

STORAGE IN IGLOO, STRADLEY, AND OVAL-ARCH MAGAZINES OF MC-1 (750 POUND) CHEMICAL BOMB, PACKED TWO PER WOODEN PALLET

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U.S. ARMY MATERIEL COMMAND DRAWING			
APPROVED, U.S. ARMY ARMAMENT, MUNITIONS AND CHEMICAL COMMAND <i>David A. Piskovik</i> SMCAR-ESK	DRAFTSMAN	L. JOHNSON/B. KUNDERT	
	ENGINEER	M. DAEUMER	
APPROVED BY ORDER OF COMMANDING GENERAL, U.S. ARMY MATERIEL COMMAND <i>Allen L. Byrd</i> U.S. ARMY DEFENSE AMMUNITION CENTER AND SCHOOL	SUPPLY ENGINEERING DIVISION	<i>Thomas J. Michels</i>	
	LOGISTICS ENGINEERING OFFICE	<i>William F. Ernst</i>	
AUGUST 1976			
REVISION NO. 3	DECEMBER 1990	CLASS	DIVISION
SEE THE REVISION LISTING ON PAGE 2		DRAWING	FILE
		19	48
		4500	C81-14-22PB2

DO NOT SCALE

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. PALLET UNIT DETAILS: SEE GENERAL NOTE "O" FOR INFORMATION REGARDING A WIDER-BASE PALLET UNIT.
1. PALLET UNIT WITH 55" PALLET STRINGERS:
- DIMENSIONS - - - - - 55" LONG X 32" WIDE X 23" HIGH.
GROSS WEIGHT - - - - - 1,500 POUNDS (APPROX).
2. PALLET UNIT WITH 45" PALLET STRINGERS (TPO 1325-926-1868):
- DIMENSIONS - - - - - 55" LONG X 32-1/4" WIDE X 22-7/8" HIGH.
GROSS WEIGHT - - - - - 1,575 POUNDS (APPROX).
- SEE GENERAL NOTE "R".
- C. AISLE DIMENSIONS SHOWN IN THIS DRAWING MAY BE ADJUSTED TO SUIT LOCAL CONDITIONS AND/OR AVAILABLE MATERIALS HANDLING EQUIPMENT; HOWEVER, TWENTY-FOUR INCH (24") MINIMUM ACCESS AISLES WILL BE PROVIDED, AS SHOWN, UNLESS OTHERWISE INDICATED, TO FACILITATE INSPECTION.
- D. STORED BOMBS MUST NOT CONTACT THE WALL OF A MAGAZINE. TO PROVIDE FOR THIS MANDATORY CLEARANCE REQUIREMENT, UNITS MAY BE ELIMINATED FROM THE DEPICTED STORAGE PATTERN AS NECESSARY.
- E. THE MAXIMUM FLOOR LOAD FOR A MAGAZINE, AS PRESCRIBED BY LOCAL STANDARDS, WILL NOT BE EXCEEDED.
- F. THE STORAGE PROCEDURES DEPICTED HEREIN FOR SPECIFIC TYPES OF MAGAZINES MAY ALSO BE UTILIZED TO STORE BOMBS IN OTHER TYPES OF APPROVED MAGAZINES. MINOR ADJUSTMENTS MAY BE MADE TO FACILITATE STORAGE IN OTHER TYPES OF MAGAZINES, HOWEVER, THE BASIC PRINCIPLES AS DEPICTED HEREIN WILL BE COMPLIED WITH.
- G. THE MAGAZINE MUST COMPLY WITH ALL REQUIREMENTS AND BE APPROVED FOR THE STORAGE OF CHEMICAL ITEMS.
- H. OTHER COMPATIBLE ITEMS MAY BE STORED IN A MAGAZINE WHICH IS PARTIALLY FILLED WITH THE DESIGNATED ITEM.
- J. A COMBINATION OF MATERIAL HANDLING EQUIPMENT (MHE), SUCH AS FORKLIFT TRUCKS, PALLET JACKS, AND OTHER APPROVED EQUIPMENT, MAY BE USED TO PLACE AND/OR REMOVE UNITS WITHIN A STACK. IF SUITABLE MHE IS NOT AVAILABLE TO PERMIT PLACING AND/OR REMOVAL OPERATIONS WITHIN THE DESIGNATED CENTER AISLE, IT MAY BE NECESSARY TO OMIT ONE ROW OF UNITS ADJACENT TO THE CENTER AISLE TO GAIN ADDITIONAL OPERATING SPACE. ALSO, IF SUITABLE NARROW AISLE STACKER MHE IS AVAILABLE, IT IS PERMITTED TO ADD ONE ROW OF UNITS ADJACENT TO THE CENTER AISLE TO GAIN INCREASED STORAGE DENSITY.
- K. REFER TO PAGE 10 FOR GUIDANCE RELATIVE TO LOT SEPARATION REQUIREMENTS WHEN STORING MULTIPLE LOTS WITHIN A MAGAZINE.
- L. THE STORAGE PROCEDURES DEPICTED FOR IGLOO MAGAZINES ARE ALSO APPLICABLE FOR STEEL ARCH MAGAZINES WHICH HAVE A SIMILAR CROSS SECTIONAL AREA.

(CONTINUED AT RIGHT)

MATERIAL SPECIFICATIONS

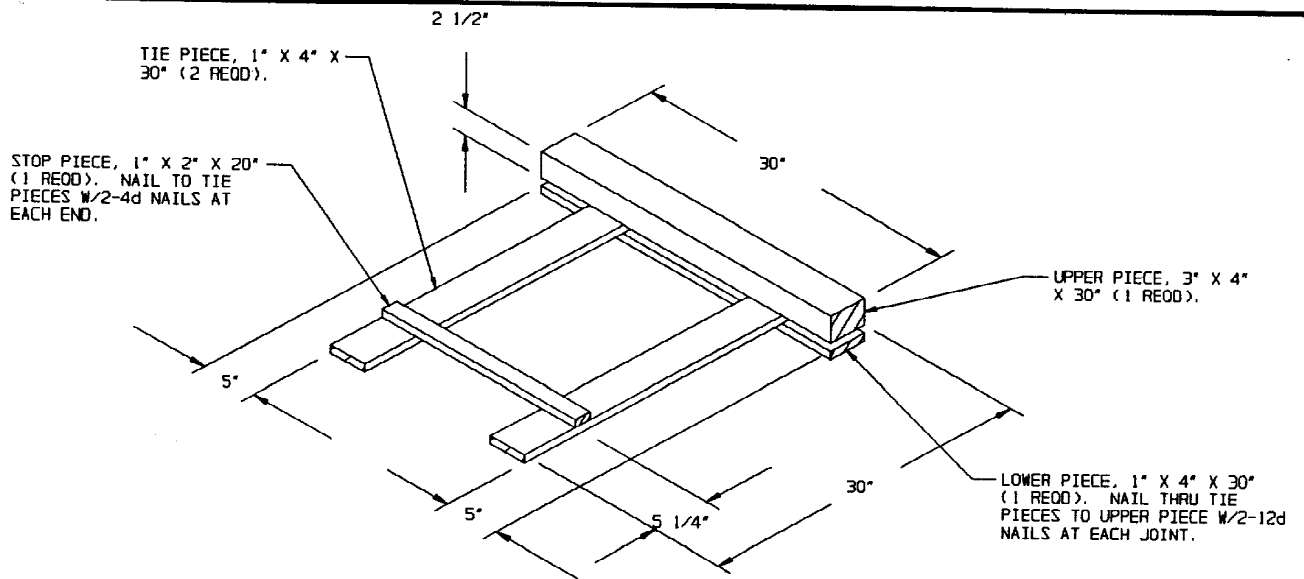
- LUMBER - - - - - : SEE TM 743-200-1 (DUNNAGE LUMBER) AND FED SPEC MM-L-751.
- NAILS - - - - - : FED SPEC FF-N-105; COMMON.
- STRAPPING, STEEL - - : FED SPEC 00-S-781; CLASS 1, TYPE I OR IV, HEAVY DUTY, FINISH B (GRADE 2), SIZE 1-1/4" X .035" OR .031".
- SEAL, STRAP - - - - : FED SPEC 00-S-781; TYPE D, STYLE I, II, OR IV, CLASS H, FINISH B (GRADE 2).

(GENERAL NOTES CONTINUED)

- M. A STACK STABILIZING ASSEMBLY WILL BE USED TO SUPPORT EACH PALLET UNIT IN THE SECOND AND HIGHER LAYERS OF EACH STACK. SEE THE DETAILS ON PAGE 3 FOR ADDITIONAL GUIDANCE. SEE GENERAL NOTE "O".
- N. CAUTION: PALLET UNITS WILL NOT BE STACKED MORE THAN THREE (3) HIGH WITHOUT STAGGER STACKING THE UPPER LAYERS, AS SHOWN. PALLET UNITS WILL NOT BE STACKED MORE THAN FIVE (5) HIGH.
- O. WEDGES ARE REQUIRED TO PERMIT LEVEL STACKING OF UNITS IN IGLOO AND STRADLEY MAGAZINES, WHICH HAVE FLOORS THAT SLOPE TOWARD THE SIDEWALL OF THE MAGAZINE. WEDGES ARE NOT REQUIRED IN OVAL-ARCH MAGAZINES, WHERE THE FLOOR DOES NOT SLOPE TOWARD THE SIDEWALL OF THE MAGAZINE.
- P. DUNNAGE LUMBER SPECIFIED IS OF A NOMINAL SIZE. FOR EXAMPLE, 1" X 4" MATERIAL IS ACTUALLY 3/4" THICK BY 3-1/2" WIDE OR 7/8" THICK BY 3-5/8" WIDE AND 3" X 4" MATERIAL IS ACTUALLY 2-1/2" THICK BY 3-1/2" WIDE OR 2-5/8" THICK BY 3-5/8" WIDE UNLESS OTHERWISE SPECIFIED.
- Q. THE PROCEDURES DEPICTED IN THIS DRAWING ARE BASED ON THOSE PALLET UNITS IDENTIFIED IN GENERAL NOTE "B" HAVING OUTER FACES OF SKIDS POSITIONED APPROXIMATELY 20" APART. THESE PROCEDURES ALSO APPLY TO "OLDER" TYPE PALLET UNITS WITH 55" LONG STRINGERS AND HAVING OUTER FACES OF SKIDS POSITIONED APPROXIMATELY 28" APART. HOWEVER, WHEN STORING THE "OLDER" TYPE PALLET UNITS THE STACK STABILIZING ASSEMBLIES SPECIFIED IN GENERAL NOTE "M" WILL NOT BE REQUIRED.
- R. WHEN REQUIRED TO REMOVE BOMB PALLET UNITS FROM STORAGE FOR PURPOSES OF MAINTENANCE, SURVEILLANCE OR OTHER INSPECTION OF THE BOMBS, THE TWO EXISTING UNITIZING STRAPS, IF NECESSARY, MAY BE REMOVED TO UNCOVER ONE OR MORE OF THE FOUR THREADED APERTURES IN THE BOMB BODY. HOWEVER, PRIOR TO RETURNING BOMBS TO THE STORAGE SITE AND PLACING IN STACKS, THE BOMBS MUST BE SECURED TO THE PALLET WITH ONE 1-1/4" STRAP AND TWO SEALS. THE STRAP WILL BE LOCATED ADJACENT TO THE REARWARD SIDE OF THE CENTER SKID OF THE PALLET AS SHOWN IN THE DETAILS ON PAGE 11 AND WILL APPLY FOR "IN-STORAGE-ONLY". WEDGES AND DUNNAGE WILL BE USED AS SPECIFIED ON PAGE 3. NOTICE: IF AT ANY TIME SUCH AN "IN-STORAGE-ONLY" PALLET UNIT IS TO BE SHIPPED BY ANY MODE OF TRANSPORT, TWO 1-1/4" UNITIZING STRAPS EACH WITH TWO SEALS MUST BE INSTALLED AT THE ORIGINAL LOCATIONS FROM WHICH REMOVED. THE "IN-STORAGE-ONLY" STRAP MAY BE REMOVED IF DESIRED. ALL STRAPPING WHETHER FOR "IN-STORAGE-ONLY" OR FOR SHIPPING WILL BE AS SPECIFIED IN THE "MATERIAL SPECIFICATIONS" ON THIS PAGE.

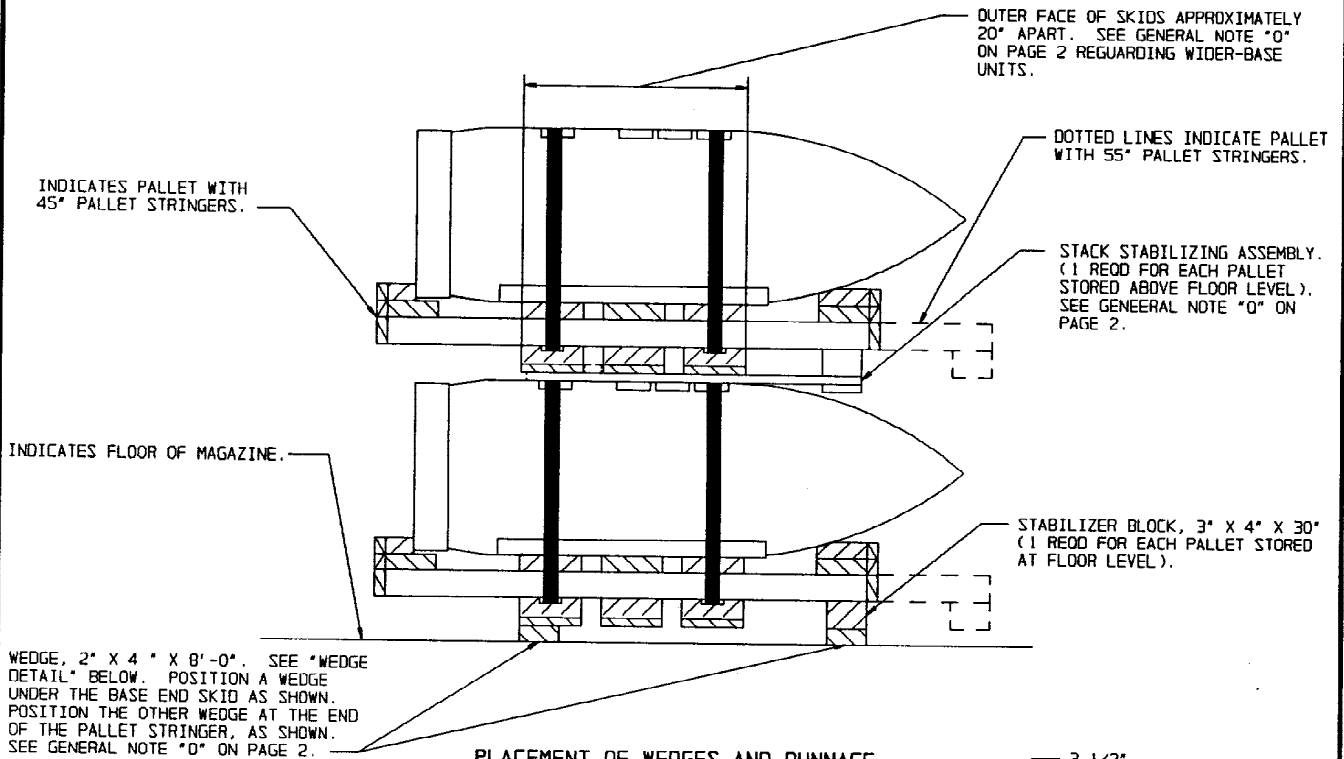
REVISIONS

- REVISION NO. 1, DATED AUGUST 1976, CONSISTS OF:
1. UPDATING THE GENERAL NOTES AND DRAWING FORMAT.
 2. INCLUDING PROCEDURES FOR STRADLEY AND OVAL-ARCH MAGAZINES.
 3. CHANGING THE FILE NUMBER FROM CBIP1 TO CB1-14-22PB2.
- REVISION NO. 2, DATED OCTOBER 1979, CONSISTS OF:
1. UPDATING AND ADDING TO THE GENERAL NOTES TO INCLUDE PROCEDURES FOR "OLDER" TYPE PALLET UNITS HAVING OUTER FACES OF SKIDS APPROXIMATELY 28" APART.
- REVISION NO. 3, DATED DECEMBER 1990 CONSISTS OF:
1. ADDING GENERAL NOTE "R" AND DETAILS ON PAGE 11 COVERING PROCEDURES FOR "IN-STORAGE-ONLY" STRAPPING.
 2. UPDATING DRAWING FORMAT.

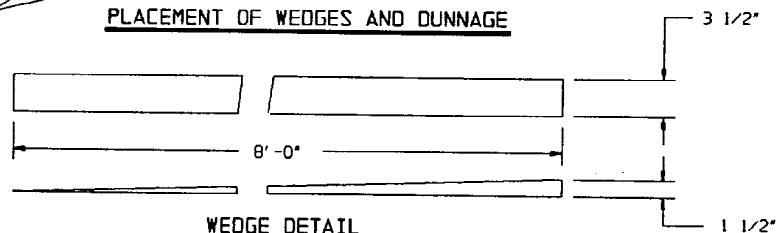


STACK STABILIZING ASSEMBLY

NOTE THAT IF 3" X 4" MATERIAL IS NOT AVAILABLE, THE "UPPER PIECE" CAN BE MADE BY LAMINATING MATERIAL OF OTHER THICKNESSES, SUCH AS PROVIDED BY 2" X 4" AND 1" X 4" PIECES.



PLACEMENT OF WEDGES AND DUNNAGE

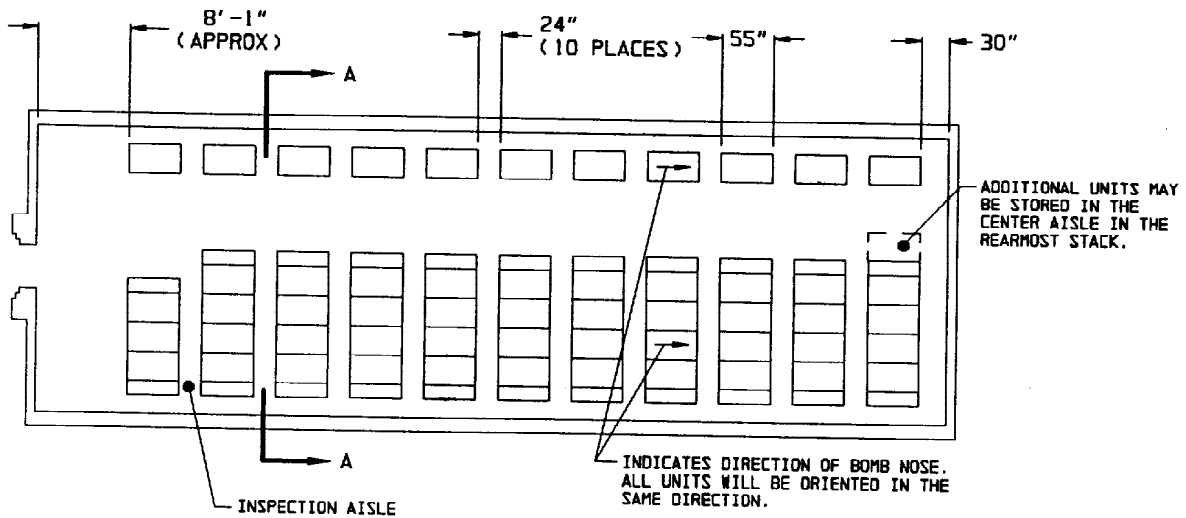


WEDGE DETAIL DETAILS

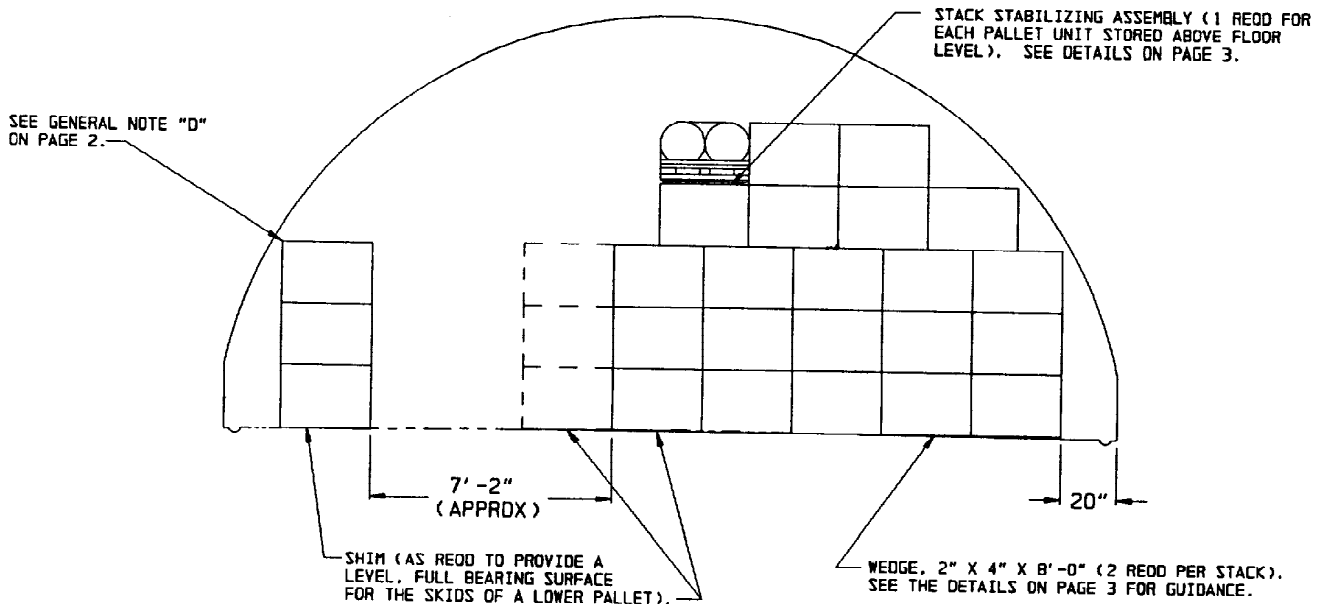
STORAGE IN 81'-0" IGLOO

(12'-9" HIGH)

ITEM	QUANTITY
PALLET UNITS - - - - -	270



PLAN VIEW
(81'-0" IGLOO)



SECTION A-A
25 PALLETS PER STACK.

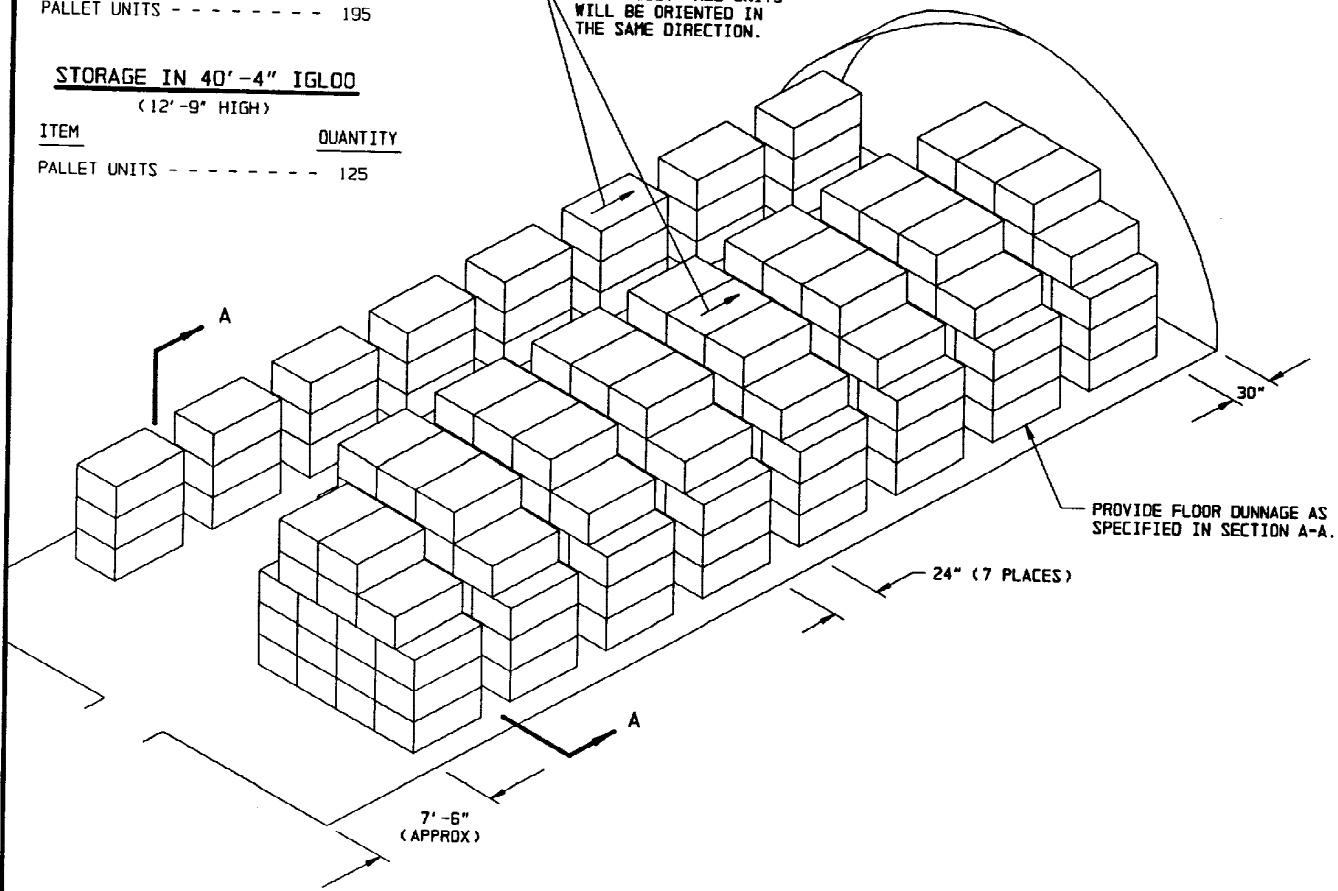
STORAGE IN 60'-8" IGL00

ITEM (12'-9" HIGH) QUANTITY
 PALLET UNITS - - - - - 195

STORAGE IN 40'-4" IGL00

ITEM (12'-9" HIGH) QUANTITY
 PALLET UNITS - - - - - 125

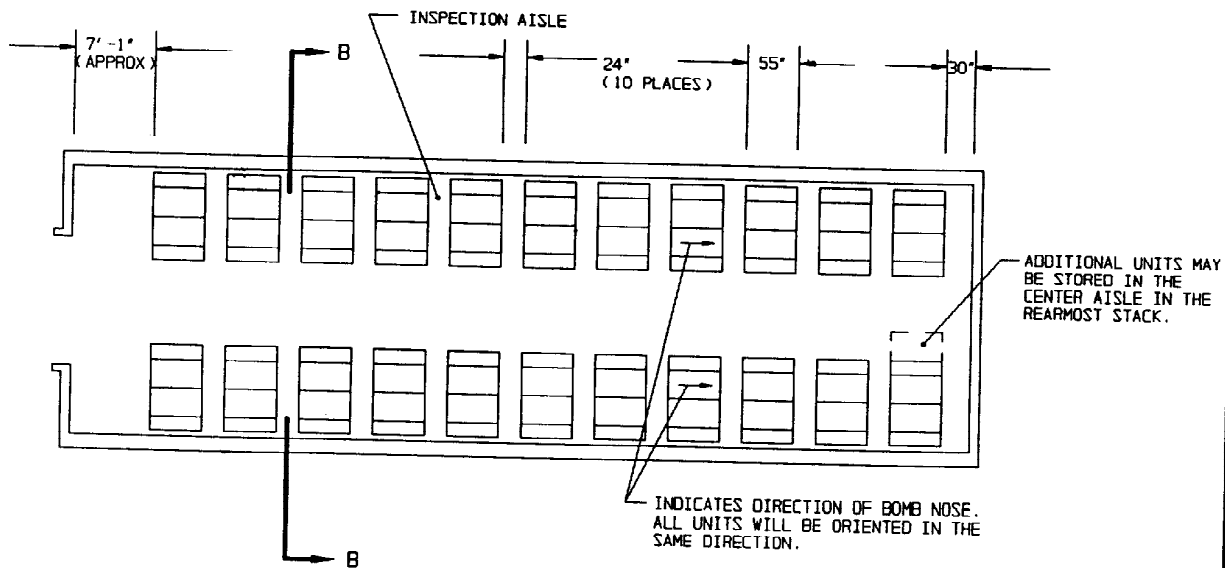
INDICATES DIRECTION OF BOMB NOSE. ALL UNITS WILL BE ORIENTED IN THE SAME DIRECTION.



ISOMETRIC VIEW
 (60'-8" IGL00)

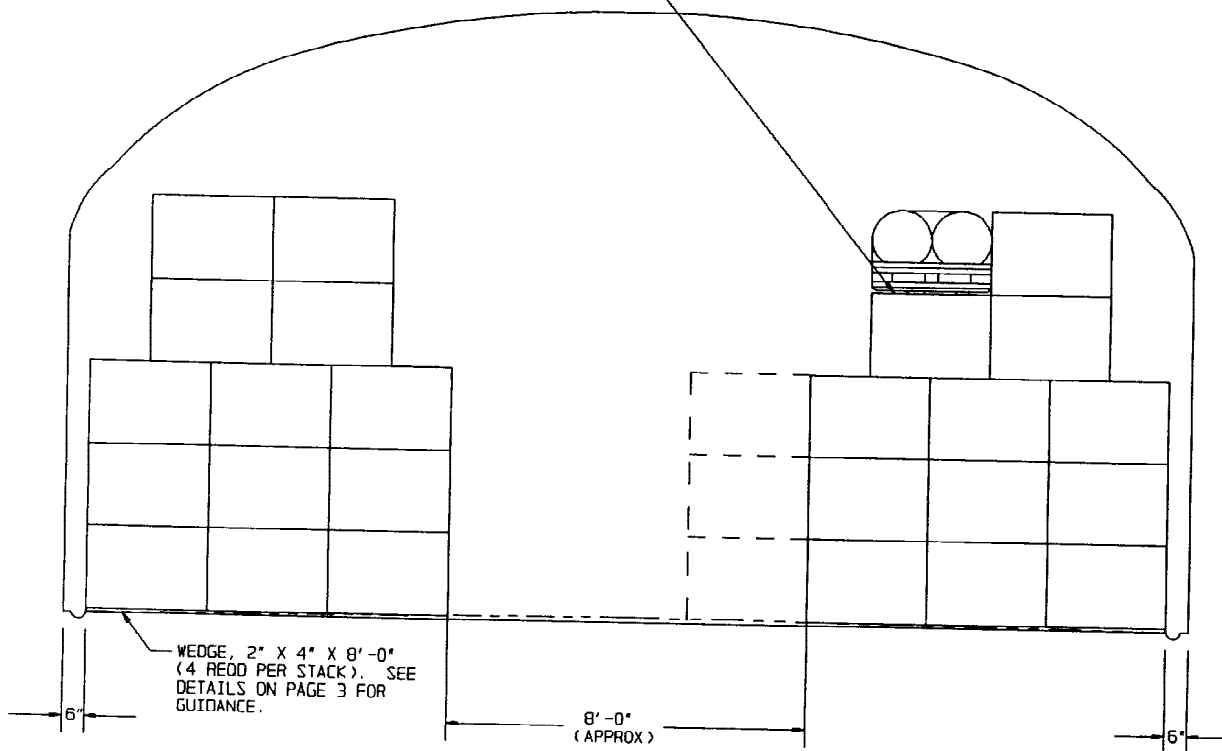
SEE "GENERAL NOTES" AND "MATERIAL SPECIFICATIONS"
 ON PAGE 2.

BILL OF MATERIAL (PER STACK)		
LUMBER	LINEAR FEET	BOARD FEET
1" 2"	32	6
1" 4"	143	48
3" 4"	63	63
NAILS	NO. REOD	POUNDS
4 (1-1/2")	76	1/3
12 (3-1/4")	76	1-1/4
WEDGES	NO. REOD	
2" X 4" X 8'-0"	2	
SHIMS	AS REOD	



PLAN VIEW
(80'-0" MAGAZINE)

STACK STABILIZING ASSEMBLY (1 REED FOR EACH PALLET UNIT STORED ABOVE FLOOR LEVEL). SEE DETAILS ON PAGE 3.



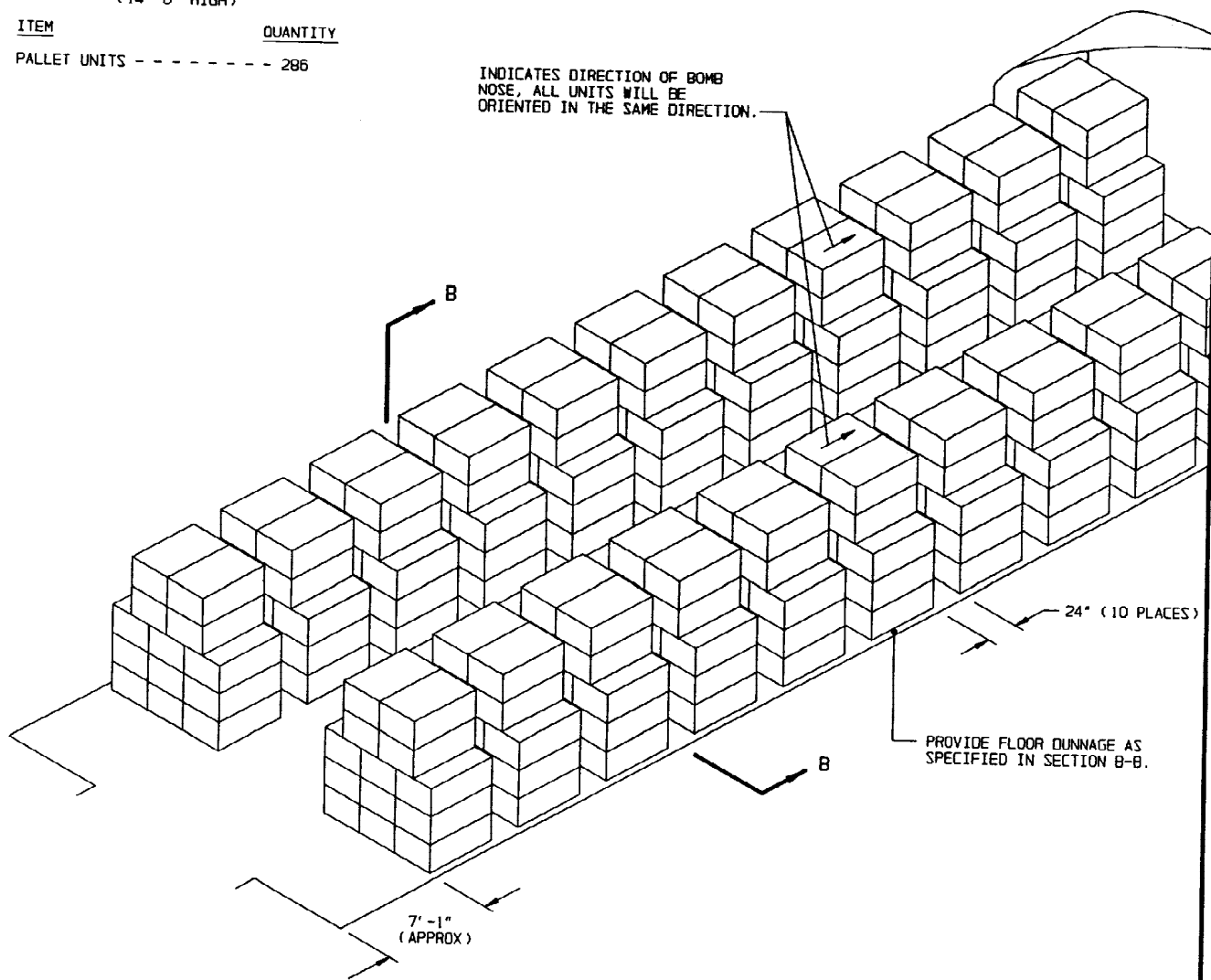
SECTION B-B
26 PALLETS PER STACK

STORAGE IN 80'-0" MAGAZINE

(14'-0" HIGH)

ITEM QUANTITY
 PALLET UNITS - - - - - 286

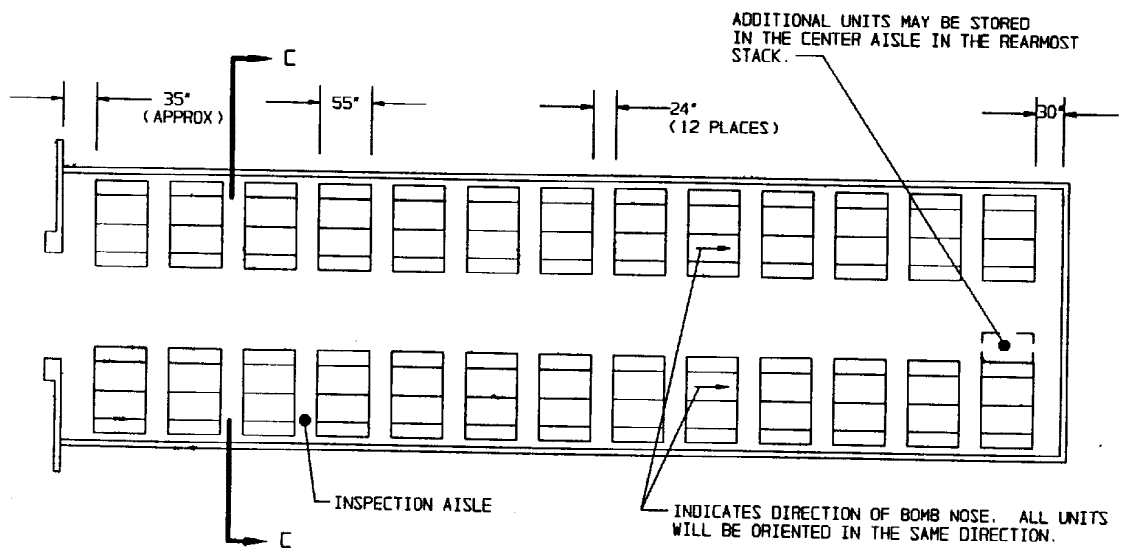
INDICATES DIRECTION OF BOMB NOSE, ALL UNITS WILL BE ORIENTED IN THE SAME DIRECTION.



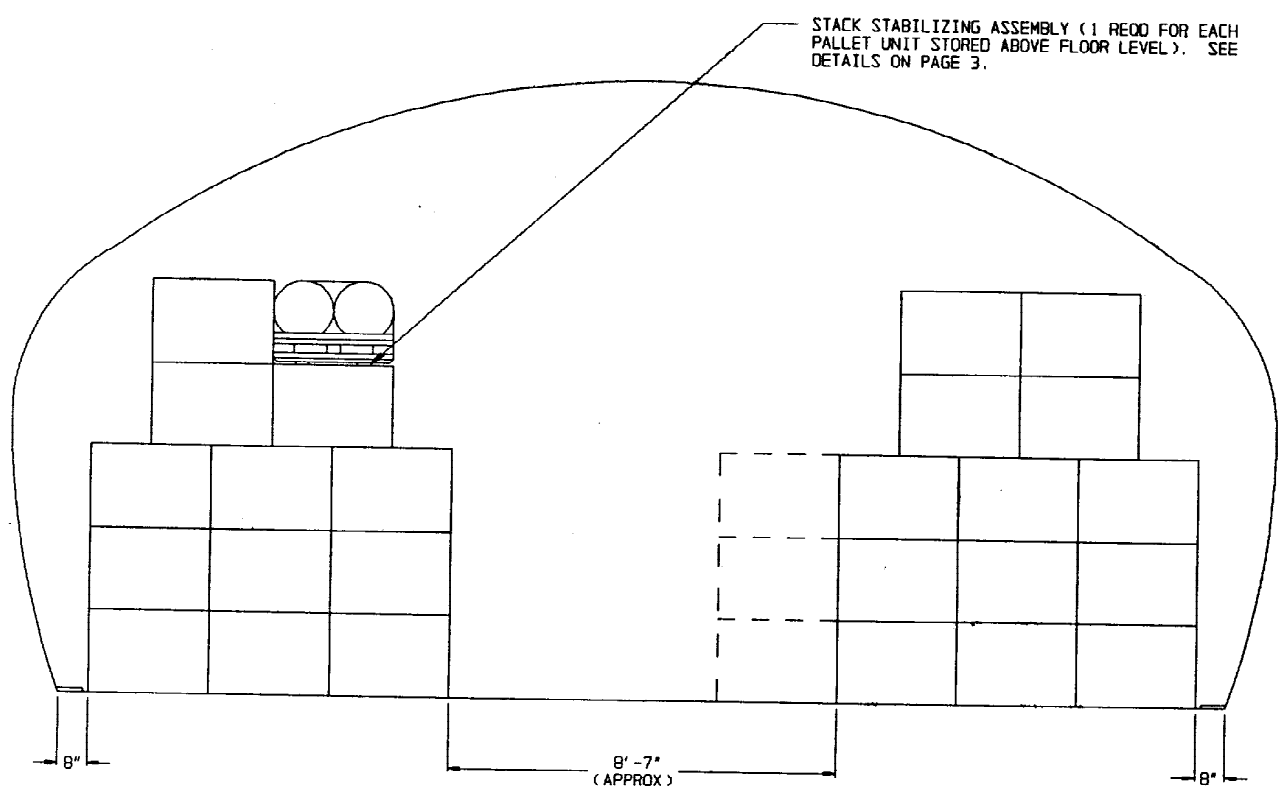
ISOMETRIC VIEW
 (80'-0" MAGAZINE)

SEE "GENERAL NOTES" AND "MATERIAL SPECIFICATIONS" ON PAGE 2.

BILL OF MATERIAL (PER STACK)		
LUMBER	LINEAR FEET	BOARD FEET
1" x 2"	34	6
1" x 4"	150	50
3" x 4"	65	65
NAILS	NO. REQD	POUNDS
4d (1-1/2")	80	1/3
12d (3-1/4")	80	1-1/4
WEDGES	NO. REQD	
2" X 4" X 8'-0"	4	



PLAN VIEW
(89'-0" MAGAZINE)



SECTION C-C
26 PALLETS PER STACK

STORAGE IN 89'-0" MAGAZINE

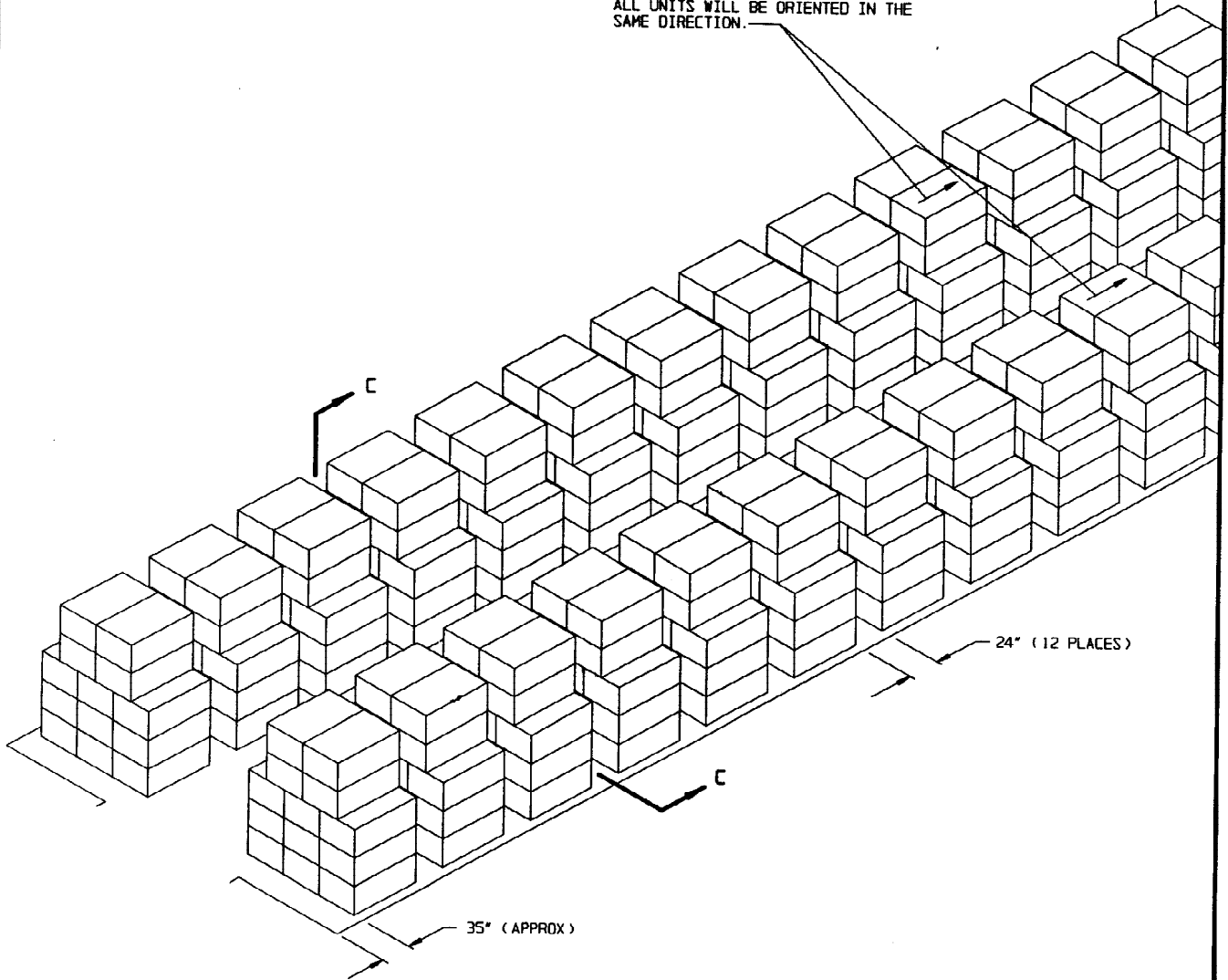
(14'-4" HIGH)

ITEM

QUANTITY

PALLET UNITS - - - - - 338

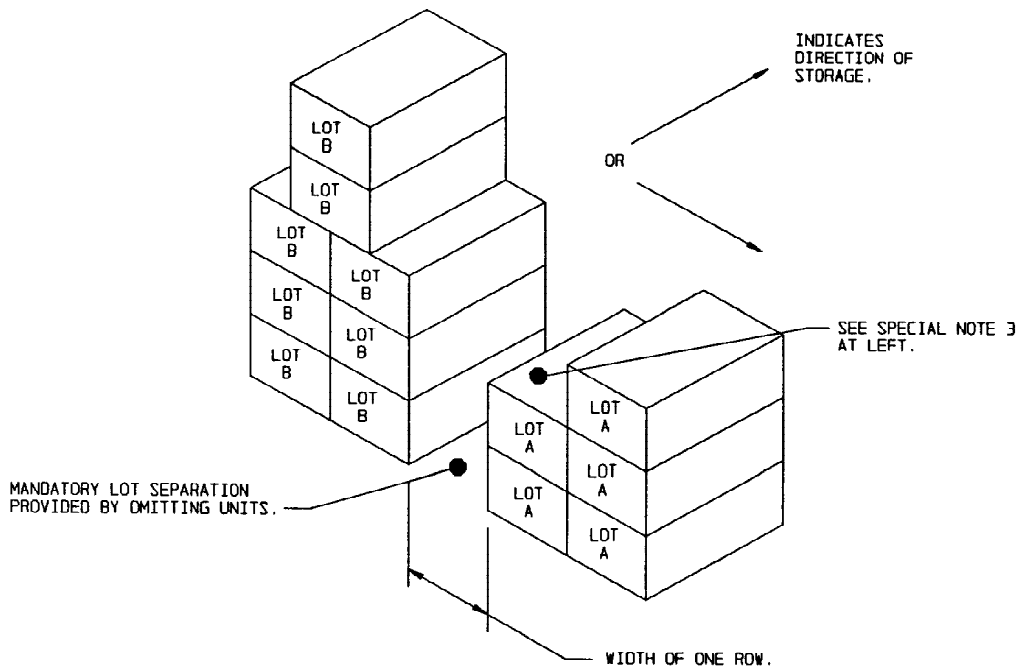
INDICATES DIRECTION OF BOMB NOSE.
ALL UNITS WILL BE ORIENTED IN THE
SAME DIRECTION.



ISOMETRIC VIEW
(89'-0" MAGAZINE)

SEE "GENERAL NOTES" AND "MATERIAL SPECIFICATIONS"
ON PAGE 2.

BILL OF MATERIAL (PER STACK)		
LUMBER	LINEAR FEET	BOARD FEET
1" x 2"	34	6
1" x 4"	150	50
3" x 4"	65	65
NAILS	NO. REQD	POUNDS
4d (1-1/2")	80	1/3
12d (3-1/4")	80	1-1/4

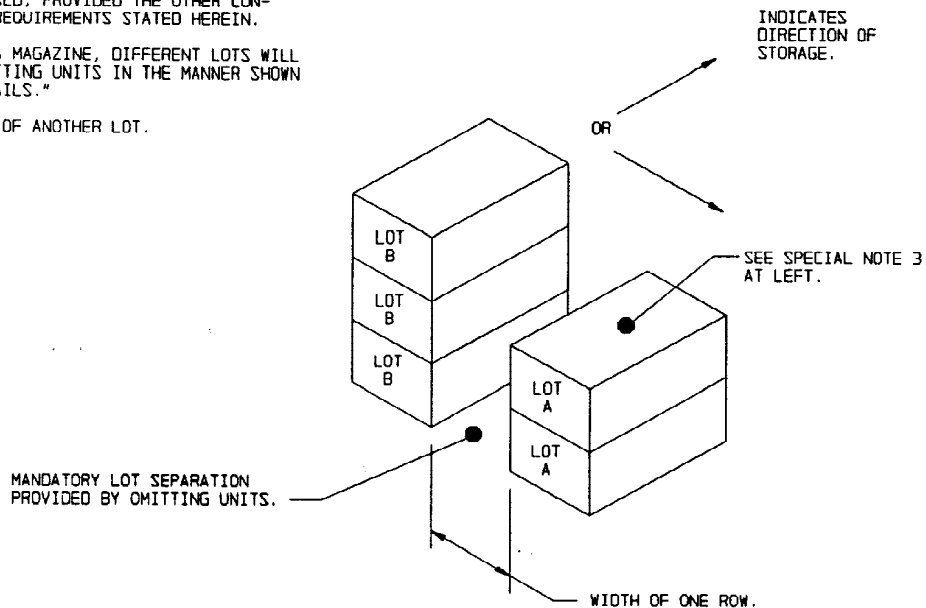


TYPICAL LOT SEPARATION DETAIL 1

(IGLOO STACK DEPICTED)

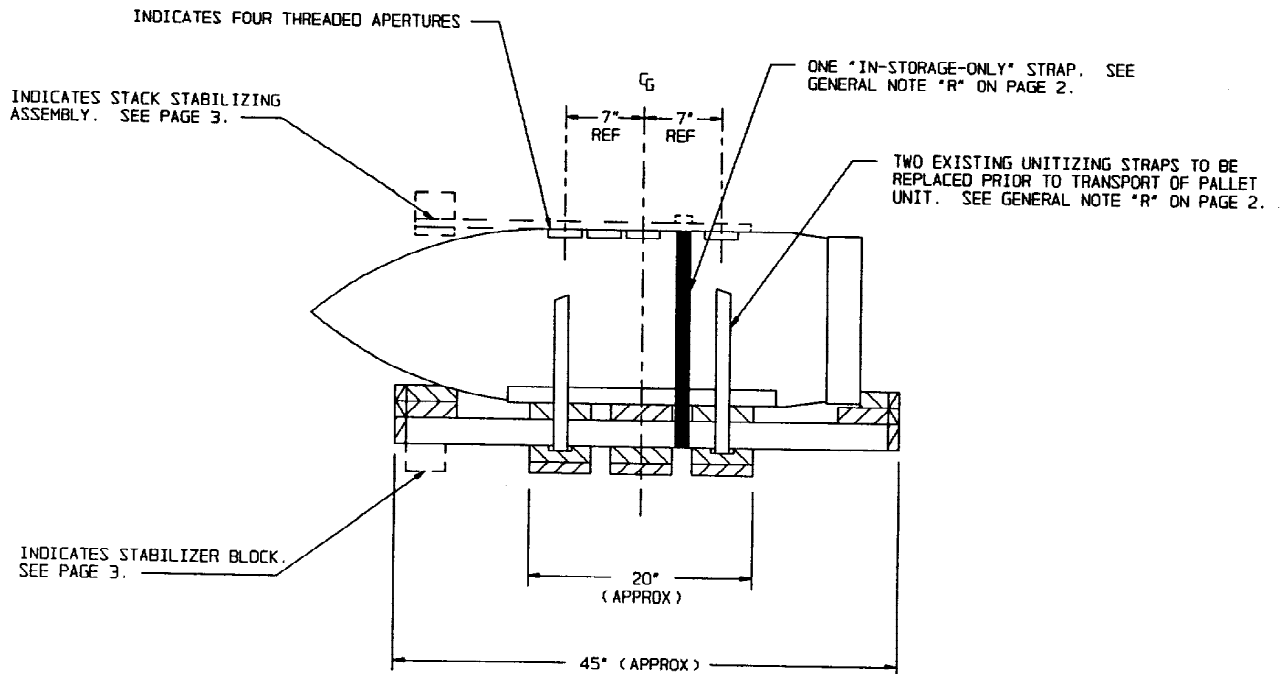
SPECIAL NOTES:

1. LOT SEPARATION WILL BE MAINTAINED WITHIN A STORAGE MAGAZINE. THE TYPICAL DETAILS ON THIS PAGE ILLUSTRATE POSSIBLE CONFIGURATIONS WHICH COMPLY WITH THE MANDATORY LOT SEPARATION REQUIREMENTS. OTHER CONFIGURATIONS MAY ALSO BE USED, PROVIDED THE OTHER CONFIGURATIONS COMPLY WITH THE BASIC REQUIREMENTS STATED HEREIN.
2. WHEN STORING MULTIPLE LOTS WITHIN A MAGAZINE, DIFFERENT LOTS WILL BE SEPARATED WITHIN A STACK BY OMITTING UNITS IN THE MANNER SHOWN IN THE "TYPICAL LOT SEPARATION DETAILS."
3. ONE LOT WILL NOT BE STACKED ON TOP OF ANOTHER LOT.



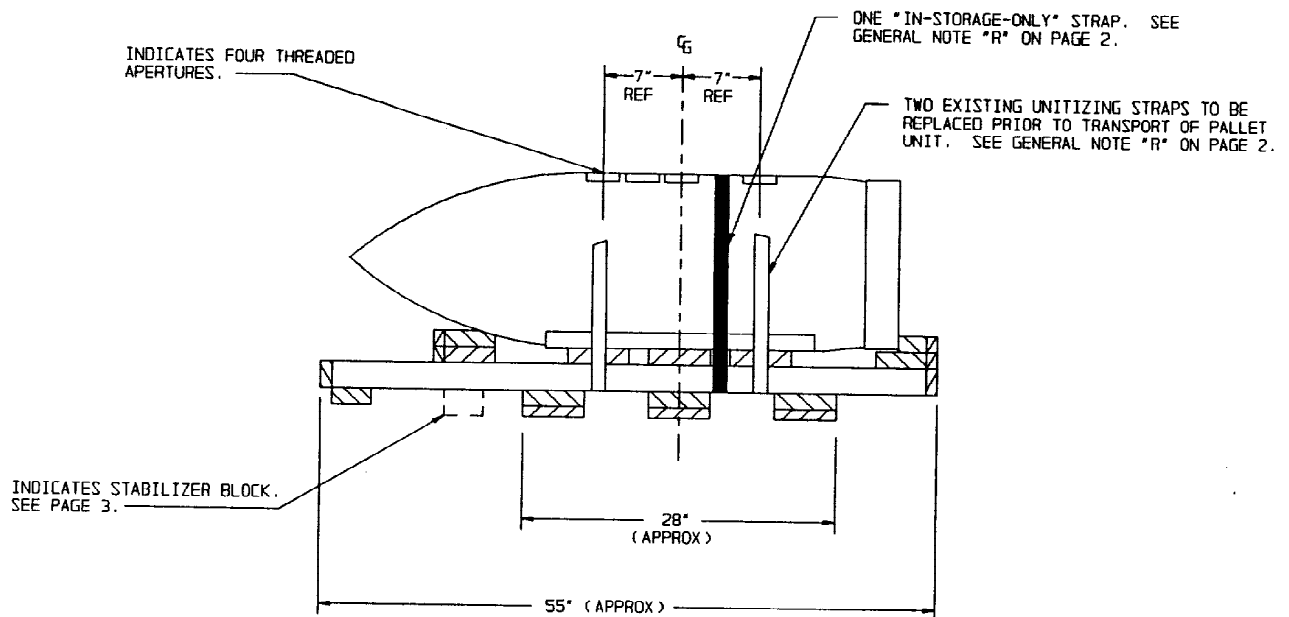
TYPICAL LOT SEPARATION DETAIL 2

(OVAL-ARCH AND/OR STRADLEY STACK DEPICTED)



NEWER TYPE PALLET UNIT

SEE GENERAL NOTE "O" ON PAGE 2.



OLDER TYPE PALLET UNIT

SEE GENERAL NOTE "O" ON PAGE 2.