STORAGE IN APPROVED MAGAZINES OF 175 MM SEPARATE LOADING PROJECTILES, UNITIZED 6 ROUNDS PER 17" L X 25 1/2" W X 41" H PALLET UNIT

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METHOD OF MEASURING STACK SPACING
217' L X 50' W STANDARD MAGAZINE

HEIGHT OF UNIT MAY VARY SLIGHTLY, HOWEVER, PROCE-DURES SPECIFIED HEREIN WILL APPLY.

THIS DRAWING SUPERSEDES DRAWING 19-48-4102-1-2-14PE 1001, DATED APRIL 1973, AS PERTAINS TO STORAGE PROCEDURES FOR 175MM, 6/PALLET SEPARATE LOADING PROJECTILES.

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1.				CLASS	DIVISION	DRAWING	FILE
		7		19	40	4102/3	1-2-3-4-14
				19	40	410273	22 PE1001

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GENERAL NOTES

- A. THIS DOCUMENT HAS BEEN PREPARED AND ISSUED IN ACCORDANCE WITH AR 740-1, AND AUGMENTS TM 743-200-1 (CHAPTER 5).
- B. THE STORAGE PROCEDURES DEPICTED WITHIN THIS DOCUMENT ARE APPLICABLE FOR STORAGE IN VARIOUS TYPES AND SIZES OF MAGAZINES. THE STORAGE PROCEDURES DEPICTED FOR THE SPECIFIC TYPES OF MAGAZINES MAY ALSO BE UTILIZED TO STORE PROJECTILE PALLET UNITS 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 FOLLOWED.
- C. CAUTION: THE ALLOWABLE "EXPLOSIVE LIMIT" ESTABLISHED FOR A MAGAZINE IS NOT TO, BE EXCEEDED, STORAGE OF SOME SPECIFIC TYPES OF SEPARATE LOADING PROJECTILES MUST ALSO COMPLY, WITH CURRENT DIRECTIVES AND REQUIATORY REQUIREMENTS OTHER THAN AS SPECIFIED IN THIS DRAWING.
- D. TWO (2) PALLET UNITS CAN BE HANDLED BY A FORKLIFT TRUCK AS ONE LOAD, IF THE LENGTH OF THE FORK TINES IS ADEQUATE TO PROVIDE FULL-LENGTH OR NEARLY FULL-LENGTH BEARING UNDER THE LOAD BEING HANDLED. OTHER APPLICABLE SAFETY CONTROLS (DIRECTIVES, REGULATIONS, ETC.) MUST BE OBSERVED.
- E. DUNNAGE PIECES INDICATED HEREIN BETWEEN LAYERS OF PALLET UNITS ARE SPECIFIED AS 1" X 4" MATERIAL. IF THE THICKNESS OF THE FORK TINES OF THE FORKLIFT TRUCK REQUIRE ADDITIONAL CLEARANCE FOR SAFE PLACEMENT OR REMOVAL OF UPPER LAYER PALLET UNITS, 2" X 4" MATERIAL MAY BE USED IN LIEU OF THE 1" X 4" MATERIAL SPECIFIED. USUALLY, MOST 1" X 4" DUNNAGE PIECES WILL BE 32" LONG.
- F. IN CONJUNCTION WITH THE SPECIFIED STACK-LEVELING WEDGES AND/OR STACK-STABILIZING DUNNAGE, ADDITIONAL STACK-STABILIZING DUNNAGE IN THE FORM OF "SHIMS" PROBABLY WILL BE REQUIRED TO ACHIEVE SOUND AND ACCEPTABLE STABLE STACKS. SHIM MATERIAL OF VARYING THICKNESSES WILL BE USED BETWEEN STACKED UNITS AS REQUIRED TO GAIN LEVEL OR NEARLY LEVEL STACKS AND SOLID BEARING WITHIN A STACK FROM THE FLOOR OF A MAGAZINE TO THE TOP OF THE STACK. ALSO, "SHIMS" WILL BE USED IN LIEU OF SPECIFIED WEDGES IN OVALARCH TYPE MAGAZINES BECAUSE THE FLOOR SLOPES FROM THE REAR WALL TOWARD THE FRONT WALL. ADDITIONALLY, "SHIMS" CAN RE USED WITHIN AN IGLOO TYPE MAGAZINE INSTEAD OF THE SPECIFIED WEDGES, PROVIDING THE MAGAZINE FLOOR DOES NOT SLOPE MORE THAN 1-1/4" FROM THE CENTER TO A SIDEWALL.
- G. IF DESIRED AND IN LIEU OF USING STACK STABILIZING DUNNAGE BETWEEN LAYERS, PALLET UNITS OF SEPARATE LOADING PROJECTILES MAY BE BUNDLED INTO GROUPS OF TWO (2) UNITS, AS SHOWN IN THE "BUNDLING DETAIL" ON PAGE 3. BUNDLING WILL PROVIDE FOR EQUAL STACK STABILITY AND FACILITATE SAFE HANDLING. BUNDLING STRAPS ARE NOT REQUIRED FOR PALLET UNITS STORED ONE-LAYER HIGH. IT IS PERMISSIBLE WITHIN THE SAME MAGAZINE TO STORE SOME STACKS USING DUNNAGING BETWEEN LAYERS AND OTHER STACKS USING THE BUNDLING METHOD. BOTH METHODS SHOULD NOT BE USED TO STABILIZE THE SAME UNITS.
- H. STORED PALLET UNITS MUST NOT CONTACT THE WALLS OF A MAGAZINE. TO PROVIDE FOR THIS MANDATORY CLEARANCE REQUIREMENT, UNITS MAY BE ELIMINATED FROM THE DEPICTED STORAGE PATTERN AS NECESSARY.
- J. AISLE DIMENSIONS SHOWN FOR STORAGE PROCEDURES IN MAGAZINES MAY BE ADJUSTED TO SUIT LOCAL CONDITIONS, VARIATIONS IN PALLET UNIT DIMENSIONS, AND/OR AVAILABLE MATERIALS HANDLING EQUIPMENT. AISLE SPACING FOR PROJECTILE STORAGE IN STANDARD ABOVE-GROUND MAGAZINES MUST COMPLY WITH NOSE TO NOSE AND BASE TO BASE DISTANCE REQUIREMENTS SPECIFIED ON PAGE 27.
- K. STORAGE PROCEDURES FOR PROJECTILE PALLET UNITS IN STANDARD ABOVE-GROUND MAGAZINES, AS DEPICTED ON PAGES 27 THRU 29, REQUIRE THE USE OF A SPECIAL "TURNING ATTACHMENT" ON THE FORKLIFT TRUCK FOR HANDLING AND STACKING THE UNITS. FOR DETAILS OF THE "TURNING ATTACHMENT", AUXILIARY PARTS, AND PROCEDURES FOR ITS OPERATION AND USE, SEE DRAWINGS NO. D-ORDJU-1361 AND 1362, C-ORDJU-1069, AND 19-48-1221-599.
- L. THE MAXIMUM FLOOR LOAD FOR A MAGAZINE AS PRESCRIBED BY LOCAL STANDARDS WILL NOT BE EXCEEDED.
- M. IF THE AVAILABLE MHE PERMITS, ADDITIONAL PALLETIZED UNITS MAY BE STORED WITHIN THE FRONTAL AREA AND/OR OTHER AVAILABLE AREA OF THE MAGAZINE.
- N. PORTIONS OF THE MAGAZINES, SUCH AS SIDEWALLS, END WALLS, AND ROOFS, HAVE NOT BEEN SHOWN IN THE STORAGE VIEWS FOR CLARITY PURPOSES.
- P. DUNNAGE LUMBER SPECIFIED THROUGHOUT THIS PROCEDURAL DRAWING IS OF NOMINAL SIZE. FOR EXAMPLE, 2" X 4" MATERIAL IS ACTUALLY 1-1/2" THICK BY 3-1/2" WIDE.

(CONTINUED AT RIGHT)

MATERIAL SPECIFICATIONS

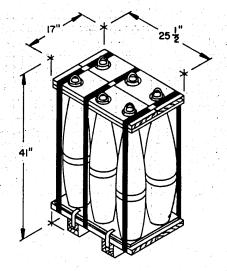
LUMBER -----: SEE TM 743-200-1, DUNNA GE LUMBER, FED SPEC MM-L-751.

STRAPPING, STEEL ---: CLASS 1, TYPE I OR IV, HEAVY DUTY, FINISH B (GRADE 2), FED SPEC QQ-S-781.

SEAL, STRAP -----: TYPE D, STYLE I, II OR IX, CLASS H, FED SPEC QQ-

(GENERAL NOTES CONTINUED)

- Q. STORAGE OF MULTIPLE LOTS IN A MAGAZINE WILL REQUIRE CAREFUL PREPLANNING SO AS TO INSURE MHE ACCESSIBILITY TO ANY LOT IN ACCORDANCE WITH REQUIREMENTS SET FORTH IN THE APPLICABLE "SPECIAL NOTES" SECTIONS OF THE MULTIPLE-LOT STORAGE PROCEDURES TYPICALLY SHOWN ON PAGES 20 THRU 26. FOR MULTIPLE LOT STORAGE IN STANDARD ABOVE-GROUND MAGAZINES, SEE SPECIAL NOTE 7 ON PAGE 27.
- R. ANY "LIGHT" PALLETIZED UNIT THAT DOES NOT CONTAIN A FULL QUANTITY OF SEPARATE LOADING PROJECTILES WILL NOT BE BURIED IN STORAGE. IT MUST BE POSITIONED ADJACENT TO AN AISLE, PREFERABLY IN FRONT OF THE LOT.
- S. SEPARATE LOADING PROJECTILES PRESENTLY STORED IN ACCORDANCE WITH A PRIOR APPROVED 19-48 SERIES DRAWING NEED NOT BE RE-STORED SOLELY TO CONFORM TO THE PROCEDURES SPECIFIED IN THIS DOCUMENT.

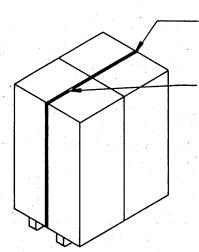


175MM, 6/PALLET

NOTE: HEIGHT OF UNIT MAY VARY SLIGHTLY.
UNIT WEIGHT ------ 934 LBS (APPROX)

SPECIAL NOTES:

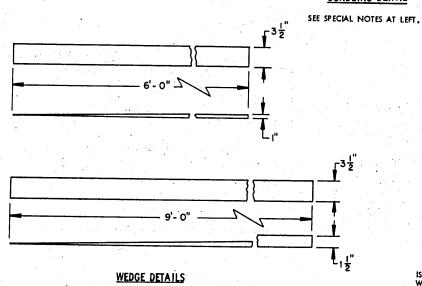
- 1. ALTHOUGH NOT TO BE APPLIED AS A STANDARD PRACTICE (BECAUSE OF HIGHER COST), AVAILABLE 1-1/4" STRAPPING CAN BE USED IN LIEU OF THE SPECIFIED 3/4" BUNDLING STRAP IF THE 3/4" STRAP IS NOT READILY AVAILABLE.
- 2. IF DESIRED AND/OR BECAUSE OF OPERATIONAL NECESSITY, TWO STRAPS MAY BE USED TO UNITIZE EACH BUNDLED UNIT, PROVIDING THE TOTAL STRENGTH OF THE TWO STRAPS IS EQUAL TO OR GREATER THAN THE STRENGTH OF THE SINGLE STRAP SPECIFIED.
- 3. OCCASIONALLY, PALLET UNITS WILL ALREADY BE BUNDLED WHEN THEY ARRIVE AT THE STORAGE LOCATION. THIS WILL NEGATE THE REQUIREMENT FOR BUNDLING UNITS AS SHOWN IN THE "BUNDLING DETAIL" PROVIDING THE UNITS ARE BUNDLED INTO TWO-PALLET BUNDLES AND THE STRAPPING IS A "FINISH B" STRAP.



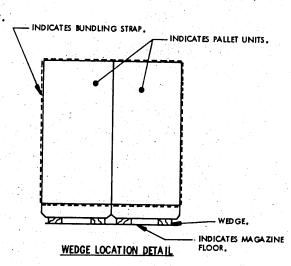
BUNDLING STRAP, 3/4" X .031" OR .035" STEEL STRAPPING BY A LENGTH REQUIRED TO ENCIRCLE;TWO (2) PALLET UNITS (1 REQD). SEE GENERAL NOTE "G" ON PAGE 2.

SEAL FOR 3/4" STRAPPING (1 REQD). CRIMP EACH SEAL WITH TWO PAIR OF NOTCHES.

BUNDLING DETAIL

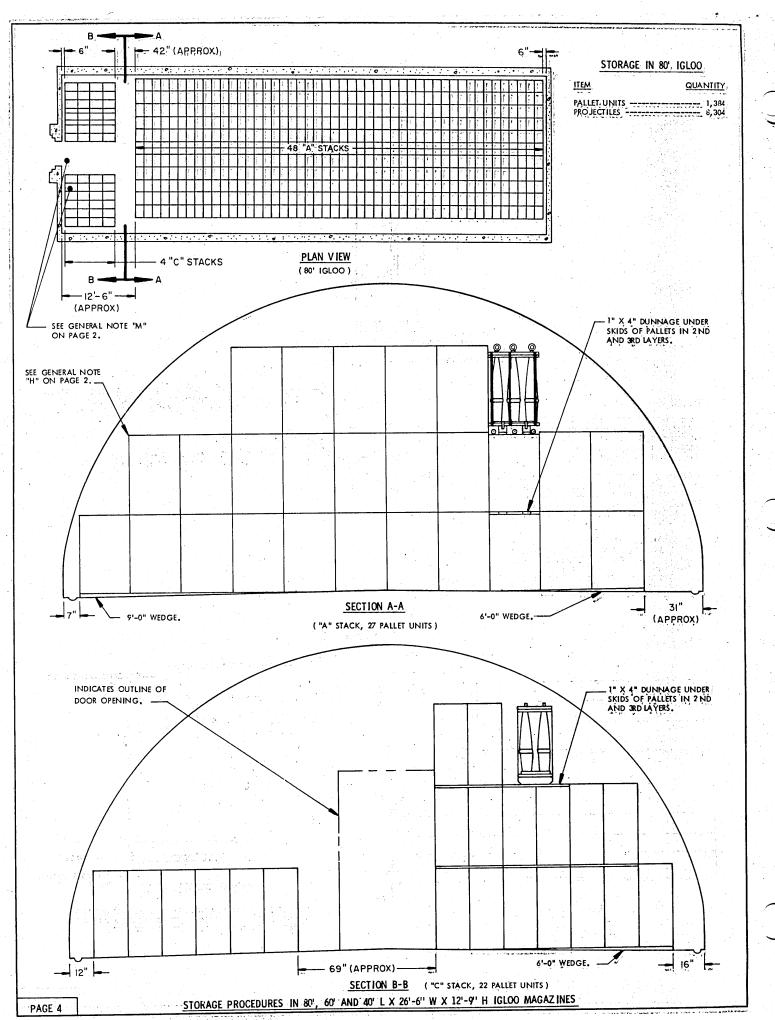


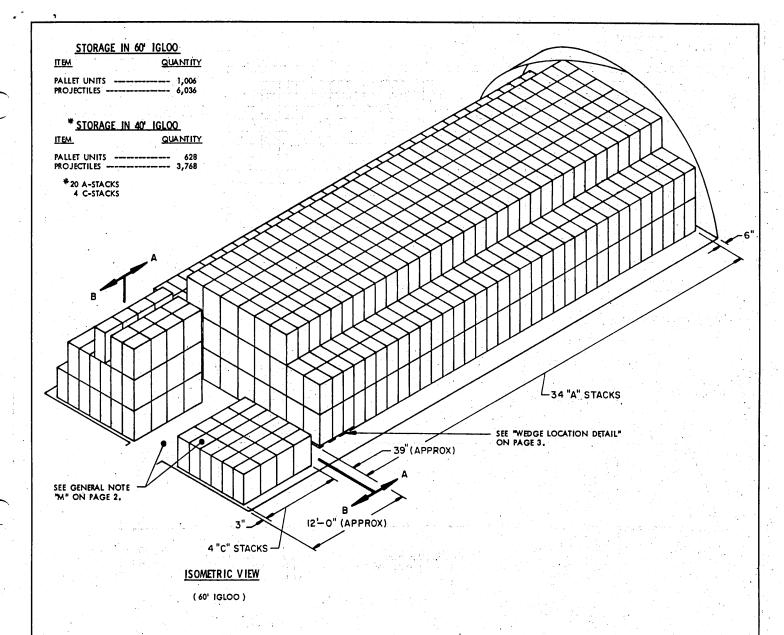
2" X 4" MATERIAL.



ISOMETRIC VIEWS WITHIN THIS DRAWING DO NOT DEPICT ALL WEDGES THAT ARE REQUIRED. WEDGES ARE SHOWN AT SOME LOCATIONS TO PROVIDE POSITIONING GUIDANCE.

DETAILS

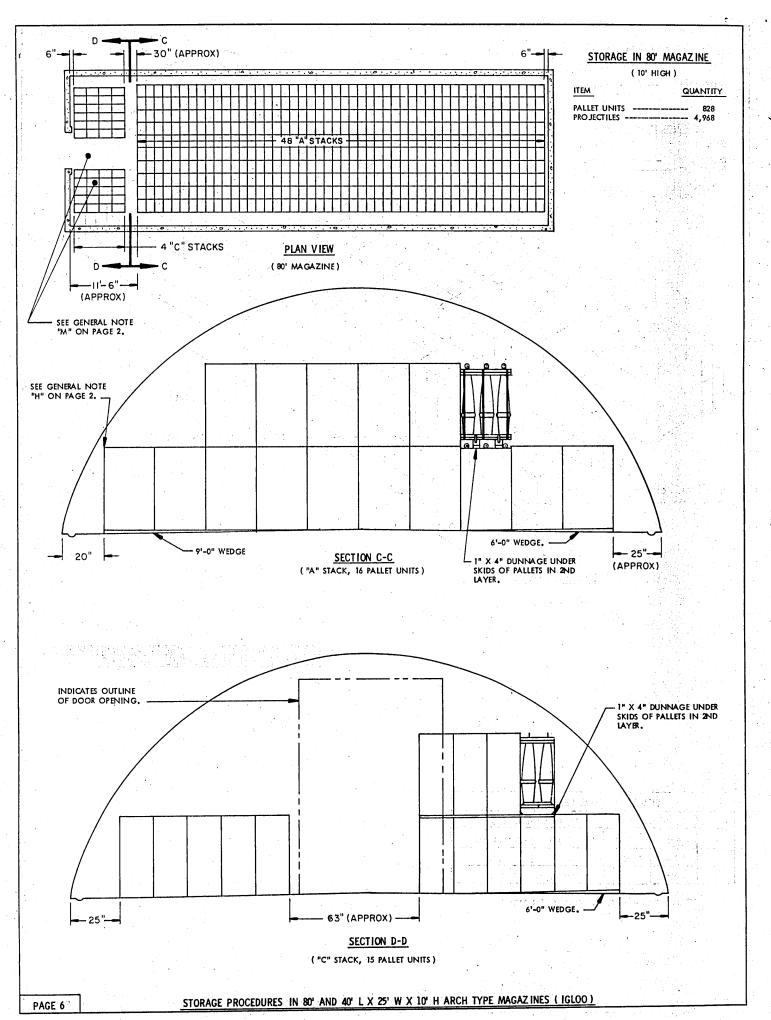


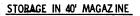


FOR "GENERAL	NOTES" AND	"MATERIA	L SPECIF	ICATIONS',
SEE PAGE 2.	FOR "WEDGE	DETAILS"	SEE PAGE	3,

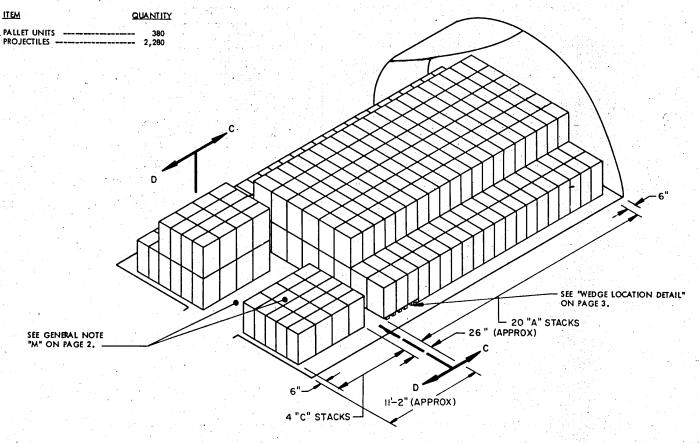
BILL OF MATERIAL (PER STACK)						
TYPE	WEDGES		1" X 4" DUN	NAGE LUMBER**		
STACK	6'-0"	9'-0"	LINEAR FEET	BOARD FEST		
A	2 REQD	2 REQD	42,67	14.22		
٥	2 REQD		26.67	8,89		

^{**} SEE GENERAL NOTES "E" AND "F" ON PAGE 2.





(10' HIGH)



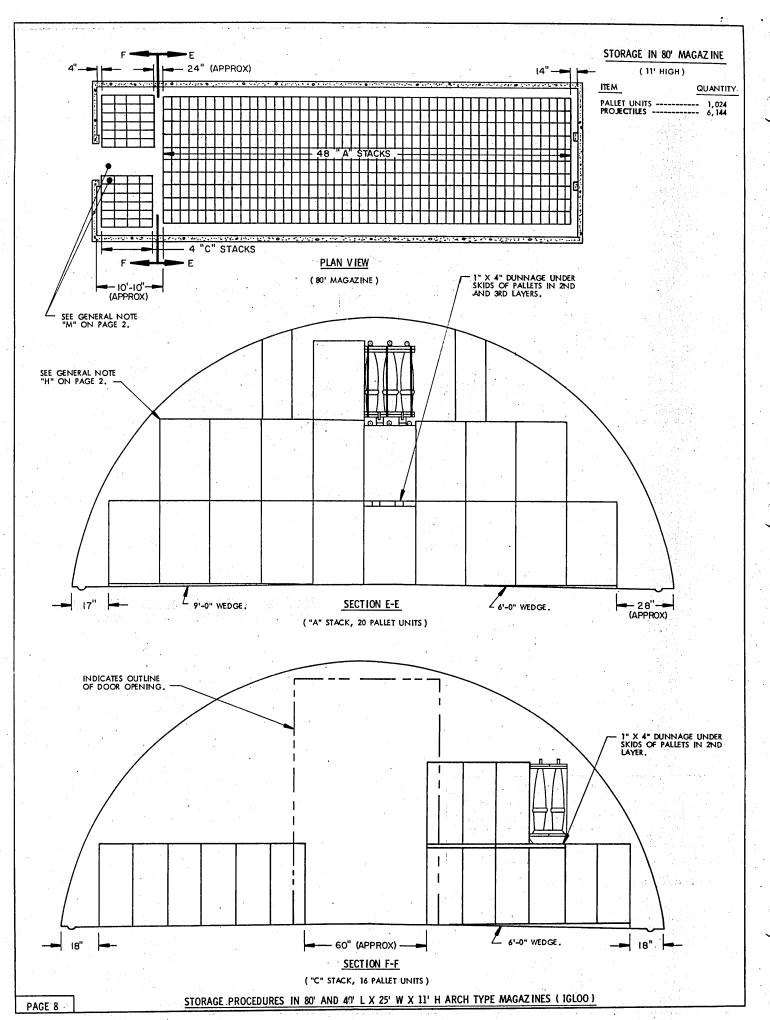
ISOMETRIC VIEW

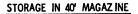
(40' MAGAZINE)

FOR "GENERAL NOTES" AND "MATERIAL SPECIFICATIONS", SEE PAGE 2, FOR "WEDGE DETAILS", SEE PAGE 3,

	BIL	L OF MATE	RIAL (PER STAC	K)
TYPE	WED	GE	1" X 4" DUI	NNAGE LUMBER*
STACK	6'-0"	9'-0"	LINEAR FEET	BOARD FEET
A	2 REQD	2 REQD	16,00	5.33
С	2 REQD		10.67	3.56

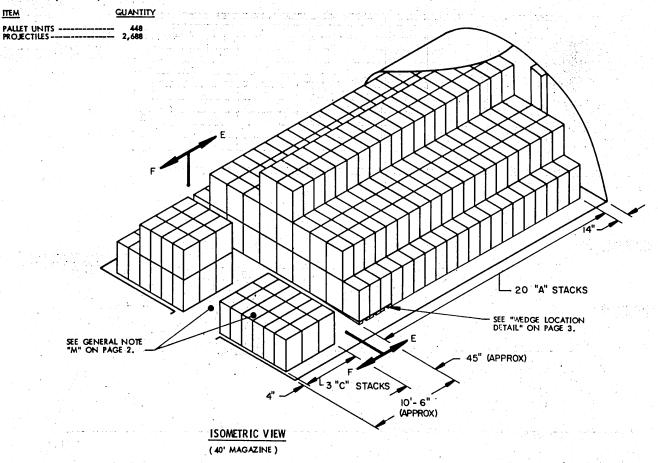
^{*}SEE GENERAL NOTES "E" AND "F" ON PAGE 2.





(11' HIGH)

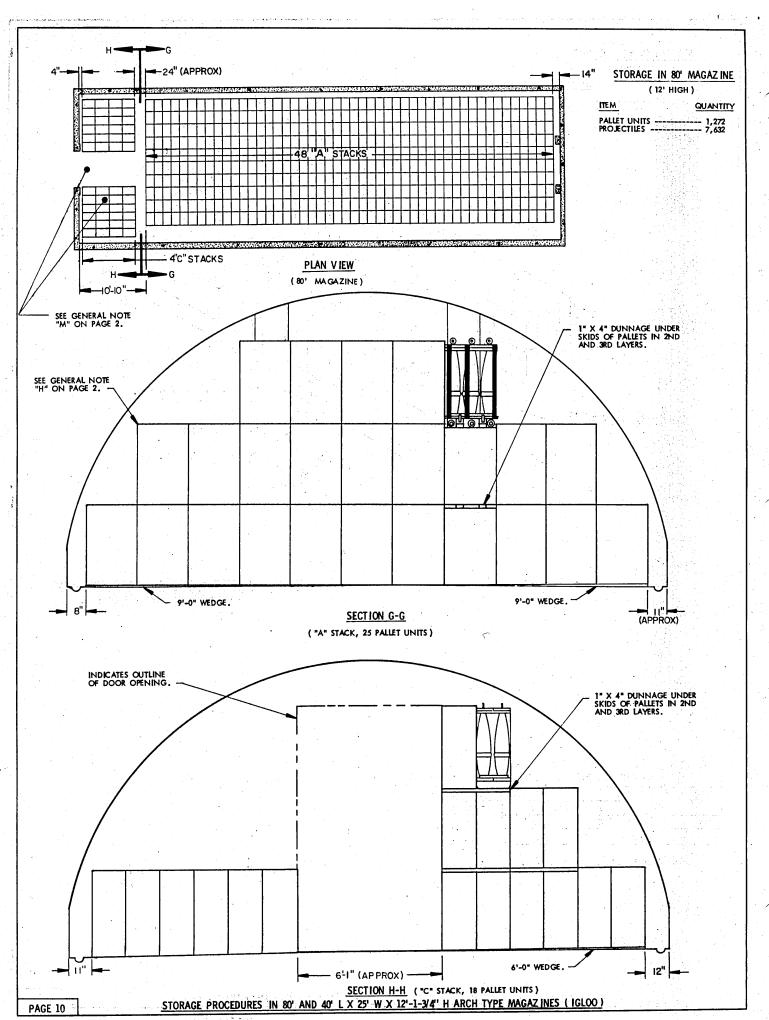
ITEM

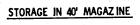


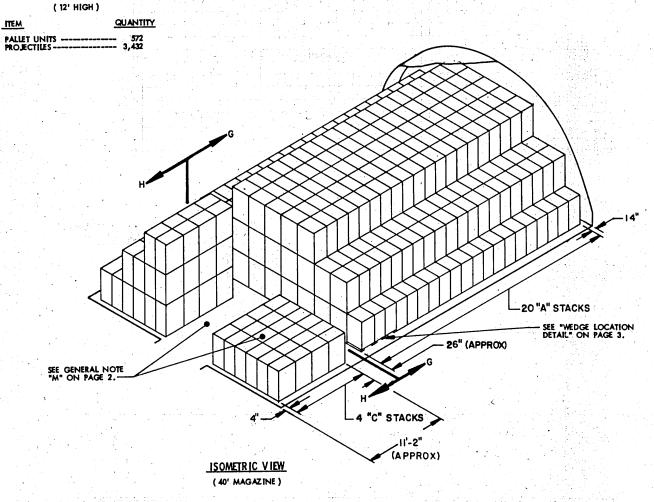
FOR "GENERAL NOTES" AND "MATERIAL SPECIFICATIONS", SEE PAGE 2. FOR "WEDGE DETAILS", SEE PAGE 3.

TYPE STACK	WEDGES		1" X 4" DUNNAGE LUMBE	
STACK	6'-0"	9'-0"	LINEAR FEET	BOARD FEET
A	2 REQD	2 REQD	26.67	8.89
С	2 REQD		10.67	3.56

SEE GENERAL NOTES "E" AND "F" ON PAGE 2.



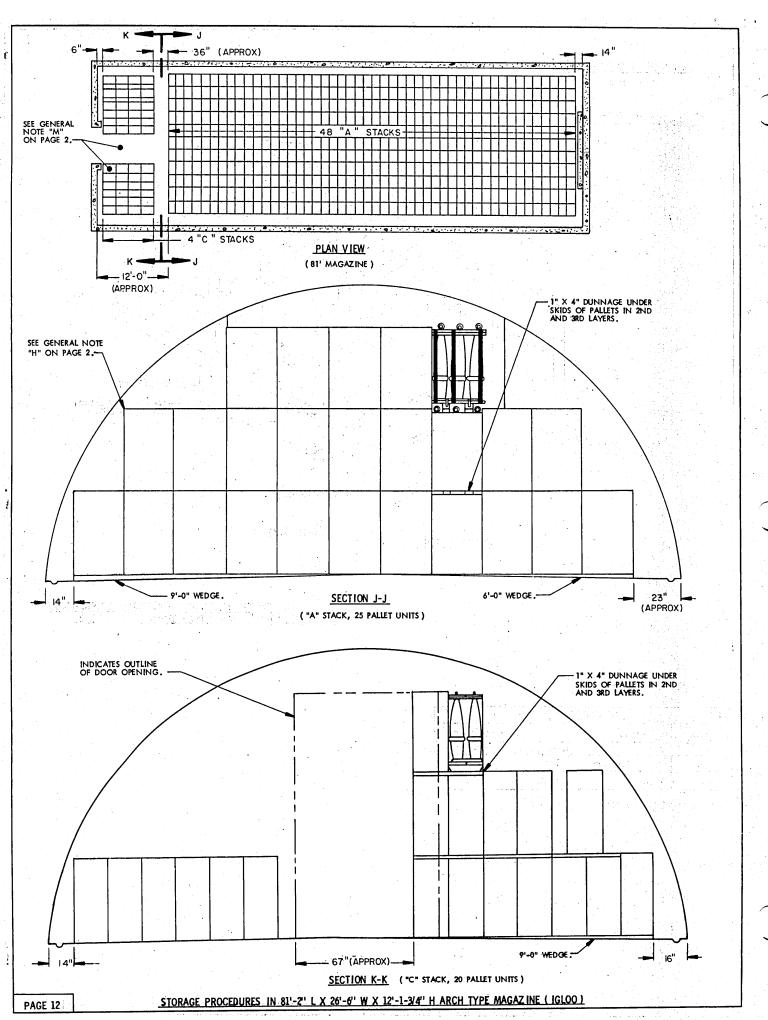


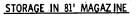


FOR "GENERAL NOTES" AND "MATERIAL SPECIFICATIONS", SEE PAGE 2. FOR "WEDGE DETAILS", SEE PAGE 3.

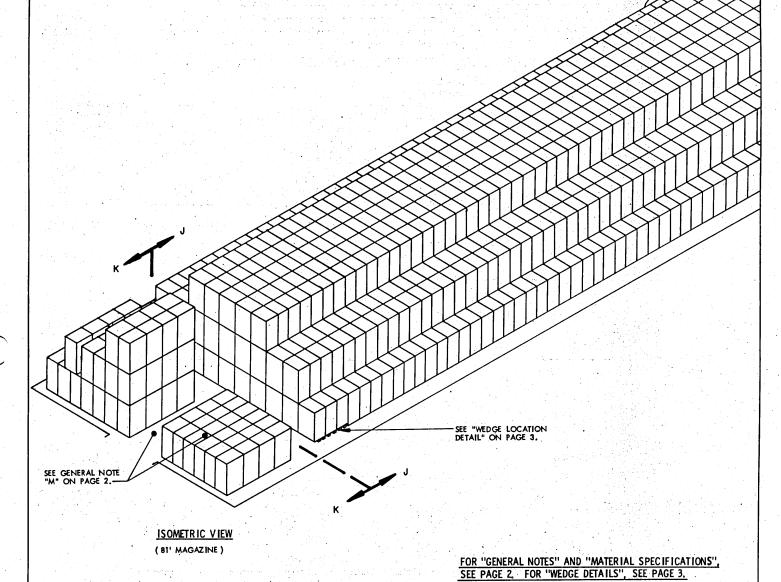
	BII	LL OF MAT	ERIAL (PER STA	ACK)
TYPE	WEDG	ÆS	1" X 4" D	UNNAGE LUMBER#
STACK	6'-0"	9'-0"	LINEAR FEET	BOARD FEET
A		4 REQD	37.33	12.44
С	2 REQD		16.00	5.33

SEE GENERAL NOTES "E" AND "F" ON PAGE 2.





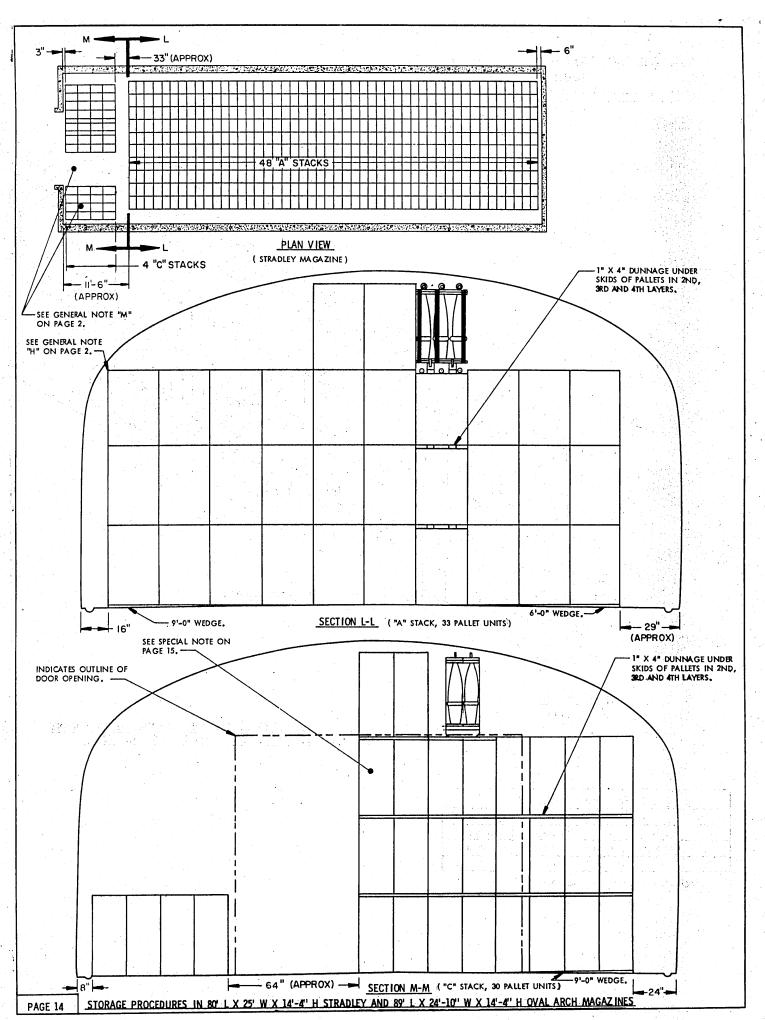
| ITEM | QUANTITY | PALLET UNITS ------ 1,280 | PROJECTILES ----- 7,680



	BILL	OF MATER	RIAL (PER STAC	K)
TYPE STACK	WED	G€S	1" X 4" DU	INAGE LUMBER*
STACK	6'-0"	9'-0"	LINEAR FEET	BOARD FEET
A	2 REQD	2 REQD	37.33	12.44
С		2 REQD	21.33	7.11

^{*} SEE GENERAL NOTES "E" AND "F" ON PAGE 2.

STORAGE PROCEDURES IN 81'-2' L X 26'-6' W X 12'-1-3/4" H ARCH TYPE MAGAZ INE (IGLOO)



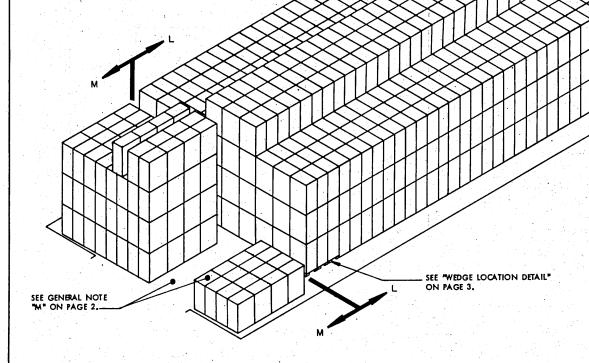
STORAGE IN STRADLEY

• STORAGE IN OVAL ARCH 89' LONG

<u>ITEM</u>	QUANTITY
PALLET UNITSPROJECTILES	

54 A-STACKS
 4 C-STACKS

SEE SPECIAL NOTE BELOW.



ISOMETRIC VIEW

(STRADLEY MAGAZINE)

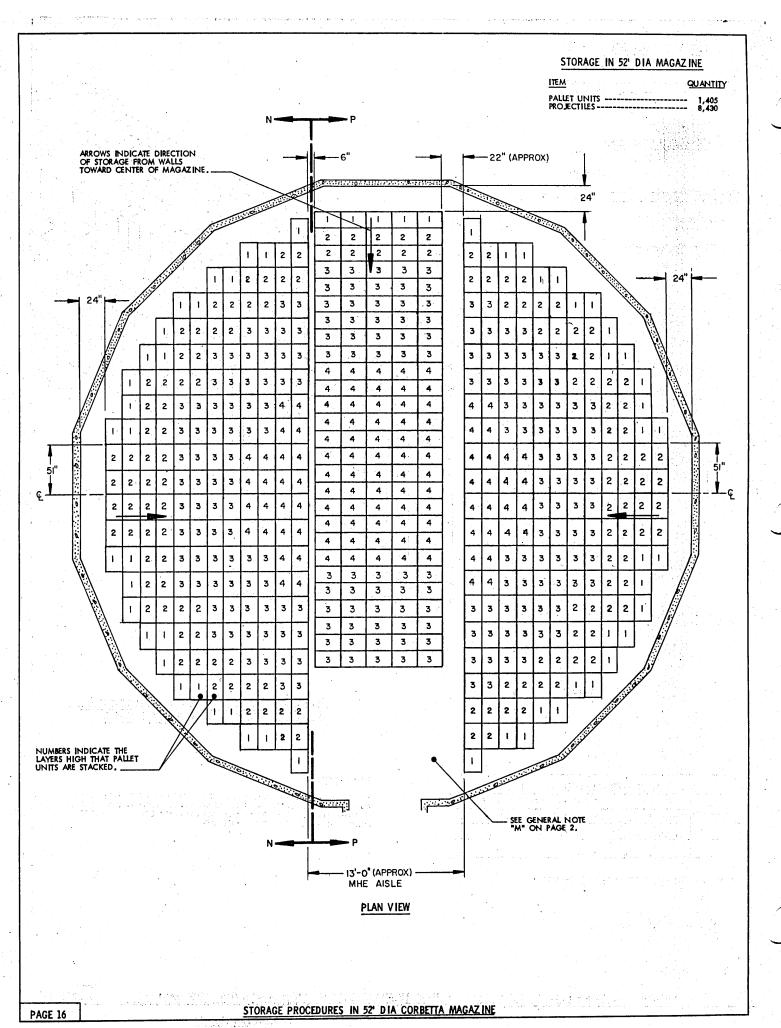
FOR "GENERAL NOTES" AND "MATERIAL SPECIFICATIONS", SEE PAGE 2. FOR "WEDGE DETAILS", SEE PAGE 3.

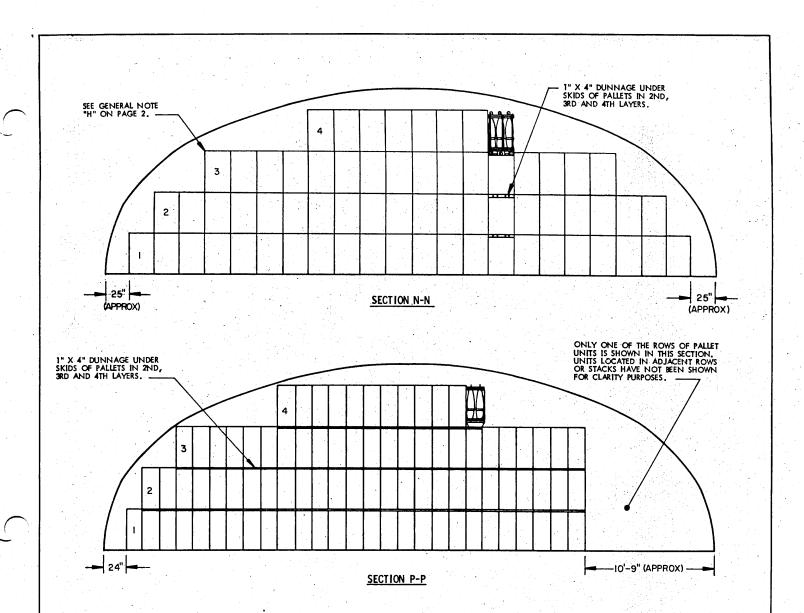
	BIL	L OF MA	TERIAL (PER S	TACK)
TYPE	WED	GES	1" X.4" DUN	VA GE LUMBER®●
STACK	6'-0"	9'-0"	LINEAR FEET	BOARD FEET
A	2 REQD	2 REQD	61,33	20.44
С		2 REQD	48.00	16.00

** SEE GENERAL NOTES "E" AND "F" ON PAGE 2.

SPECIAL NOTE:

FOR STORAGE IN OVAL ARCH MAGAZINES, ONE (1) ROW OF PALLET UNITS ADJACENT TO THE OPERATING AISLE AS SHOWN IN "SECTION M-M" MUST BE OMITTED BECAUSE OF THE RELATIVELY NARROW DOOR OPENING. THIS WILL REDUCE THE "C" STACKS TO 26 UNITS EACH.

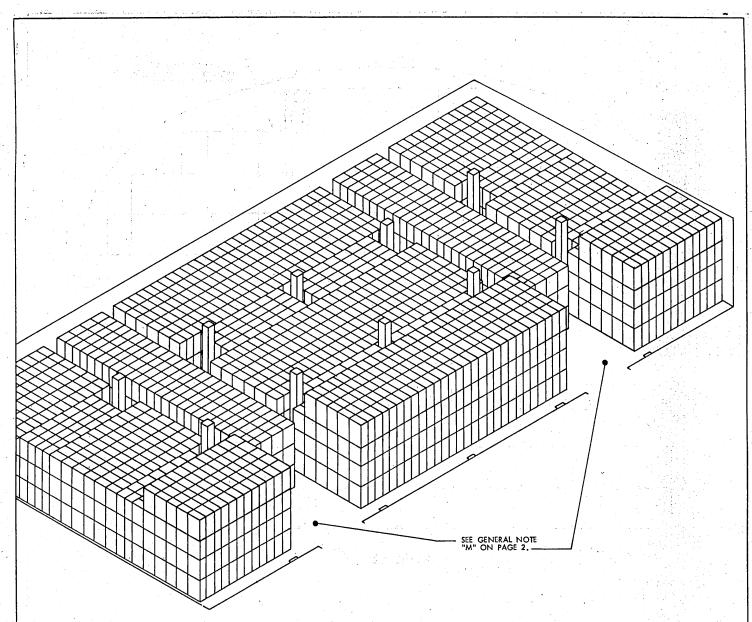




FOR "GENERAL NOTES" AND "MATERIAL SPECIFICATIONS", SEE PAGE 2.

BI	LL OF MATERIAL (PER	PALLET STACK)		
STACK	1" X 4" DUNNAGE LUMBER *			
HEIGHT	LINEAR FEET	BOARD FEET		
2 3 4	2.67 5.33 8.00	.89 1.78 2.67		

^{*}SEE GENERAL NOTES "E" AND "F" ON PAGE 2.



ISOMETRIC VIEW
(100' L X 50' W MAGAZINE)

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

BILL OF	MATERIAL (PER P	ALLET STACK)
	1" X 4" DUNI	NAGE LUMBER*
STACK HEIGHT	LINEAR FEET	BOARD FEET
3	5,33	1.78
4	8.00	2.67

SEE GENERAL NOTES "E" AND "F" ON PAGE 2.

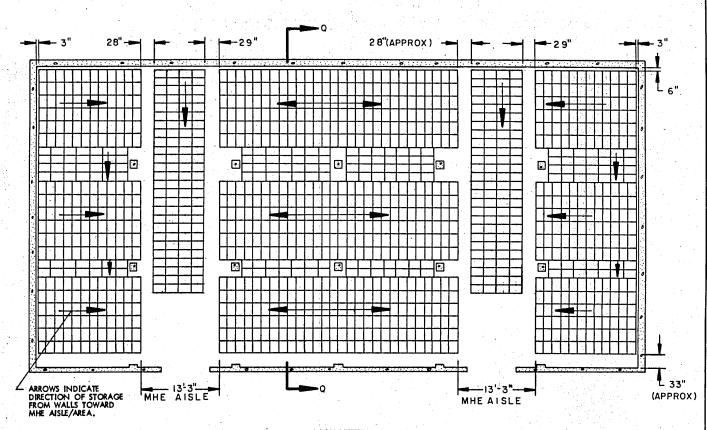
STORAGE IN 100' X 50' MAGAZ INE QUANTITY

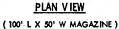
115111		
PALLET UNITSPROJECTILES	 	4,196 25,176

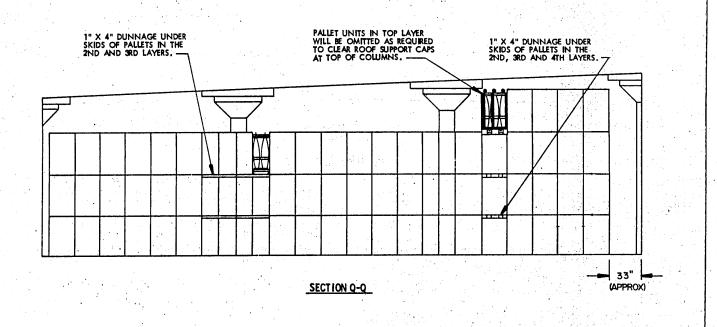
SPECIAL NOTE:

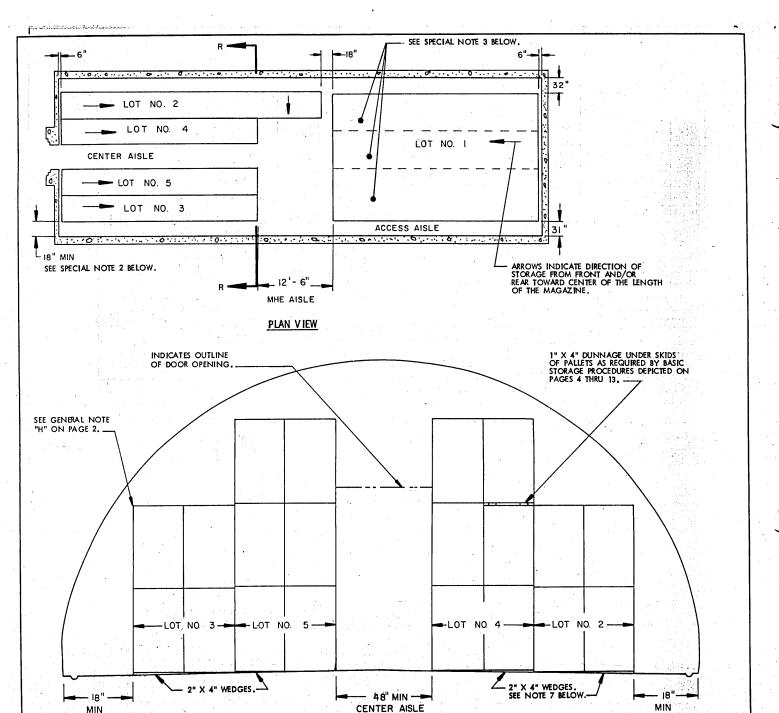
IF THE QUANTITY FOR A MAGAZINE IS TO BE REDUCED FROM WHAT IS SHOWN DUE TO THE PERMITTED "EXPLOSIVE LIMIT" OR FOR ANY OTHER REASON, SUCH AS A LIMITED QUANTITY TO BE STORED - THE DELINEATED PROCEDURES ARE TO BE ADJUSTED BY OMITTING STACKS RATHER THAN BY OMITTING LAYERS.

STORAGE PROCEDURES IN 100° L' X 50° W RECTANGULAR MAGAZINE









SEE SPECIAL NOTE 2 BELOW.

- THE STORAGE PLANS AND CONFIGURATIONS SHOWN ON THIS PAGE ARE TYPICAL ONLY AND APPLY TO RELATIVELY LARGE LOTS. ADAPTATIONS MAY BE MADE AS NUMBER AND SIZES OF LOTS TO BE STORED IN MAGAZINE REQUIRE.
- 2. AN INSPECTION/INVENTORY AISLE MUST BE PROVIDED AT ONE SIDE OR END OF EACH LOT.
- 3. GENERALLY, THE LARGEST LOT SHOULD BE STORED IN THE REAR OF THE MAGAZINE, HOWEVER, THE REAR AREA MAY BE USED TO STORE MORE THAN ONE LOT BY ERECTING ROWS SIMILAR TO THOSE SHOWN IN THE FRONTAL AREA. A CENTER AISLE WILL NOT BE REQUIRED IN THE REAR AREA AS LONG AS EACH LOT IS ACCESSIBLE FOR REMOVAL AND INSPECTION/INVENTORY IN ACCORDANCE WITH OTHER CRITERIA SPECIFIED IN THESE SPECIAL NOTES AND IN THE GENERAL NOTES ON PAGE 2.
- 4. EACH LOT WITHIN THE MAGAZINE MUST BE ACCESSIBLE FOR MOVEMENT BY MHE.
 A SINGLE-LOT OF PALLET UNITS IS CONSIDERED "ACCESSIBLE" IF NO MORE THAN
 TWELVE (12) "LIFTS" OF ANOTHER LOT OR LOTS HAVE TO BE MADE TO GAIN
 ACCESS TO THAT LOT. THE TERM "LIFT" MEANS HANDLING AND MOVING NOT
 MORE THAN TWO (2) PALLET UNITS OF PROJECTILES AT ONE TIME.
- 5. FOR STORAGE OF MULTIPLE LOTS, THE DISTANCE FROM THE SIDEWALL WILL BE BASED ON THE OVERHEAD CLEARANCE REQUIRED FOR MHE.

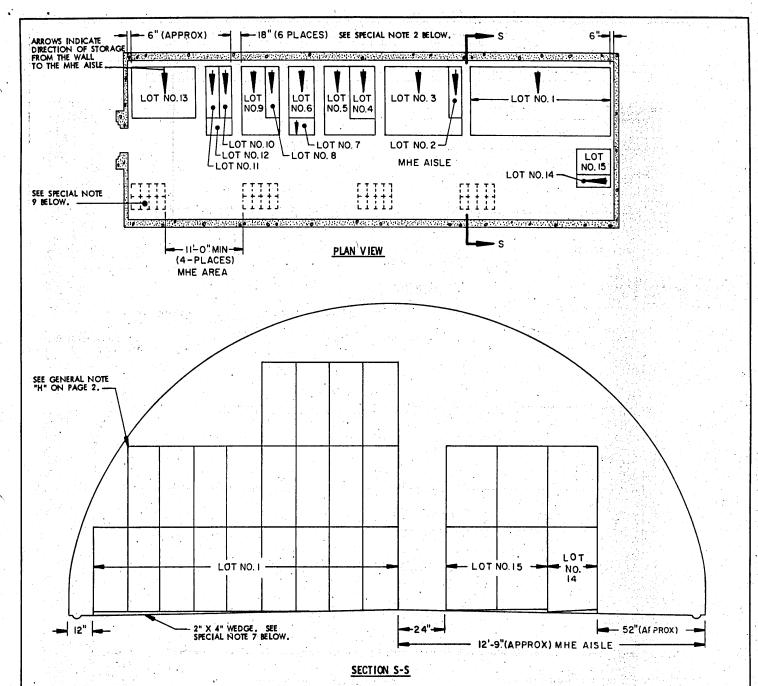
(CONTINUED AT RIGHT)

(SPECIAL NOTES CONTINUED)

- EACH LOT MUST BE STORED TWO (2) UNITS (MINIMUM) WIDE TO ACCOMMODATE WIDTH OF MHE DURING OPERATIONS, EXCEPT FOR A ROW ADJACENT TO A CENTER AISLE.
- 7. LENGTH OF 2" X 4" WEDGES WILL BE DETERMINED BY THE WIDTH OF THE LOT IN ROWS. WEDGES WILL NOT EXTEND INTO AISLE OR UNDER ADJACENT LOTS.
- 8. WHEN TWO LOTS ARE STORED ADJACENT TO EACH OTHER, THEY SHOULD BE SEPARATED BY AT LEAST 1" TO PROVIDE CLEARANCE FOR REMOVAL OF EITHER LOT.

TYPICAL MULTIPLE-LOT STORAGE IN IGLOO AND ARCH TYPE MAGAZINES

SECTION R-R



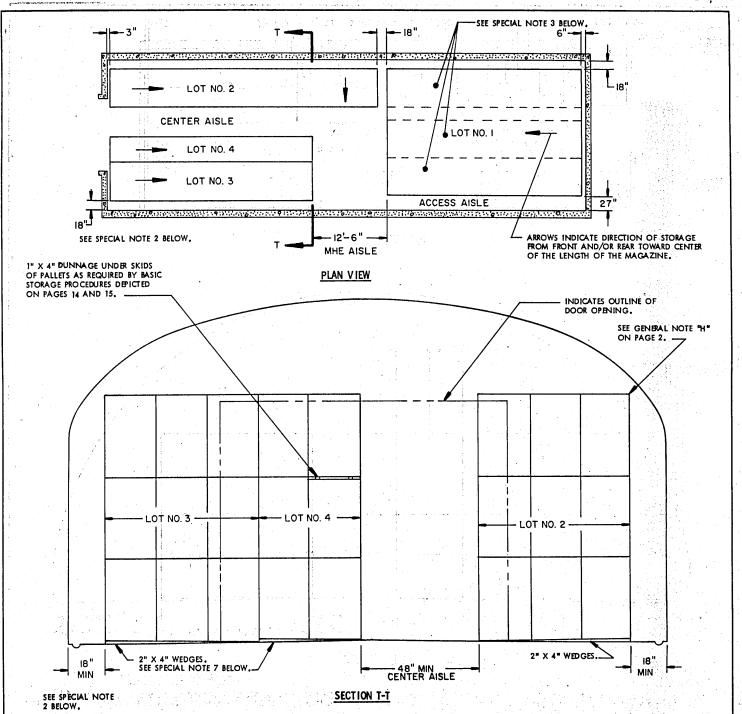
- THE STORAGE PLANS AND CONFIGURATIONS SHOWN ON THIS PAGE ARE TYPICAL ONLY AND APPLY TO STORAGE OF NUMEROUS SMALL LOTS. ADAPTATIONS MAY BE MADE AS NUMBER AND SIZES OF LOTS TO BE STORED IN MAGAZINE REQUIRE.
- 2. AN INSPECTION/INVENTORY AISLE NOT LESS THAN 18" WIDE MUST BE PROVIDED AT ONE SIDE OF EACH "BURIED" LOT.
- 3. GENERALLY, THE LARGEST LOT SHOULD BE STORED IN THE REAR OF THE MAGAZINE. HOWEVER, THE REAR AREA MAY BE USED TO STORE MORE THAN ONE LOT BY ERECTING STACKS SIMILAR TO THOSE SHOWN IN THE FRONTAL AREA. AN MHE AISLE WILL BE REQUIRED ON ONE SIDE OF THE MAGAZINE, AND EACH LOT MUST BE ACCESSIBLE FOR REMOVAL AND INSPECTION/INVENTORY IN ACCORDANCE WITH OTHER CRITERIA SPECIFED IN THESE SPECIAL NOTES AND IN THE GENERAL NOTES ON PAGE 2.
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 MORE THAN TWO (2) PALLET UNITS OF PROJECTILES AT ONE TIME.
- 5. FOR STORAGE OF MULTIPLE LOTS, THE DISTANCE FROM THE SIDEWALL WILL BE BASED ON THE OVERHEAD CLEARANCE REQUIRED FOR MHE.
- 6. EACH LOT MUST BE STORED TWO (2) UNITS (MINIMUM) WIDE TO ACCOMMODATE WIDTH OF MHE DURING OPERATIONS, EXCEPT FOR A ROW ADJACENT TO AN INSPECTION/INVENTORY AISLE.
- 7. LENGTH OF 2" X 4" WEDGES WILL BE DETERMINED BY THE WIDTH OF THE LOT IN ROWS. WEDGES WILL NOT EXTEND INTO AISLE OR UNDER ADJACENT LOTS.

(CONTINUED AT RIGHT)

(SPECIAL NOTES CONTINUED)

- 8. WHEN TWO LOTS ARE STORED ADJACENT TO EACH OTHER, THEY SHOULD BE SEPARATED BY AT LEAST 1" TO PROVIDE CLEARANCE FOR REMOVAL OF EITHER LOT.
 - SEPARATED BY AT LEAST 1" TO PROVIDE CLEARANCE FOR REMOVAL OF EITHER LOT.

 P. AREAS INCLOSED BY DOTTED LINES INDICATE LOCATIONS WHERE ADDITIONAL LOTS MAY BE STORED OR WHERE ADDITIONAL ITEMS MAY BE STORED, THAT ARE FROM THE LOT OR LOTS WHICH ARE DIRECTLY OR ALMOST DIRECTLY ACROSS THE CENTER AISLE ON THE OTHER SIDE OF THE MAGAZINE. COMPLIANCE WITH ALL OF THE MULTIPLE-LOT CRITERIA AS SET FORTH ON THIS PAGE MUST BE OBSERVED. THE SIZE OF THE LOTS BEING STORED AND THE CRITERIA OF SPECIAL NOTE 4, RELATIVE TO "12 LIPTS", WILL BE MAJOR FACTORS IMPACTING ON THE NUMBER OF UNIT LOADS THAT CAN BE STORED IN AN "ADDITIONAL STORAGE LOCATION". MORE OR FEWER STACKS THAN SHOWN MAY BE STORED AT ANY ONE OF THE ADDITIONAL STORAGE LOCATIONS. AN 11-FOOT WHE OPERATING AREA HAS BEEN SPECIFED FOR ACCESS TO EACH "ADDITIONAL LOCATION" BY FORKLIFT TRUCKS. THIS OPERATING AREA IS BASED ON REQUIREMENTS OF FORKLIFT TRUCKS. COMMONLY USED IN STORAGE MAGAZINES. THE WHE OPERATING AREA CAN BE ENLARGED AS REQUIRED TO SUIT AVAILABLE FORKLIFT TRUCKS, AND SHOULD BE MADE SMALLER IF AVAILABLE MHE PERMITS. A "CENTER AISLE" (SPACE BETWEEN STORAGE ON ONE SIDE OF A MAGAZINE AND AN "ADDITIONAL STORAGE LOCATION") IS TO BE AT LEAST 48 INCHES WIDE. AN AISLE SLIGHTLY WIDER THAN 48 INCHES WILL ENHANCE FORKLIFT TRUCK MOVEMENT WITHIN A MAGAZINE; HOWEVER, THIS AISLE SHOULD NOT BE MADE WIDER IF A LOSS IN STORAGE RESULTS.



- 1. THE STORAGE PLANS AND CONFIGURATIONS SHOWN ON THIS PAGE ARE TYPICAL ONLY AND APPLY TO RELATIVELY LARGE LOTS. ADAPTATIONS MAY BE MADE AS NUMBER AND SIZES OF LOTS TO BE STORED IN MAGAZINE REQUIRE.
- 2. AN INSPECTION/INVENTORY AISLE MUST BE PROVIDED AT ONE SIDE OR END OF EACH LOT.
- 3. GENERALLY, THE LARGEST LOT SHOULD BE STORED IN THE REAR OF THE MAGAZINE. HOWEVER, THE REAR AREA MAY BE USED TO STORE MORE THAN ONE LOT BY BRECTING ROWS SIMILAR TO THOSE SHOWN IN THE FRONTAL AREA. A CENTER AISLE WILL NOT BE REQUIRED IN THE REAR AREA AS LONG AS EACH LOT IS ACCESSIBLE FOR REMOVAL AND INSPECTION/INVENTIORY IN ACCORDANCE WITH OTHER CRITERIA SPECIFIED IN THESE SPECIAL NOTES AND IN THE GENERAL NOTES ON PAGE 2.
- 4. EACH LOT WITHIN THE MAGAZINE MUST BE ACCESSIBLE FOR MOVEMENT BY MHE.
 A SINGLE-LOT OF PALLET UNITS IS CONSIDERED "ACCESSIBLE" IF NO MORE THAN
 TWELVE (12) "LIFTS" OF ANOTHER LOT OR LOTS HAVE TO BE MADE TO GAIN
 ACCESS TO THAT LOT. THE TERM "LIFT" MEANS HANDLING AND MOVING NOT
 MORE THAN TWO (2) PALLET UNITS OF PROJECTILES AT ONE TIME.
- 5. FOR STORAGE OF MULTIPLE LOTS, THE DISTANCE FROM THE SIDEWALL WILL BE BASED ON THE OVERHEAD CLEARANCE REQUIRED FOR MHE.

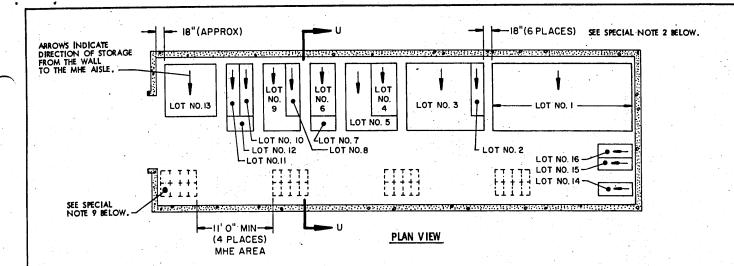
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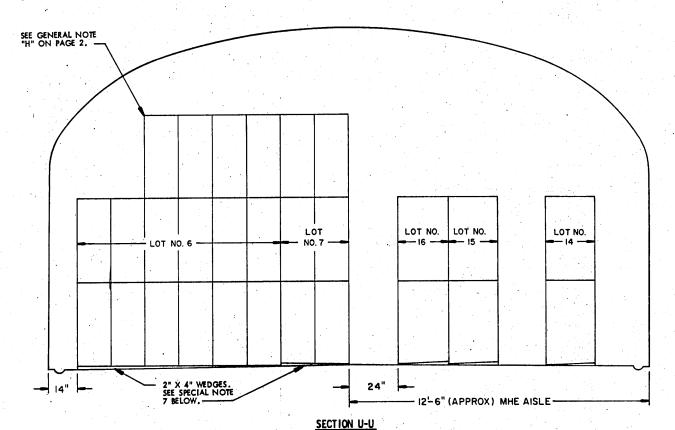
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(SPECIAL NOTES CONTINUED)

- 6. EACH LOT MUST BE STORED TWO (2) UNITS (MINIMUM) WIDE TO ACCOMMODATE WIDTH OF MHE DURING OPERATIONS, EXCEPT FOR A ROW ADJACENT TO A CENTER AISLE.
- . LENGTH OF 2" X 4" WEDGES WILL BE DETERMINED BY THE WIDTH OF THE LOT IN ROWS. WEDGES WILL NOT EXTEND INTO AISLES OR UNDER ADJACENT LOTS.
- S. WHEN TWO LOTS ARE STORED AD ACENT TO EACH OTHER, THEY SHOULD BE SEPARATED BY AT LEAST 1" TO PROVIDE CLEARANCE FOR REMOVAL OF EITHER LOT.

TYPICAL MULTIPLE-LOT STORAGE IN STRADLEY AND OVAL ARCH TYPE MAGAZINES





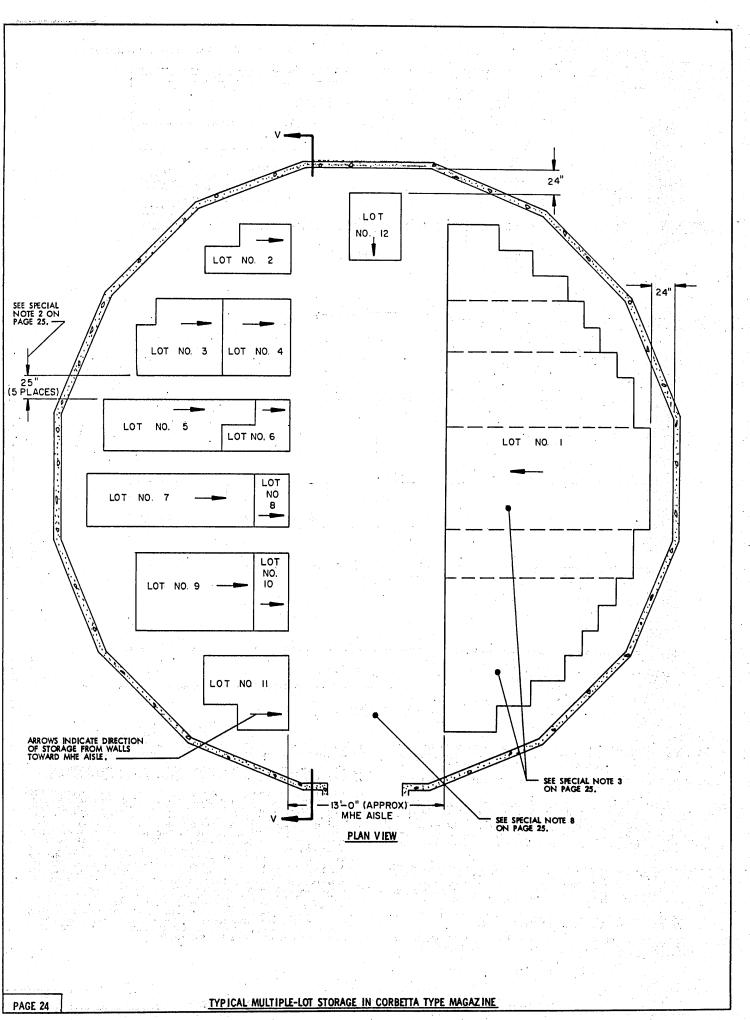
- THE STORAGE PLANS AND CONFIGURATIONS SHOWN ON THIS PAGE ARE TYPICAL ONLY AND APPLY TO STORAGE OF NUMEROUS SMALL LOTS. ADAPTATIONS MAY BE MADE AS NUMBER AND SIZES OF LOTS TO BE STORED IN MAGAZINE REQUIRE.
- AN INSPECTION/INVENTORY AISLE NOT LESS THAN 18" WIDE MUST BE PROVIDED AT ONE SIDE OF EACH "BURED" LOT.
- GENERALLY, THE LARGEST LOT SHOULD BE STORED IN THE REAR OF THE MAGAZINE. HOWEVER, THE REAR AREA MAY BE USED TO STORE MORE THAN ONE LOT BY ERECTING STACKS SIMILAR TO THOSE SHOWN IN THE FRONTAL AREA. AN MHE AJSIE WILL BE REQUIRED ON ONE SIDE OF THE MAGAZINE, AND EACH LOT MUST BE ACCESSIBLE FOR REMOVAL AND INSPECTION/INVENTORY IN ACCORDANCE WITH OTHER CRITERIA SPECIFIED IN THESE SPECIAL NOTES AND IN THE GENERAL NOTES ON PAGE 2.
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- FOR STORAGE OF MULTIPLE LOTS, THE DISTANCE FROM THE SIDEWALL WILL BE BASED ON THE OVERHEAD CLEARANCE REQUIRED FOR MHE.
- EACH LOT MUST BE STORED TWO (2) UNITS (MINIMUM) WIDE TO ACCOMMODATE WIDTH OF MHE DURING OPERATIONS, EXCEPT FOR A ROW ADJACENT TO AN INSPECTION/INVENTORY AISLE.

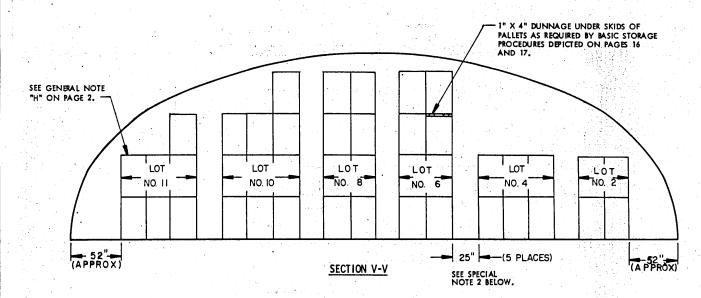
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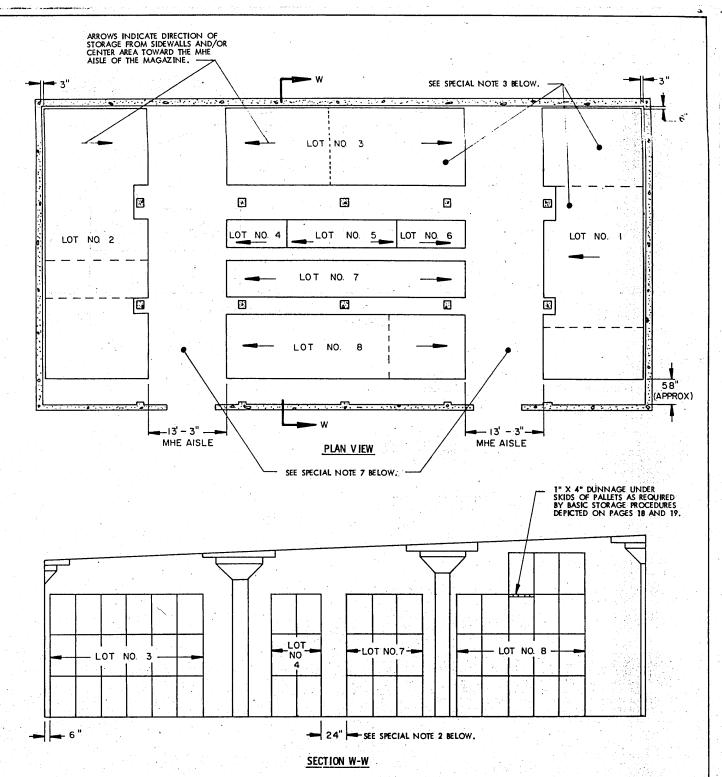
- 7. LENGTH OF 2" X 4" WEDGES WILL BE DETERMINED BY THE WIDTH OF THE LOT IN ROWS, WEDGES WILL NOT EXTEND INTO AISLE OR UNDER ADJACENT LOTS.
- WHEN TWO LOTS ARE STORED ADJACENT TO EACH OTHER, THEY SHOULD BE SEPARATED BY AT LEAST 1" TO PROVIDE CLEARANCE FOR REMOVAL OF EITHER LOT.
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- 1. THE STORAGE PLANS SHOWN ARE TYPICAL ONLY. ADAPTATIONS MAY BE MADE AS NUMBER AND SIZES OF LOTS TO BE STORED IN MAGAZINE REQUIRE.
- 2. AN INSPECTION/INVENTORY AISLE NOT LESS THAN 18" WIDE MUST BE PROVIDED AT ONE SIDE OF EACH "BURIED" LOT.
- 3. GENERALLY, THE LARGEST LOT SHOULD BE STORED ON ONE SIDE OF THE MAGAZINE. HOWEVER, BOTH SIDES MAY BE USED TO STORE MORE THAN ONE LOT BY ERECTING ROWS SIMILAR TO THOSE SHOWN ON THE LEFT SIDE. EACH ADDITIONAL LOT MUST BE ACCESSIBLE FOR REMOVAL AND INSPECTION/INVENTORY IN ACCORDANCE WITH OTHER CRITERIA SPECIFIED IN THESE SPECIAL NOTES AND IN THE GENERAL NOTES ON PAGE 2.
- 4. EACH LOT WITHIN THE MAGAZINE MUST BE ACCESSIBLE FOR MOVEMENT BY MHE. A SINGLE-LOT OF PALLET UNITS IS CONSIDERED "ACCESSIBLE" IF NO MORE THAN TWELVE (12) "LIFTS" OF ANOTHER LOT OR LOTS HAVE TO BE MADE TO GAIN ACCESS TO THAT LOT. THE TERM "LIFT" MEANS HANDLING AND MOVING NOT MORE THAN TWO (2) PALLET UNITS OF PROJECTILES AT ONE TIME
- 5. FOR STORAGE OF MULTIPLE LOTS, THE DISTANCE FROM THE WALL WILL BE BASED ON THE OVERHEAD CLEARANCE REQUIRED FOR MHE.
- EACH LOT MUST BE STORED TWO (2) UNITS (MINIMUM) WIDE TO ACCOMMODATE WIDTH OF MHE DURING OPERATIONS.
- 7. WHEN TWO LOTS ARE STORED ADJACENT TO EACH OTHER, THEY SHOULD BE SEPARATED BY AT LEAST 1" TO PROVIDE CLEARANCE FOR REMOVAL OF EITHER LOT.
- 8. THE MHE AISLE MAY BE USED TO STORE ONE OR MORE STACKS OF ADDITIONAL LOTS OR ADDITIONAL ITEMS THAT ARE FROM A LOT ADJACENT TO THE MHE AISLE, THIS ADDITIONAL STORAGE IS TO BE ARRANGED IN A MANNER SIMILAR TO ARRANGEMENTS DEPICTED ON PAGES 21 AND 23 FOR THE "ADDITIONAL STORAGE LOCATIONS" (SHOWN BY DOTTED LINES). ADEQUATE SPACE FOR MHE OPERATION, AS DESCRIBED ON PAGES 21 AND 23, MUST BE MADE AVAILABLE FOR THE ADDITIONAL STORAGE. ALSO, COMPLIANCE WITH ALL OF THE MULTIPLE-LOT CRITERIA AS SET FORTH ON THIS PAGE MUST BE OBSERVED.



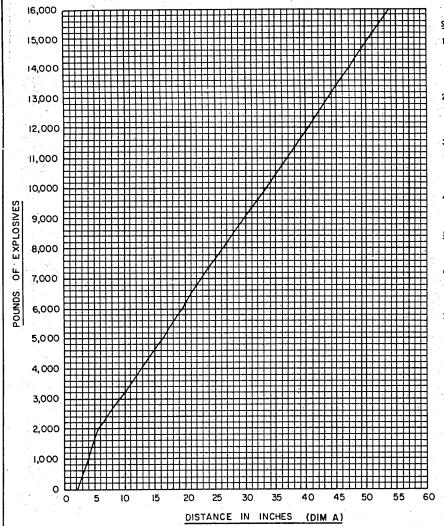
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- 2. AN INSPECTION/INVENTORY AISLE NOT LESS THAN 18" WIDE MUST BE PROVIDED AT ONE SIDE OF EACH "BURIED" LOT.
- 3. GENERALLY, THE LARGEST LOT SHOULD BE STORED IN THE REAR OR ON ONE SIDE OF THE MAGAZINE. HOWEVER, THESE AREAS MAY BE USED TO STORE MORE THAN ONE LOT BY ERECTING ROWS SIMILAR TO THOSE SHOWN IN THE CENTER AREA OR AS TYPICALLY INDICATED BY DOTTED LINES, EACH ADDITIONAL LOT MUST BE ACCESSIBLE FOR REMOVAL AND INSPECTION/INVENTORY IN ACCORDANCE WITH OTHER CRITERIA SPECIFIED IN THESE SPECIAL NOTES AND IN THE GENERAL NOTES ON PAGE 2.
- 4. EACH LOT WITHIN THE MAGAZINE MUST BE ACCESSIBLE FOR MOVEMENT BY MHE. A SINGLE-LOT OF PALLET UNITS IS CONSIDERED "ACCESSIBLE" IF NO MORE THAN TWENTY-FOUR (24) "LIFTS" OF ANOTHER LOT OR LOTS HAVE TO BE MADE TO GAIN ACCESS TO THAT LOT. THE TERM "LIFT" MEANS HANDLING AND MOVING NOT MORE THAN TWO (2) PALLET UNITS OF PROJECTILES AT ONE TIME.

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(SPECIAL NOTES CONTINUED)

- 5. WHEN TWO LOTS ARE STORED ADJACENT TO EACH OTHER, THEY SHOULD BE SEPARATED BY AT LEAST 1" TO PROVIDE CLEARANCE FOR REMOVAL OF EITHER LOT.
- 6. EACH LOT MUST BE STORED TWO (2) UNITS (MINIMUM) WIDE TO ACCOMMODATE WIDTH OF MHE DURING OPERATIONS, EXCEPT FOR A ROW ADJACENT TO AN INSPECTION/INVENTORY AISLE.
- 7. THE MHE AISLE MAY BE USED TO STORE ONE OR MORE STACKS OF ADDITIONAL LOTS OR ADDITIONAL ITEMS THAT ARE FROM A LOT ADJACENT TO THE MHE AISLE. THIS ADDITIONAL STORAGE IS TO BE ARRANGED IN A MANNER SIMILAR TO ARRANGEMENTS DEPICTED ON PAGES 21 AND 23 FOR THE "ADDITIONAL STORAGE LOCATIONS" (SHOWN BY DOTTED LINES). ADEQUATE SPACE FOR MHE OPERATION, AS DESCRIBED ON PAGES 21 AND 23, MUST BE MADE AVAILABLE FOR THE ADDITIONAL STORAGE. ALSO, COMPLIANCE WITH ALL OF THE MULTIPLE-LOT CRITERIA AS SET FORTH ON THIS PAGE MUST BE OBSERVED.

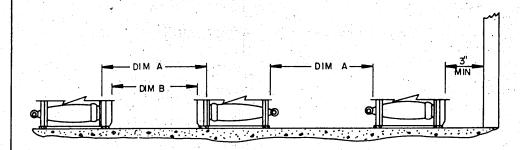
TYPICAL MULTIPLE-LOT STORAGE IN RECTANGULAR MAGAZINE



DISTANCE CURVE

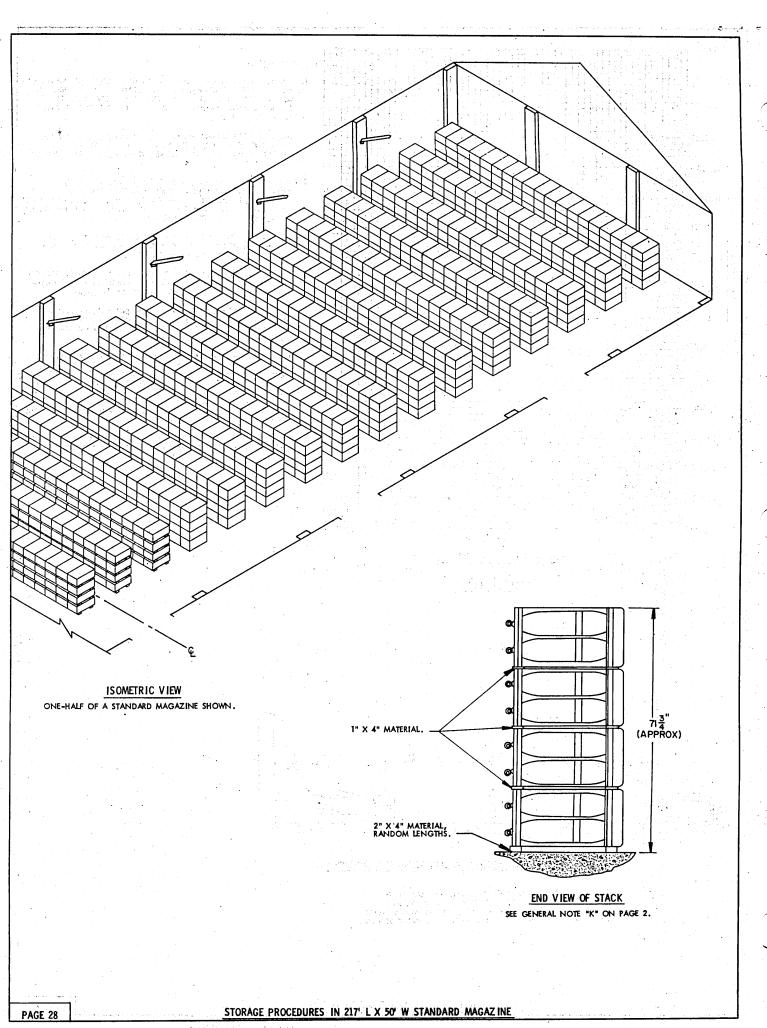
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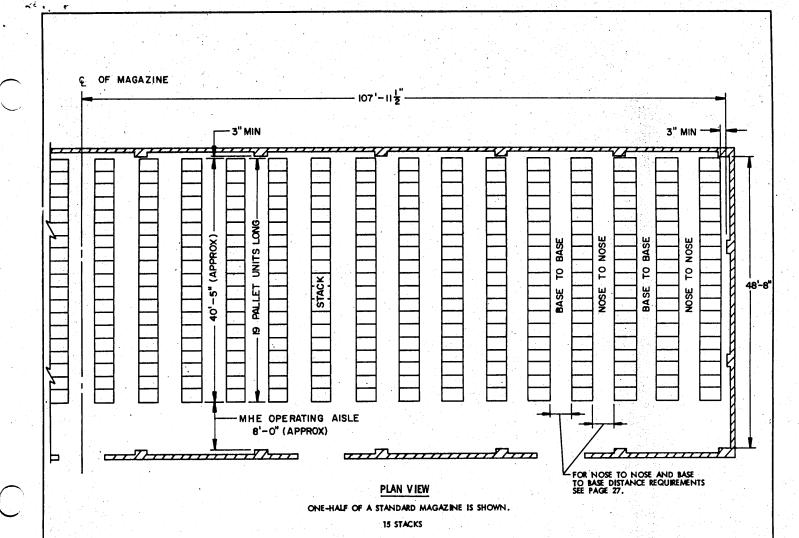
- THE DEPICTED "DISTANCE CURVE" AND THE "METHOD OF MEASURING NOSE TO NOSE AND BASE TO BASE DISTANCE" ARE REQUIRED TO BE USED FOR THE STORAGE OF PROJECTILE PALLET UNITS IN STANDARD ABOVE-GROUND MAGAZINES AS FURTHER DELINEATED ON PAGES 28 AND 29.
- ALL SEPARATE LOADING PROJECTILES WILL BE STORED NOSE TO NOSE AND BASE TO BASE THROUGHOUT THE MAGAZINE. FOR SPECIAL HANDLING EQUIPMENT REQUIRED, SEE GENERAL NOTE "K" ON PAGE 2.
- 3. THE DISTANCE CURVE DESIGNATES THE AISLE SPACING (DIM A BELOW) TO BE PROVIDED BETWEEN STACKS OF PROJECTILES. SIZE OF AISLE IS DETERMINED BY THE POUNDS OF EXPLOSIVE CONTAINED WITHIN A STACK. NOSE TO NOSE AND BASE TO BASE DIMENSIONS MUST NOT BE DECREASED UNDER ANY CONDITIONS.
- 4. CATEGORY (18) CLASS 1.2 AMMUNITION STORED IN ABOVE-GROUND MAGAZINES WILL BE PLACED IN STACKS OF NOT MORE THAN 15,000 POUNDS OF EXPLOSIVE EACH.
- 5. NOTE: STORAGE OF SOME SPECIFIC TYPES OF SEPARATE LOADING PROJECTILES MUST ALSO COMPLY WITH DIRECTIVES AND REGULATORY REQUIREMENTS OTHER THAN AS SPECIFIED HEREIN.
- 6. NOSE TO NOSE AND BASE TO BASE QUANTITY DISTANCE CURVE SHOWN IS BASED ON ABBRDEEN TESTS, AND IS DESIGNED TO LIMIT EXPLOSIONS TO ONE STACK IF PROJECTILES ARE STACKED ALLOWING AISLE SPACING AS SHOWN ON CURVE.
- 7. MULTIPLE LOTS OF ITEMS MAY BE STORED IN A MAGAZINE. ALSO, MORE THAN ONE LOT OF ITEMS MAY BE STORED WITHIN A STACK; HOWEVER, ITEMS OF ONE LOT WILL NOT BE STACKED ON TOP OF ITEMS FROM ANOTHER LOT. ADDITIONALLY, AN MHE OPPRATING AISLE MUST. BE PROVIDED, AS REQUIRED, TO PERMIT ACCESS TO ANY LOT. LOTS SHOULD BE SEPARATED BY A 3" MINIMUM SPACE. DUNNAGE MATERIAL USED FOR ONE LOT WILL NOT EXTEND UNDER ITEMS OF AN ADJACENT LOT.
- 8. PALLET UNITS WILL NOT BE STACKED MORE THAN FOUR (4) UNITS HIGH WHEN PROJECTILES ARE IN THE HORIZONTAL POSITION.



METHOD OF MEASURING NOSE TO NOSE & BASE TO BASE DISTANCE

DIM A WILL BE THE DISTANCE IN INCHES AS DETERMINED FROM THE DISTANCE CURVE SHOWN ABOVE. SEE SPECIAL NOTE 3 ABOVE. DIM B EQUALS DIM A MINUS 10", BASED ON PALLET UNITS HAVING 3-5/8" HIGH SKIDS AND 1-3/8" THICK STRINGERS.





STORAGE AS SHOWN

ONE-HALF OF A STANDARD MAGAZINE.

QUANTITY

PALLET UNITS (76/STACK) ----PROJECTILES (6/PALLET) -----

FOR "GENERAL NOTES" AND "MATERIAL SPECIFICATIONS", SEE PAGE 2.

BILL OF MATERIAL (PER STACK)			
LUMBER	# LINEAR FEET	BOARD PEET	
1" X 4" 2" X 4"	239.01 79.67	79.67 53.33	

RANDOM LENGTHS MAY BE USED. SEE SPECIAL NOTES ON THIS PAGE FOR ADDITIONAL GUIDANCE.

SPECIAL NOTES:

- RANDOM LENGTHS MAY BE USED FOR FLOOR AND INTERMEDIATE DUNNAGE, HOWEVER, FOR THE INTERMEDIATE DUNNAGE, 50" LONG PIECES WILL ENHANCE STORAGE OPERATIONS. CAUTION: BASED ON HANDLING TWO PALLETS PER LIFT, NOT MORE THAN TWO PIECES CAN BE USED TO MAKE A 50" LONG PIECE, AND THESE PIECES CANNOT BE OF EQUAL LENGTH (25"). THE SHORTEST OF THE TWO PIECES CAN RANGE IN LENGTH FROM 15" TO 22". IF TWO RANDOM LENGTH PIECES ARE USED TO FORM BOTH 50" LONG PIECES OF INTERMEDIATE DUNNAGE UNDER ONE "SET" OF TWO PALLETS, THE JOINTS WITHIN THESE PIECES ARE TO BE STAGGERED.
- THE STORAGE AS SHOWN IS BASED ON HANDLING TWO PALLET UNITS PER LIFT. STORAGE CAN BE ACCOMPLISHED BY HANDLING ONE PALLET UNIT FER LIFT, HOWEVER, DUE TO STACK STABILITY REQUIREMENTS, RANDOM LENGTH INTERMEDIATE DUNINAGE IS NOT FERMITTED AND THE MINIMUM LENGTH FOR INTERMEDIATE DUNINAGE PECES IS 25" (EQUAL TO DIMENSION OF ONE PALLET UNIT).

