STORAGE IN APPROVED MAGAZINES OF SOLUTION A, UNITIZED 4 DRUMS PER 48" L X 48" W X 39-3/4" H PALLET UNIT AND SOLUTION B, UNITIZED 4 DRUMS PER 40" L X 48" W X 34" H PALLET UNIT

INDEX

<u>ITEM</u>	PAGE(S)
GENERAL NOTES, AND MATERIAL SPECIFICATIONS DETAILS STORAGE PROCEDURES (EARTH-COVERED MAGAZ INES):	
81'-0', 60'-8' AND 40'-4" L X 26'-6" W X 12'-9" H IGLOO MAGAZINES	-
52' DIA CORBETTA MAGAZINE	28-31 32-35 36

			REVIS	SIONS	CHECKER	n-c	203	JF5		
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					APPROVED MATERIEL	NO ORDER DEVELOPHI	OF COME	ANDING BENER READINESS CO	AL, U. S. ARMY MMAND (DARCOM)	
-		.'	7		>	U.S. ARMI	DEFEN	DE AMMUNITION	CENTER AND SCHOOL	<u>. </u>
					U.S.	ARM	Y D	ARCOM	DRAWING	3
			ΓZ			APF	RIL	19	80	
			\vee		CLASS	DIVIS	NOI	DRAWING	FILE	
					19	4	8	4148	3 1-3-4-14 22 PN 1000	0

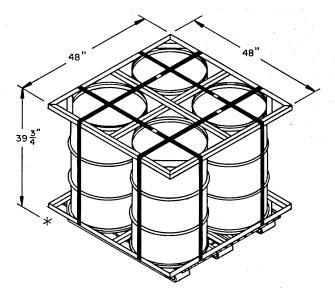
DO NOT SCALE

GENERAL NOTES

- A. THIS DOCUMENT HAS BEEN PREPARED AND ISSUED IN ACCORDANCE WITH AR 740-1, AND AUGMENTS TM 743-200-1 (CHAPTER 5).
- 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 SOLUTION A AND/OR SOLUTION B PALLET UNITS AS DETAILED ON PAGE 3, 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. 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.
- D. 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.
- E. THE USE OF "FLOOR DUNNAGE" UNDER METAL PALLETS IS OPTIONAL, ALTHOUGH THE USE OF THIS TYPE OF DUNNAGE IS DELINEATED WITHIN THIS STORAGE PROCEDURE DRAWING. THE PURPOSE OF FLOOR DUNNAGE IS TO HELP KEEP THE RUNNERS OF A PALLET DRY, THUS AIDING IN PREVENTING DETERIORATION DUE TO OXIDATION (RUSTING). THEREFORE, FLOOR DUNNAGE SHOULD BE USED WHEN STORING IN A MAGAZINE THAT IS KNOWN TO HAVE A "DAMP" FLOOR. ALSO, IN LIEU OF USING ONE-INCH THICK FLOOR DUNNAGE AS SPECIFIED, THE USE OF THICKER FLOOR DUNNAGE MAY BE REQUIRED, AND SHOULD BE USED, TO ACHIEVE THE DESIRED OBJECTIVE.
- F. IF AVAILABLE MHE PERMITS, ADDITIONAL PALLETIZED UNITS MAY BE STORED WITHIN THE FRONTAL AREA AND/OR OTHER AVAILABLE AREA OF THE MAGAZINE.
- G. THE HEIGHT OF THE PACKAGE GUARD ON SOME FORKLIFT TRUCKS MAY NOT PERMIT PLACEMENT OF SOME TOP LAYER UNITS IN THE STACKS SHOWN IN THE STORAGE VIEWS HEREIN, UNLESS TWO UPPER PALLET UNITS ARE HANDLED AS ONE LIFT OR THE PACKAGE GUARD IS REMOVED (TIME CARRIAGE WILL IN MOST INSTANCES PROVIDE ADEQUATE PACKAGE GUARD PROTECTION). ONLY A FORKLIFT TRUCK OF ADEQUATE CAPACITY WILL BE USED WHEN LIFTING TWO PALLET UNITS AS ONE LIFT.
- H. STACK-STABILIZING DUNNAGE IN THE FORM OF "SHIMS" PROBABLY WILL BE REQUIRED TO ACHIEVE SOUND AN ACCEPTABLE STABLE STACKS. SHIM MATERIAL OF VARYING THICKNESSES WILL BE USED 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,
- J. SOLUTION A AND/OR SOLUTION B PRESENTLY STORED IN ACCORDANCE WITH A PRIOR APPROVED DRAWING NEED NOT BE RE-STORED SOLELY TO CONFORM TO THE PROCEDURES SPECIFIED IN THIS DOCUMENT.
- K. DUNNAGE LUMBER SPECIFIED THROUGHOUT THIS PROCEDURAL DRAWING IS OF NOMINAL SIZE. FOR EXAMPLE, 1" X 6" MATERIAL IS ACTUALLY 3/4" THICK BY 5-1/2" WIDE.
- L. PORTIONS OF THE MAGAZINES, SUCH AS SIDEWALLS, END WALLS, AND ROOFS, HAVE NOT BEEN SHOWN IN THE STORAGE VIEWS FOR CLARITY PURPOSES.
- M. 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 PAGE 36.
- N. ALTHOUGH SPECIFIC PROCEDURES ARE INCLUDED IN THIS DRAWING FOR STORING MULTIPLE LOTS WITHIN ONE STRUCTURE, THE BASIC STORAGE PATTERNS AS SHOWN ON PAGES 4 THRU 35 CAN ALSO BE ADAPTED FOR THE STORING OF MORE THAN ONE LOT. LOTS WHEN STORED IN ACCORDANCE WITH A BASIC STORAGE PATTERN MAY BE STORED WITH ONE OR MORE ROWS USED FOR EACH LOT. A SPACE OF APPROXIMATELY 1" WILL HAVE TO BE LEFT BETWEEN ADJACENT ROWS CONTAINING DIFFERENT LOTS. IN BASIC STORAGE PATTERNS WHERE THE WIDTH OF A ROW IS ESTABLISHED BY THE 48" UNIT-DIMENSION, EACH ROW MAY BE A DIFFERENT LOT AND BE READILY REMOVABLE. IN BASIC STORAGE PATTERNS WHERE THE WIDTH OF A ROW IS ESTABLISHED BY THE 40" UNIT-DIMENSION, A LOT MUST CONSIST OF TWO OR MORE ROWS TO PROVIDE ADEQUATE SPACE TO ACCOMMODATE THE WIDTH OF A FORKLIFT TRUCK FOR STORING OR REMOVING THE LOT. HOWEVER, WHEN THE SIZE OF A LOT REQUIRES THE SPACE OF ONLY ONE ROW, IT IS PERMISSIBLE TO STORE THAT LOT WITH THE 48" UNIT-DIMENSION ESTABLISHING THE WIDTH OF THAT ROW, PROVIDING THE STORAGE PRINCIPLES SPECIFIED ARE FOLLOWED AS CLOSELY AS POSSIBLE. THE 1" SPACE BETWEEN LOTS, AS STATED ABOVE, WILL NOT BE EXCEEDED SOLELY TO ACCOMMODATE THE WIDTH OF A FORKLIFT TRUCK. WHEN A BASIC STORAGE PATTERN IS USED FOR MULTIPLE-LOTS, IT IS PERMISSIBLE TO ELIMINATE THE USE OF A STAGGERED-LAYER STORAGE PATTERN AS SHOWN, FOR ADDITIONAL REQUIREMENTS AND GUIDANCE, SEE THE SPECIAL NOTES FOR MULTIPLE-LOT STORAGE ON PAGE 36.

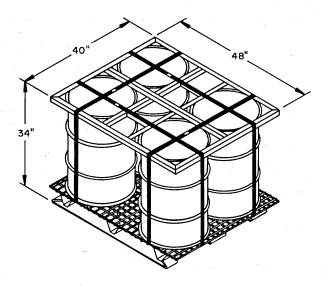
MATERIAL SPECIFICATIONS

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



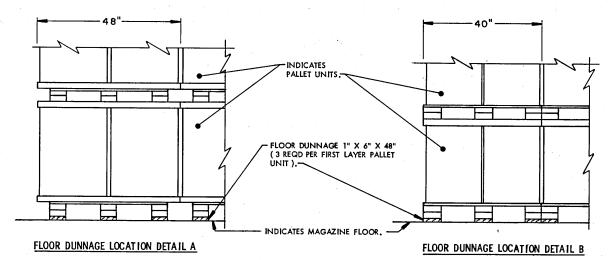
SOLUTION A, 41 PALLET

UNIT WEIGHT ----- 1,969 LBS (APPROX)



SOLUTION B, 4/ PALLET

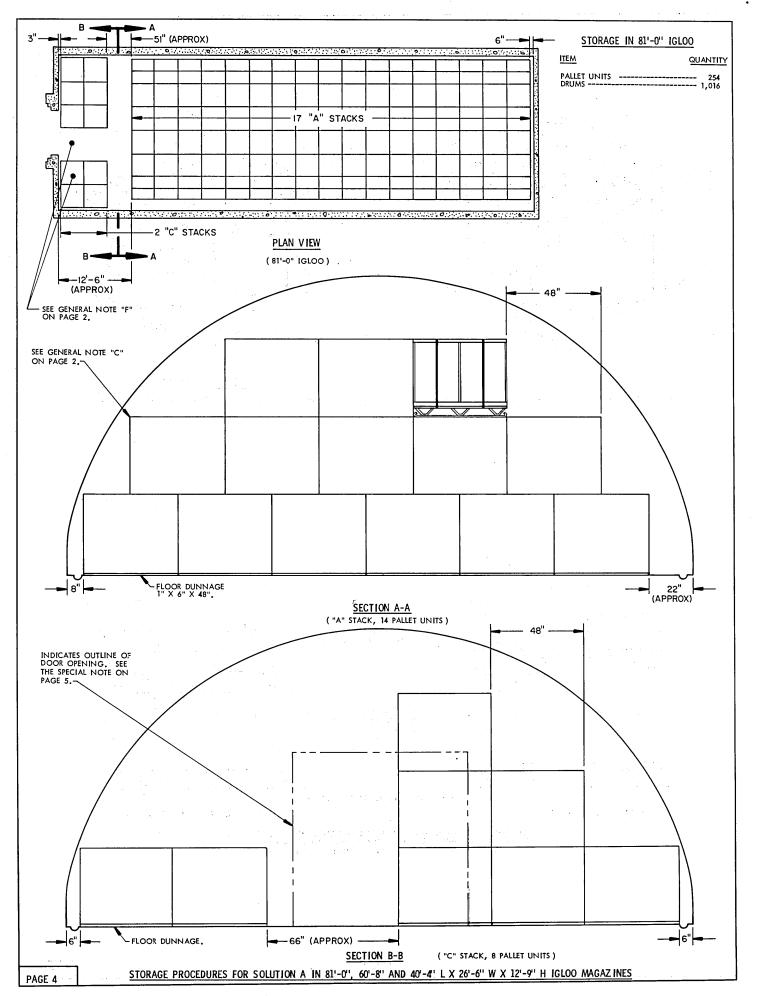
UNIT WEIGHT ----- 1,636 LBS (APPROX)

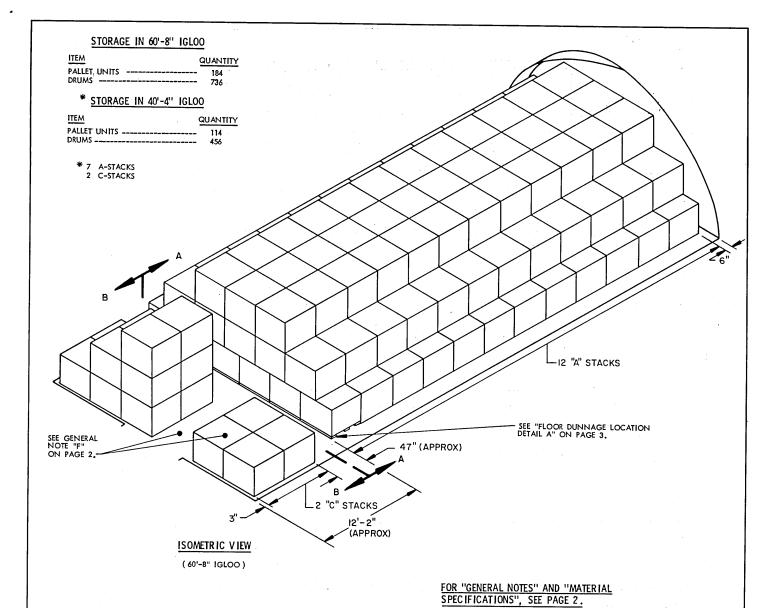


ISOMETRIC VIEWS WITHIN THIS DRAWING DO NOT DEPICT ALL FLOOR DUNNAGE THAT IS REQUIRED WHEN FLOOR DUNNAGE IS USED. FLOOR DUNNAGE IS SHOWN AT SOME LOCATIONS TO PROVIDE POSITIONING GUIDANCE.

DETAILS

PAGE 3



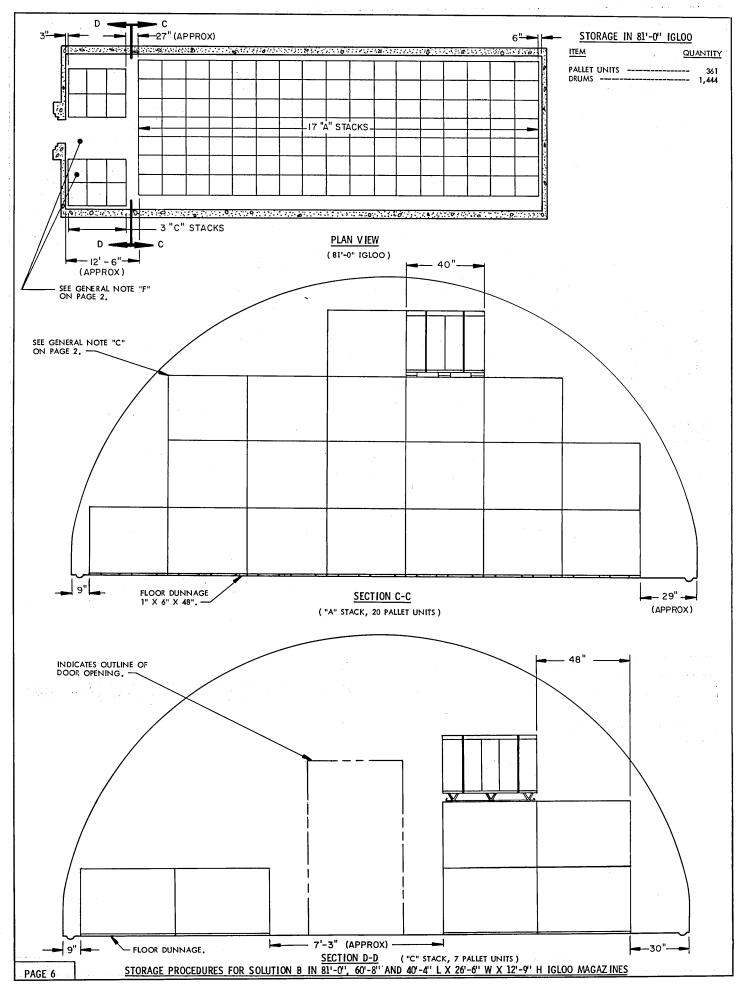


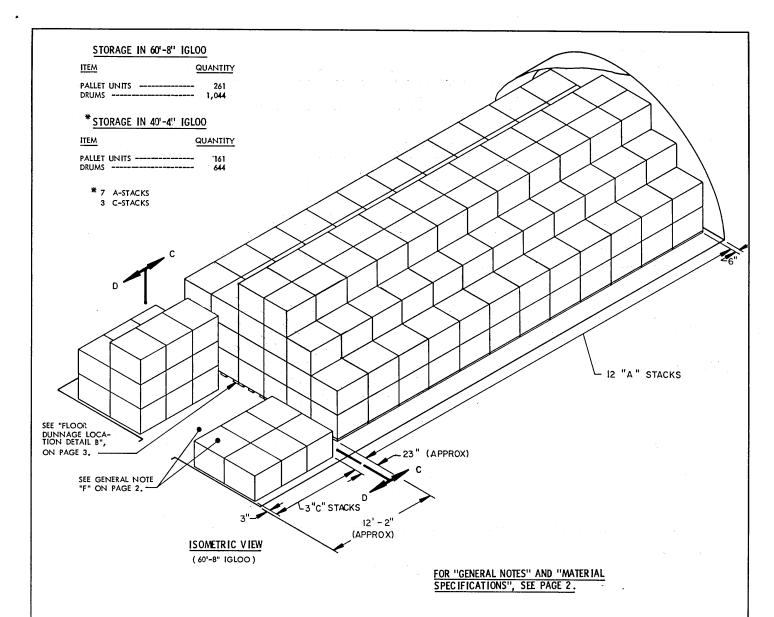
BILI	OF MATERIAL (PER	STACK) **
TYPE STACK	1" X 6" DUNNAGE LUMBER	
	LINEAR FEET	BOARD FEET
A	72.00	36.00
С	60.00	30.00

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

SPECIAL NOTE:

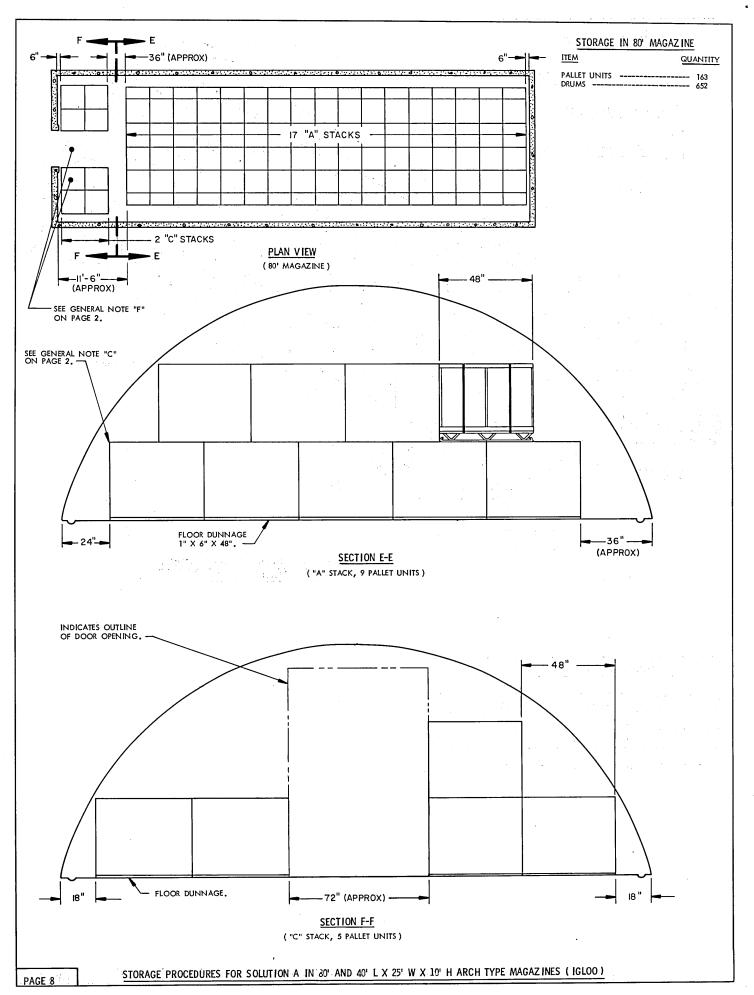
DUE TO THE SIZE OF PALLETIZED SOLUTION A UNIT, MAGAZINES MUST HAVE A DOOR OPENING OF SUFFICIENT WIDTH TO PERMIT ENTRY INTO A MAGAZINE FOR STORAGE. THE STANDARD 48" WIDE SINGLE DOOR OPENING IS NOT ADEQUATE.

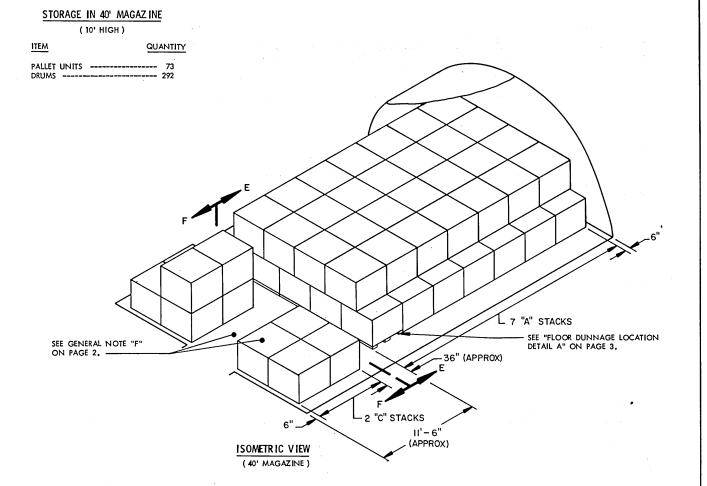




BILL	OF.MATERIAL (PER S	TACK) **
TOPE STACK	1" X 6" DUNNA	GE LUMBER
TYPE STACK	LINEAR FEET	BOARD FEET
Α	84.00	42.00
c c	48.00	24.00

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

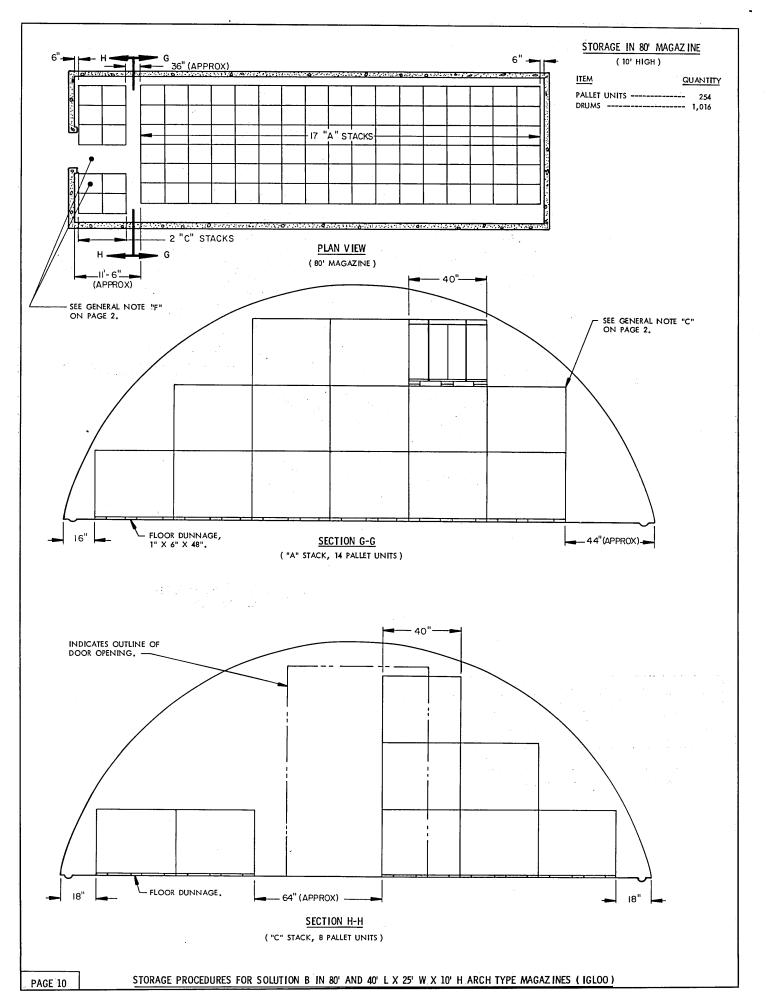


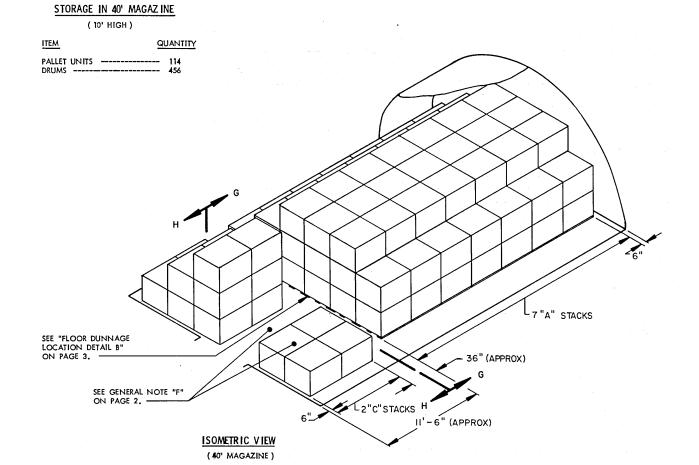


FOR "GENERAL NOTES" AND MATERIAL SPECIFICATIONS", SEE PAGE 2.

BILL O	F MATERIAL (PER S	TACK)*
	1" X 6" DUNNAGE LUMBER	
TYPE STACK	LINEAR FEET	BOARD FEET
A	60.00	30.00
C	48.00	24.00

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

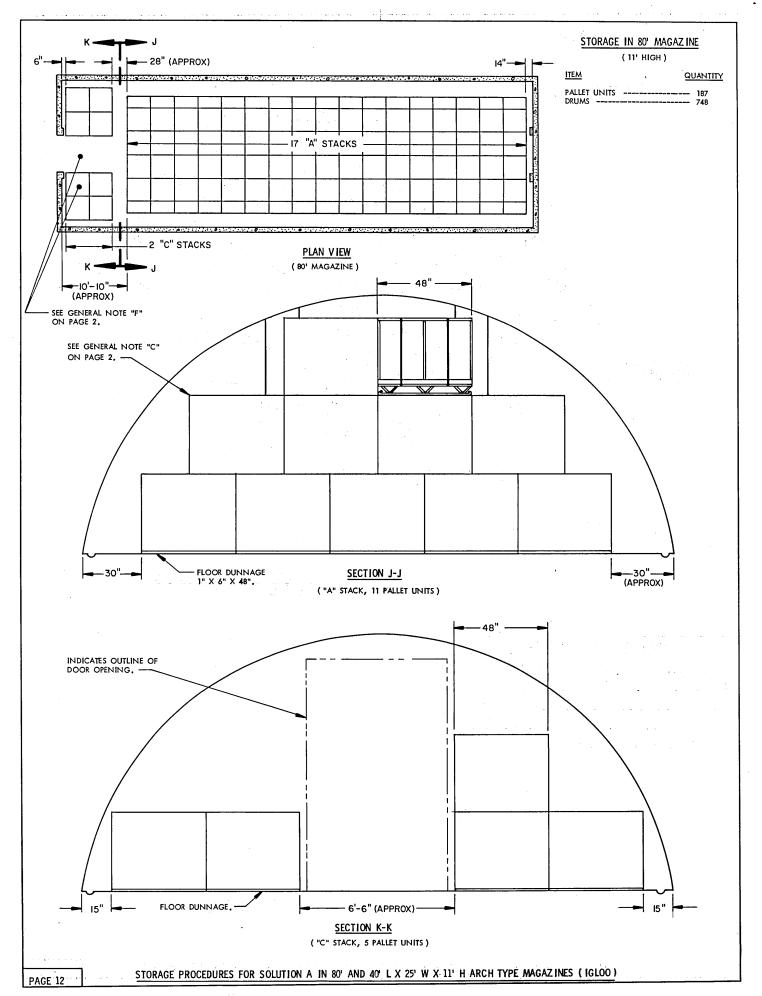


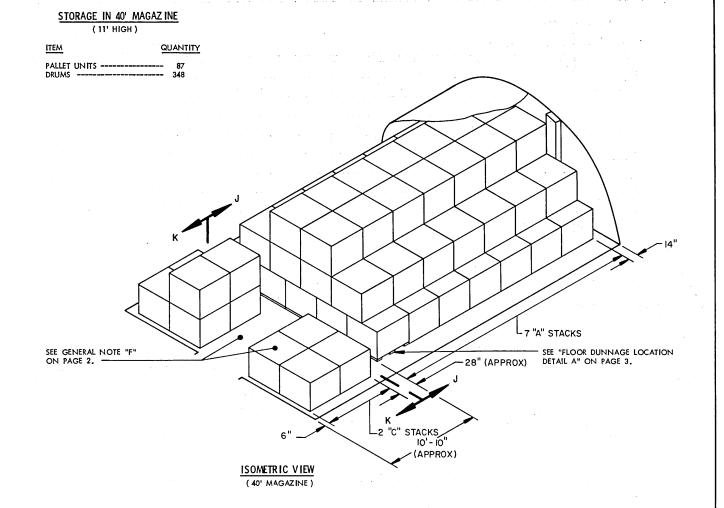


FOR "GENERAL NOTES" AND "MATERIAL SPECIFICATIONS" SEE PAGE 2.

BILL (OF MATERIAL (PER ST/	/CK)) ♣
TO OTHER	1" X 6" DUNN	AGE LUMBER
TYPE STACK	LINEAR FEET	BOARD FEET
A	72.00	36,00
С	60.00	30.00

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

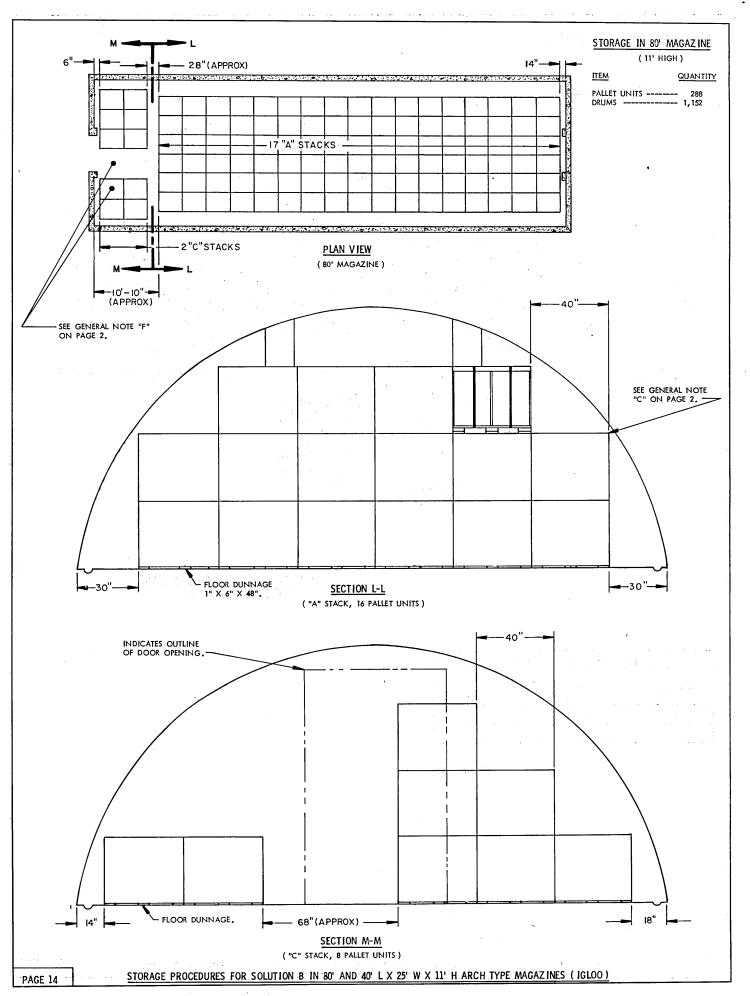


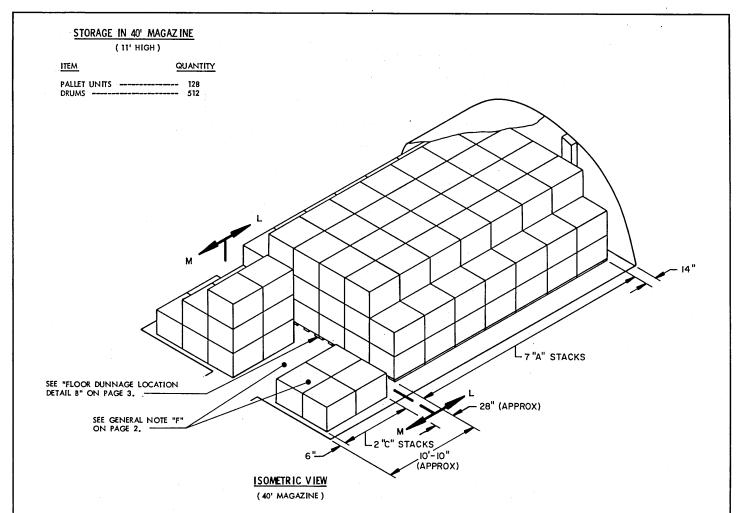


FOR "GENERAL NOTES" AND "MATERIAL SPECIFICATIONS", SEE PAGE 2.

BILL C	F MATERIAL (PER SI	ACK) *
	1" X 6" DUNNAC	SE LUMBER
TYPE STACK	LINEAR FEET	BOARD FEET
Α	60.00	30.00
С	48.00	24.00

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



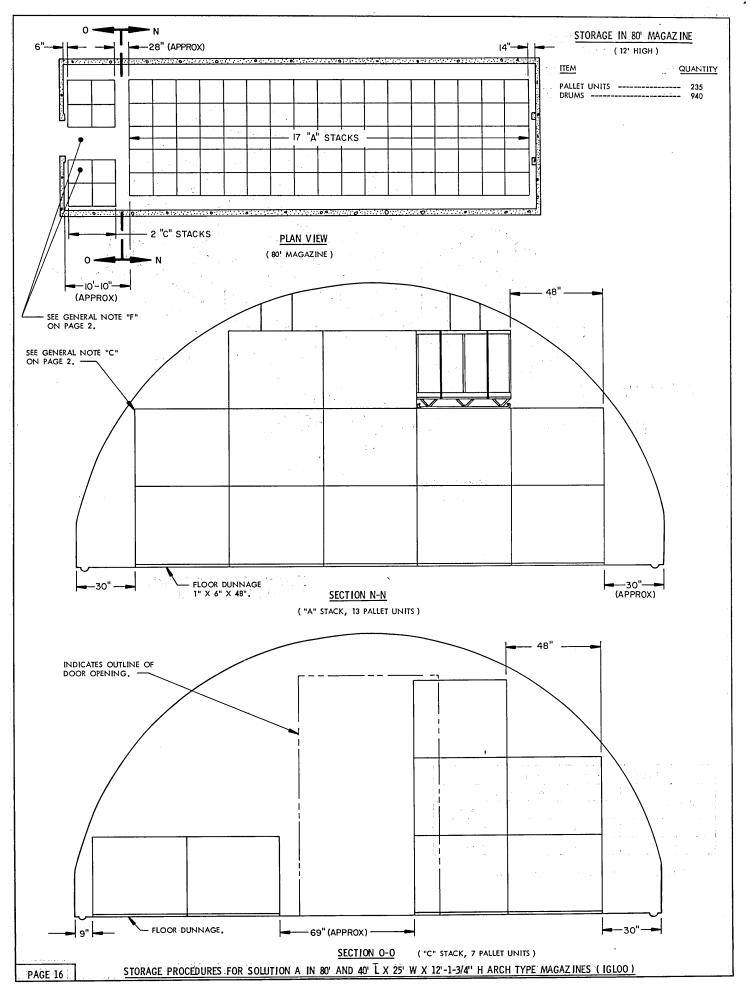


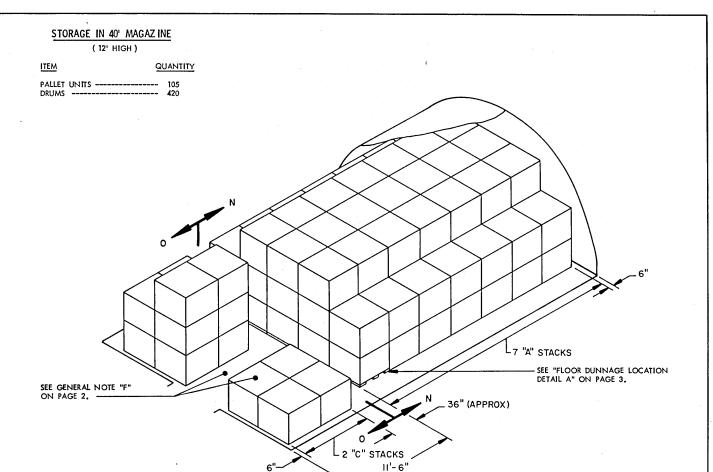
FOR "GENERAL NOTES" AND "MATERIAL SPECIFICATIONS", SEE PAGE 2.

BILL OF	MATERIAL (PER STAC	CK)*	
	1" X 6" DUNNA	DUNNAGE LUMBER	
TYPE STACK	LINEAR FEET	BOARD FEET	
A	72.00	36.00	
С	60.00	30.00	

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

STORAGE PROCEDURES FOR SOLUTION B IN 80' AND 40' L X 25' W X 11' H ARCH TYPE MAGAZINES (IGLOO)





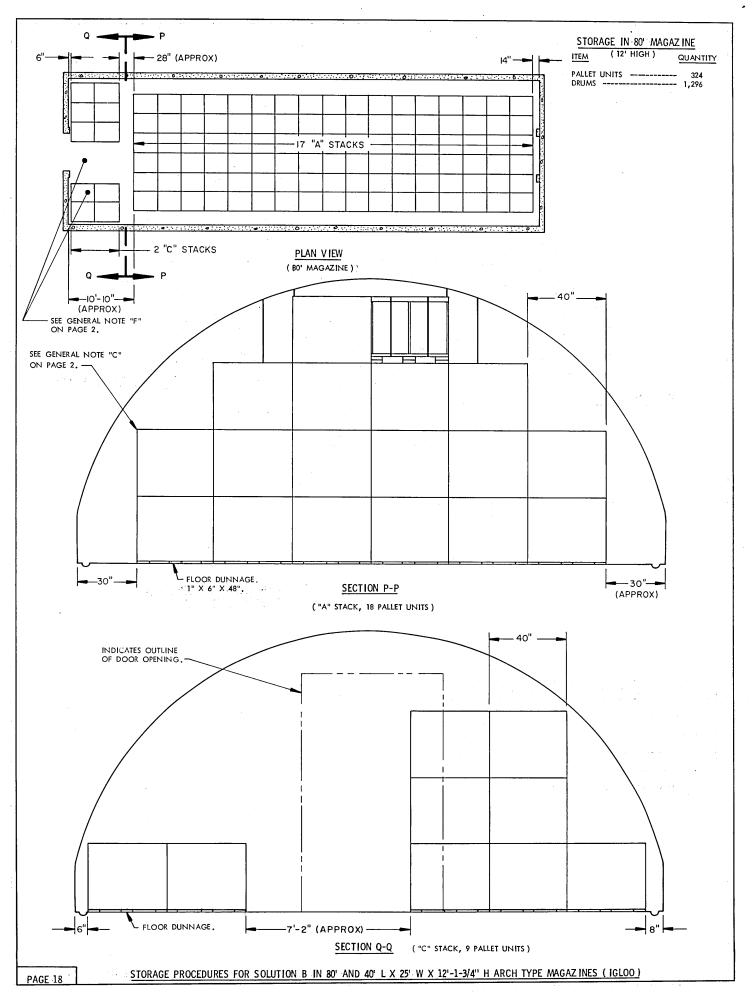
(APPROX)

(40' MAGAZINE)

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

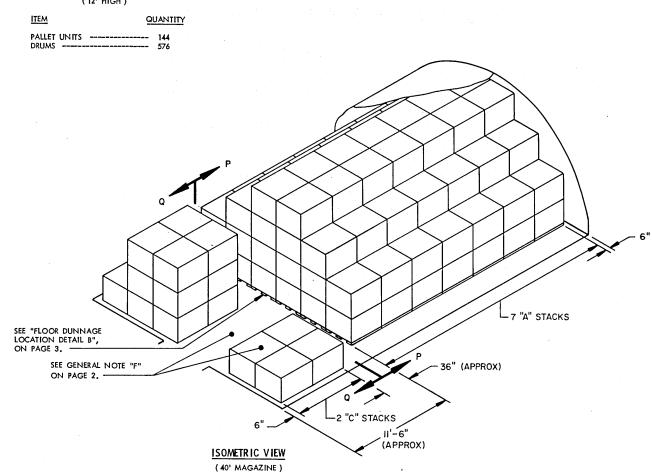
BILL	OF MATERIAL (PER ST	ACK)*
	1" X 6" DUNNA	GE LUMBER
TYPE STACK	LINEAR FEET	BOARD FEET
A	60,00	30.00
С	48.00	24.00

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



STORAGE IN 40' MAGAZINE

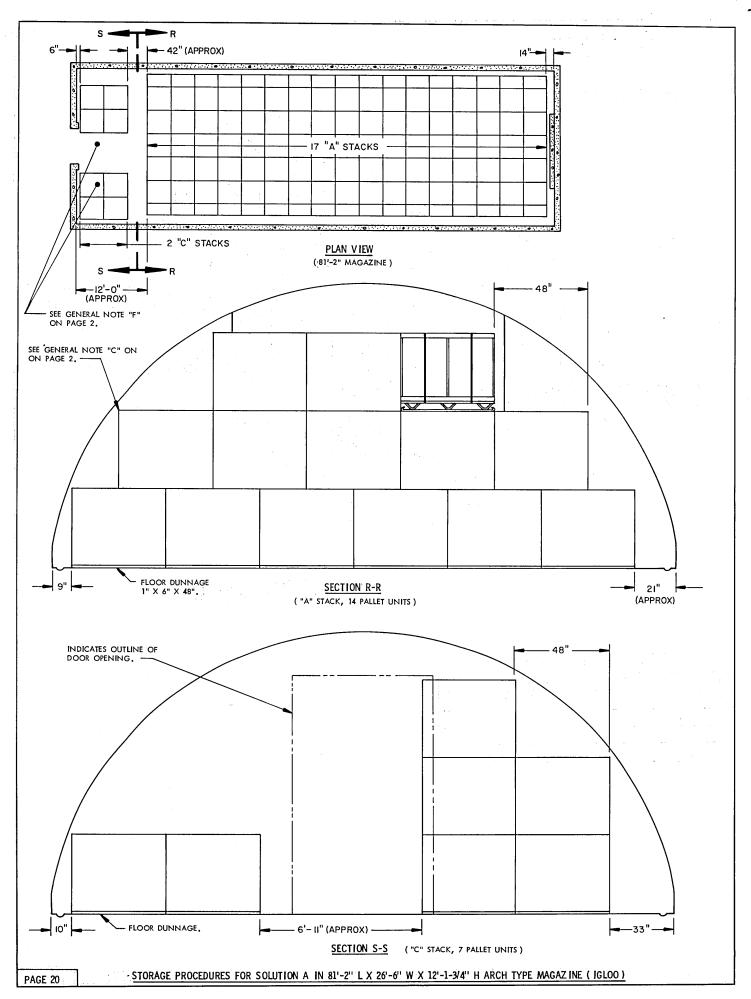
(12' HIGH)

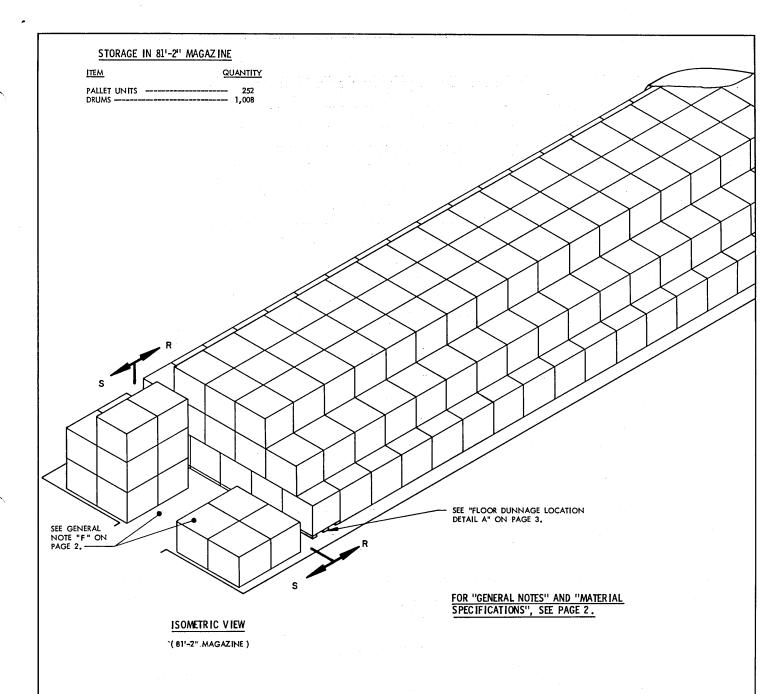


FOR "GENERAL NOTES" AND "MATERIAL SPECIFICATIONS", SEE PAGE 2.

BILL OF	MATERIAL (PER STAC	K) *	
TYPE STACK	1" X 6" DUNN	K 6" DUNNAGE LUMBER	
TITE STACK	LINEAR FEET	BOARD FEET	
. A	72.00	36.00	
С	60.00	30.00	

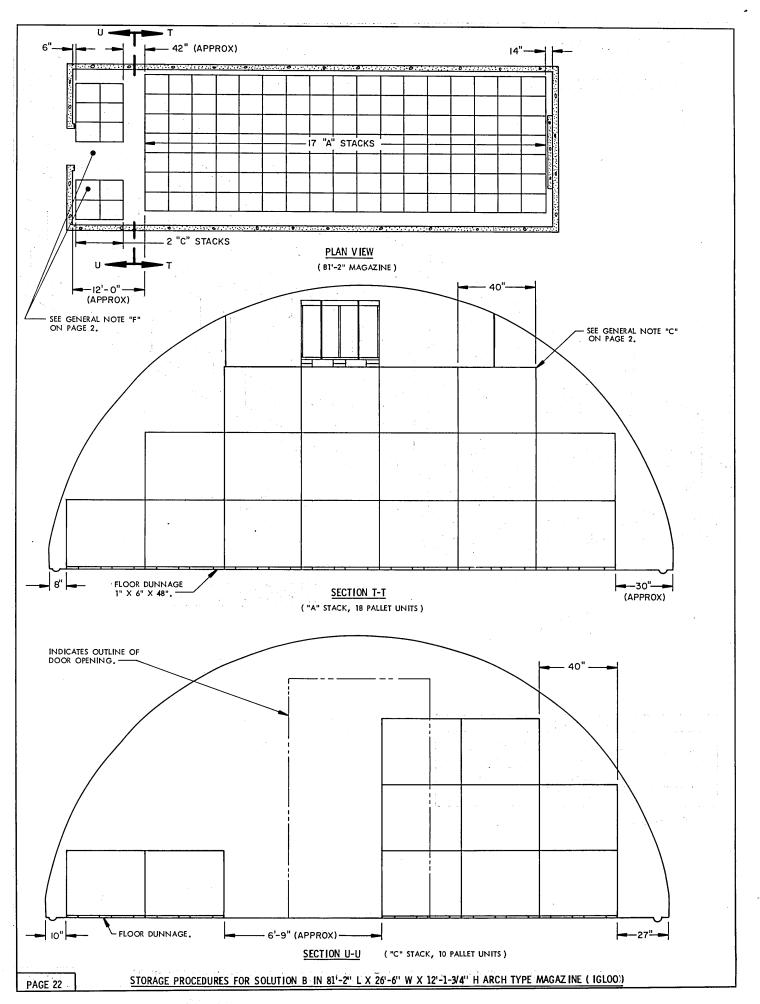
^{*} SEE GENERAL NOTES "E" AND "H" ON PAGE 2.

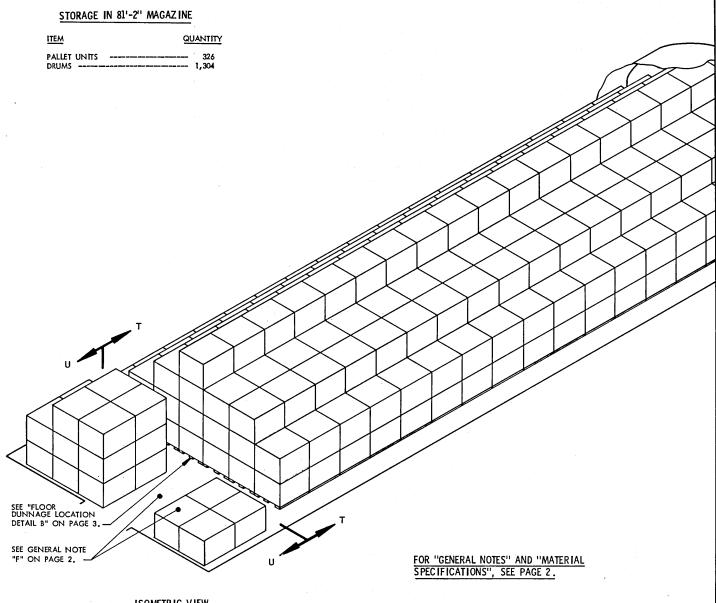




BILL OF M	IATERIAL (PER STACK) *
	1" X 6" DUNNAGE LUMBER	
TYPE STACK	LINEAR FEET	BOARD FEET
A	72.00	36.00
С	48.00	24.00

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





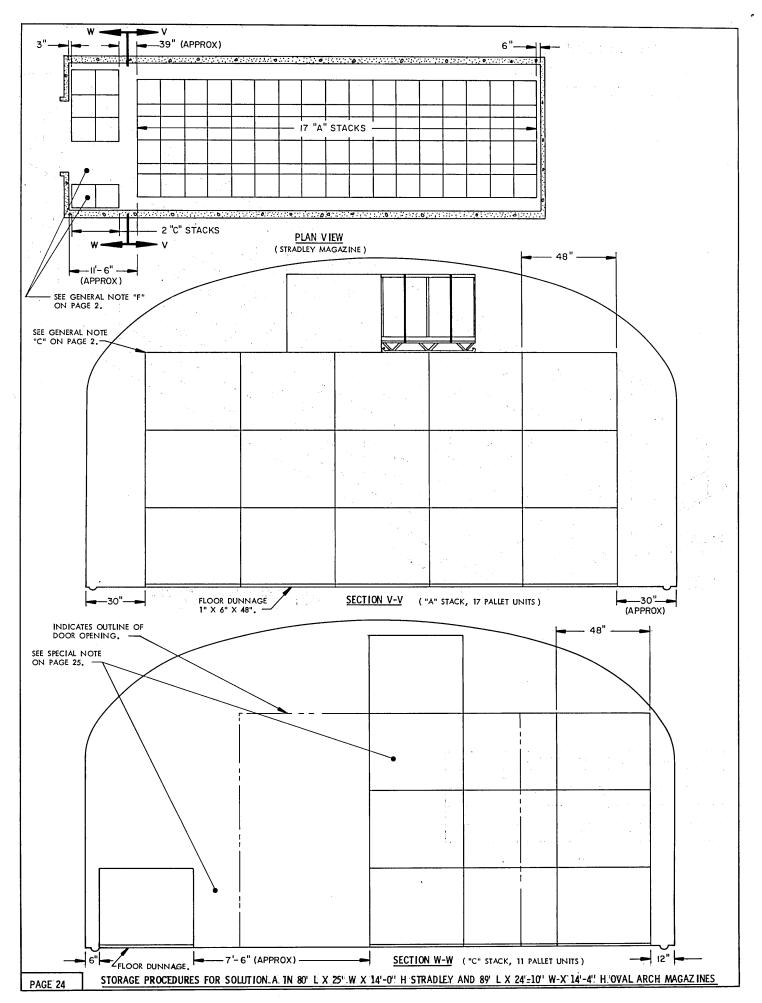
ISOMETRIC VIEW

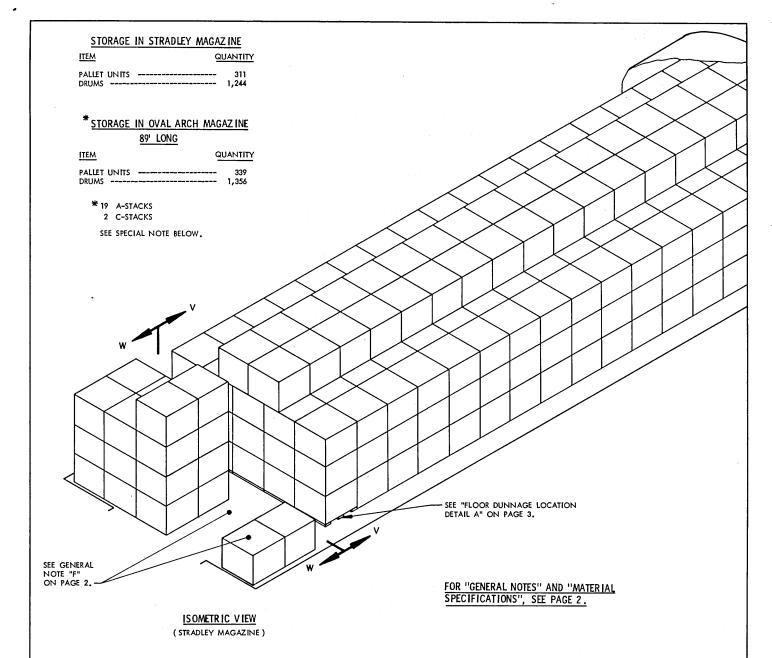
(81'-2" MAGAZINE)

BILL OF	MATERIAL (PER STAC	K) *
7/75 (57.4.6)/	1" X 6" DUNNA	GE LUMBER
TYPE STACK	LINEAR FEET	BOARD FEET
A	84.00	42.00
С	60.00	30.00

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

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





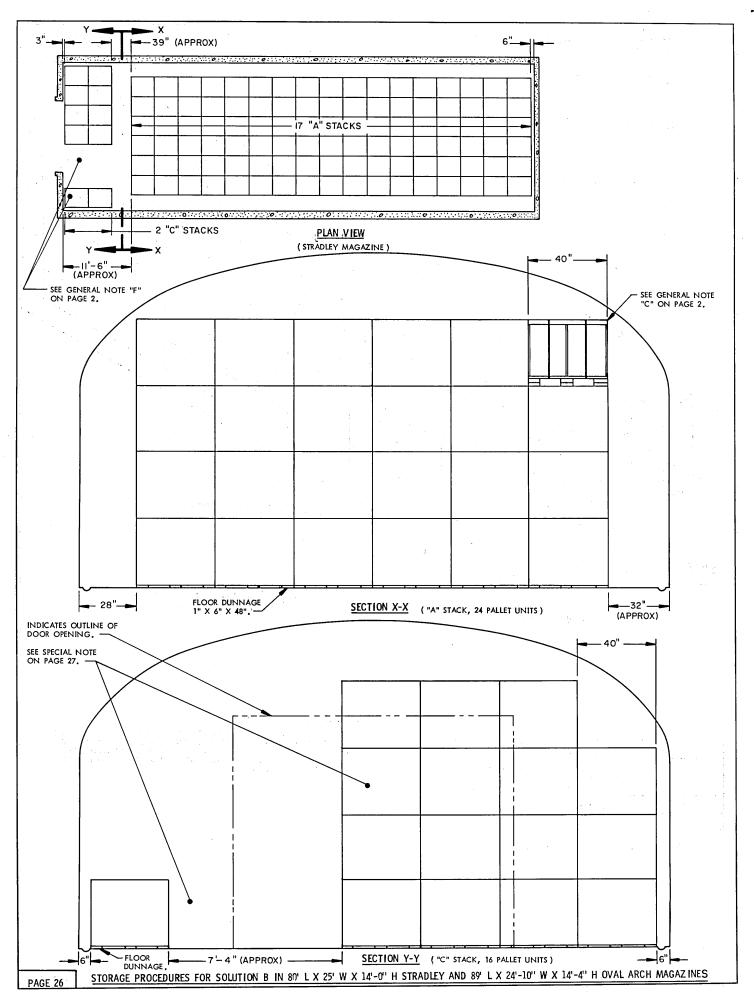
TYPE STACK 1" X 6" DUNNAGE LUMBER LINEAR FEET BOARD FEET A 60.00 30.00 C 48.00 24.00

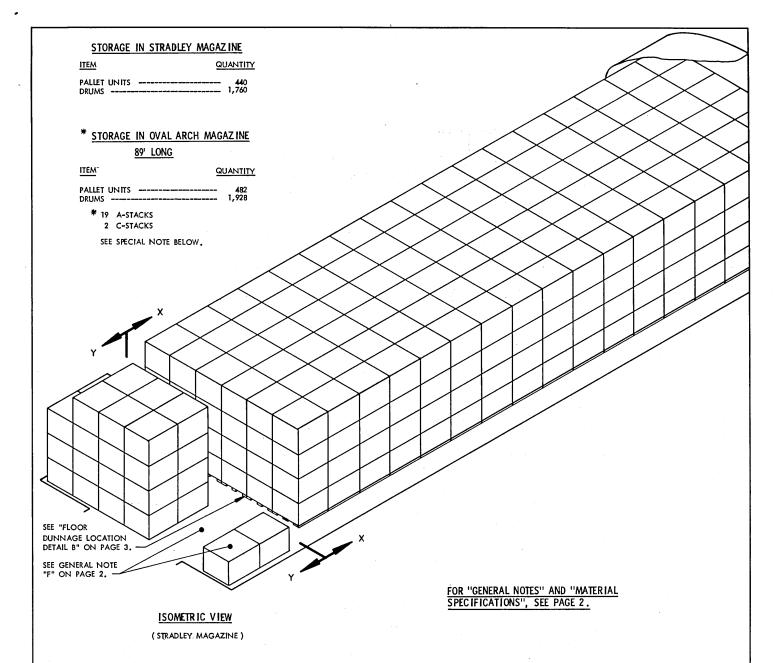
SPECIAL NOTE:

FOR STORAGE IN OVAL ARCH MAGAZINES, THE ONE (1) ROW OF PALLET UNITS ADJACENT TO THE OPERATING AISLE AS SHOWN IN "SECTION W-W" MUST BE OMITTED AND ONE (1) PALLET UNIT CAN BE ADDED ON THE OPPOSITE SIDE OF THE OPERATING AISLE BECAUSE OF THE RELATIVELY NARROW DOOR OPENING. THIS WILL REDUCE THE "C" STACKS TO 8 UNITS EACH.

STORAGE PROCEDURES FOR SOLUTION A IN 80' L X 25' W X 14'-0" H STRADLEY AND 89' L X 24'-10" W X 14'-4" H OVAL MAGAZINES

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





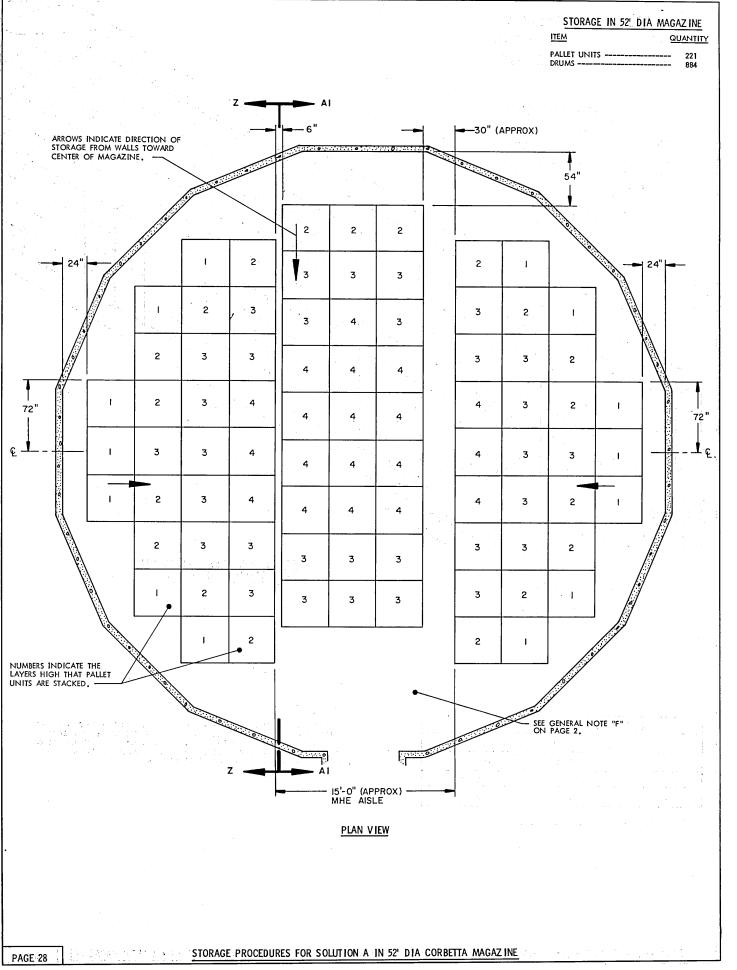
BILL OF MATERIAL (PER STACK) * *			
T. (DE . CT.) CV	1" X 6" DUNNA	AGE LUMBER	
TYPE STACK	LINEAR FEET	BOARD FEET	
A	72,00	36.00	
С	60.00	30.00	

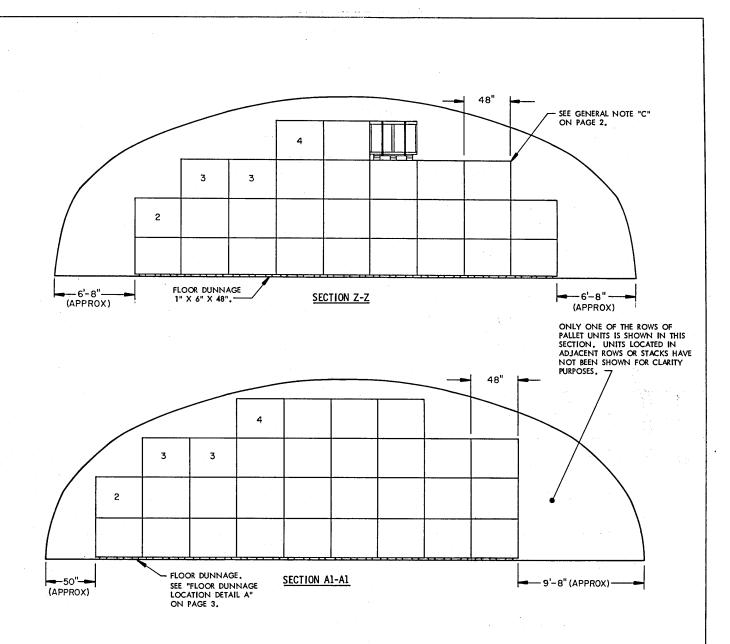
^{* *} SEE GENERAL NOTES "E" AND "H" ON PAGE 2.

SPECIAL NOTE:

FOR STORAGE IN OVAL ARCH MAGAZINES, THE ONE (1) ROW OF PALLET UNITS ADJACENT TO THE OPERATING AISLE AS SHOWN IN "SECTION Y-Y" MUST BE OMITTED AND ONE (1) PALLET UNIT CAN BE ADDED ON THE OPPOSITE SIDE OF THE RELATIVELY NARROW DOOR OPENING. THIS WILL REDUCE THE "C" STACKS TO 13 UNITS EACH.

STORAGE PROCEDURES FOR SOLUTION B IN 80' L X 25' W X 14'-0" H STRADLEY AND 89' L X 24'-10" W X 14'-4" H OVAL ARCH MAGAZINES





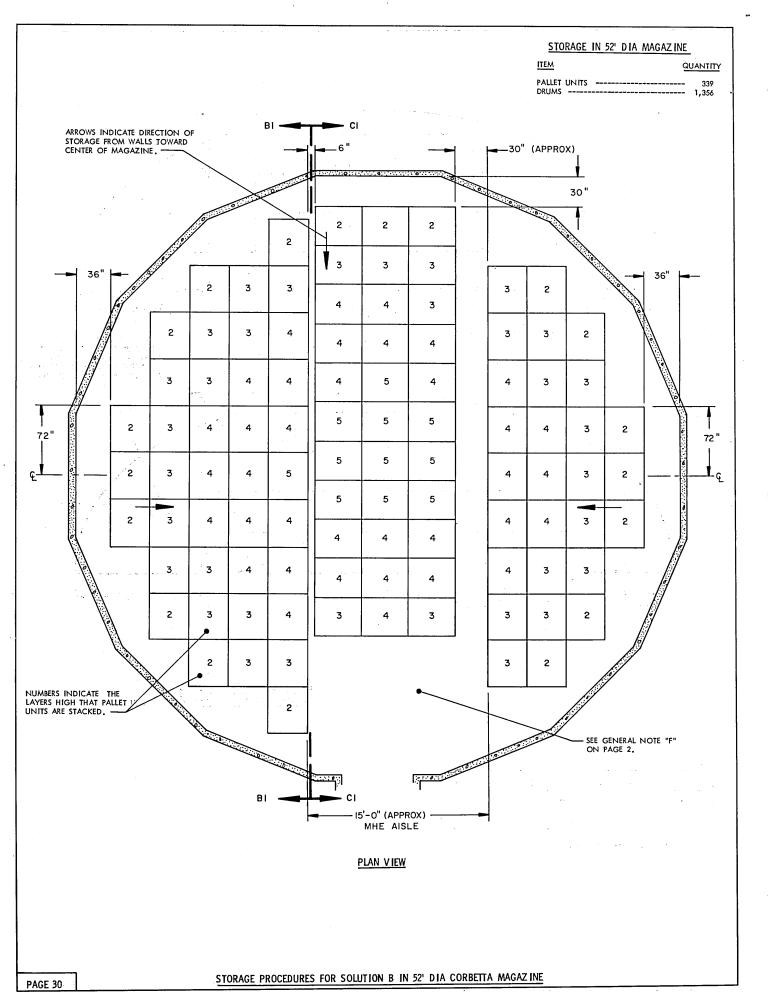
FOR "GENERAL NOTES" AND "MATERIAL SPECIFICATIONS", SEE PAGE 2.

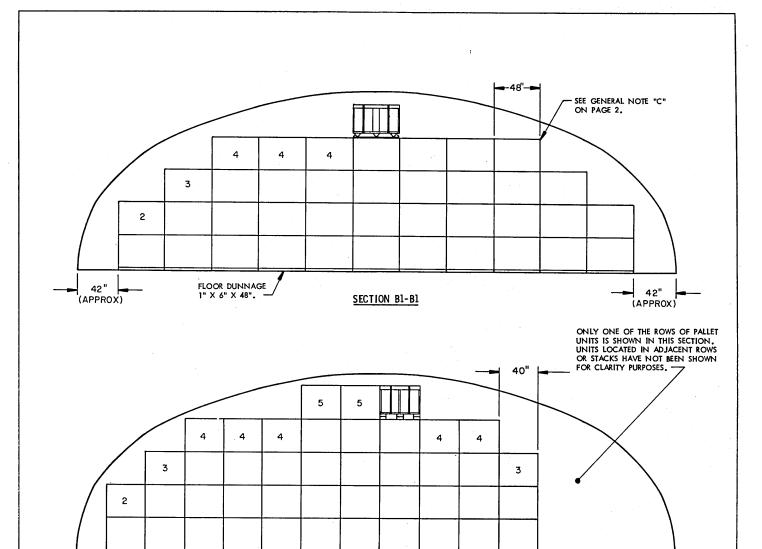
BILL OF MATERIAL (PER FIRST LAYER PALLET UNIT)*			
LUMBER	LINEAR FEET	BOARD FEET	
1" × 6"	12,00	6.00	

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

STORAGE PROCEDURES FOR SOLUTION A IN 52' DIA CORBETTA MAGAZINE

PAGE 29





SECTION C1-C1

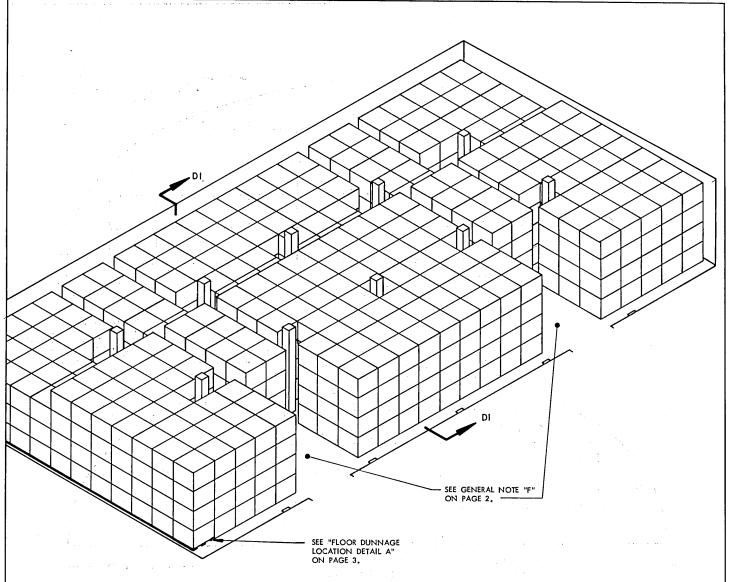
FOR "GENERAL NOTES" AND "MATERIAL SPECIFICATIONS", SEE PAGE 2.

- II'-10" (APPROX)-

BILL OF MATERIAL (PER FIRST LAYER PALLET UNIT)*			
LUMBER	LINEAR FEET	BOARD FEET	
1" X 6"	12.00	6.00	

FLOOR DUNNAGE. SEE
"FLOOR DUNNAGE LOCATION
DETAIL B" ON PAGE 3.

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



ISOMETRIC VIEW

(100'-8" L X 50'-0" W MAGAZINE)

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

BILL OF MATERIAL (PER FIRST LAYER PALLET UNIT) *			
LUMBER	LINEAR FEET	BOARD FEET	
1" X 6"	12.00	6.00	

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

STORAGE IN 100' X 50' MAGAZINE

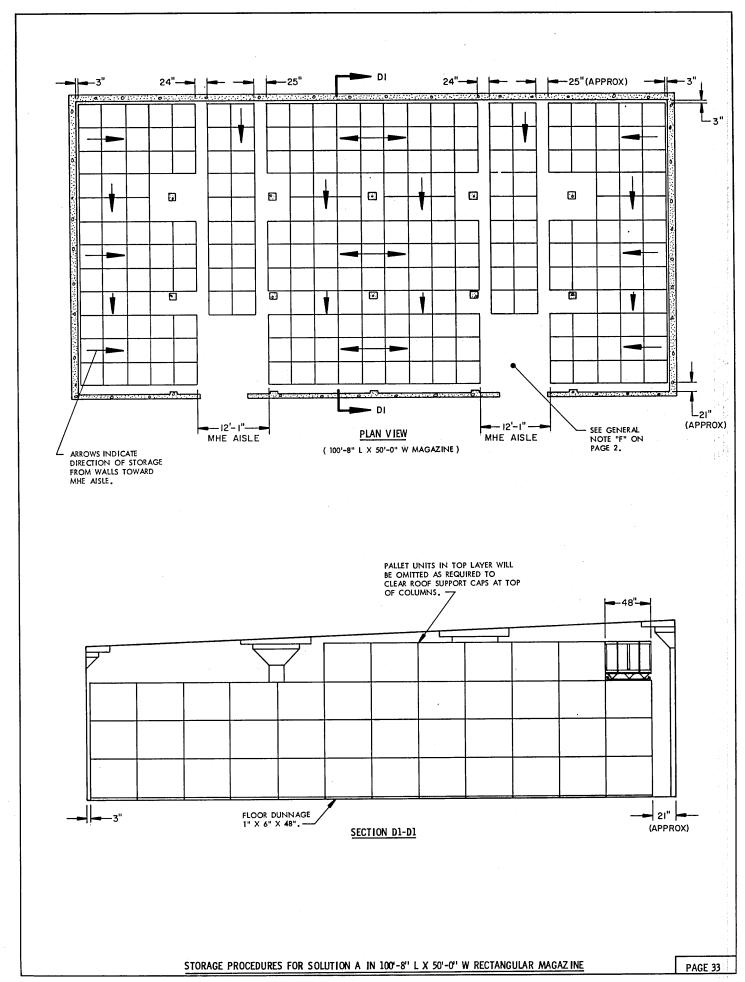
ITEM		<u>Q</u> i	JANTITY
PALLET DRUMS	UNITS		871 3,484

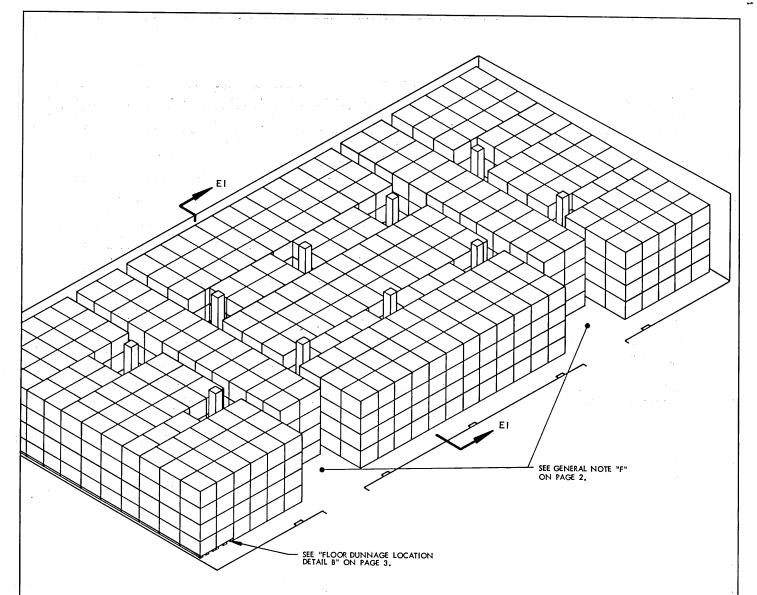
SPECIAL NOTE:

IF THE QUANTITY FOR A MAGAZINE IS TO BE REDUCED FROM WHAT IS SHOWN FOR ANY 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 FOR SOLUTION A IN 100'-8' L X 50'-0' W RECTANGULAR MAGAZINE

PAGE 32





ISOMETRIC VIEW

(100'-8" L X 50'-0" W MAGAZINE)

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

BILL OF MATERIAL (PER FIRST LAYER PALLET UNIT)*			
LUMBER	LINEAR FEET	BOARD FEET	
1" X 6"	12,00	6.00	

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

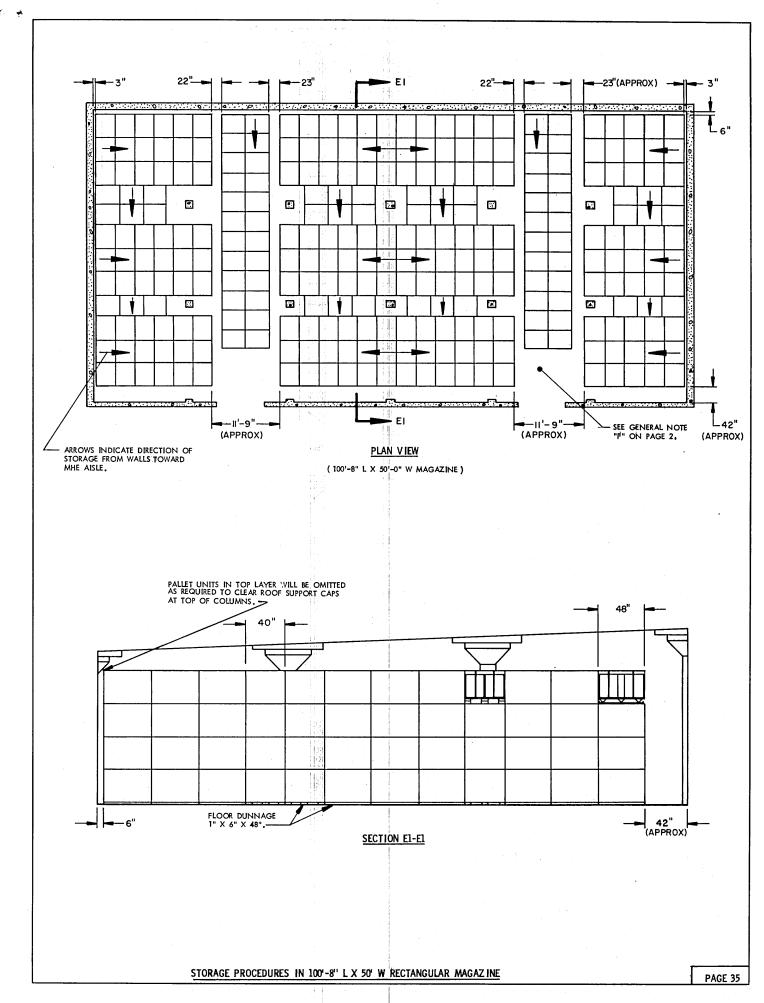
STORAGE IN 100'-X 50' MAGAZINE

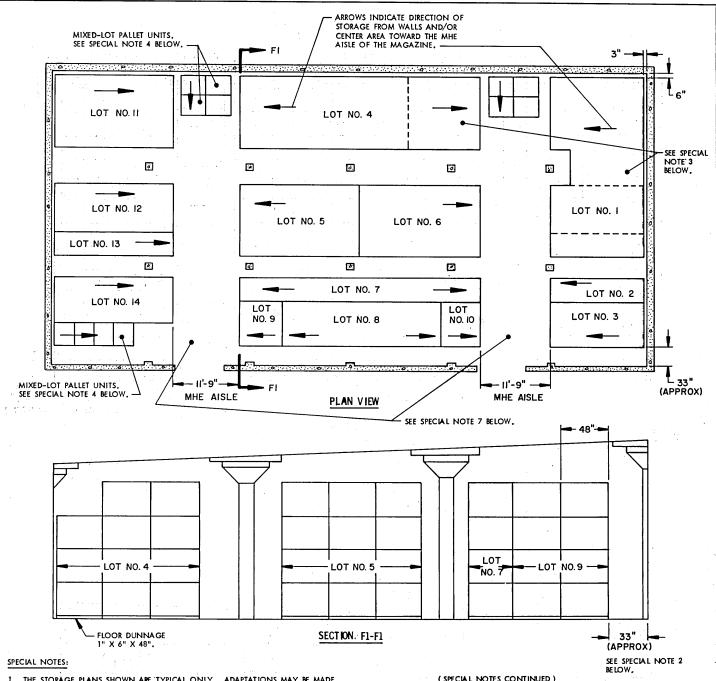
<u>ITEM</u>		QUANTITY
PALLET	UNITS	 1,164
DRUMS		 4.656

SPECIAL NOTE:

IF THE QUANTITY FOR A MAGAZINE IS TO BE REDUCED FROM WHAT IS SHOWN FOR ANY 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 FOR SOLUTION B IN 100'-8" L X 50' W RECTANGULAR MAGAZINE





- THE STORAGE PLANS SHOWN ARE TYPICAL ONLY. ADAPTATIONS MAY BE MADE AS NUMBER AND SIZES OF LOTS TO BE STORED IN MAGAZINE REQUIRE. ALTHOUGH, PROCEDURES ARE SHOWN IN A RECTANGULAR MAGAZINE, THE PRINCIPLES OF MULTIPLE-LOT STORAGE WILL APPLY TO THE OTHER STRUCTURES DEPICTED WITHIN THIS DOCUMENT.
- 2. AN INSPECTION/INVENTORY AISLE NOT LESS THAN 18" WIDE MUST BE PROVIDED AT ONE SIDE OF EACH "BURIED" LOT.
- 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.
- A MIXED-LOT PALLET UNIT MAY HAVE FROM TWO LOTS PER PALLET UNIT UPWARDS TO AS MANY DIFFERENT LOTS AS DRUMS WITHIN THAT UNIT. HOWEVER, ALL DRUMS AND LOTS WITHIN THE PALLET UNIT MUST HAVE THE SAME NATIONAL STOCK NUMBER AND CONDITION CODE.
- EACH LOT WITHIN THE MAGAZINE MUST BE ACCESSIBLE FOR MOVEMENT BY MHE. PALLET UNITS OF A SINGLE-LOT OR MIXED-LOT PALLET UNITS ARE CONSIDERED "ACCESSIBLE" IF NOT MORE THAN TWENTY-FOUR (24) "LIFTS" OF ANOTHER LOT OR LOTS HAVE TO BE MADE TO GAIN ACCESS TO THE SINGLE-LOT OR MIXED-LOT UNITS. A "LIFT" MAY CONSIST OF ONE (1) OR MORE PALLET UNITS, PROVIDING THE CAPACITY OF MHE PERMITS, AND SAFE HANDLING IS NOT JEOPARDIZED.

(SPECIAL NOTES CONTINUED)

- 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.
- 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. ADEQUATE SPACE FOR MHE OPERATION 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.

(CONTINUED AT RIGHT)

TYPICAL MULTIPLE-LOT STORAGE PROCEDURES