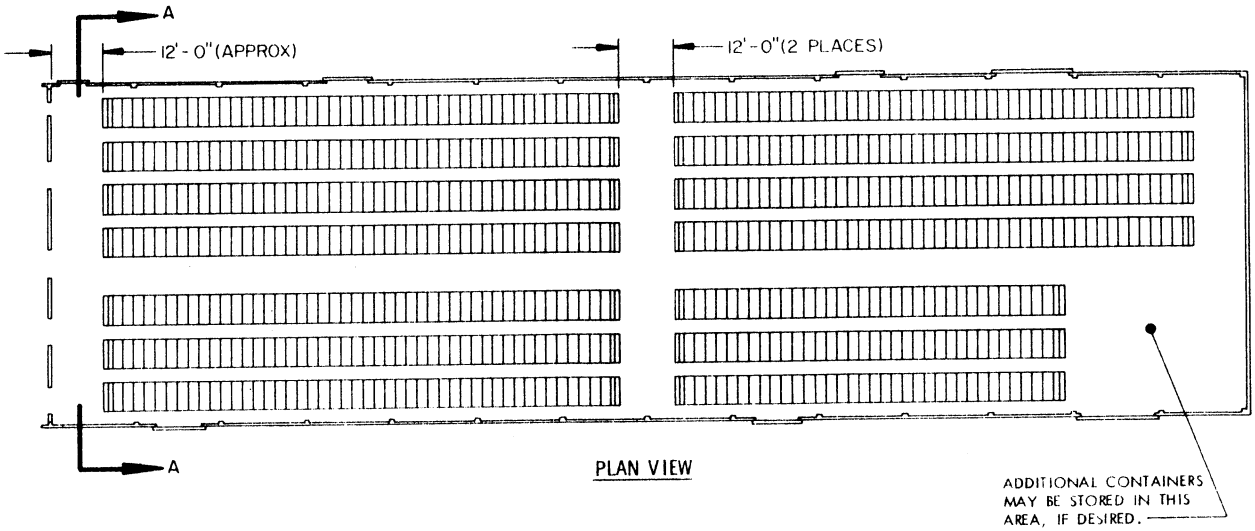
STORAGE IN WAREHOUSE TYPE FACILITIES OF THE 1-TON CONTAINER (FILLED)

INDEX

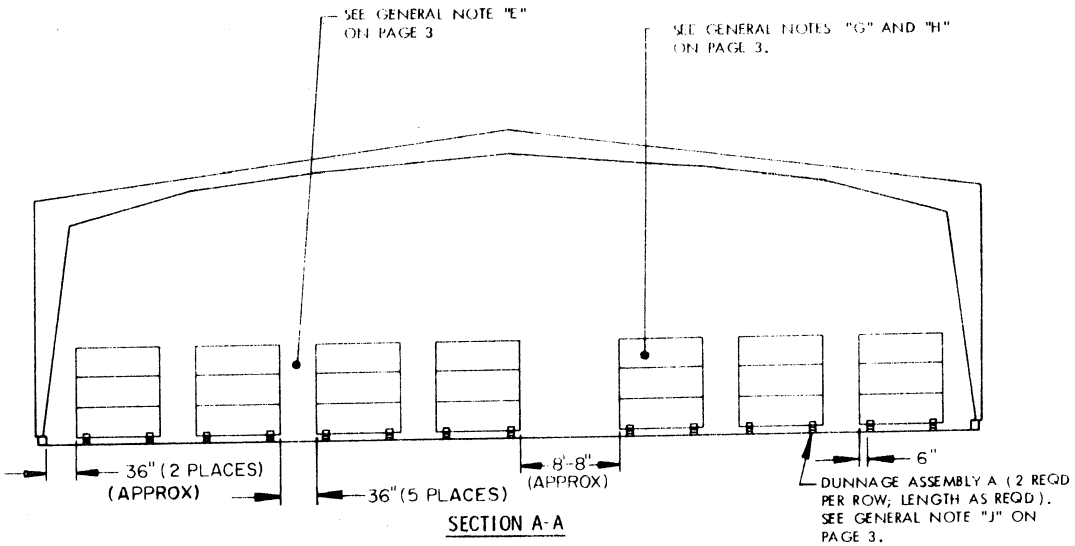
REVISIONS				DRAFTSMAN GRG	PROJ ENG JNW/LWW	
				CHECKER GRG	LOG ENGRG OFFICE	
1	MAR 77	LWW	Walter J. Thalacker	APPROVED, U. S. ARMY ARMAMENT COMMAND		
			A. D. Ehringer	Robert V. Smith		
				APPROVED BY ORDER OF COMMANDING GENERAL, U. S. ARMY MATERIEL DEVELOPMENT AND READINESS COMMAND (DARCOM)		
				John L. Byrd Jr. DARCOM AMMO CENTER		
				U. S. ARMY DARCOM DRAWING		
				OCTOBER 1976		
				CLASS	DIVISION	DRAWING	FILE
				19	48	4508	CB 10M11

DO NOT SCALE

PROJECT CB 25-76



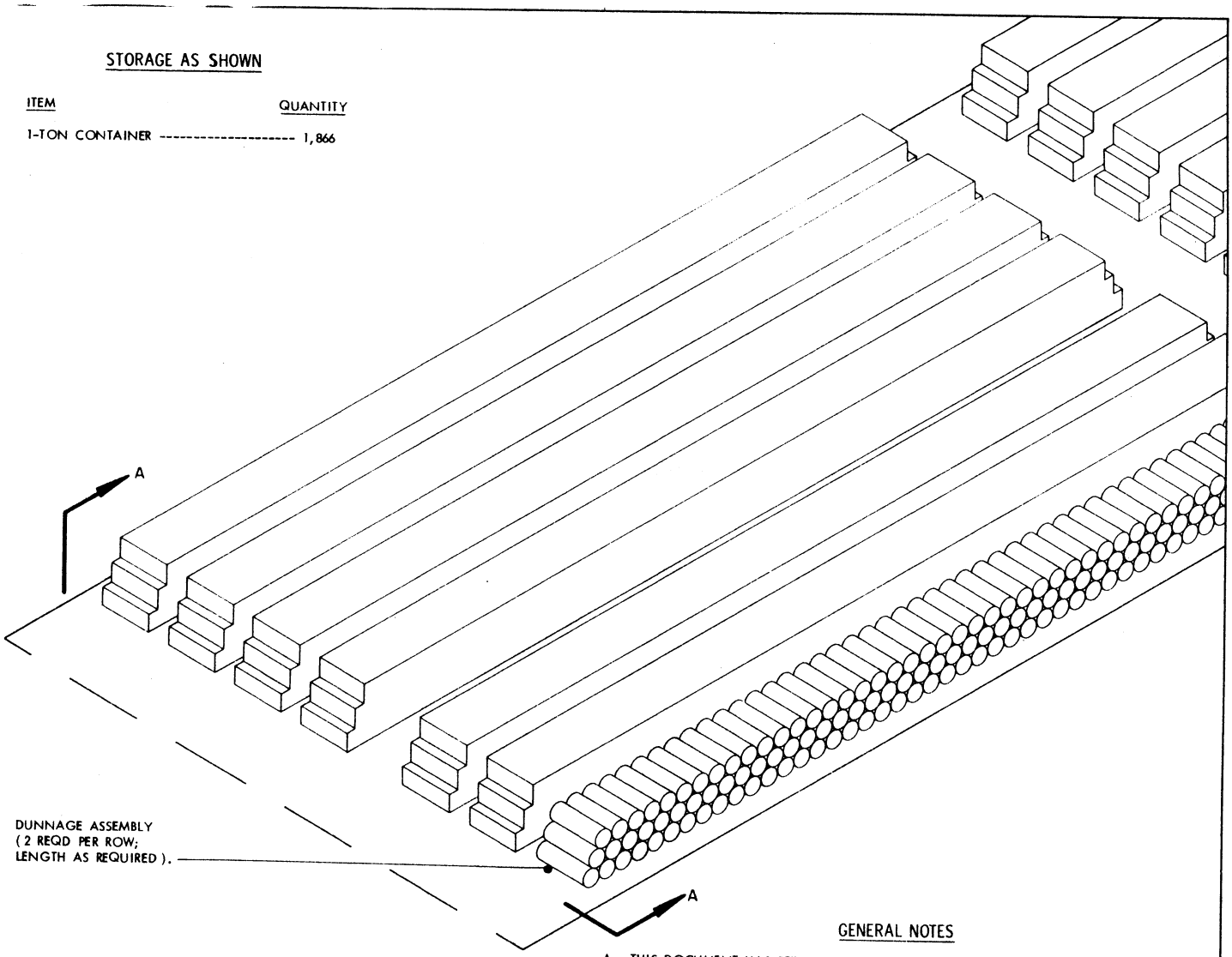
PLAN VIEW



SECTION A-A

STORAGE AS SHOWN

ITEM	QUANTITY
1-TON CONTAINER	1,866



ISOMETRIC VIEW

(GENERAL NOTES CONTINUED)

J. THE PROCEDURES AS SHOWN SPECIFY "DUNNAGE ASSEMBLY A" TO SUPPORT THE BOTTOM LAYER OF CONTAINERS. DUNNAGE ASSEMBLIES "A", "B", AND/OR "C" MAY BE USED, AS DESIRED. SEE THE APPROPRIATE DETAILS ON PAGES 4 THROUGH 8.

K. THE STORAGE FACILITY MUST COMPLY WITH ALL REQUIREMENTS AND BE APPROVED FOR THE STORAGE OF CHEMICAL ITEMS. ALSO, THE MAXIMUM FLOOR LOAD, AS PRESCRIBED BY LOCAL STANDARDS, WILL NOT BE EXCEEDED.

L. THE PROCEDURES DEPICTED HEREIN WILL NOT BE USED IN OTHER FACILITIES UNLESS SPECIFIC AUTHORIZATION IS OBTAINED.

M. FLOOR DUNNAGE WILL BE SHIMMED OR OTHERWISE PROPERLY SUPPORTED AS REQUIRED WHERE THE DUNNAGE PASSES OVER DEPRESSIONS, SUCH AS DRAIN INLETS, IN THE FLOOR.

N. DUNNAGE LUMBER SPECIFIED THROUGHOUT THIS PROCEDURAL DRAWING IS OF NOMINAL SIZE. FOR EXAMPLE, 2" X 6" MATERIAL IS ACTUALLY 1-1/2" THICK BY 5-1/2" WIDE OR 1-5/8" THICK BY 5-5/8" WIDE.

REVISIONS

REVISION NO. 1, DATED MARCH 1977, CONSISTS OF:

1. CHANGES TO SECTION A-A ON PAGE 2.

MATERIAL SPECIFICATIONS

LUMBER	:	SEE TM 743-200-1, DUNNAGE LUMBER, FED SPEC MM-L-751.
NAILS	:	COMMON, CEMENT COATED OR CHEMICALLY ETCHED. FED SPEC FF-N-105. ALT: ANNULAR-RING TYPE NAIL OF THE SAME SIZE.
STRUCTURAL STEEL	:	ROLLED SHAPES, PLATE AND BAR; FED SPEC QQ-S-741D.
BOLTS	:	SAE GRADE 1 CARBON STEEL.

GENERAL NOTES

A. THIS DOCUMENT HAS BEEN PREPARED AND ISSUED IN ACCORDANCE WITH AR 740-1, AND AUGMENTS TM 743-200-1 (CHAPTER 5), TM 9-1300-206 (CHAPTER 4), AND TM 3-250.

B. DETAILS OF CONTAINER:

DIMENSIONS ------- 81-1/2" LONG X 30-1/2" DIAMETER.
GROSS WEIGHT ----- 3,500 POUNDS (APPROX).

C. THE STORAGE PLAN DEPICTED HEREIN IS DESIGNED SPECIFICALLY FOR NEWPORT ARMY AMMUNITION PLANT, BUILDING 144. NECESSARY MODIFICATIONS THAT ARE REQUIRED TO BE MADE TO THE BUILDING TO ACCOMMODATE THIS STORAGE PROCEDURE ARE TO BE COMPLETED, SUCH AS REMOVING EQUIPMENT FOUNDATIONS, COLUMNS, AND OTHER FEATURES THAT COULD INTERFERE WITH THIS STORAGE PROCEDURE.

D. THIS STORAGE PLAN IS BASED ON USE OF PORTABLE A-FRAME TYPE MATERIAL HANDLING EQUIPMENT (MHE) WHICH IS TO BE SPECIFICALLY PROVIDED BY THE STORING ACTIVITY SO THAT A CONTAINER CAN BE REMOVED FROM ANY LOCATION WITHIN A ROW WITHOUT EXCESSIVE RELOCATION OF OTHER CONTAINERS. THIS EQUIPMENT SHALL BE SUITABLE AND OF SUFFICIENT CAPACITY TO HANDLE THE CONTAINERS IN AN ACCEPTABLE MANNER.

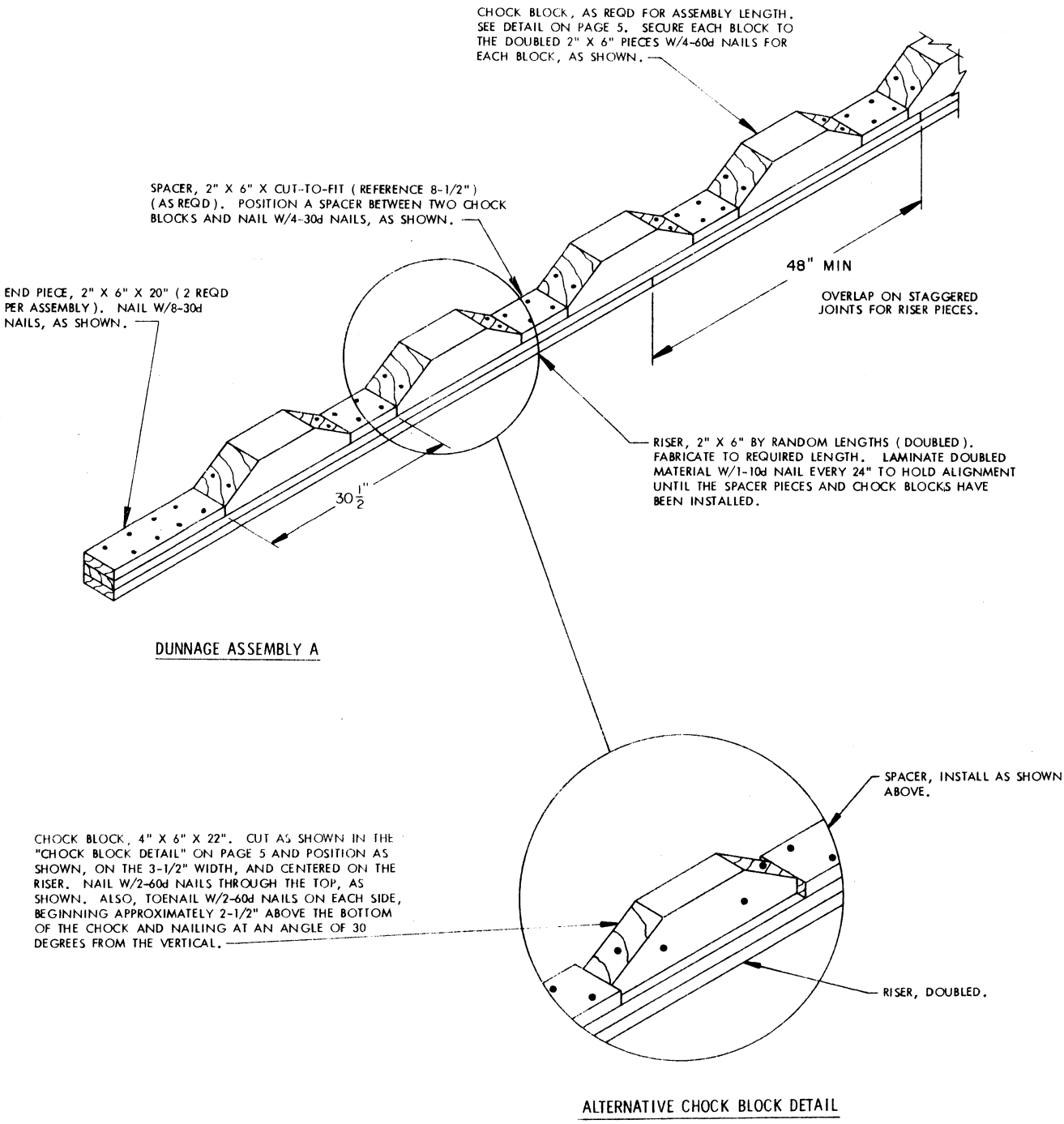
E. AISLE DIMENSIONS SHOWN IN THIS DRAWING MAY BE ADJUSTED TO SUIT LOCAL CONDITIONS AND/OR MATERIALS HANDLING EQUIPMENT; HOWEVER, THE ACCESS AISLES PROVIDED AT THE ENDS OF THE CONTAINERS WILL NOT BE LESS THAN THIRTY INCHES (30"), TO PERMIT ADEQUATE INSPECTION OF BOTH ENDS OF EACH CONTAINER. THIS AISLE MUST BE WIDER THAN 30" IF REQUIRED FOR PROPER OPERATION OF THE MHE.

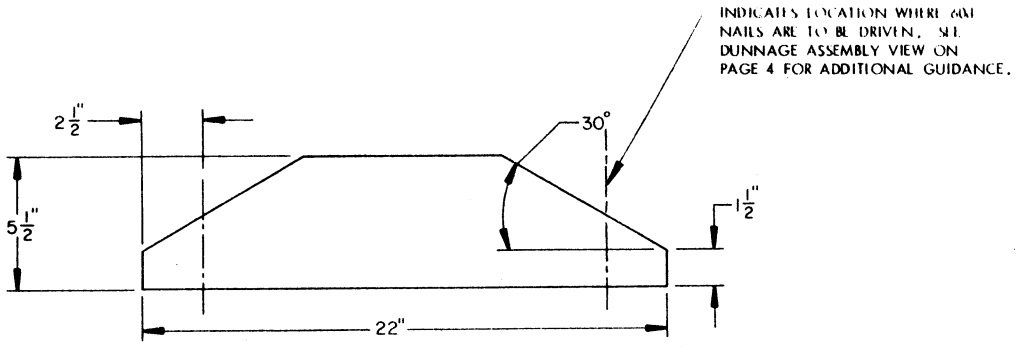
F. STORED CONTAINERS MUST NOT CONTACT OUTER WALLS OF THE FACILITY.

G. THE VALVE END OF CONTAINERS WILL BE ORIENTED IN THE SAME DIRECTION WITHIN A STACK. ALSO, EACH STACK WILL BE ORIENTED SO THAT THE VALVE END OF THE CONTAINERS WILL BE ONLY ON ONE SIDE OF AN ACCESS AISLE. THE BASE END OF CONTAINERS IN AN ADJACENT STACK MUST FACE THE SAME AISLE AS THE VALVE END OF CONTAINERS IN THE PRECEDING STACK. SEE THE STORAGE VIEWS FOR ADDITIONAL GUIDANCE ON CONTAINER ORIENTATION.

H. VALVES ON EACH CONTAINER WILL BE POSITIONED IN THE PROPER VERTICAL OR HORIZONTAL ALIGNMENT, AS REQUIRED FOR THE SPECIFIC CHEMICAL AGENTS IN THE CONTAINER.

(CONTINUED AT LEFT)


CHOCK BLOCK, AS REQD FOR ASSEMBLY LENGTH. SEE DETAIL ON PAGE 5. SECURE EACH BLOCK TO THE DOUBLED 2" X 6" PIECES W/4-60d NAILS FOR EACH BLOCK, AS SHOWN.
SPACER, 2" X 6" X CUT-TO-FIT (REFERENCE 8-1/2") (AS REQD). POSITION A SPACER BETWEEN TWO CHOCK BLOCKS AND NAIL W/4-30d NAILS, AS SHOWN.
END PIECE, 2" X 6" X 20" (2 REQD PER ASSEMBLY). NAIL W/8-30d NAILS, AS SHOWN.
48" MIN
OVERLAP ON STAGGERED JOINTS FOR RISER PIECES.
RISER, 2" X 6" BY RANDOM LENGTHS (DOUBLED). FABRICATE TO REQUIRED LENGTH. LAMINATE DOUBLED MATERIAL W/1-10d NAIL EVERY 24" TO HOLD ALIGNMENT UNTIL THE SPACER PIECES AND CHOCK BLOCKS HAVE BEEN INSTALLED.
30 1/2"
DUNNAGE ASSEMBLY A
SPACER, INSTALL AS SHOWN ABOVE.
CHOCK BLOCK, 4" X 6" X 22". CUT AS SHOWN IN THE "CHOCK BLOCK DETAIL" ON PAGE 5 AND POSITION AS SHOWN, ON THE 3-1/2" WIDTH, AND CENTERED ON THE RISER. NAIL W/2-60d NAILS THROUGH THE TOP, AS SHOWN. ALSO, TOENAIL W/2-60d NAILS ON EACH SIDE, BEGINNING APPROXIMATELY 2-1/2" ABOVE THE BOTTOM OF THE CHOCK AND NAILING AT AN ANGLE OF 30 DEGREES FROM THE VERTICAL.
RISER, DOUBLED.
ALTERNATIVE CHOCK BLOCK DETAIL



CHOCK BLOCK

6" X 6" MATERIAL

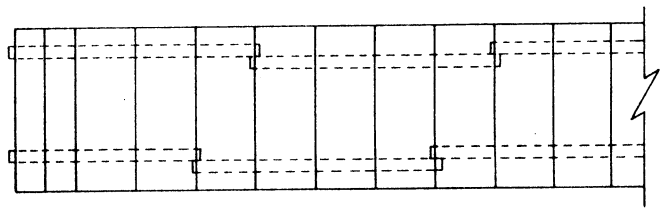
USE 4" X 6" MATERIAL FOR ALTERNATIVE.

ALTHOUGH THE SPECIFICATIONS FOR BOTH CHOCK BLOCKS (6" X 6" AND 4" X 6") ARE BASED ON THE USE OF NOMINAL SIZED LUMBER, FULL SIZE LUMBER MAY BE USED.

SPECIAL NOTES:

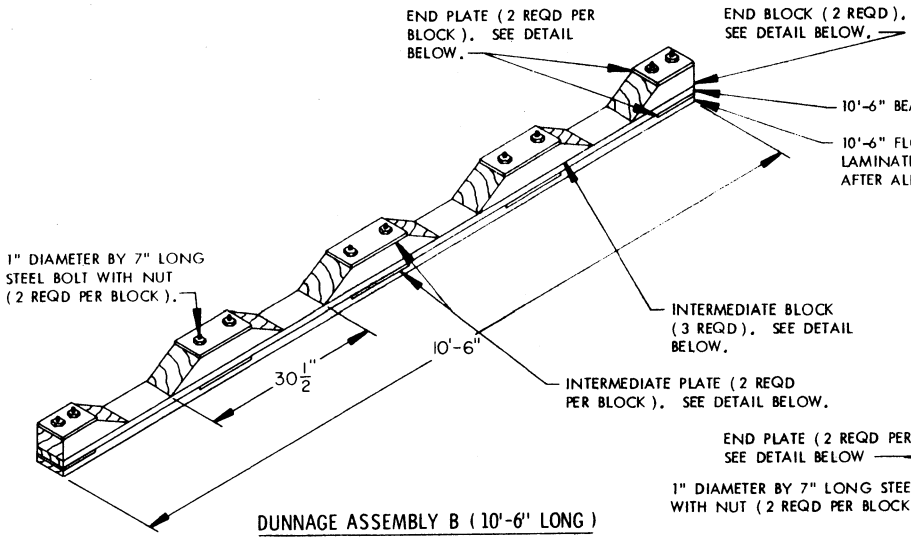
1. WHEN USING DUNNAGE ASSEMBLY A, THE ASSEMBLY SHALL BE CONSTRUCTED OF THE LENGTH AS REQUIRED TO HOLD THE NUMBER OF CONTAINERS IN THE BOTTOM LAYER OF A ROW.

2. WHEN USING DUNNAGE ASSEMBLY B AND/OR C, AS DETAILED ON PAGES 6 THRU 8, THE LONGITUDINAL LAP JOINTS OF DUNNAGE ASSEMBLIES ON ONE SIDE OF A ROW OF CONTAINERS MUST BE STAGGERED FROM THE LAP JOINTS ON THE OTHER SIDE OF THE SAME ROW OF CONTAINERS. SEE THE PARTIAL PLAN VIEW ON THE RIGHT OF THIS PAGE FOR ADDITIONAL GUIDANCE RELATIVE TO THE POSITIONING OF DUNNAGE ASSEMBLIES B AND/OR C.



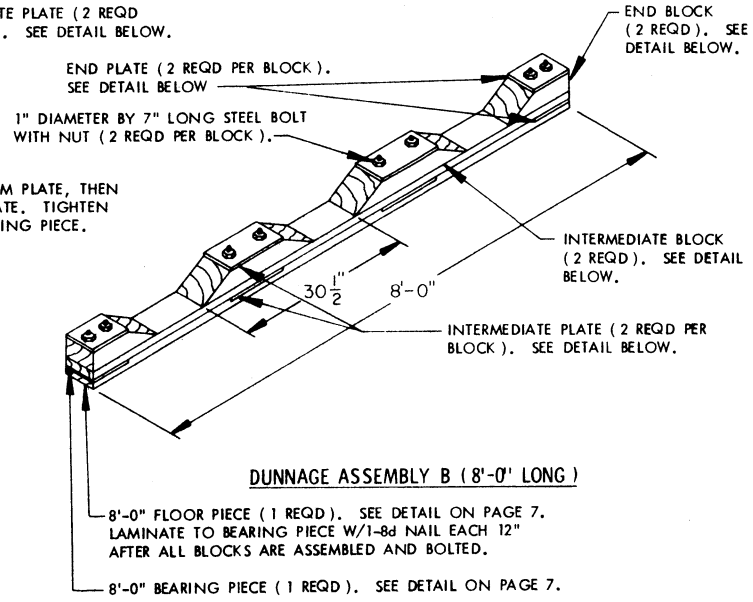
PARTIAL PLAN VIEW

SEE SPECIAL NOTE 2 AT LEFT.



DUNNAGE ASSEMBLY B (10'-6" LONG)

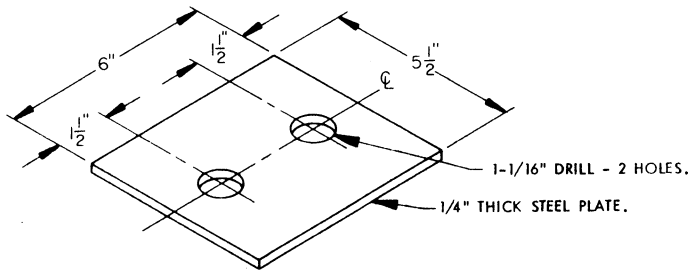
ASSEMBLE THE DUNNAGE ASSEMBLY BY PLACING A BOLT THROUGH A BOTTOM PLATE, THEN THROUGH A BEARING PIECE AND A BLOCK, AND THEN THROUGH A TOP PLATE. TIGHTEN THE NUT ON THE BOLT AND THEN LAMINATE THE FLOOR PIECE TO THE BEARING PIECE. THE NUT ON THE BOLT IS TO BE ON THE UPPER SURFACE.



DUNNAGE ASSEMBLY B (8'-0" LONG)

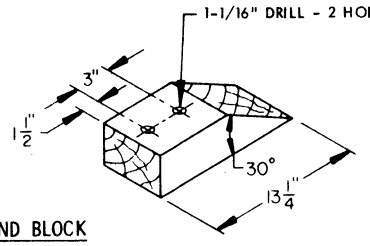
8'-0" FLOOR PIECE (1 REQD). SEE DETAIL ON PAGE 7. LAMINATE TO BEARING PIECE W/1-8d NAIL EACH 12" AFTER ALL BLOCKS ARE ASSEMBLED AND BOLTED.

8'-0" BEARING PIECE (1 REQD). SEE DETAIL ON PAGE 7.



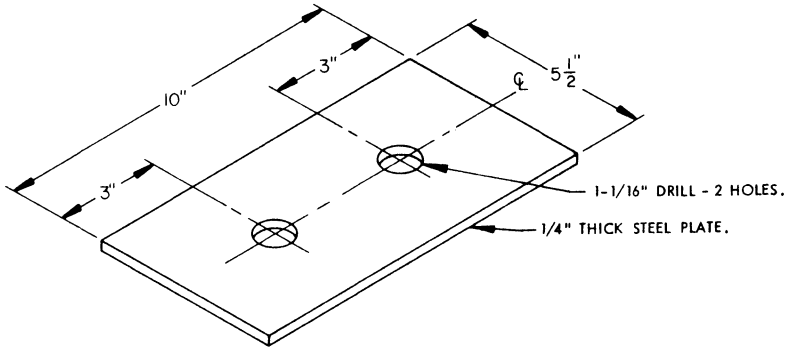
END PLATE

(2 REQD PER END BLOCK)



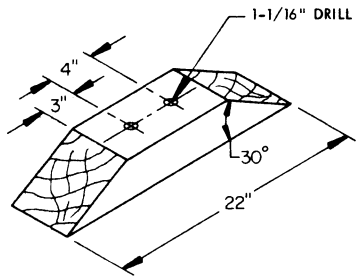
END BLOCK

4" X 6" MATERIAL



INTERMEDIATE PLATE

(2 REQD PER INTERMEDIATE BLOCK)



INTERMEDIATE BLOCK

4" X 6" MATERIAL

DUNNAGE ASSEMBLY B

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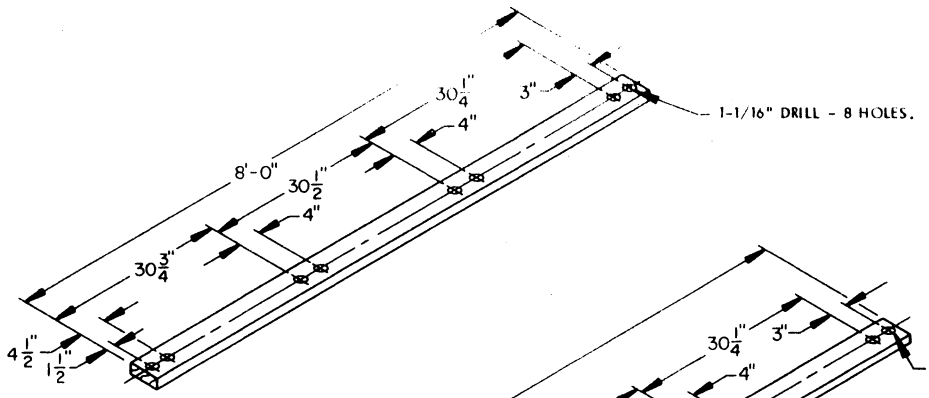
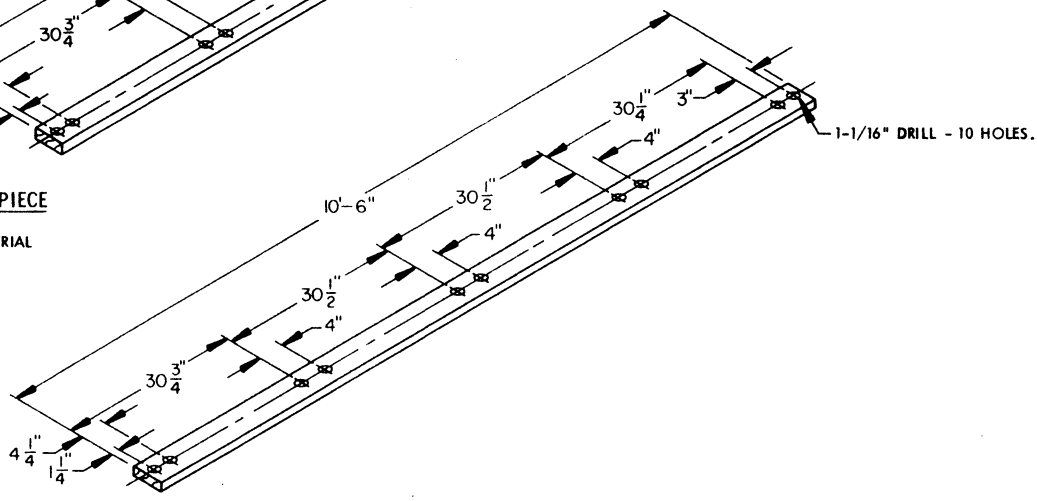


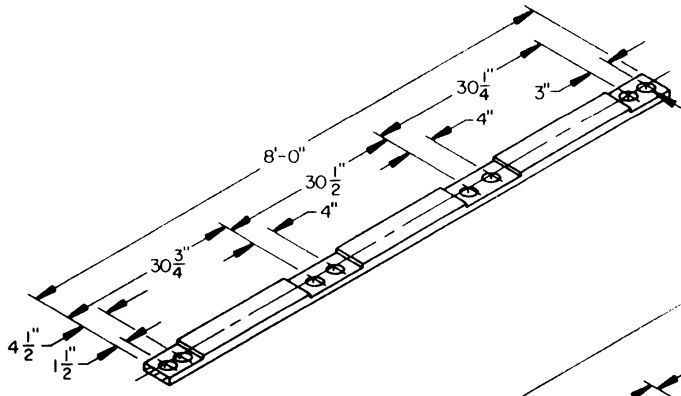
8'-0" BEARING PIECE

2" X 6" MATERIAL



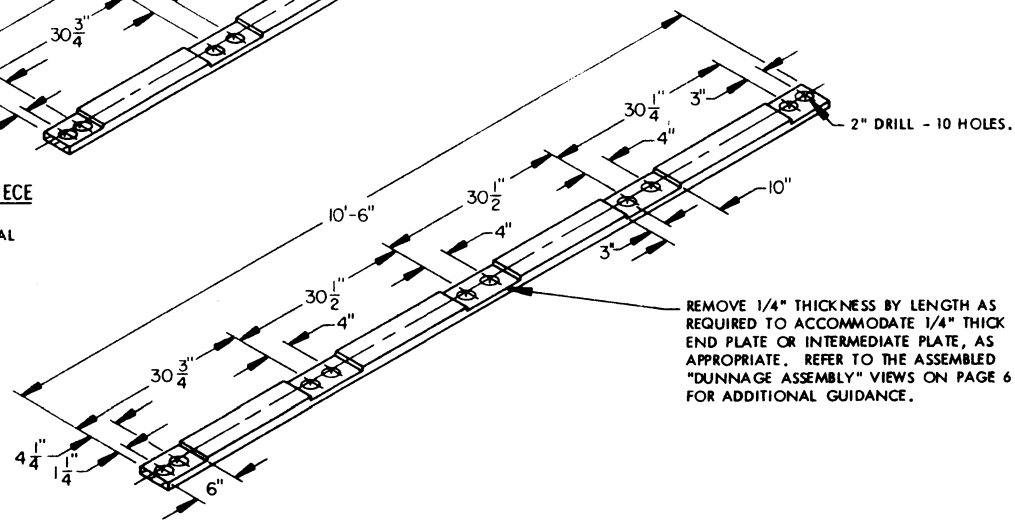
10'-6" BEARING PIECE

2" X 6" MATERIAL



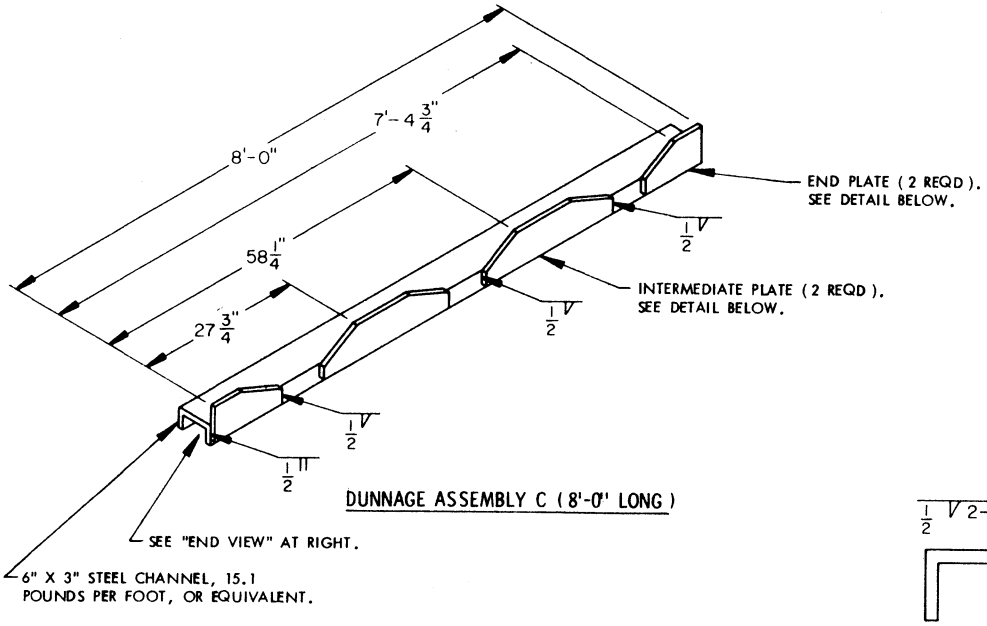
8'-0" FLOOR PIECE

2" X 6" MATERIAL

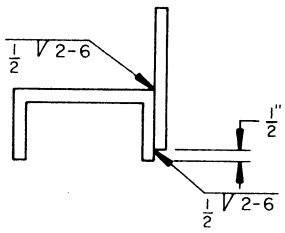


10'-6" FLOOR PIECE

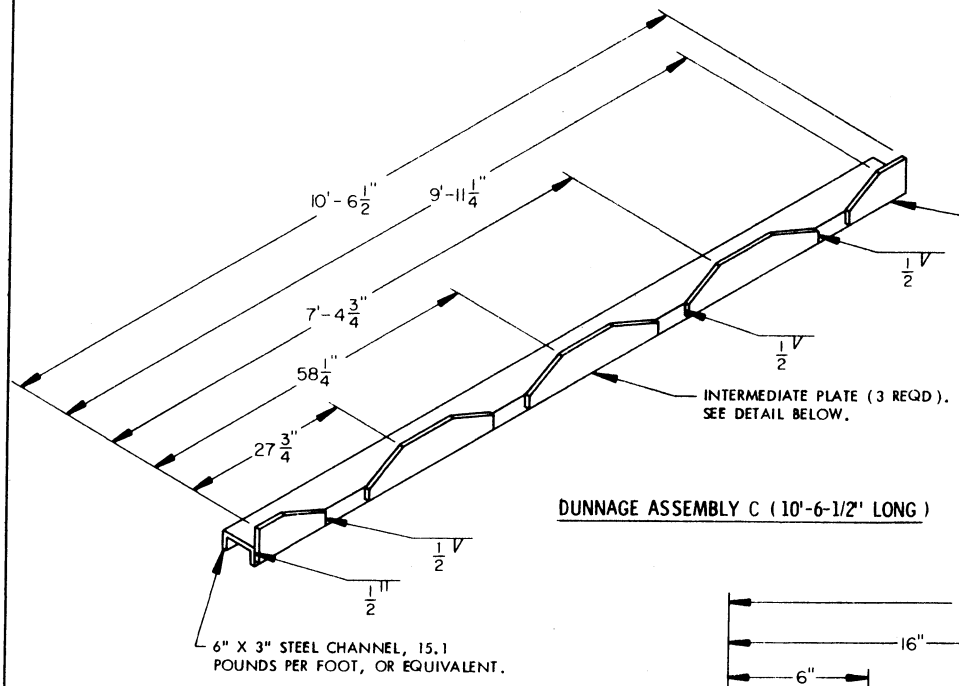
2" X 6" MATERIAL



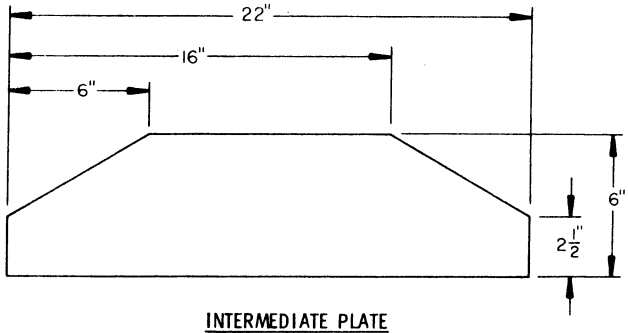
DUNNAGE ASSEMBLY C (8'-0" LONG)



END VIEW

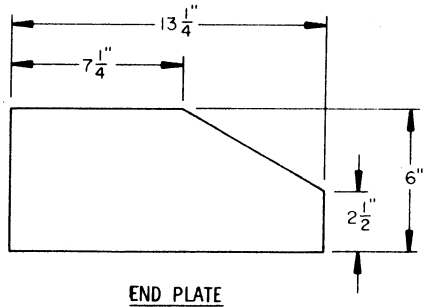


DUNNAGE ASSEMBLY C (10'-6-1/2" LONG)



INTERMEDIATE PLATE

(1/2" THICK STEEL PLATE)



END PLATE

(1/2" THICK STEEL PLATE)