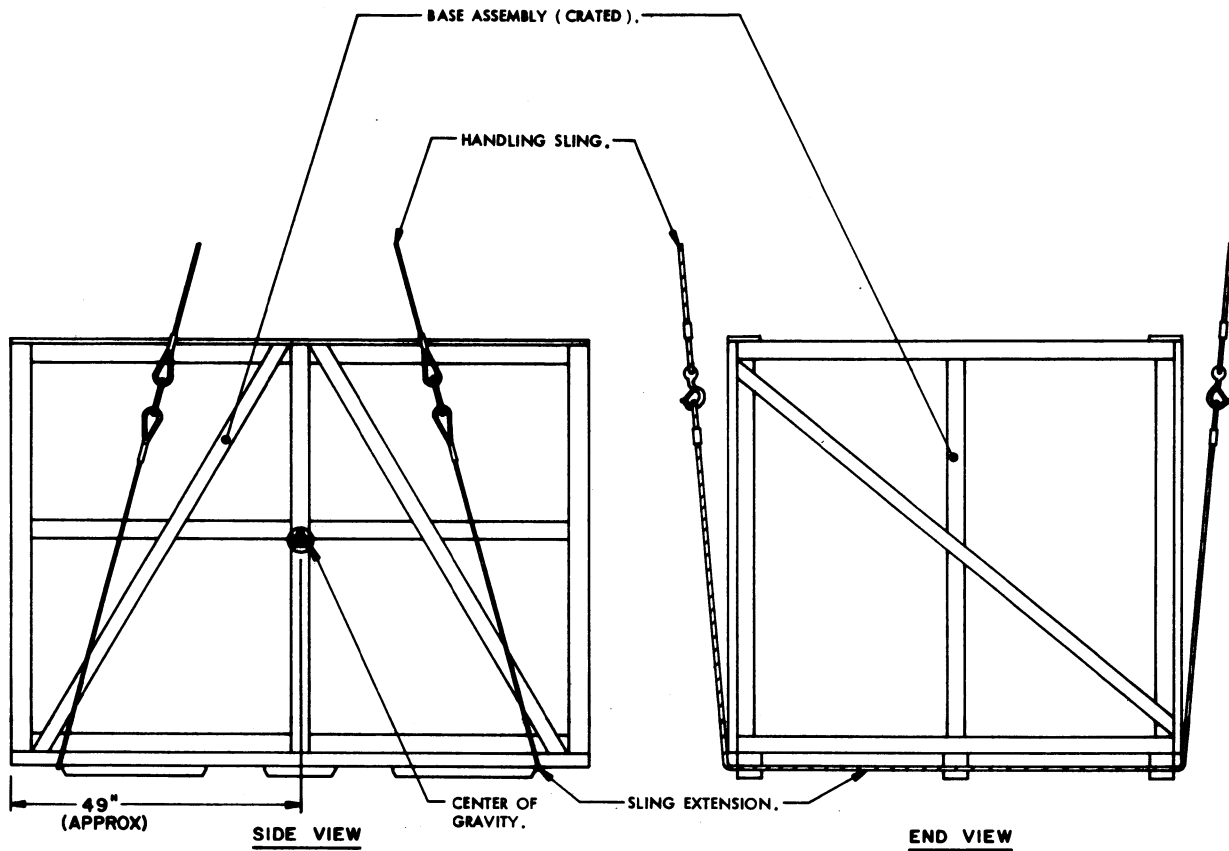
CONTAINER DIMENSIONS (TYPICAL) ----- 17'-3" LONG X 2'-2" WIDE X
1'-10" HIGH.
GROSS WEIGHT ----- 843 LBS (APPROX).
CUBE ----- 68 CU. FT.

HANDLING:

- A. PERTINENT PROVISIONS OF TITLE 46 CODE OF FEDERAL REGULATIONS APPLY.
- B. HANDLING OF THE ITEMS SHOULD BE ACCOMPLISHED BY USING SLING EXTENSIONS SECURELY POSITIONED AGAINST THE SKIDS OF THE ITEMS SHOWN.
- C. EACH BASE ASSEMBLY (CRATED) SHALL BE HANDLED INDIVIDUALLY. STACKING OF CRATED ITEMS IS NOT PERMITTED.
- D. THE BOOM ASSEMBLY (WOODEN CONTAINER) MAY BE HANDLED TWO (2) HIGH IF UNITIZED AS SHOWN ON PAGE 4. STACKING OF CONTAINERS IS LIMITED TO FOUR (4) HIGH.
- E. THE HANDLING SLING SHALL BE OF A DESIGN AND CONFIGURATION TO LIFT THE ITEMS IN SUCH A MANNER THAT THE CABLE LEGS DO NOT APPLY EXCESSIVE PRESSURE WHICH MAY DAMAGE THE ITEM.
- F. ALTHOUGH DESIRABLE, A LEVEL LIFT IS NOT MANDATORY. THE CENTERS OF GRAVITY OF THESE ITEMS ARE SHOWN TO ASSIST IN DETERMINING CABLE LENGTHS TO ASSURE A SAFE LIFT.

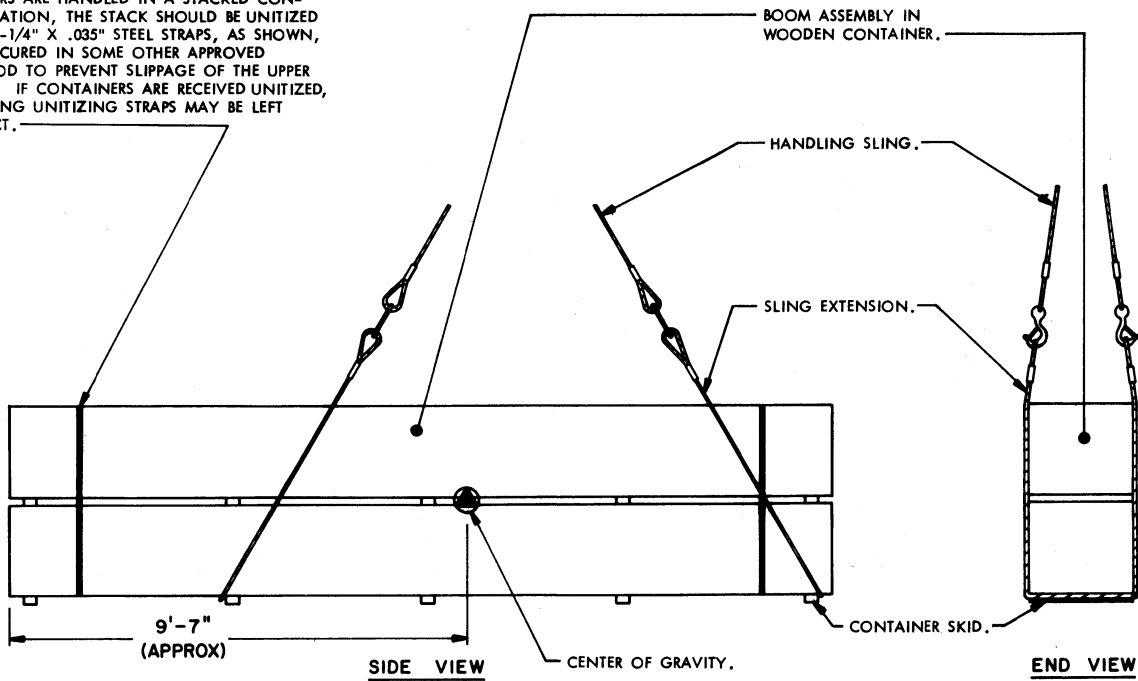
STOWAGE AND BRACING:

- A. STOWAGE OF THE BASE ASSEMBLY (CRATED) IS RESTRICTED TO ONE (1) LAYER HIGH. STOWAGE OF THE BOOM ASSEMBLY (WOODEN CONTAINER) IS RESTRICTED TO FOUR (4) LAYERS HIGH. HOWEVER, OTHER CARGO ITEMS MAY BE OVER-STOWED BY CONSTRUCTING A DUNNAGE FLOOR ON TOP OF THE DEPICTED CRATES AND/OR CONTAINERS. CAUTION: THE WEIGHT OF OVER-STOWED CARGO MUST NOT CRUSH OR OTHERWISE DAMAGE THE CRATES AND/OR CONTAINERS OF THE ABOVE MENTIONED ITEMS.
- B. SPECIES, GRADE AND SIZE OF LUMBER TO BE USED WILL COMPLY WITH REQUIREMENTS OF CURRENT SHIPWRIGHT-CARPENTRY AND RELATED SERVICES CONTRACTS. BRACING METHODS AND LUMBER SIZES DEPICTED IN THIS DRAWING ARE CONSIDERED MINIMUM AND ARE NOT INTENDED TO CONFLICT WITH CONTRACT REQUIREMENTS.
- C. IF CARGO TRUCKS ARE TO BE LOADED ABOARD SHIP, MORE EFFICIENT UTILIZATION OF SHIP CARGO SPACE WILL BE PROVIDED BY STOWING THE DEPICTED BOOM ASSEMBLY CONTAINERS IN THE CARGO BED OF THE TRUCKS. IF THE LENGTH OF THE CARGO BED PERMITS, ONE, TWO OR THREE BOOM ASSEMBLY CONTAINERS MAY BE STOWED IN THE CARGO BED OF A TRUCK. A TYPICAL STOWAGE AND BRACING PROCEDURE FOR AN M55, 5-TON TRUCK IS SHOWN ON PAGE 6.

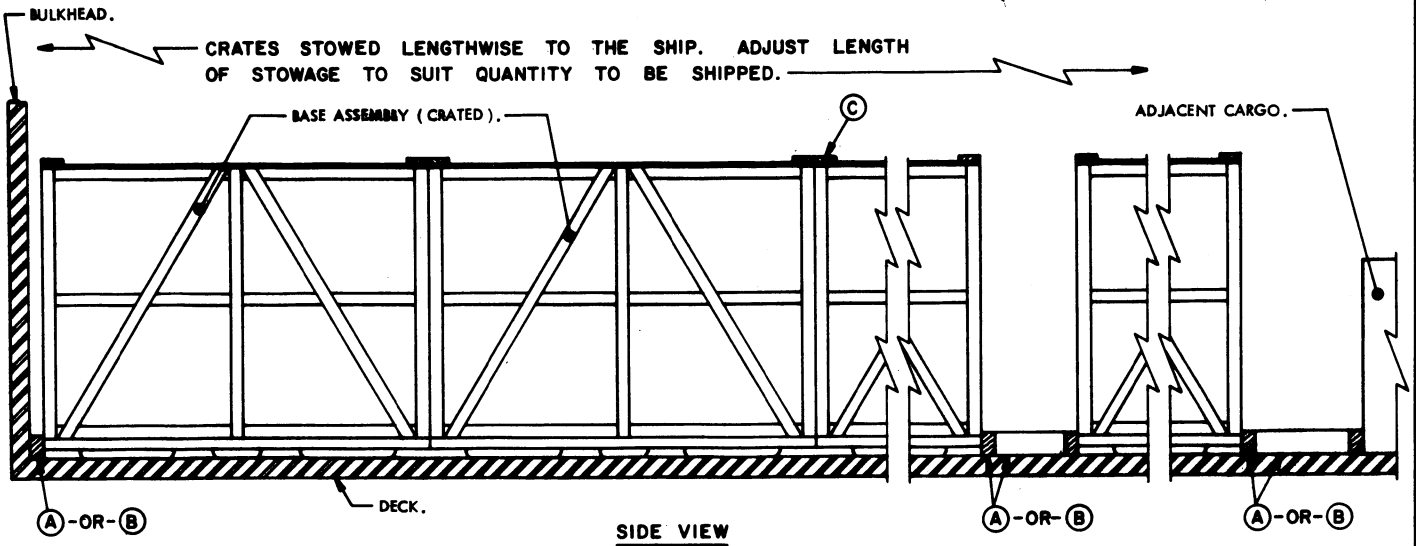


PRECAUTIONARY PROVISIONS FOR HANDLING, STOWAGE AND BRACING AS SPECIFIED IN THE NOTES ON PAGE 2 MUST BE OBSERVED.

CONTAINERS MAY BE HANDLED INDIVIDUALLY, OR MAY BE STACKED AS SHOWN. IF CONTAINERS ARE HANDLED IN A STACKED CONFIGURATION, THE STACK SHOULD BE UNITIZED W/2-1-1/4" X .035" STEEL STRAPS, AS SHOWN, OR SECURED IN SOME OTHER APPROVED METHOD TO PREVENT SLIPPAGE OF THE UPPER UNIT. IF CONTAINERS ARE RECEIVED UNITIZED, EXISTING UNITIZING STRAPS MAY BE LEFT INTACT.



PRECAUTIONARY PROVISIONS FOR HANDLING, STOWAGE AND BRACING AS SPECIFIED IN THE NOTES ON PAGE 2 MUST BE OBSERVED.

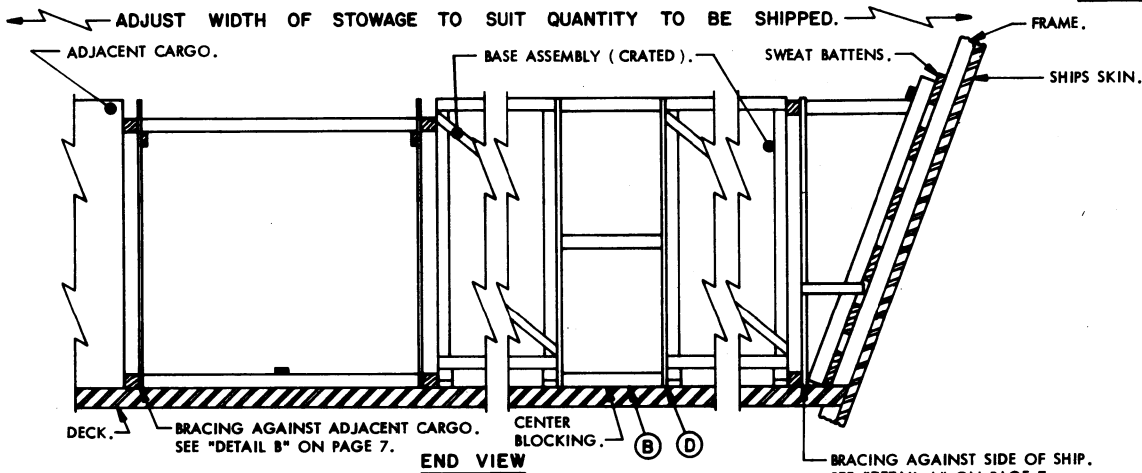


SIDE VIEW

THIS VIEW SHOWS BRACING AGAINST END OF CRATE AND USING FLOOR LINE BRACING MATERIAL (A) (4" X 6", 6" VERTICAL). WHEN BRACING AGAINST CRATE SIDES, USE FLOOR LINE BRACING MATERIAL (B) IN LIEU OF (A) MATERIAL.

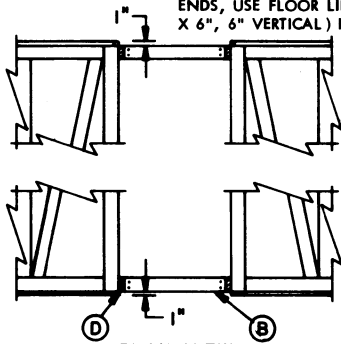
MINIMUM LUMBER SIZES	
(A)	4" X 6"
(B)	4" X 4"
(C)	2" X 6"
(D)	2" X 4"

BRACING METHOD I



END VIEW

THIS VIEW SHOWS BRACING AGAINST SIDE OF CRATE AND USING FLOOR LINE BRACING MATERIAL (B) (4" X 4"). WHEN BRACING AGAINST CRATE ENDS, USE FLOOR LINE BRACING MATERIAL (A) (4" X 6", 6" VERTICAL) IN LIEU OF (B) MATERIAL.



**PLAN VIEW
CENTER BLOCKING**

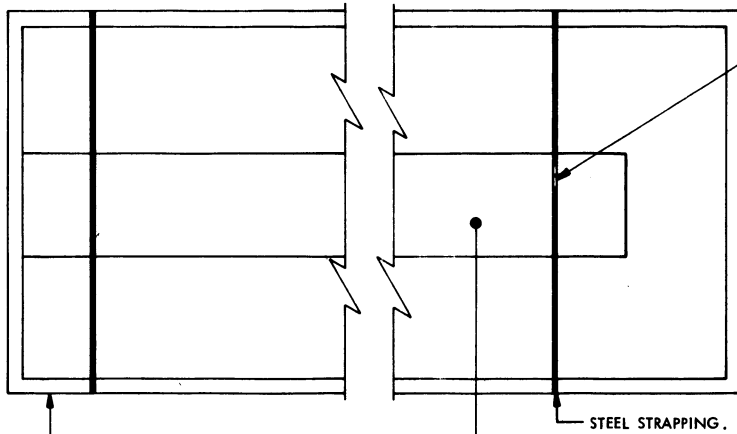
PRECAUTIONARY PROVISIONS FOR HANDLING, STOWAGE AND BRACING AS SPECIFIED IN THE NOTES ON PAGE 2 MUST BE OBSERVED.

BRACING METHOD II

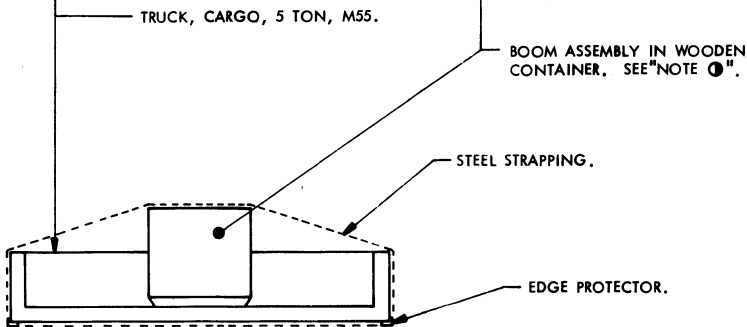
SEALS FOR STEEL STRAPPING.

NOTE ①:

ONE (1) TO THREE (3) BOOM ASSEMBLIES IN CONTAINERS MAY BE STOWED IN THE CARGO BED. IT IS RECOMMENDED THAT 1-1/4" X .035" STEEL STRAPPING BE INSTALLED TO FORM A COMPLETE LOOP OVER CONTAINER(S) AND UNDER BED OF TRUCK AND SEALED WITH TWO (2) SEALS, AS SHOWN. EDGE PROTECTORS SHOULD BE USED ON ALL SHARP EDGES AND MAY BE FORMED FROM 18 (MIN) GAGE SHEET STEEL IF NOT COMMERCIALY AVAILABLE. SEE STOWAGE AND BRACING NOTE "C" ON PAGE 2.



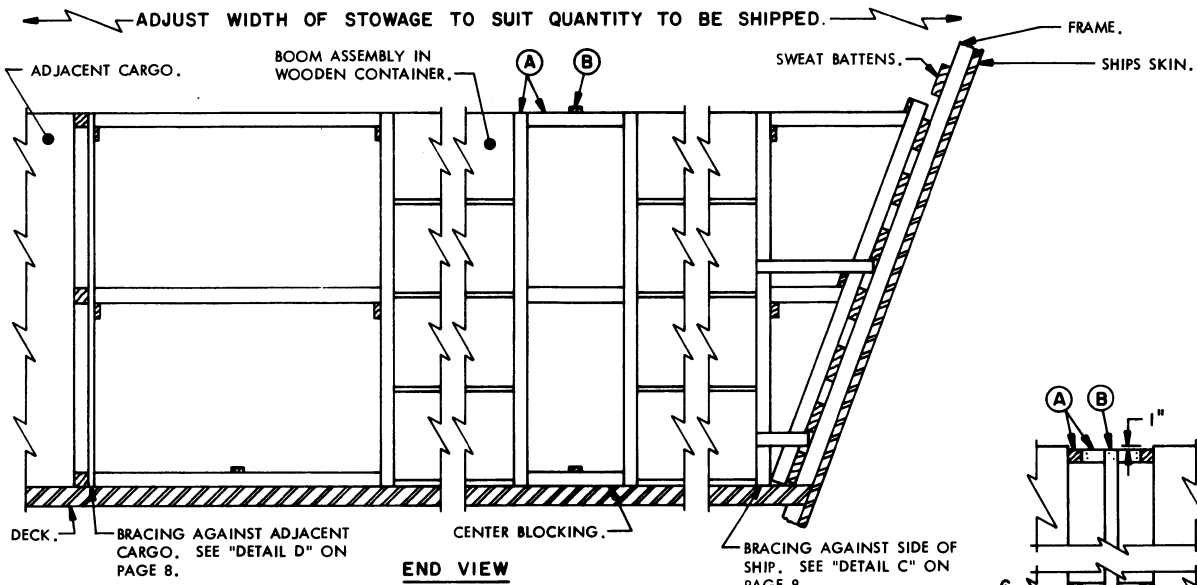
PLAN VIEW



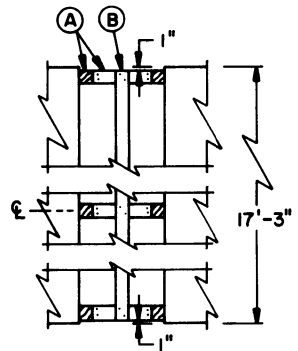
REAR VIEW

PRECAUTIONARY PROVISIONS FOR HANDLING, STOWAGE AND BRACING AS SPECIFIED IN THE NOTES ON PAGE 2 MUST BE OBSERVED.

STOWAGE AND BRACING IN CARGO TRUCK, 5 TON, M55



END VIEW

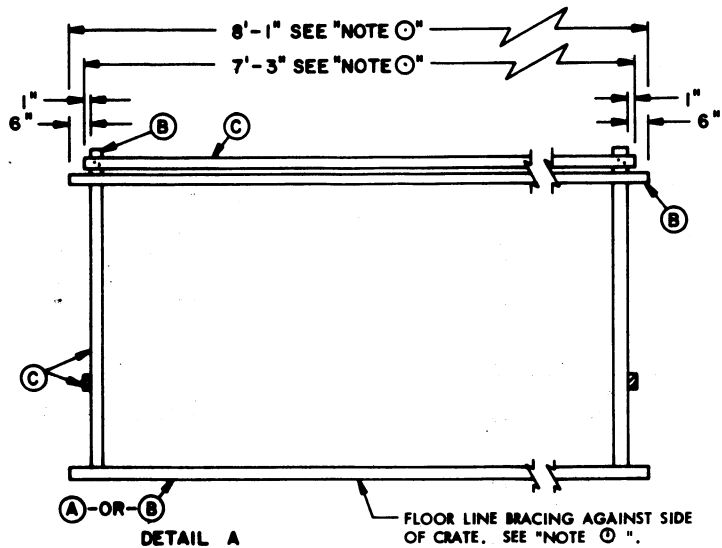
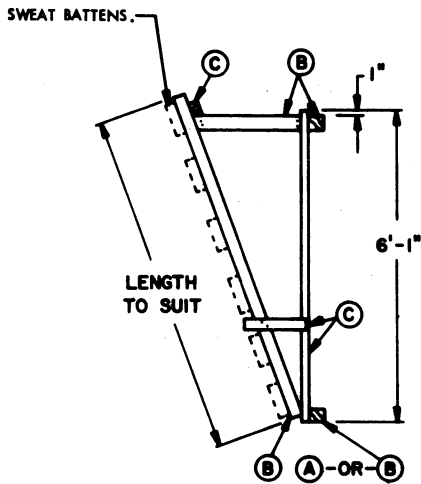


**PLAN VIEW
CENTER BLOCKING**

MINIMUM LUMBER SIZES	
(A)	4" X 4"
(B)	2" X 4"

STOWAGE AND BRACING IN SHIPS HOLD

BRACING METHODS FOR THE BOOM ASSEMBLY (WOODEN CONTAINERS)

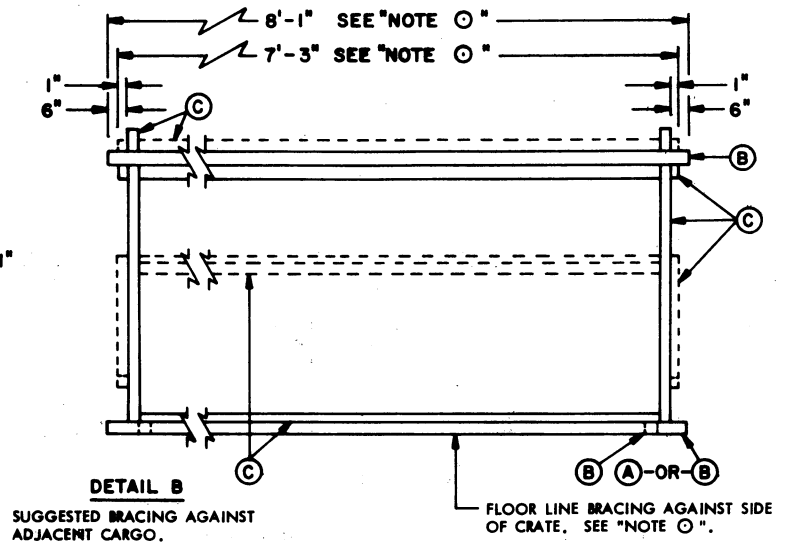
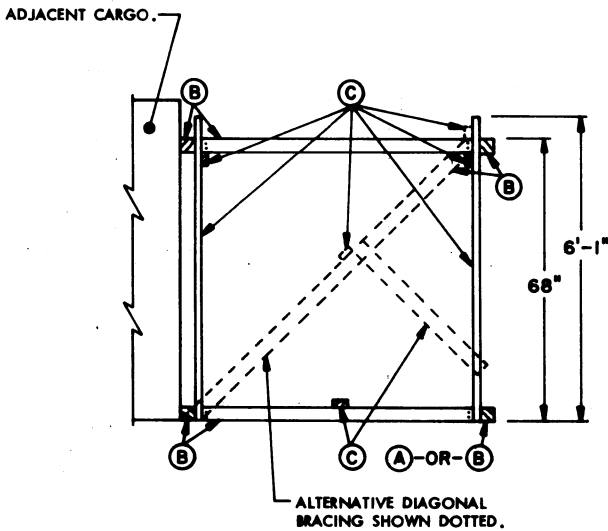


DETAIL A
SUGGESTED BRACING AT SIDE OF SHIP.

NOTE (C) :

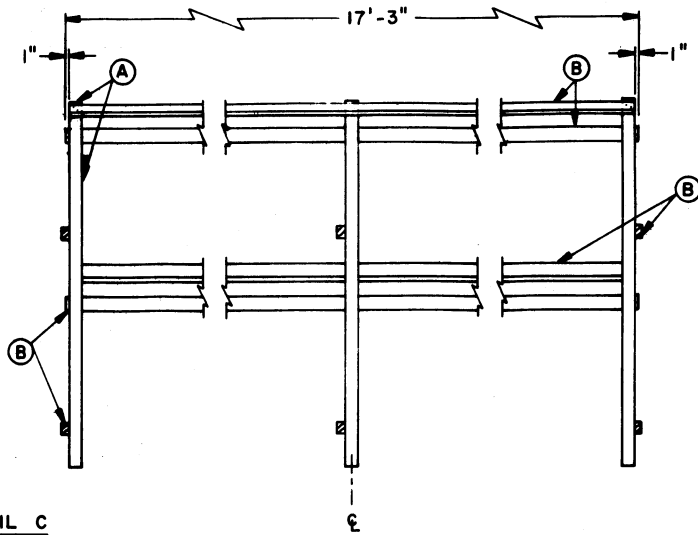
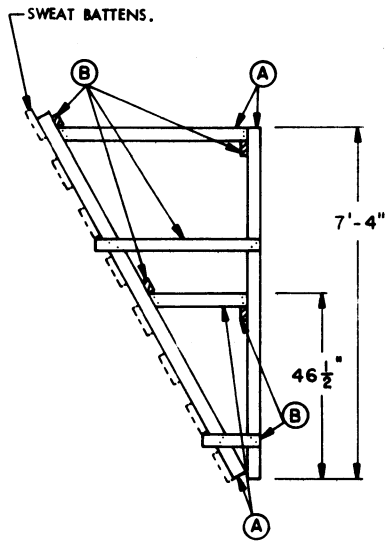
DIMENSIONS SHOWN ARE FOR BRACING AGAINST SIDE OF CRATE AND USING FLOOR LINE BRACING MATERIAL (B). WHEN BRACING AGAINST CRATE ENDS, CHANGE DIMENSIONS OF THE BRACING ASSEMBLY. USE 6'-4" IN LIEU OF 8'-1" AND 6'-6" IN LIEU OF 7'-3". ALSO, USE FLOOR LINE BRACING MATERIAL (A) (4" X 6", 6" VERTICAL) AGAINST CRATE ENDS IN LIEU OF (B) MATERIAL.

MINIMUM LUMBER SIZES	
(A)	4" X 6"
(B)	4" X 4"
(C)	2" X 4"



DETAIL B
SUGGESTED BRACING AGAINST ADJACENT CARGO.

PRECAUTIONARY PROVISIONS FOR HANDLING, STOWAGE AND BRACING AS SPECIFIED IN THE NOTES ON PAGE 2 MUST BE OBSERVED.

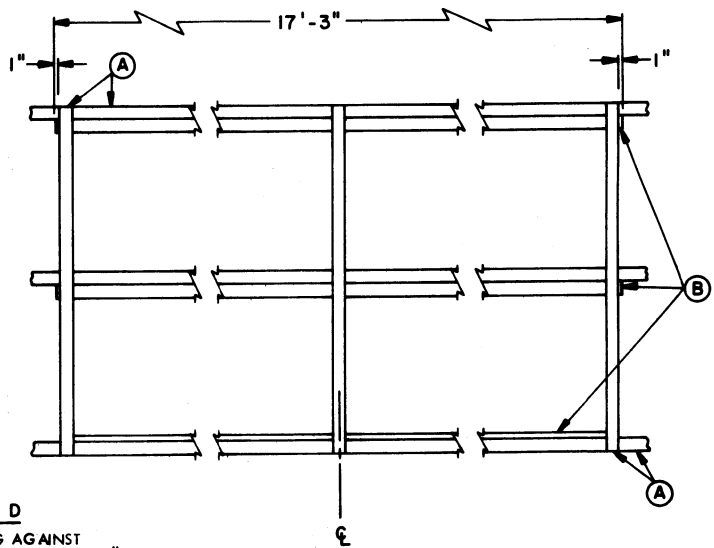
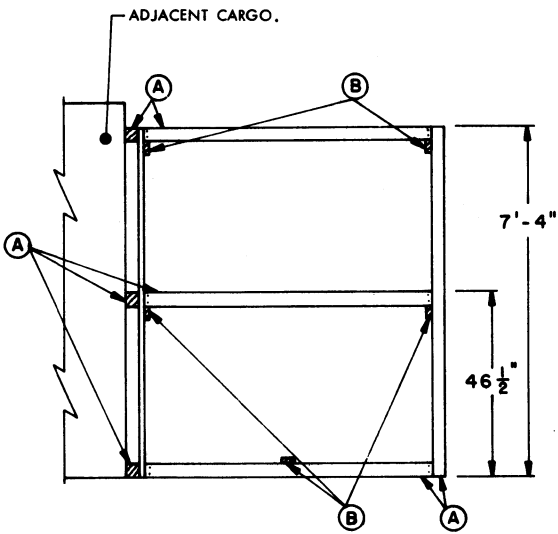


DETAIL C

SUGGESTED BRACING AT SIDE OF SHIP. SEE "NOTE ④".

NOTE ④ :

THE ASSEMBLIES SHOWN ON THIS PAGE ARE FOR BRACING AGAINST THE CONTAINER SIDE, WHEN CONTAINERS ARE STACKED FOUR (4) LAYERS HIGH. WHEN BRACING AGAINST CONTAINER ENDS, SIMILAR BRACING WILL BE INSTALLED, SO THAT EACH STACK IS PROPERLY SUPPORTED.



DETAIL D

SUGGESTED BRACING AGAINST ADJACENT CARGO. SEE "NOTE ④".

MINIMUM LUMBER SIZES	
(A)	4" X 4"
(B)	2" X 4"

PRECAUTIONARY PROVISIONS FOR HANDLING, STOWAGE AND BRACING AS SPECIFIED IN THE NOTES ON PAGE 2 MUST BE OBSERVED.