

# STORAGE IN APPROVED MAGAZINES OF M21 (OPA) CANISTER, FOR M687, 155 MM, BINARY SEPARATE LOADING PROJECTILE, PACKED 8 CANISTERS PER WOODEN BOX, UNITIZED 12 BOXES PER 40" X 48", 4-WAY ENTRY PALLET

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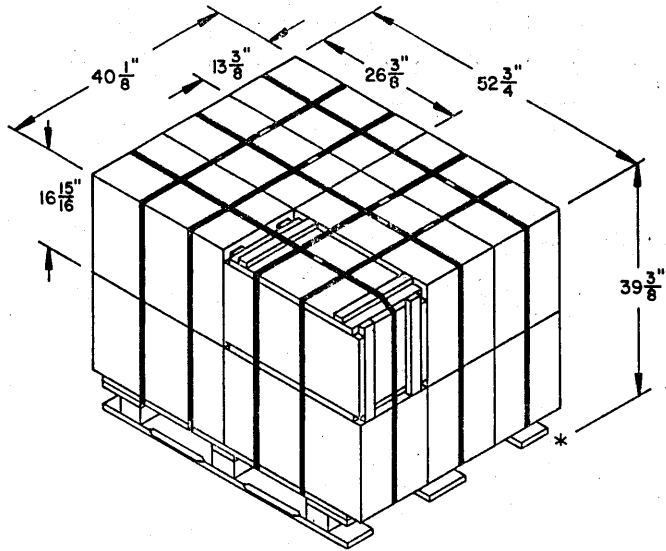
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REVISIONS				DRAFTSMAN	PROJ ENG
				Diw	MND/WRF
				CHECKER	LOG ENGR
				GEG	MB
APPROVED BY U. S. ARMY ARMAMENT MATERIEL READINESS COMMAND					
<i>John L. Smith</i>					
APPROVED BY ORDER OF COMMANDING GENERAL, U. S. ARMY MATERIEL DEVELOPMENT AND READINESS COMMAND (DARCOM)					
<i>John L. Smith</i>					
U. S. ARMY DARCOM DRAWING					
MARCH 1982					
CLASS	DIVISION	DRAWING	FILE		
19	48	4528	CBI-3-4 14-22PA2		

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 9-1300-205 ( CHAPTER 4 ), AND TM 3-250.
- B. PALLET UNIT DETAILS:
- 12 BOX ( 96 CANISTER ) PALLET UNIT:
- DIMENSIONS --- 40-1/8" LONG X 52-3/4" WIDE X 39-3/8" HIGH ( APPROX ).  
GROSS WEIGHT-- 1,640 POUNDS ( APPROX ).
- C. AISLE DIMENSIONS SHOWN IN THIS DRAWING MAY BE ADJUSTED TO SUIT LOCAL CONDITIONS AND/OR AVAILABLE MATERIALS HANDLING EQUIPMENT; HOWEVER, THIRTY-INCH ( 30" ) MINIMUM ACCESS AISLES WILL BE PROVIDED, AS SHOWN, TO FACILITATE INSPECTION.
- D. STORED PALLET UNITS 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 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 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. USE OF FRONT/SIDE LOADING FORKLIFT TRUCKS WILL INCREASE STORAGE CAPABILITY IN MOST STORAGE PATTERNS. IF SUITABLE MHE IS NOT AVAILABLE TO PERMIT PLACING AND/OR REMOVAL OPERATIONS WITHIN THE DESIGNATED MHE OPERATING AISLE, IT MAY BE NECESSARY TO OMIT ONE ROW OF UNITS ADJACENT TO THE MHE OPERATING AISLE TO GAIN ADDITIONAL OPERATING SPACE.
- K. REFER TO PAGE 20 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.

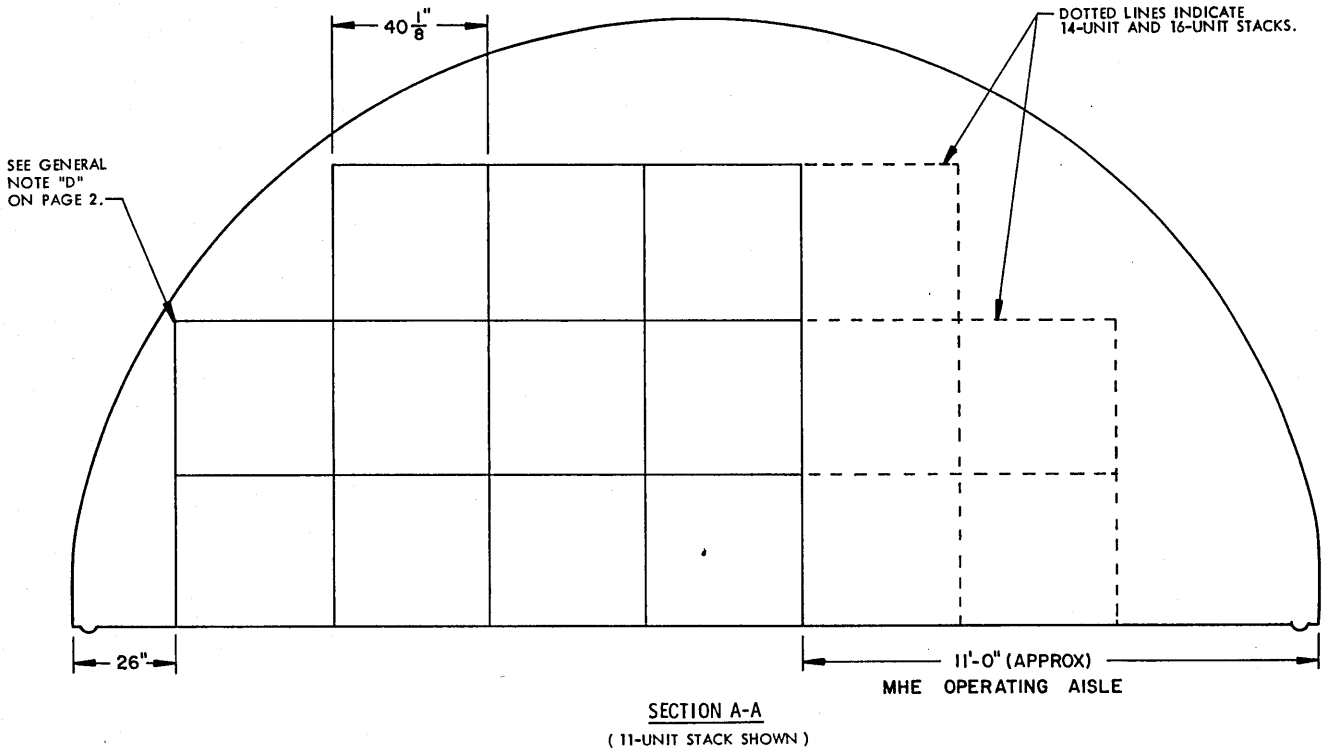
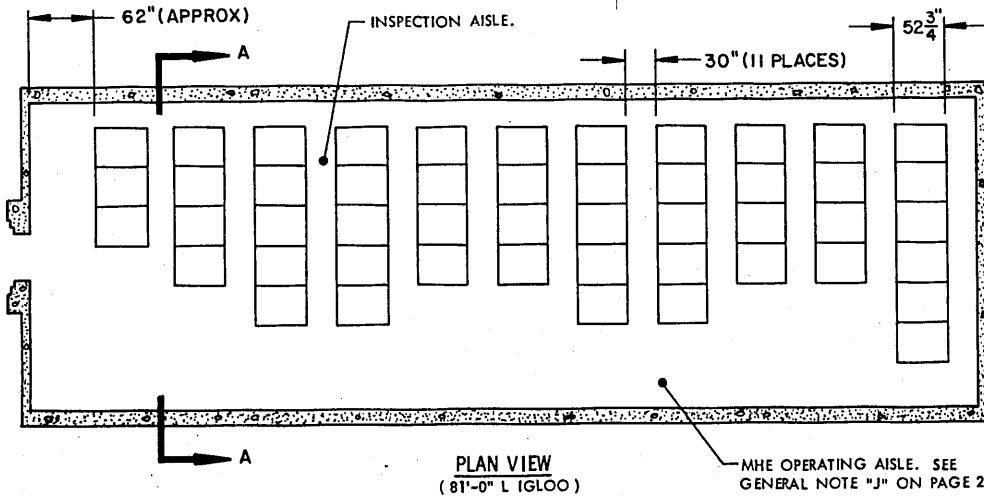


PALLET UNIT

GROSS WEIGHT ----- 1,640 LBS ( APPROX )  
 CUBIC FEET ----- 48.23

**STORAGE IN 81'-0" L IGLOO**  
( 12'-9" HIGH )

ITEM	QUANTITY
PALLET UNITS	135
CANISTERS	12,960



**STORAGE IN 60'-8" L IGLOO**

(12'-9" HIGH)

ITEM QUANTITY

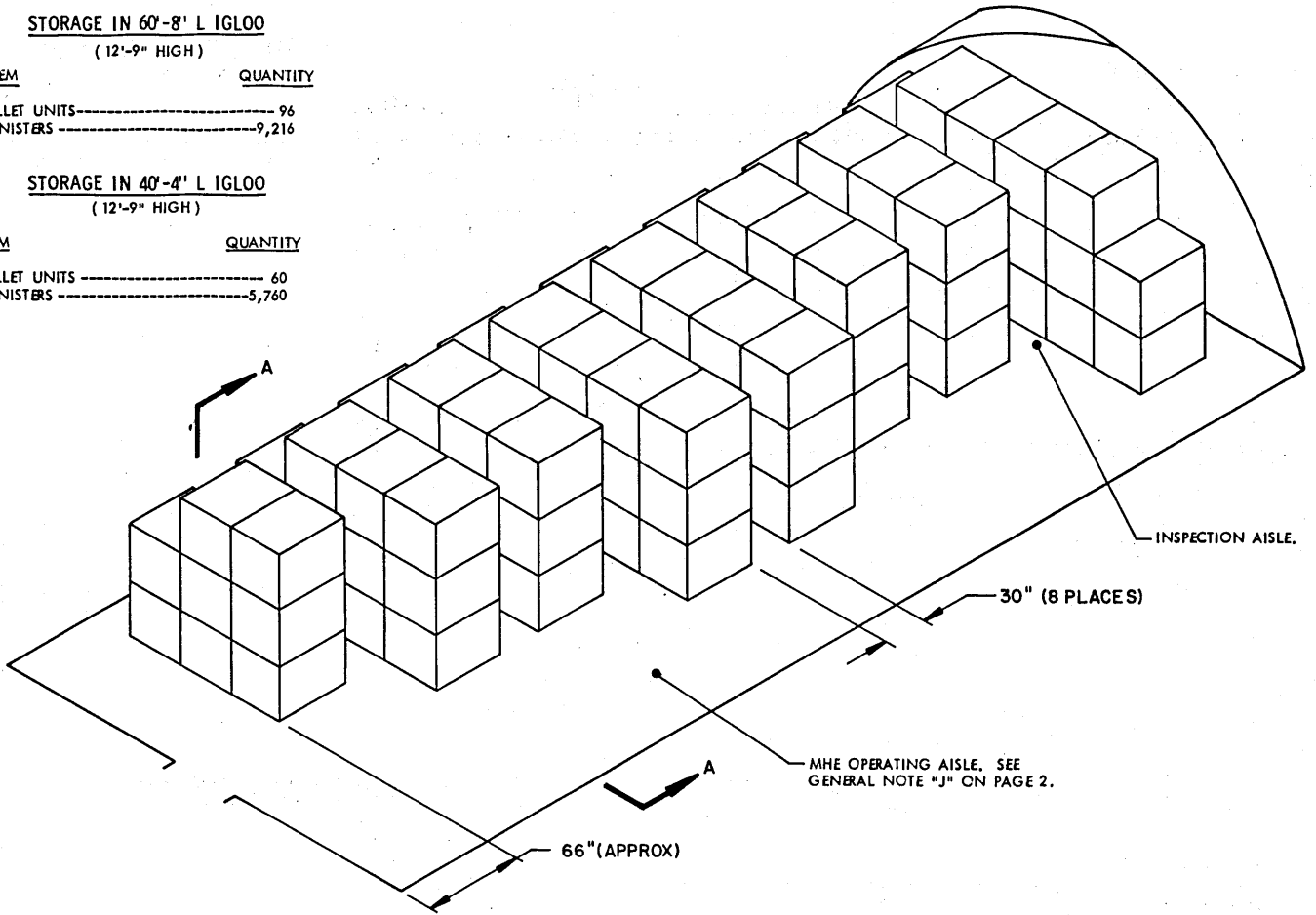
PALLET UNITS ----- 96  
CANISTERS ----- 9,216

**STORAGE IN 40'-4" L IGLOO**

(12'-9" HIGH)

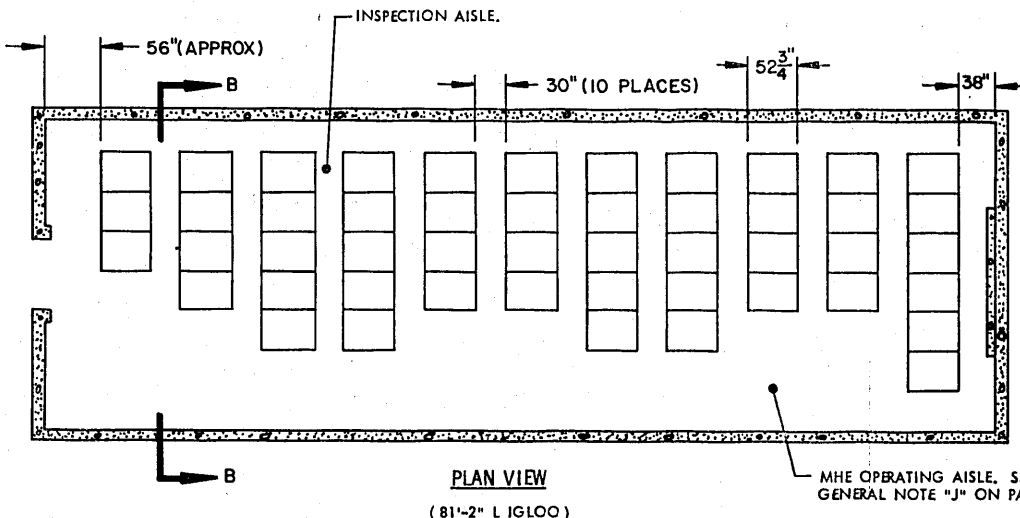
ITEM QUANTITY

PALLET UNITS ----- 60  
CANISTERS ----- 5,760



**ISOMETRIC VIEW**  
(60'-8" L IGLOO)

SEE "GENERAL NOTES" ON PAGE 2.

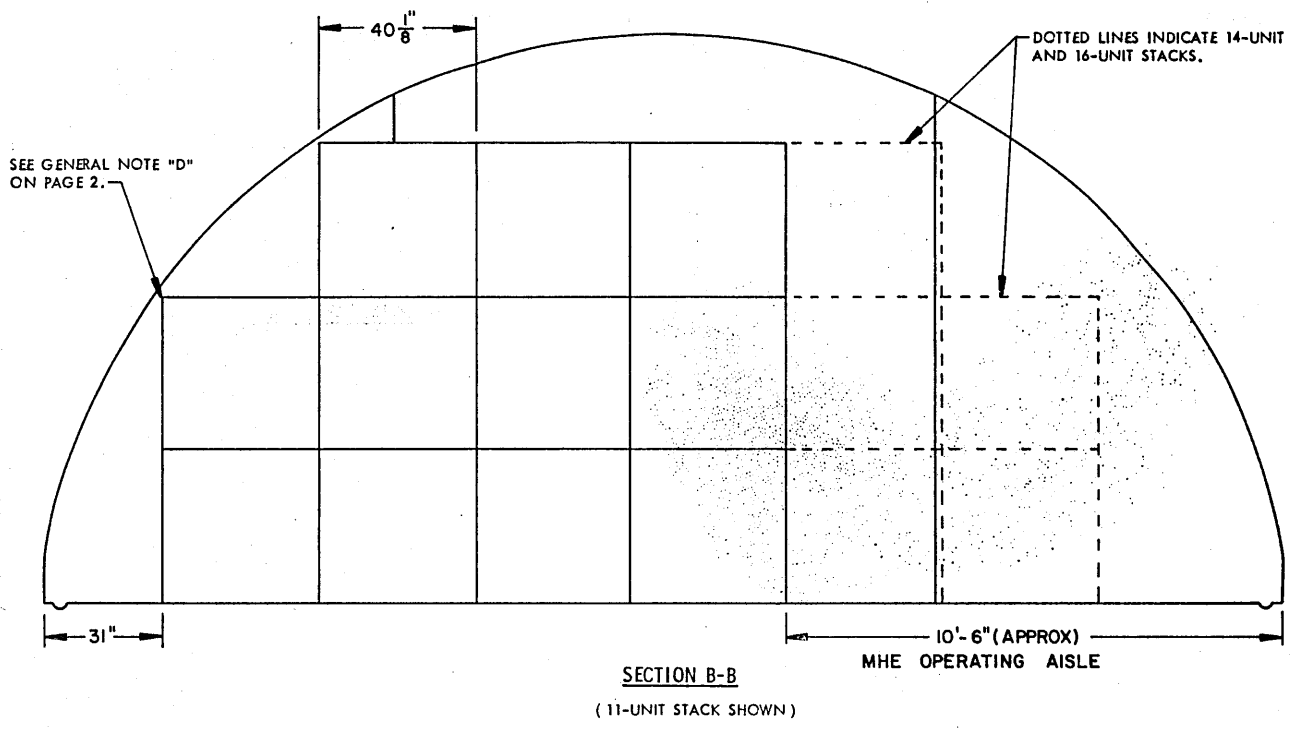


**STORAGE IN 81'-2" L MAGAZINE**  
(12'-1-3/4" HIGH)

ITEM	QUANTITY
PALLET UNITS	135
CANISTERS	12,960

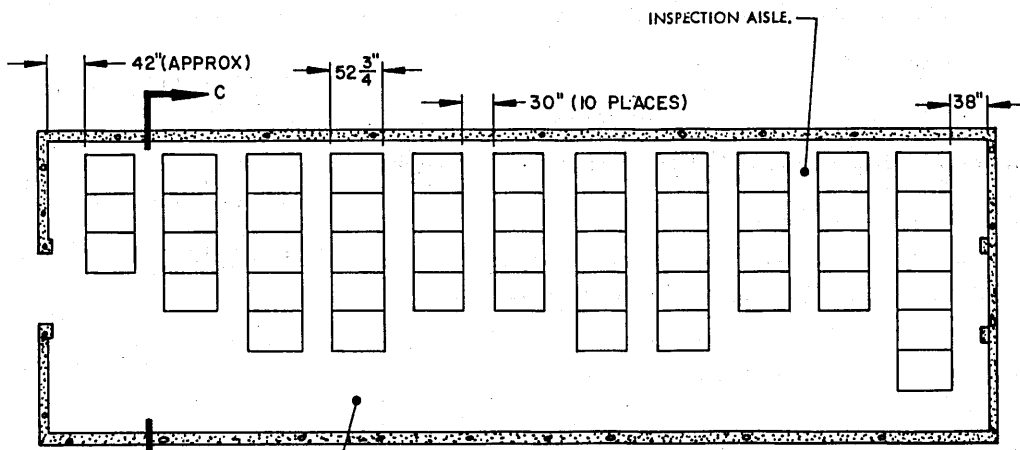
**PLAN VIEW**  
(81'-2" L IGLOO)

MHE OPERATING AISLE. SEE GENERAL NOTE "J" ON PAGE 2.



**SECTION B-B**  
(11-UNIT STACK SHOWN)

SEE "GENERAL NOTES" ON PAGE 2.



**STORAGE IN 80'-0' L MAGAZINE**  
(12'-1-3/4" HIGH)

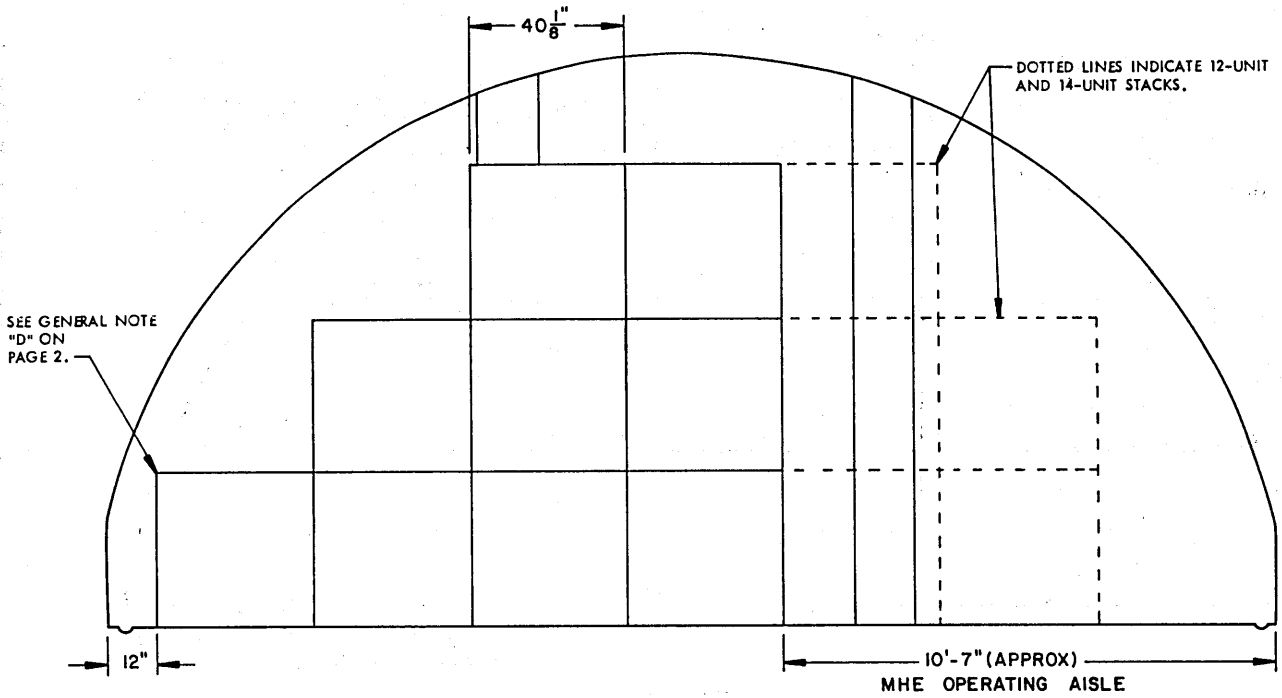
ITEM	QUANTITY
PALLET UNITS	113
CANISTERS	10,848

**STORAGE IN 40'-0' L MAGAZINE**  
(12'-1-3/4" HIGH)

ITEM	QUANTITY
PALLET UNITS	50
CANISTERS	4,800

**PLAN VIEW**  
(80'-0" L MAGAZINE)

MHE OPERATING AISLE.  
SEE GENERAL NOTE  
"J" ON PAGE 2.

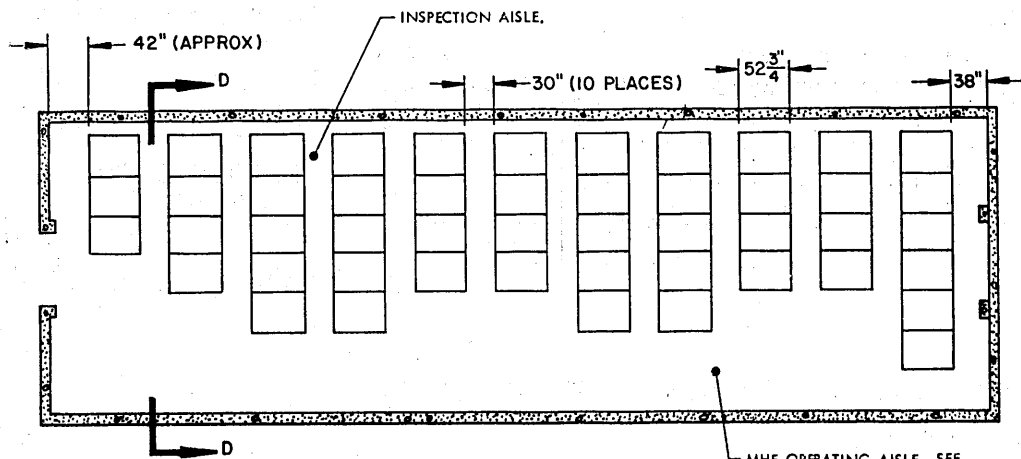


SEE GENERAL NOTE  
"D" ON  
PAGE 2.

DOTTED LINES INDICATE 12-UNIT  
AND 14-UNIT STACKS.

**SECTION C-C**  
(9-UNIT STACK SHOWN)

SEE "GENERAL NOTES" ON PAGE 2.



PLAN VIEW  
(80'-0" L MAGAZINE)

MHE OPERATING AISLE. SEE GENERAL NOTE "J" ON PAGE 2.

**STORAGE IN 80'-0' L MAGAZINE**

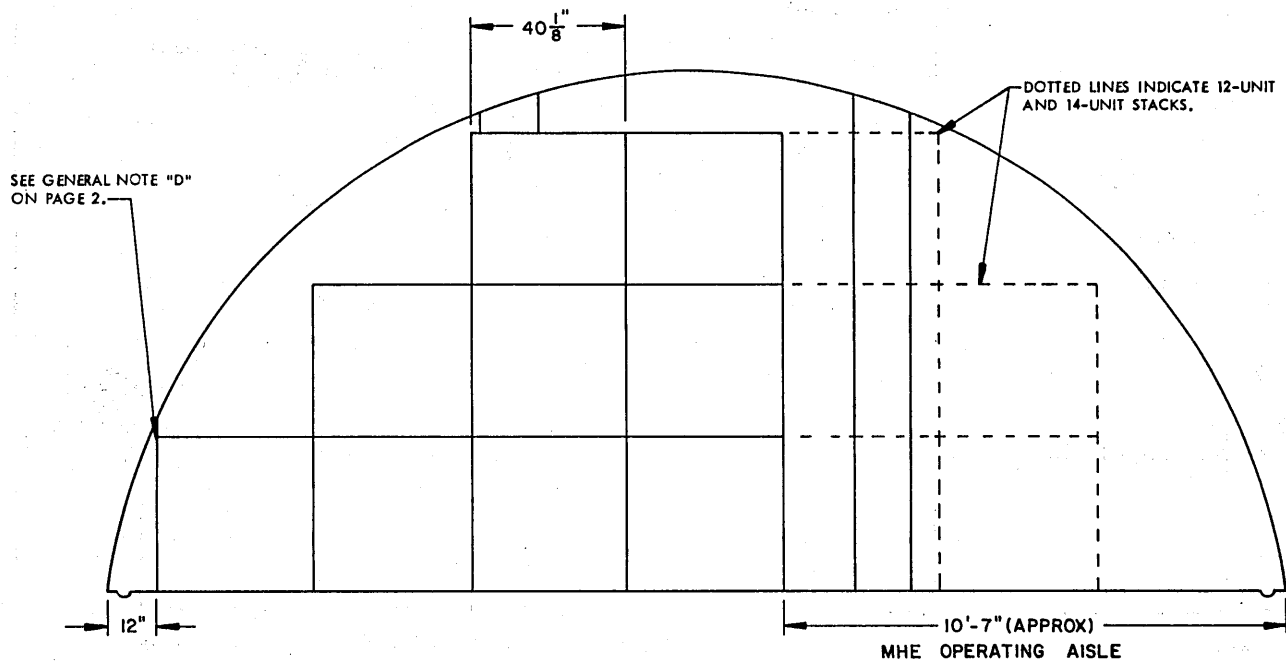
(11'-0" HIGH)

ITEM	QUANTITY
PALLET UNITS-----	113
CANISTERS-----	10,848

**STORAGE IN 40'-0' L MAGAZINE**

(11'-0" HIGH)

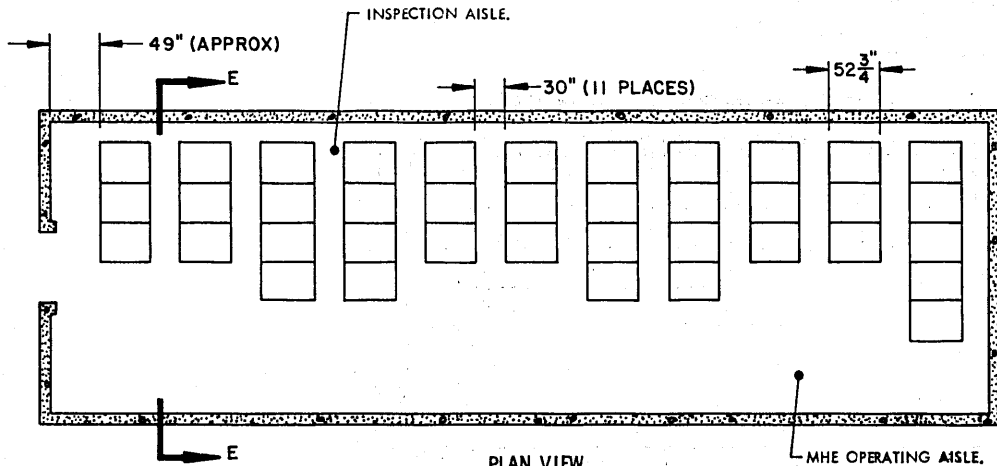
ITEM	QUANTITY
PALLET UNITS-----	50
CANISTERS-----	4,800



SECTION D-D  
(9-UNIT STACK SHOWN)

SEE "GENERAL NOTES" ON PAGE 2.





**PLAN VIEW**  
(80'-0" L MAGAZINE)

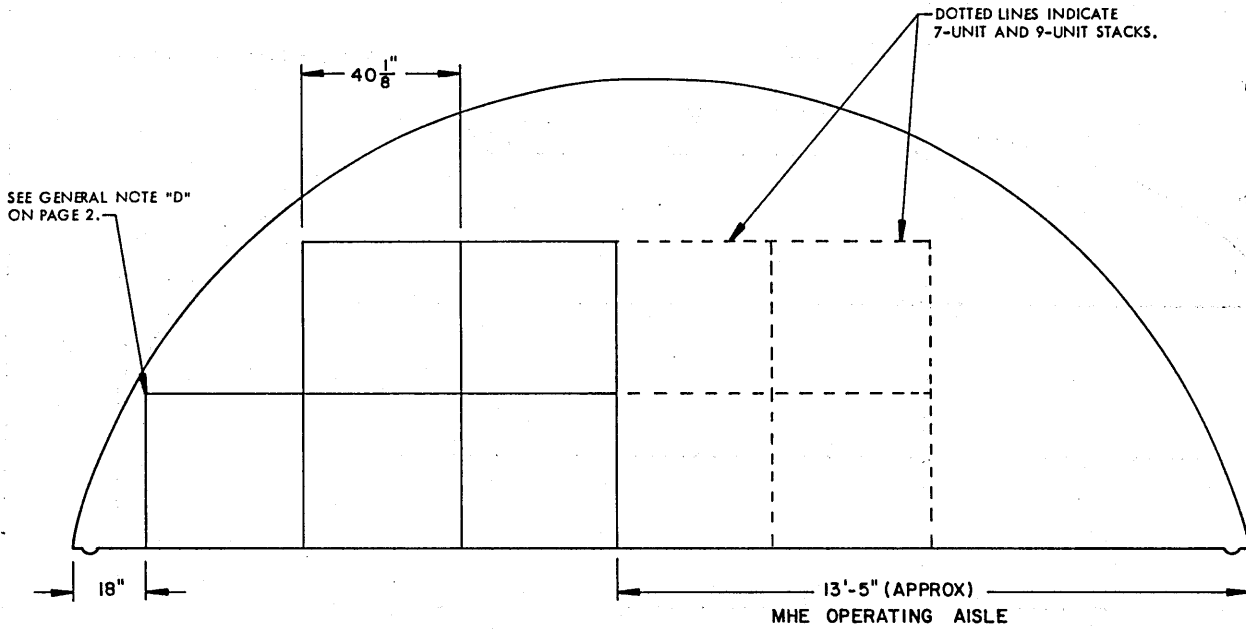
MHE OPERATING AISLE. SEE  
GENERAL NOTE "J" ON PAGE 2.

**STORAGE IN 80'-0" L MAGAZINE**  
(10'-0" HIGH)

ITEM	QUANTITY
PALLET UNITS-----	67
CANISTERS-----	6,432

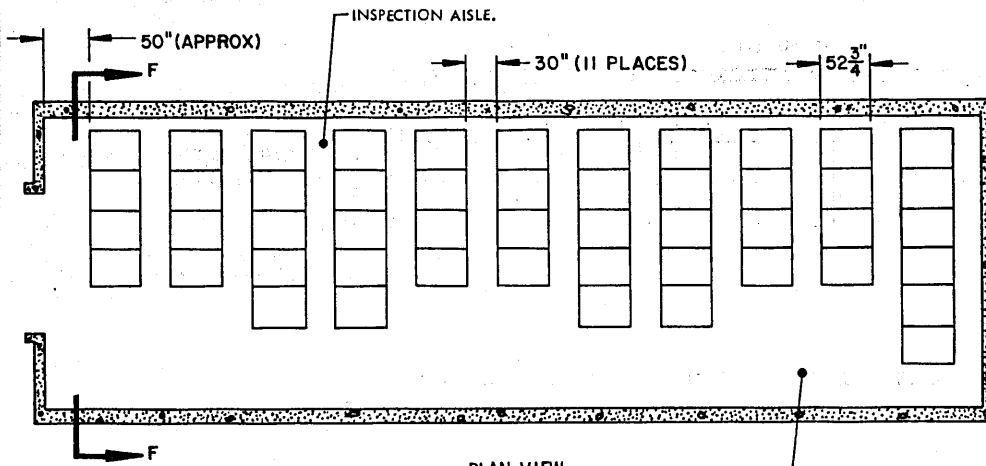
**STORAGE IN 40'-0" L MAGAZINE**  
(10'-0" HIGH)

ITEM	QUANTITY
PALLET UNITS-----	31
CANISTERS-----	2,976



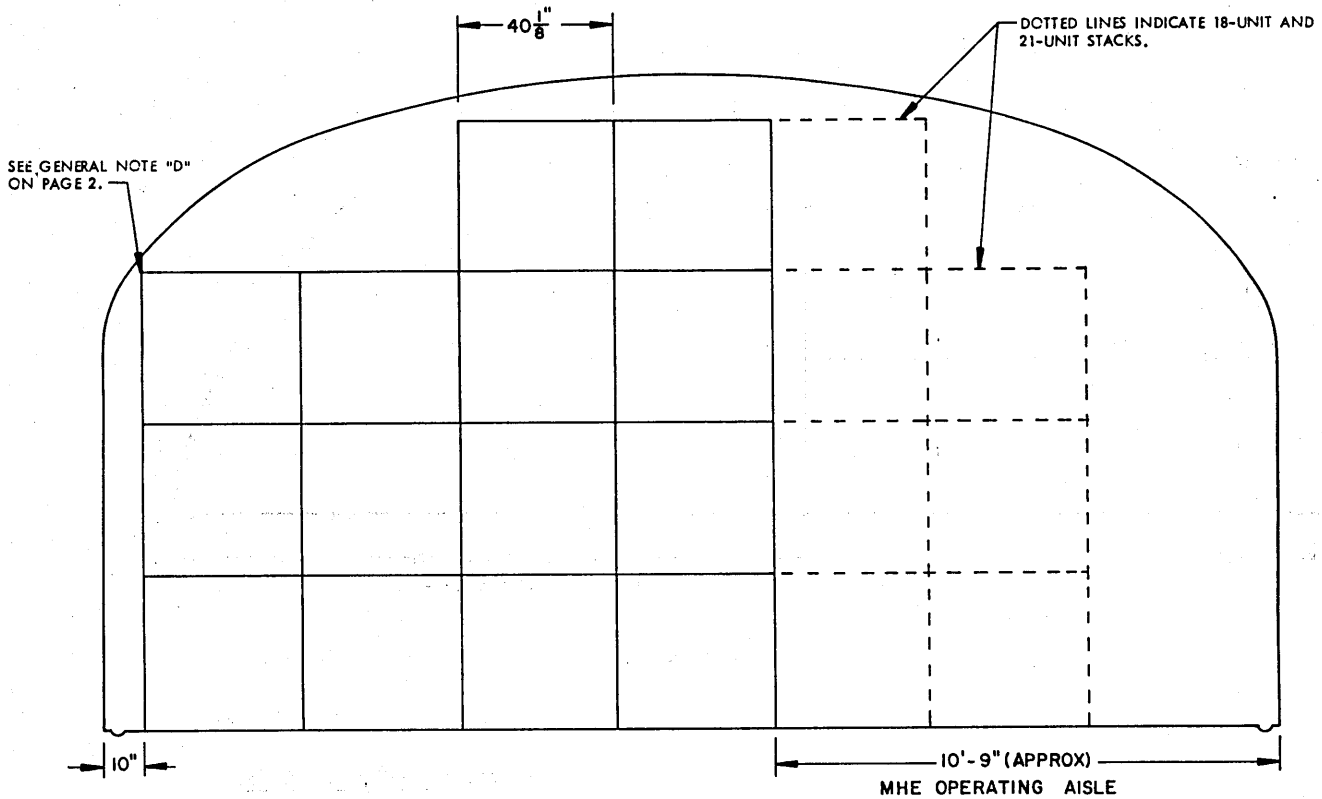
**SECTION E-E**  
(5-UNIT STACK SHOWN)

SEE "GENERAL NOTES" ON PAGE 2.



PLAN VIEW  
(STRADLEY MAGAZINE)

MHE OPERATING AISLE. SEE  
GENERAL NOTE "J" ON PAGE 2.



SEE GENERAL NOTE "D"  
ON PAGE 2.

DOTTED LINES INDICATE 18-UNIT AND  
21-UNIT STACKS.

SECTION F-F  
(14-UNIT STACK SHOWN)

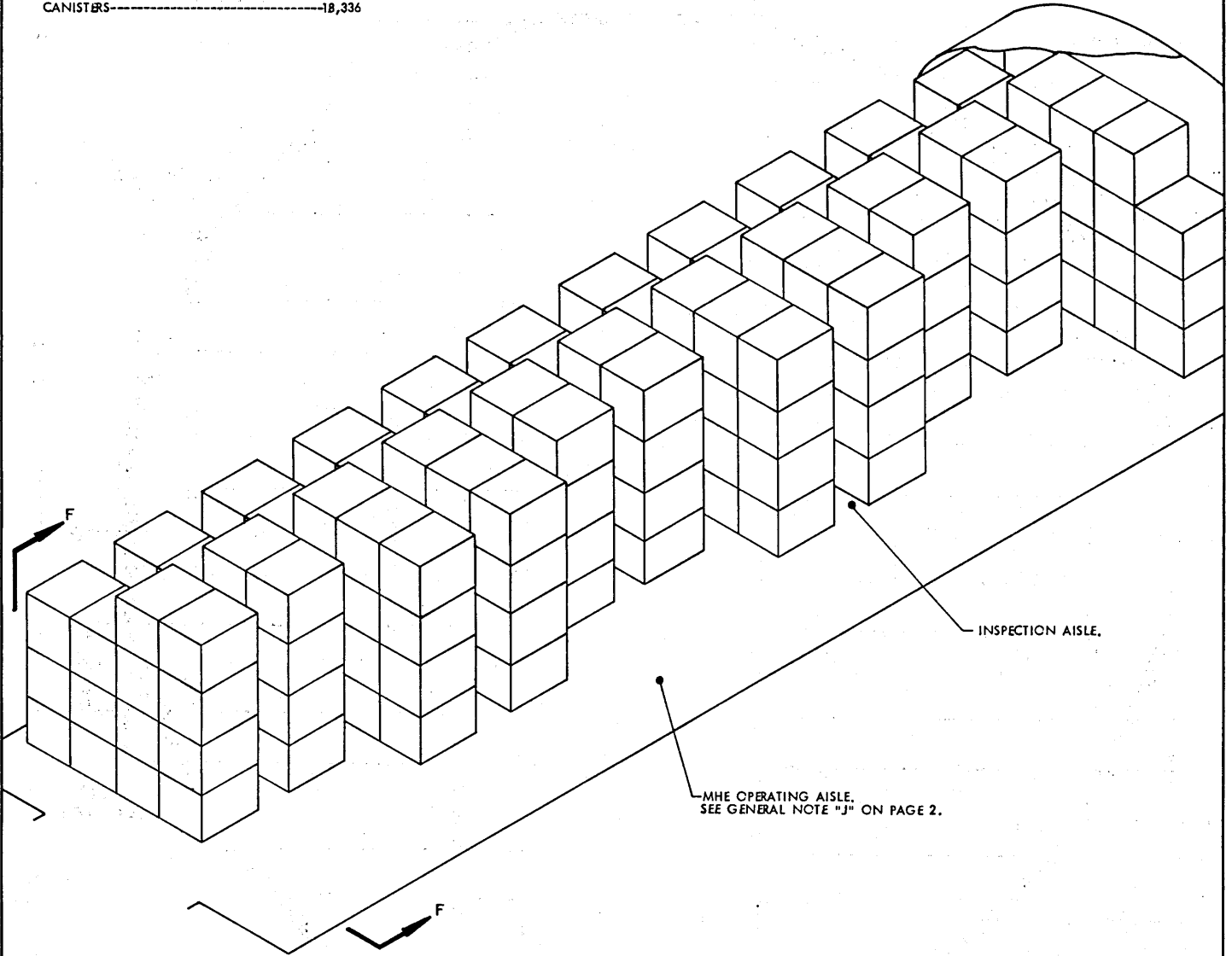
10'-9" (APPROX)  
MHE OPERATING AISLE

STORAGE IN STRADLEY MAGAZINE

<u>ITEM</u>	<u>QUANTITY</u>
PALLET UNITS-----	177
CANISTERS-----	16,992

STORAGE IN OVAL ARCH MAGAZINE

<u>ITEM</u>	<u>QUANTITY</u>
PALLET UNITS-----	191
CANISTERS-----	18,336

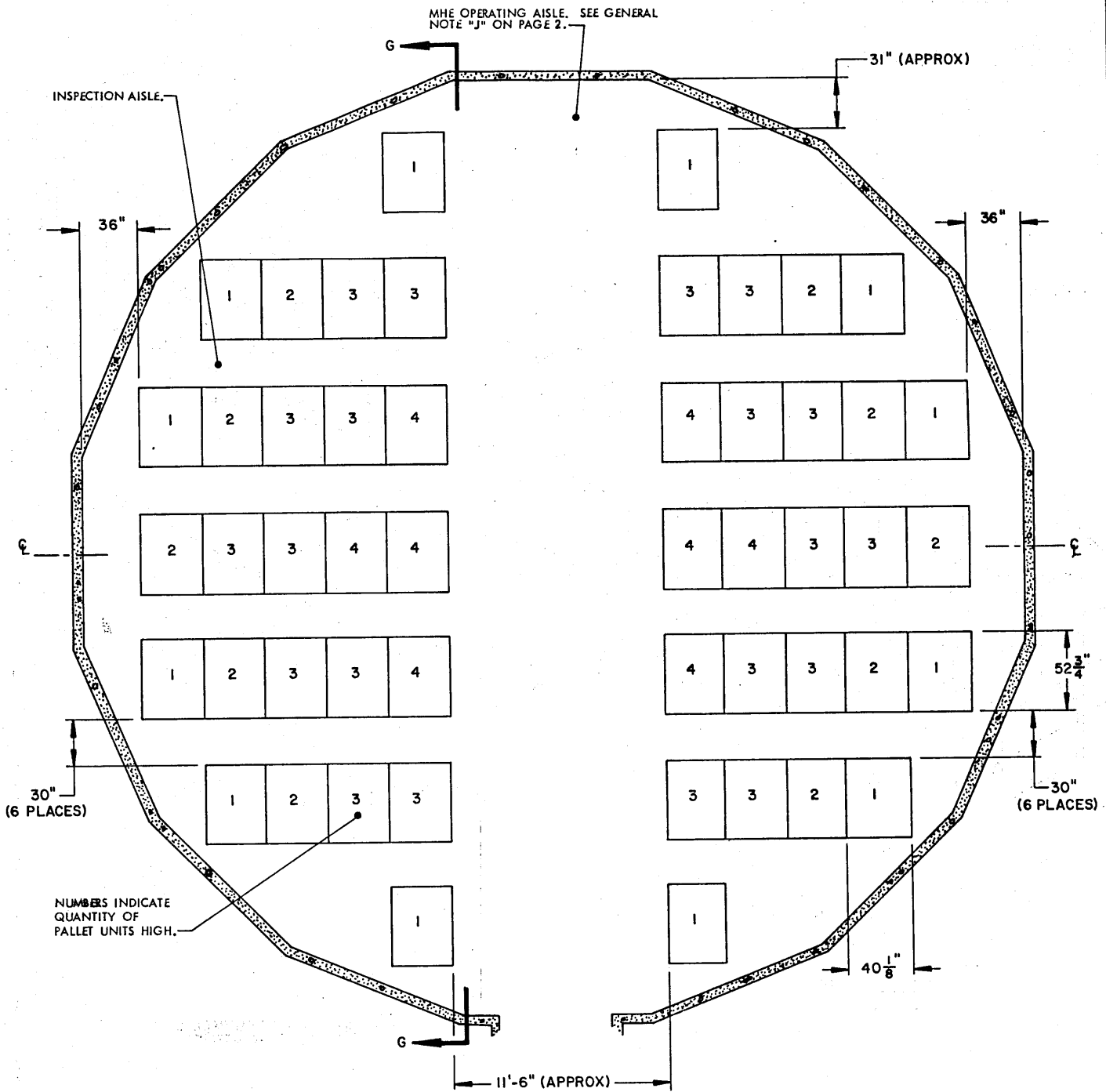


ISOMETRIC VIEW  
(STRADLEY MAGAZINE)

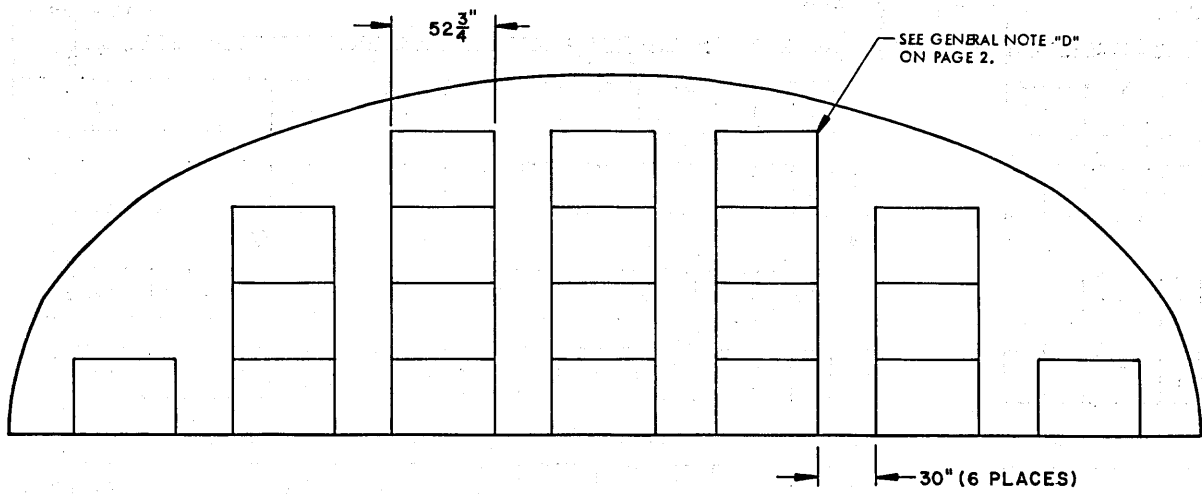
SEE "GENERAL NOTES" ON PAGE 2.

STORAGE IN 52'-0" DIAMETER MAGAZINE

ITEM	QUANTITY
PALLET UNITS	124
CANISTERS	11,904



PLAN VIEW  
(CORBETTA MAGAZINE)



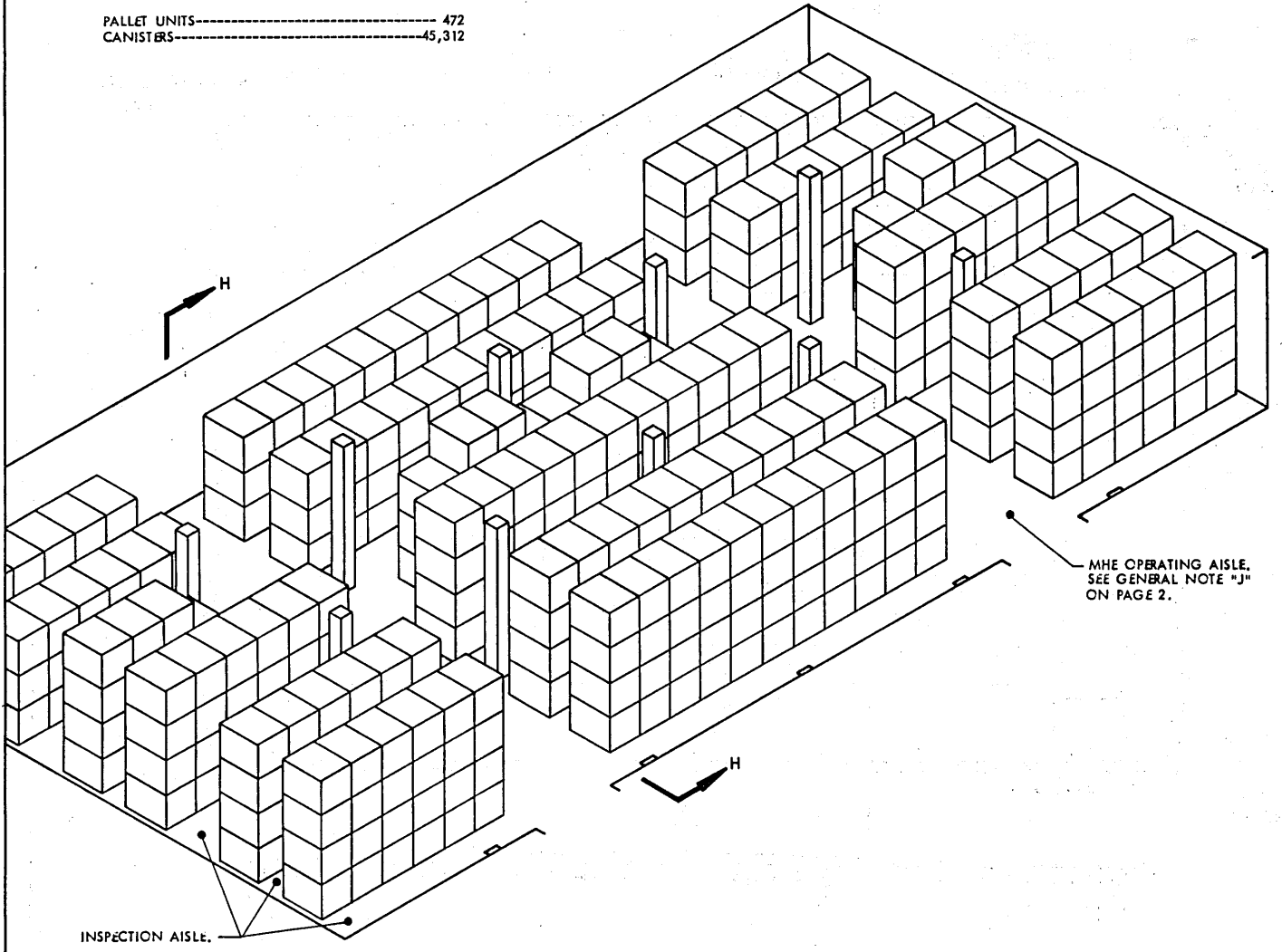
SECTION G-G

SEE "GENERAL NOTES" ON PAGE 2.



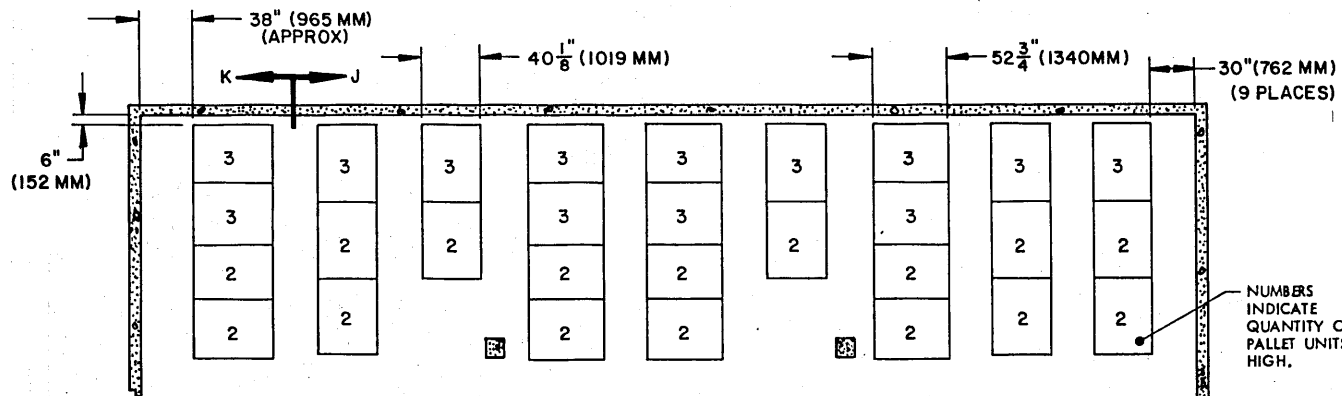
STORAGE IN 100'-8" L X 50'-0" W MAGAZINE

<u>ITEM</u>	<u>QUANTITY</u>
PALLET UNITS-----	472
CANISTERS-----	45,312

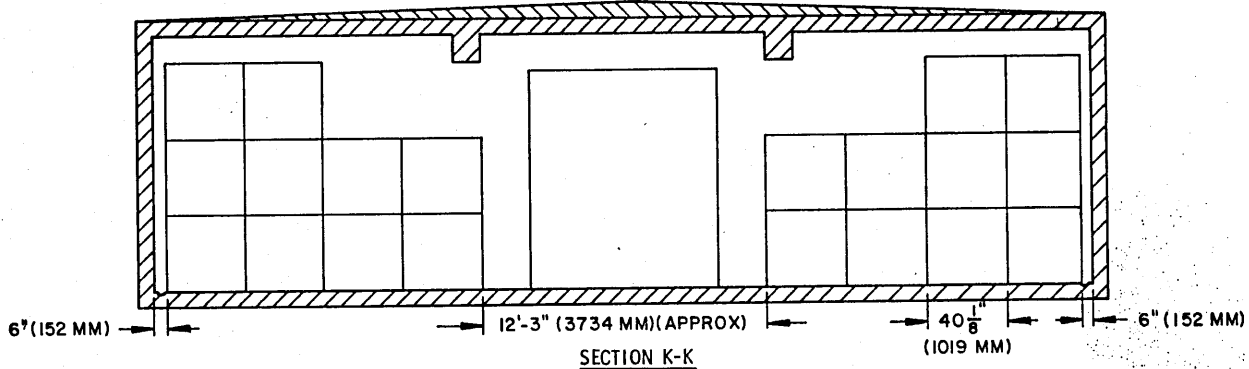
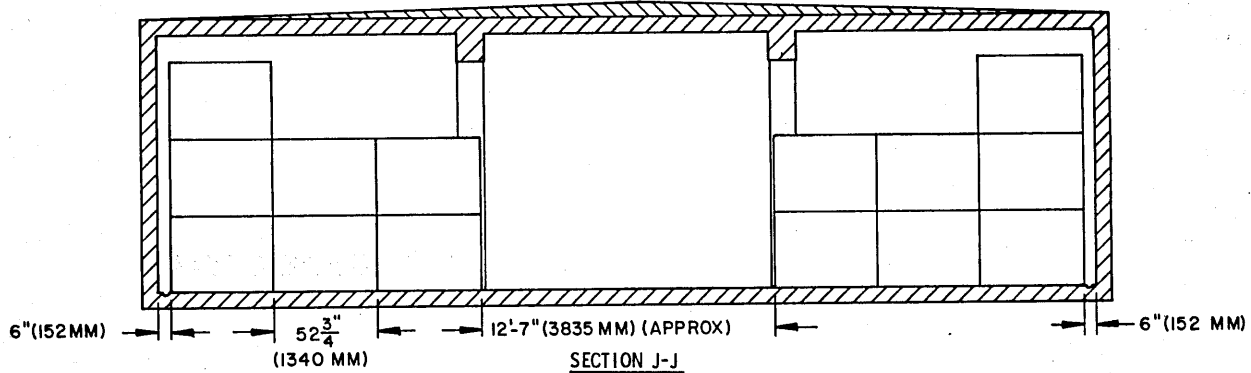
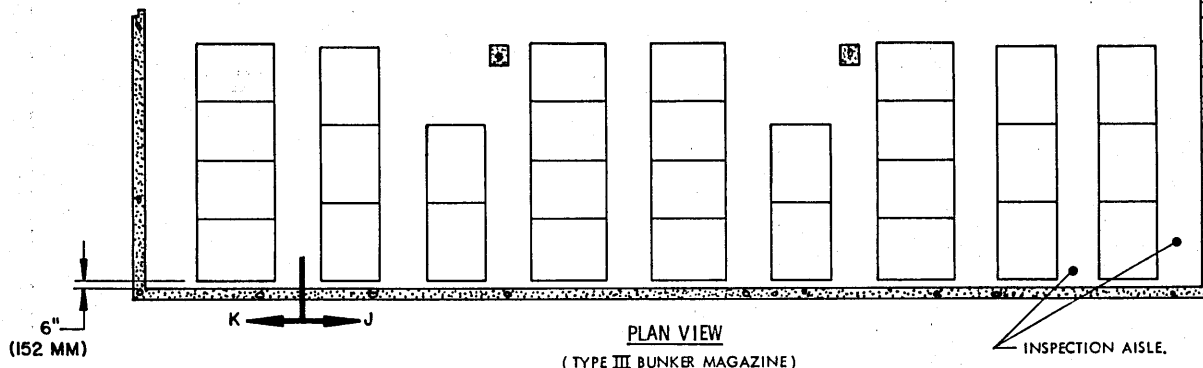


ISOMETRIC VIEW  
(100'-8" L X 50'-0" W MAGAZINE)

SEE "GENERAL NOTES" ON PAGE 2.



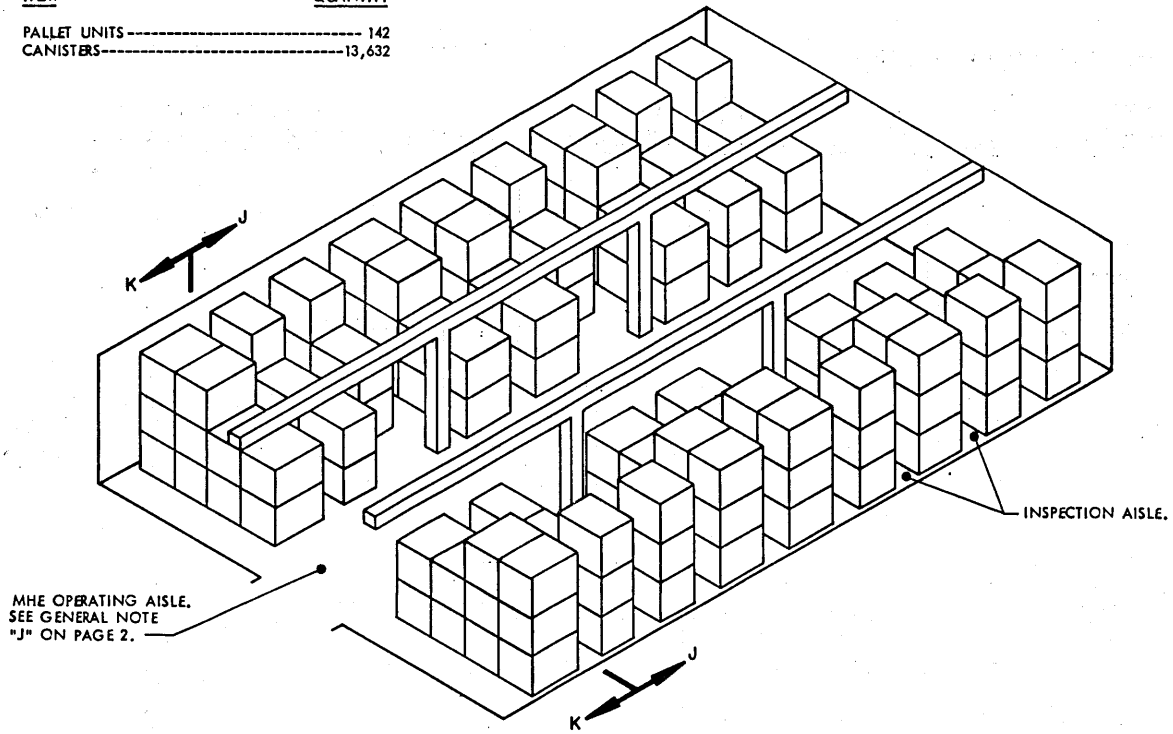
MHE OPERATING AISLE. SEE GENERAL NOTE "J" ON PAGE 2.





**STORAGE IN TYPE III BUNKER MAGAZINE**

<u>ITEM</u>	<u>QUANTITY</u>
PALLET UNITS-----	142
CANISTERS-----	13,632

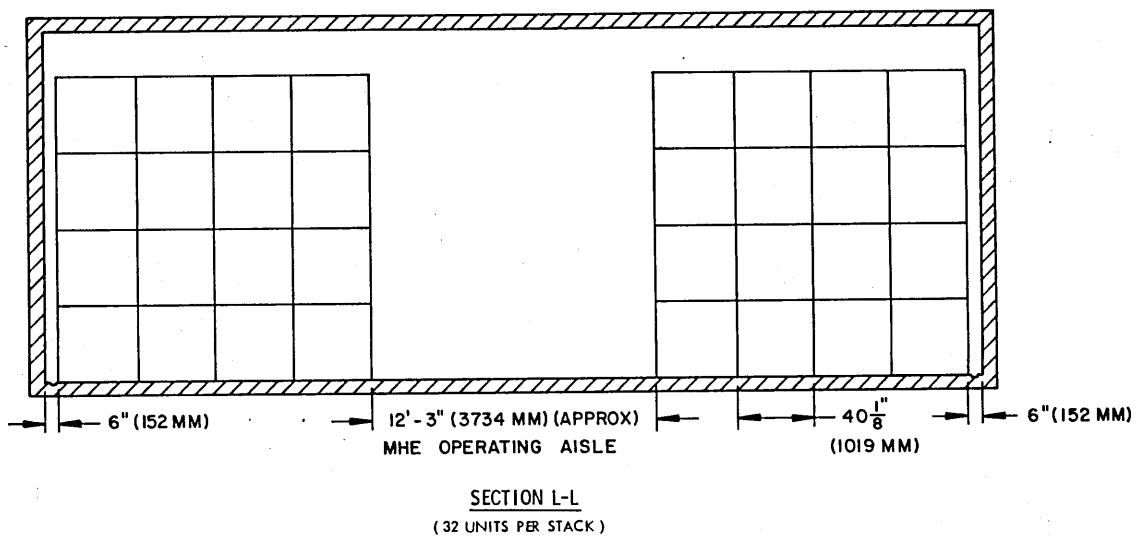
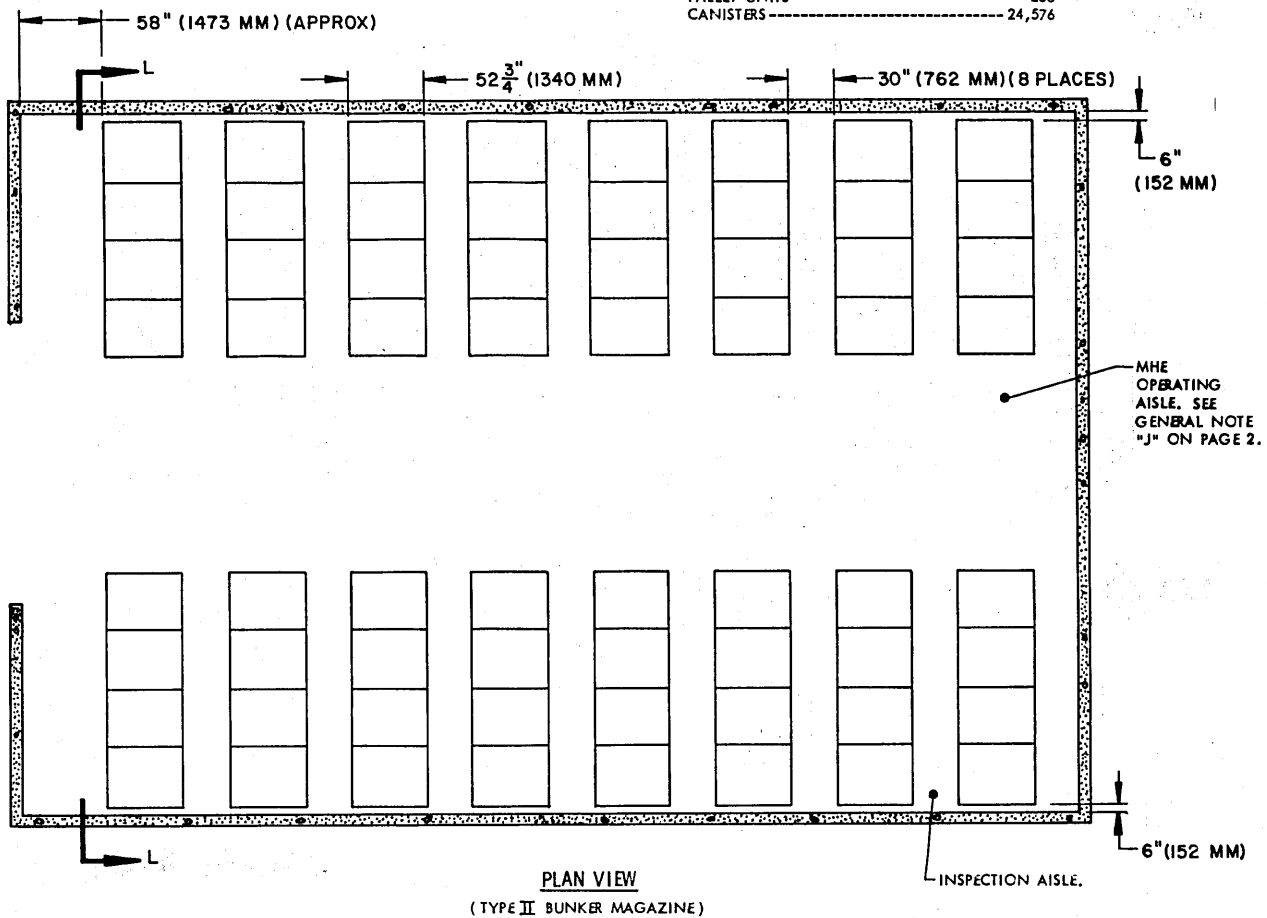


**ISOMETRIC VIEW**  
(TYPE III BUNKER MAGAZINE)

SEE "GENERAL NOTES" ON PAGE 2.

STORAGE IN TYPE II BUNKER MAGAZINE

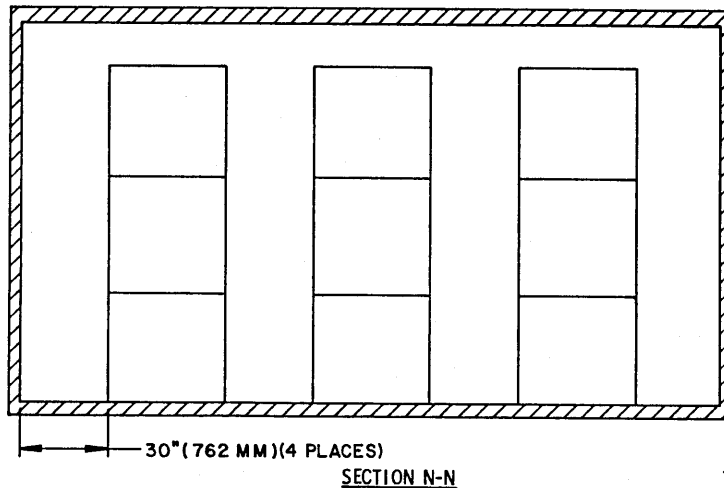
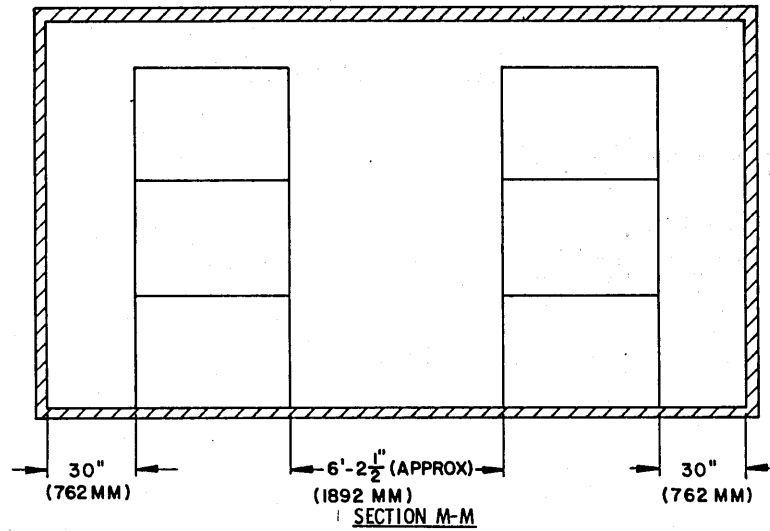
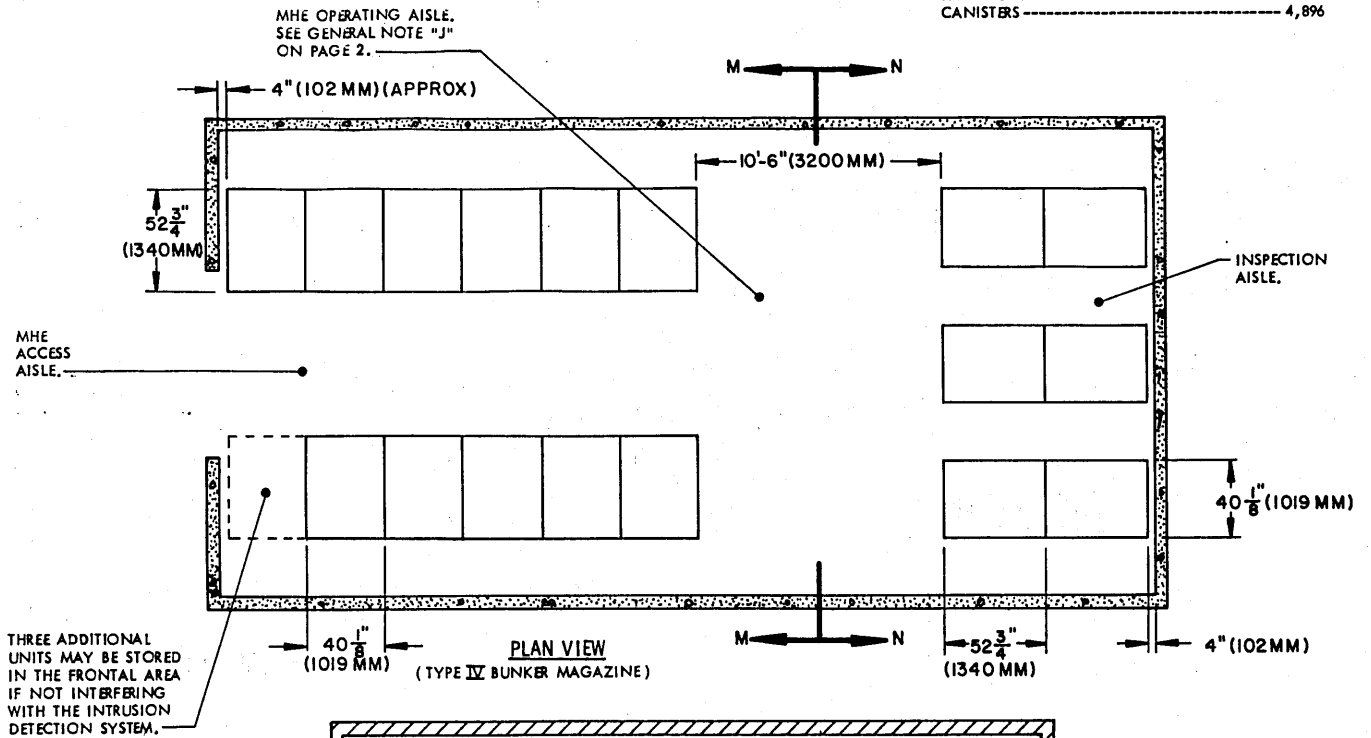
ITEM	QUANTITY
PALLET UNITS	256
CANISTERS	24,576



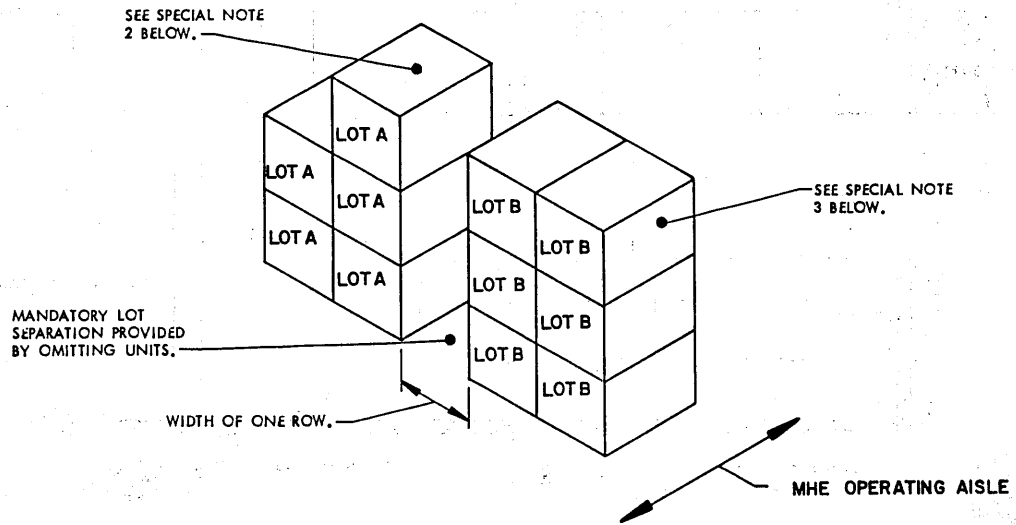
SEE "GENERAL NOTES" ON PAGE 2.

STORAGE IN TYPE IV BUNKER MAGAZINE

ITEM	QUANTITY
PALLET UNITS	51
CANISTERS	4,896



SEE "GENERAL NOTES" ON PAGE 2.



TYPICAL LOT SEPARATION DETAIL

SPECIAL NOTES:

1. 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 DETAIL".
2. ONE LOT WILL NOT BE STACKED ON TOP OF ANOTHER LOT.
3. TO SATISFY LOT QUANTITIES, IT MAY BE NECESSARY TO OMIT A ROW-STACK WHICH WOULD NORMALLY BE NEXT TO AN MHE OPERATING AISLE, SINCE IT IS NOT PERMISSIBLE TO STACK ITEMS OF ONE LOT IMMEDIATELY ADJACENT TO ITEMS OF ANOTHER LOT WITHIN THE SAME STACK.