

STORAGE IN APPROVED MAGAZINES OF HARPOON GUIDED MISSILE, TARTAR-LAUNCHED OR CAP/CAN, PACKED 1 PER MK632 MOD 0 SHIPPING AND STORAGE CONTAINER

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U. S. ARMY MATERIEL COMMAND DRAWING			
APPROVED, U. S. ARMY INDUSTRIAL OPERATIONS COMMAND <div style="text-align: center; margin-top: 10px;"> <i>W. H.</i> <i>Donald A. Pankovich</i> </div> AMSTA-AR-ESK	DRAFTSMAN	INGEBORG DEPPE	
	ENGINEER	M. DAEUMER	
	SUPPLY ENGINEERING DIVISION	<div style="text-align: center;"> <i>William F. Ernst</i> </div>	
APPROVED BY ORDER OF COMMANDING GENERAL, U. S. ARMY MATERIEL COMMAND <div style="text-align: center; margin-top: 10px;"> <i>William F. Ernst</i> </div> DEFENSE AMMUNITION CENTER	LOGISTICS ENGINEERING OFFICE	<div style="text-align: center;"> <i>William F. Ernst</i> </div>	
	JUNE 1997		
	CLASS	DIVISION	DRAWING
	19	48	8638
	FILE		
	SP 1-3-4-14 -22 J 33		

DO NOT SCALE

GENERAL NOTES

(GENERAL NOTES CONTINUED)

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 SPECIFIED HEREIN ARE APPLICABLE TO THE HARPOON GUIDED MISSILE, TARTAR-LAUNCHED OR CAP/CAN, PACKED 1 PER MK 632 MOD 0 CONTAINER. SUBSEQUENT REFERENCE TO CONTAINER MEANS THE MK 632 CONTAINER WITH CONTENTS. FOR DETAILS OF THE CONTAINER SEE NAVSEA SYSTEMS COMMAND DR-4/239 AND THE PICTORIAL VIEW ON PAGE 3.

CONTAINER DIMENSIONS -- 193-1/2" L X 28" W X 28-1/2" H
STACKING HEIGHT - - - - - 27-1/2"
GROSS WEIGHT - - - - - 2,210 POUNDS (APPROX)
CUBE - - - - - 89.4 CUBIC FEET (APPROX)

CAUTION: THIS ITEM IS IN A "PROPULSIVE STATE" AND MUST BE STORED WITH THE FORWARD END FACING TOWARD A SIDEWALL OR THE REAR WALL AS INDICATED BY THE DIRECTIONAL ARROWS ON THE STORAGE VIEWS. ADDITIONALLY, CONTAINERS MUST NOT BE STACKED MORE THAN FOUR (4) CONTAINERS HIGH.

C. 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 CONTAINERS 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.

D. CAUTION: THE ALLOWABLE "EXPLOSIVE LIMIT" ESTABLISHED FOR A MAGAZINE IS NOT TO BE EXCEEDED. THIS LIMITATION MAY REQUIRE A QUANTITY REDUCTION FROM THE STORAGE AS SHOWN.

E. STORED CONTAINERS MUST NOT CONTACT THE WALLS OF A MAGAZINE. THEREFORE, CONTAINERS WILL BE STORED A MINIMUM OF SIX INCHES (6") FROM THE SIDEWALL OR CURVATURE OF THE MAGAZINE AS APPLICABLE. TO PROVIDE FOR THIS MANDATORY CLEARANCE REQUIREMENT, CONTAINERS MAY BE ELIMINATED FROM THE DEPICTED STORAGE PATTERN AS NECESSARY.

F. AISLE DIMENSIONS SHOWN FOR STORAGE PROCEDURES IN MAGAZINES MAY BE ADJUSTED TO SUIT LOCAL CONDITIONS, AND/OR AVAILABLE MATERIALS HANDLING EQUIPMENT (MHE), HOWEVER, A 18" MINIMUM INSPECTION AISLE MUST BE MAINTAINED AT THE FORWARD END OF CONTAINERS WHERE THE HUMIDITY INDICATOR IS LOCATED.

G. THE MAXIMUM FLOOR LOAD FOR A MAGAZINE AS PRESCRIBED BY LOCAL STANDARDS WILL NOT BE EXCEEDED.

H. IF AVAILABLE MHE PERMITS, ADDITIONAL CONTAINERS MAY BE STORED WITHIN THE MHE AREA AND/OR OTHER AVAILABLE AREA OF THE MAGAZINE.

J. THE HEIGHT OF THE PACKAGE GUARD ON SOME FORKLIFT TRUCKS MAY NOT PERMIT PLACEMENT OF SOME TOP LAYER CONTAINERS IN THE STACKS SHOWN IN THE STORAGE VIEWS HEREIN, UNLESS TWO UPPER CONTAINERS ARE HANDLED AS ONE LIFT OR THE PACKAGE GUARD IS REMOVED (TINE CARRIAGE WILL IN MOST INSTANCES PROVIDE ADEQUATE PACKAGE GUARD PROTECTION). ONLY A FORKLIFT TRUCK OF ADEQUATE CAPACITY WILL BE USED WHEN LIFTING TWO CONTAINERS AS ONE LIFT.

K. IF THE QUANTITY OF CONTAINERS FOR A MAGAZINE IS TO BE REDUCED FROM WHAT IS SHOWN HEREIN 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.

L. PORTIONS OF THE MAGAZINES, SUCH AS SIDEWALLS, END WALLS, AND ROOFS, HAVE NOT BEEN SHOWN IN THE STORAGE VIEWS FOR CLARITY PURPOSES.

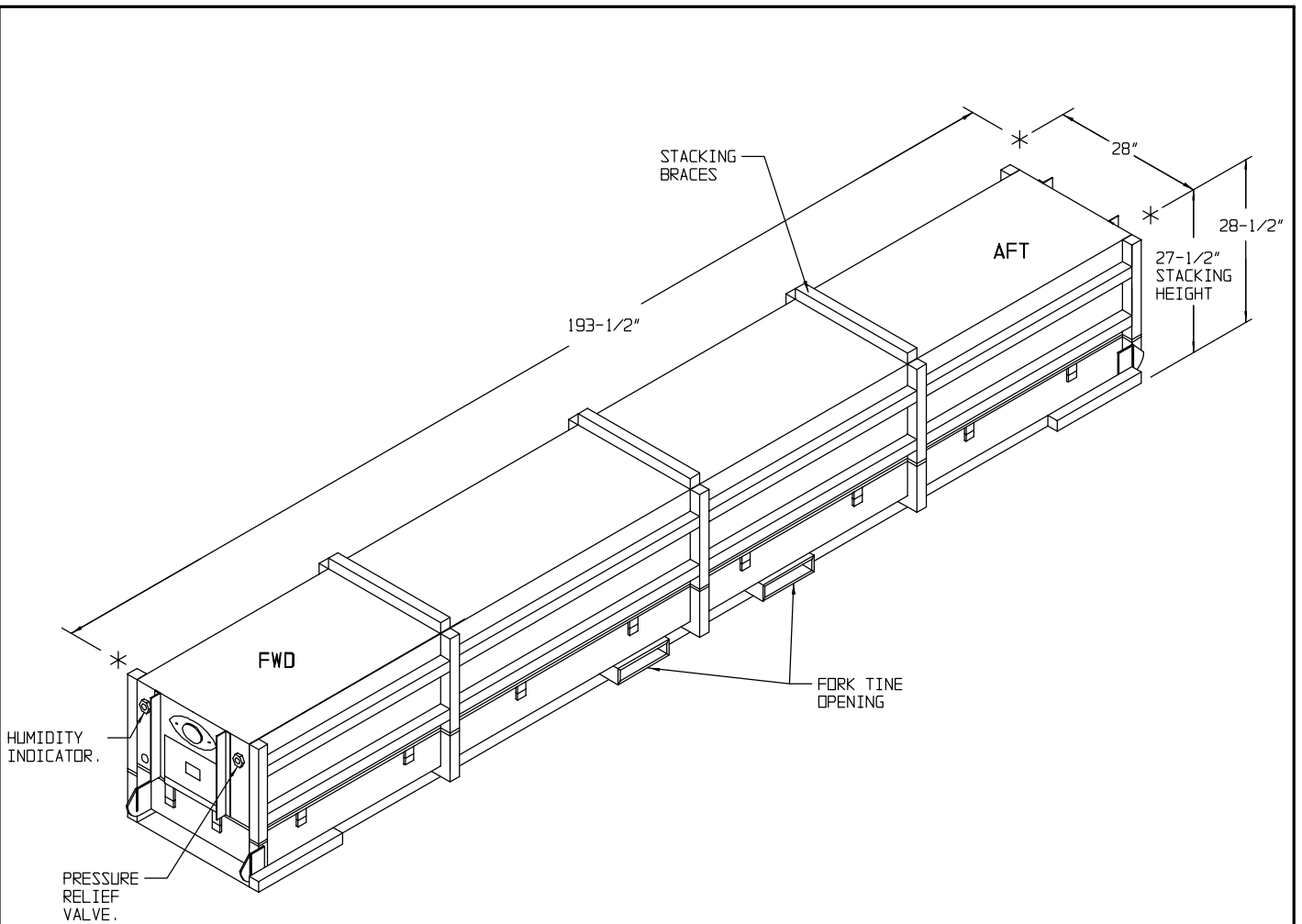
M. THE USE OF NOMINAL SIZE 1" X 6" X 28" OR 2" X 6" X 28" FLOOR DUNNAGE UNDER EACH END OF EACH FIRST-LAYER CONTAINER IS OPTIONAL, ALTHOUGH THE USE OF THIS TYPE OF DUNNAGE IS DELINEATED WITHIN THIS STORAGE PROCEDURE DRAWING. THE PURPOSE OF FLOOR DUNNAGE IS TO HELP KEEP THE RUNNERS OF A CONTAINER DRY, THUS AIDING IN PREVENTING DETERIORATION DUE TO CORROSION. THEREFORE, FLOOR DUNNAGE SHOULD BE USED WHEN STORING IN A MAGAZINE THAT IS KNOWN TO HAVE A "DAMP" FLOOR. IN IGLOO, ARCH TYPE AND STRADLEY MAGAZINES WHICH HAVE FLOORS SLOPING TOWARD THE SIDE WALLS, THE DEPICTED STORAGE PATTERNS INCLUDE CONTAINER-STACKS WHICH STRADDLE THE RIDGE OF THE FLOOR AT THE CENTER OF THE MAGAZINE. IT WILL BE NECESSARY, THEREFORE, TO USE 2" THICK MATERIAL FOR FLOOR DUNNAGE UNDER THESE STACKS TO PREVENT THE BOTTOM OF THE FORK TINE POCKETS FROM CONTACTING THE CONCRETE FLOOR. STACK STABILIZING DUNNAGE IN THE FORM OF SHIMS WILL BE USED IF REQUIRED TO ACHIEVE SOUND AND ACCEPTABLE STABLE STACKS FROM THE FLOOR TO THE TOP OF THE STACK. SHIM MATERIAL OF VARYING THICKNESSES OR THICKER FLOOR DUNNAGE WILL BE USED AS REQUIRED UNDER THE LOAD BEARING LOCATIONS AT THE ENDS OF FIRST LAYER CONTAINERS. SEE THE "FLOOR DUNNAGE AND SHIM LOCATION" DETAIL ON PAGE 3 FOR A TYPICAL INSTALLATION.

O. OTHER COMPATIBLE ITEMS MAY BE STORED IN A MAGAZINE WHICH IS PARTIALLY FILLED WITH THE DESIGNATED ITEM.

(CONTINUED AT RIGHT)

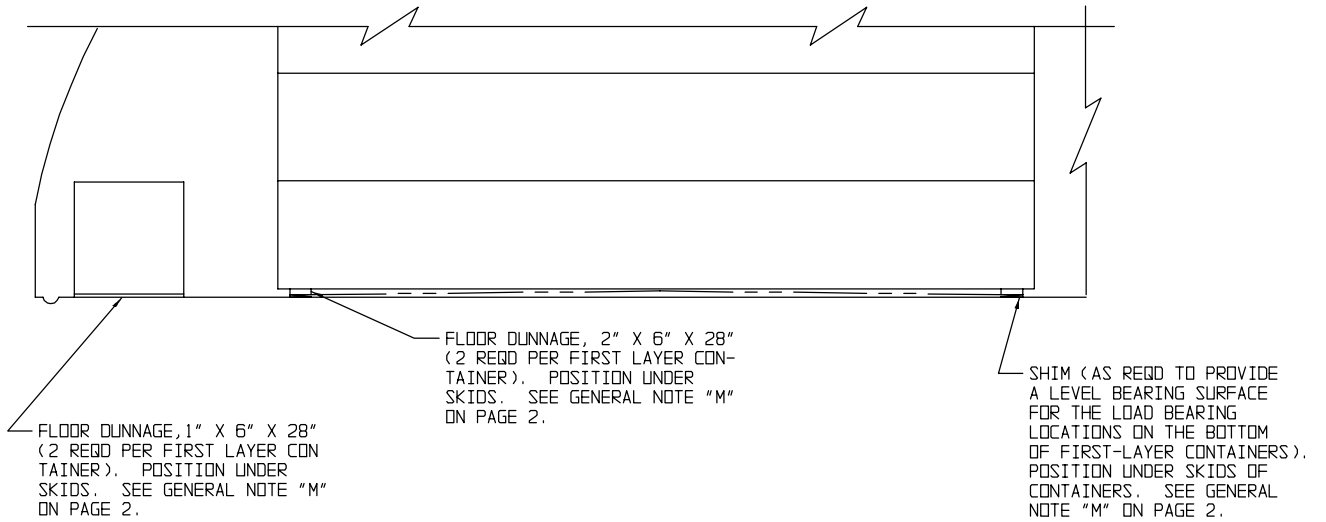
MATERIAL SPECIFICATION

LUMBER - - - - - : SEE TM 743-200-1 (DUNNAGE LUMBER) AND FED SPEC MM-L-751.



MK 632 MOD 0 CONTAINER

GROSS WEIGHT - - - - 2,210 LBS (APPROX)
 CUBE - - - - - 89.4 CUBIC FEET



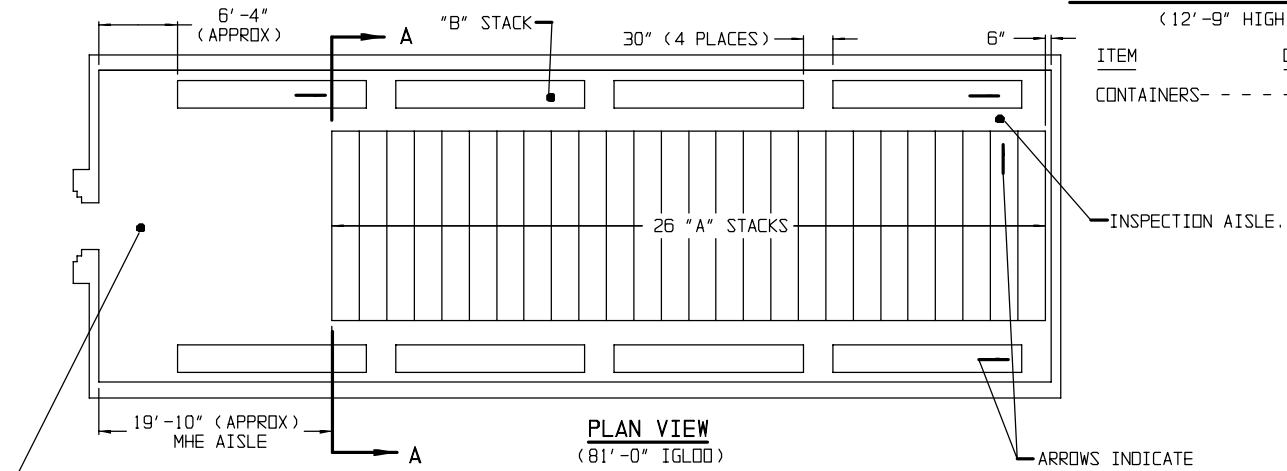
TYPICAL FLOOR DUNNAGE AND SHIM LOCATION DETAIL

DETAILS

STORAGE IN 81'-0" IGLOO

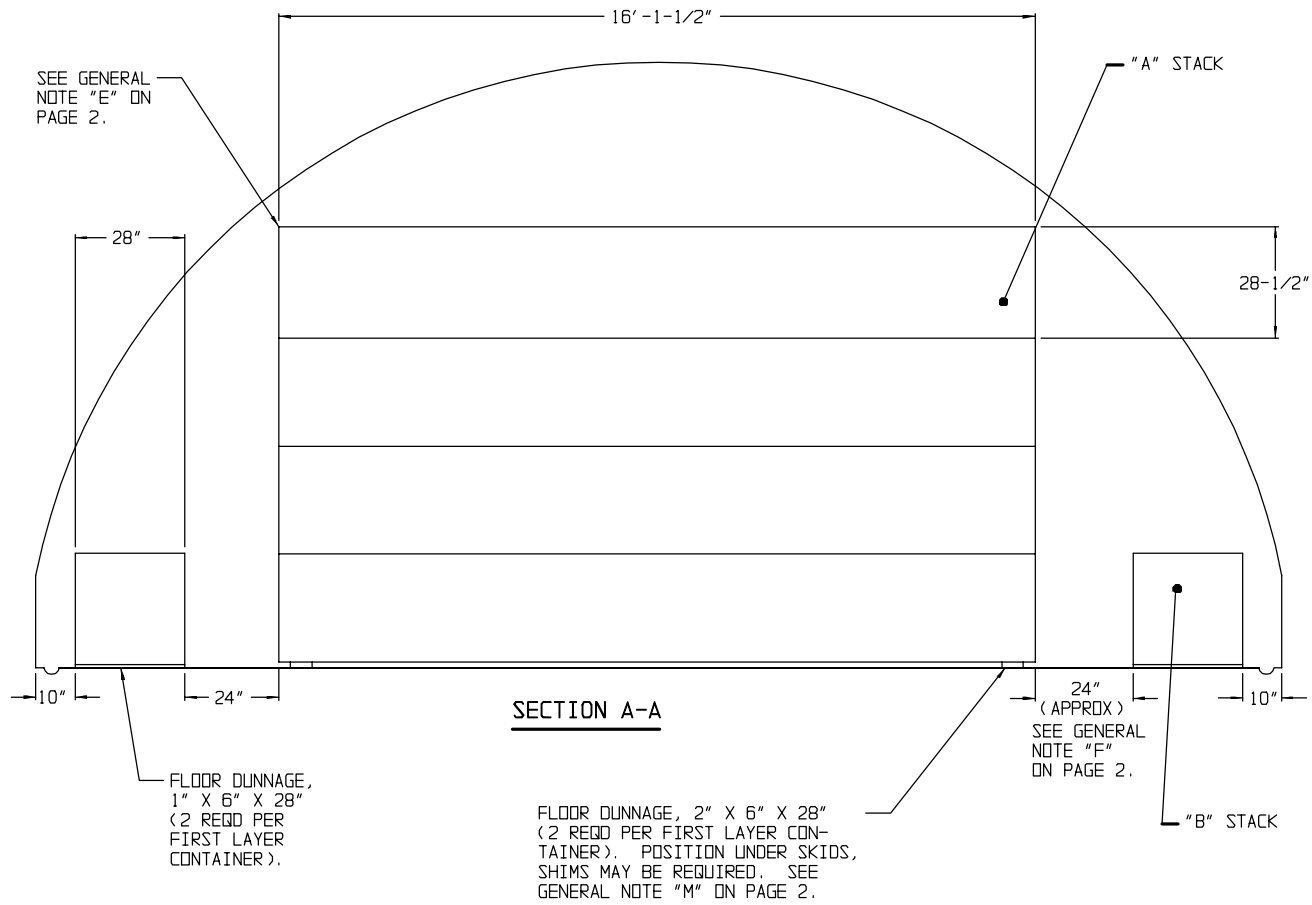
(12'-9" HIGH)

ITEM	QUANTITY
CONTAINERS-	112



SEE GENERAL NOTE "H" ON PAGE 2.

ARROWS INDICATE FORWARD END OF CONTAINERS. SEE GENERAL NOTE "B" ON PAGE 2.



SEE GENERAL NOTE "E" ON PAGE 2.

FLOOR DUNNAGE, 1" X 6" X 28" (2 REQD PER FIRST LAYER CONTAINER).

FLOOR DUNNAGE, 2" X 6" X 28" (2 REQD PER FIRST LAYER CONTAINER). POSITION UNDER SKIDS, SHIMS MAY BE REQUIRED. SEE GENERAL NOTE "M" ON PAGE 2.

24" (APPROX) SEE GENERAL NOTE "F" ON PAGE 2.

STORAGE IN 60'-8" IGLOO

(12'-9" HIGH)

ITEM QUANTITY

CONTAINERS - - - - - 78

STORAGE IN 40'-4" IGLOO*

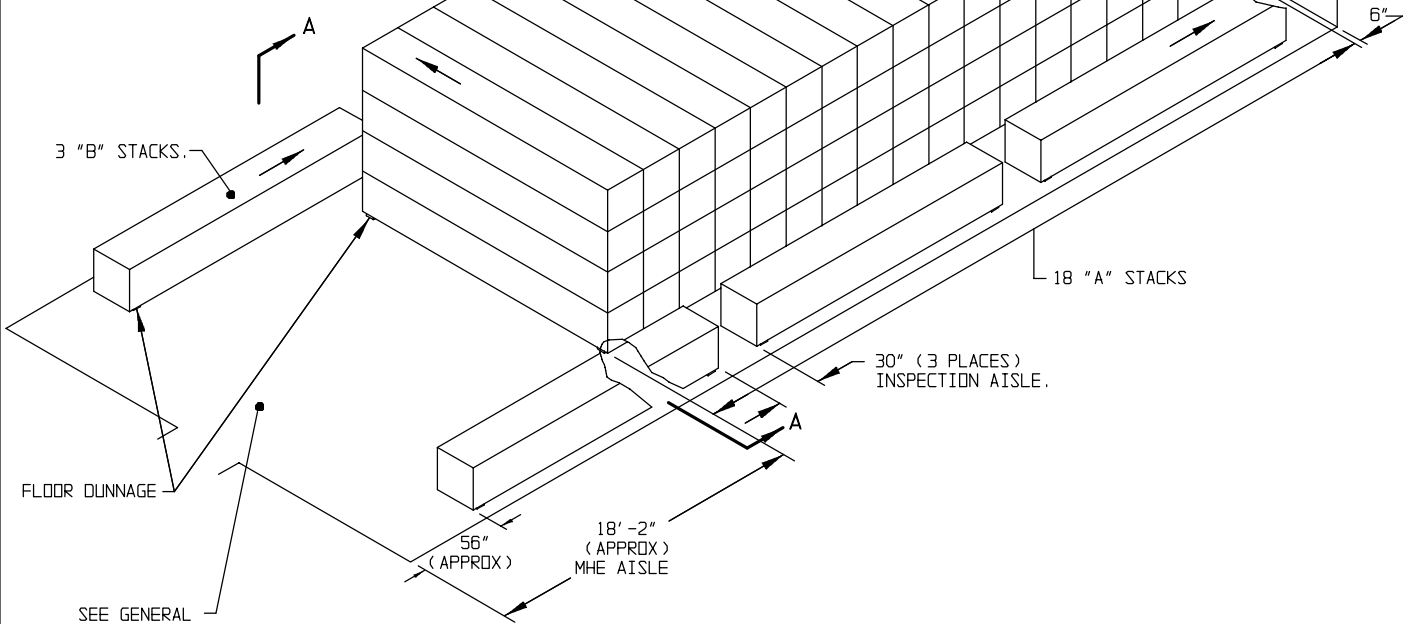
(12'-9" HIGH)

ITEM QUANTITY

CONTAINERS - - - - - 40

* 9 "A" STACKS
2 "B" STACKS

ARROWS INDICATE FORWARD END OF CONTAINERS. SEE GENERAL NOTE "B" ON PAGE 2.



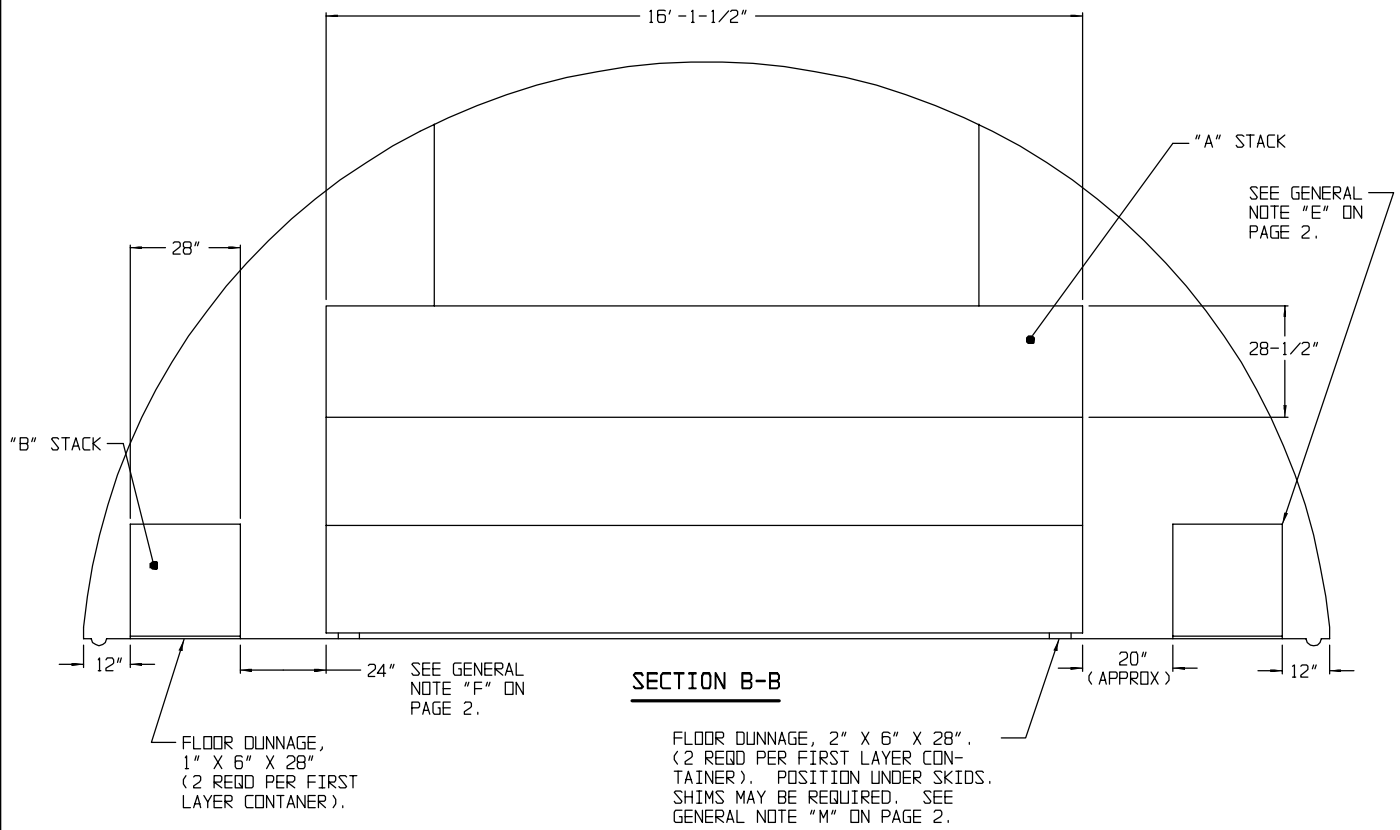
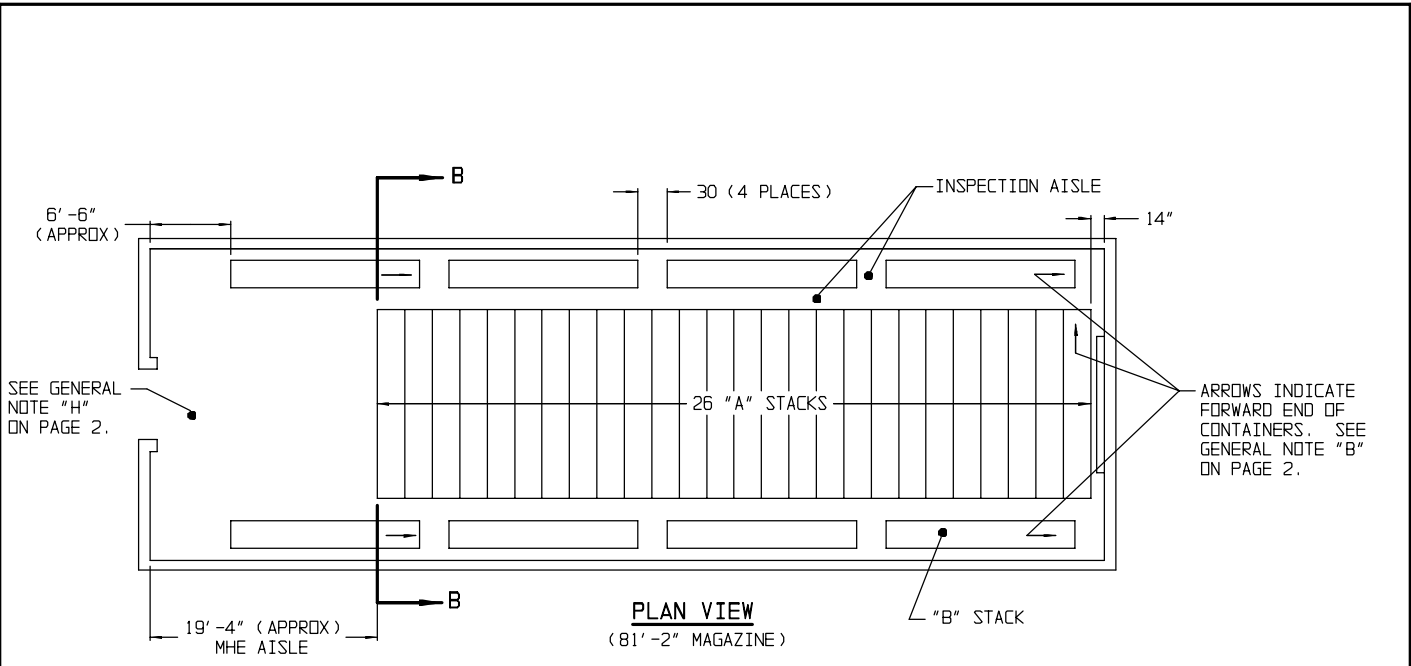
FLOOR DUNNAGE

SEE GENERAL NOTE "H" ON PAGE 2.

ISOMETRIC VIEW

(60'-8" IGLOO)

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



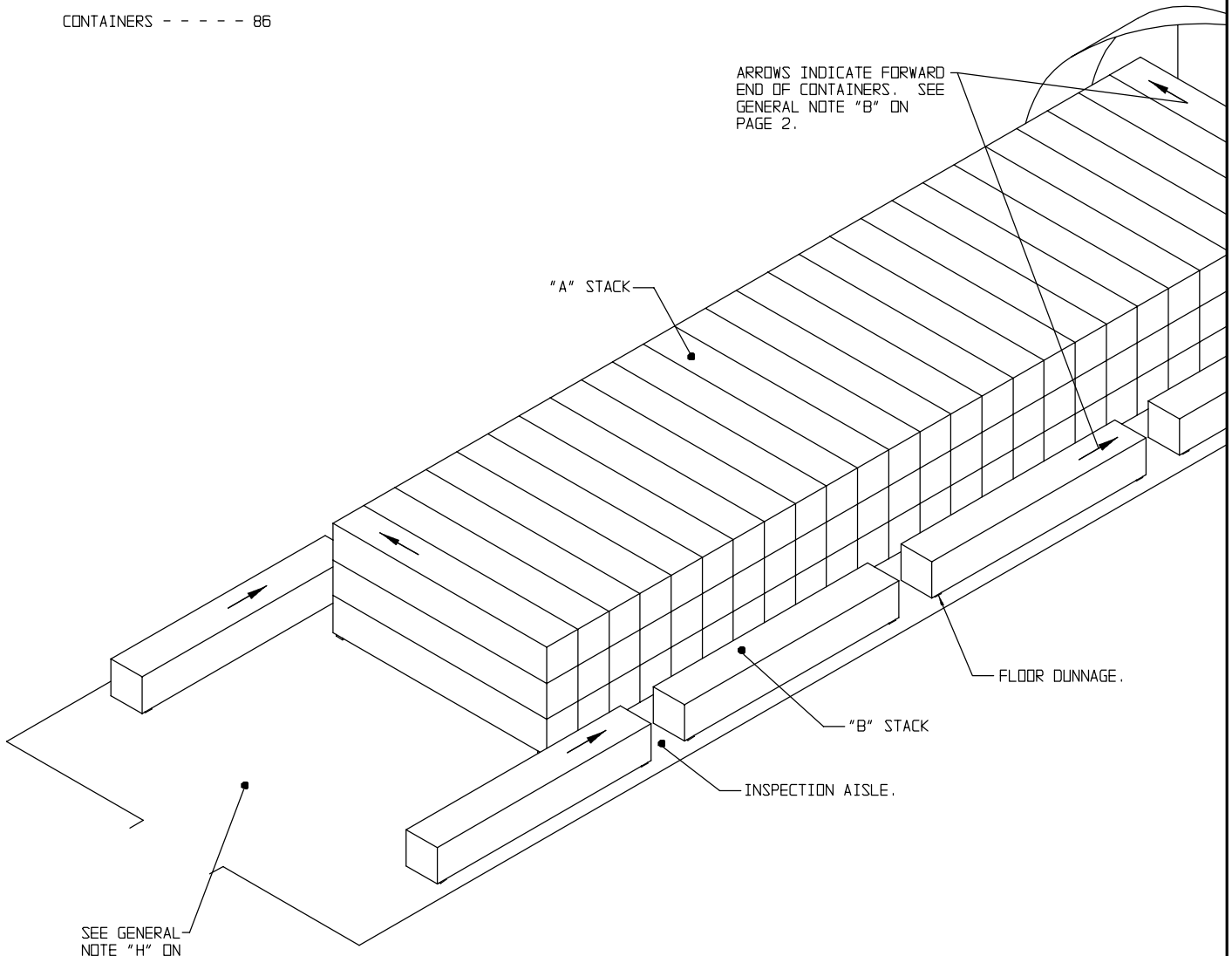
STORAGE IN 81'-2" MAGAZINE

(12'-1-3/4" HIGH)

ITEM QUANTITY

CONTAINERS - - - - - 86

ARROWS INDICATE FORWARD
END OF CONTAINERS. SEE
GENERAL NOTE "B" ON
PAGE 2.



SEE GENERAL
NOTE "H" ON
PAGE 2.

ISOMETRIC VIEW

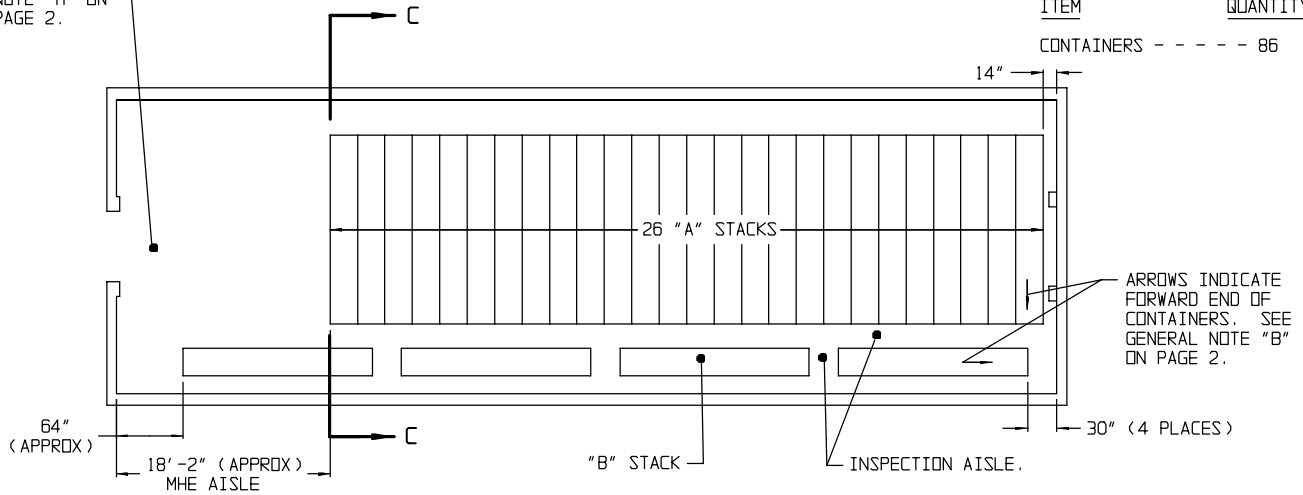
(81'-2" MAGAZINE)

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

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

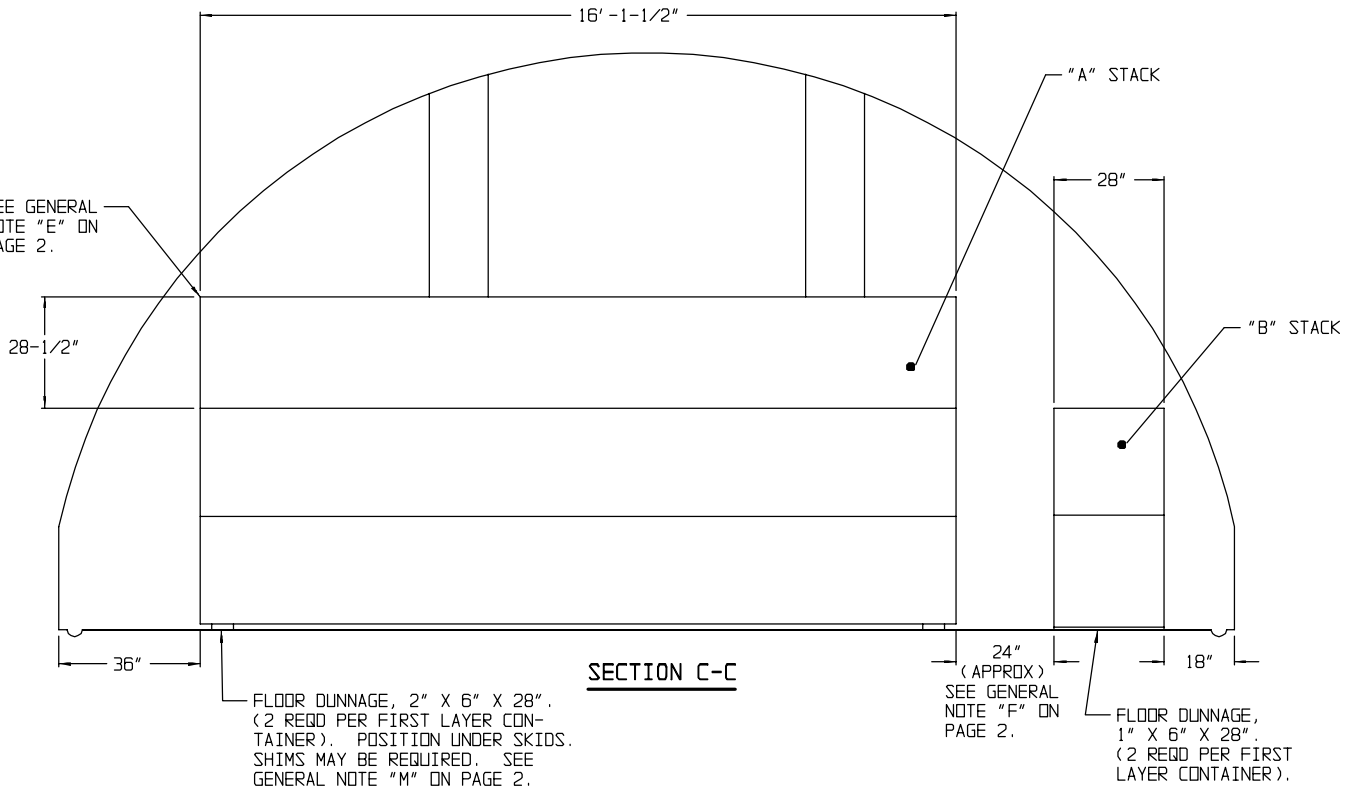
SEE GENERAL NOTE "H" ON PAGE 2.

ITEM	QUANTITY
CONTAINERS - - - - -	86



PLAN VIEW
(80'-0" MAGAZINE)

SEE GENERAL NOTE "E" ON PAGE 2.



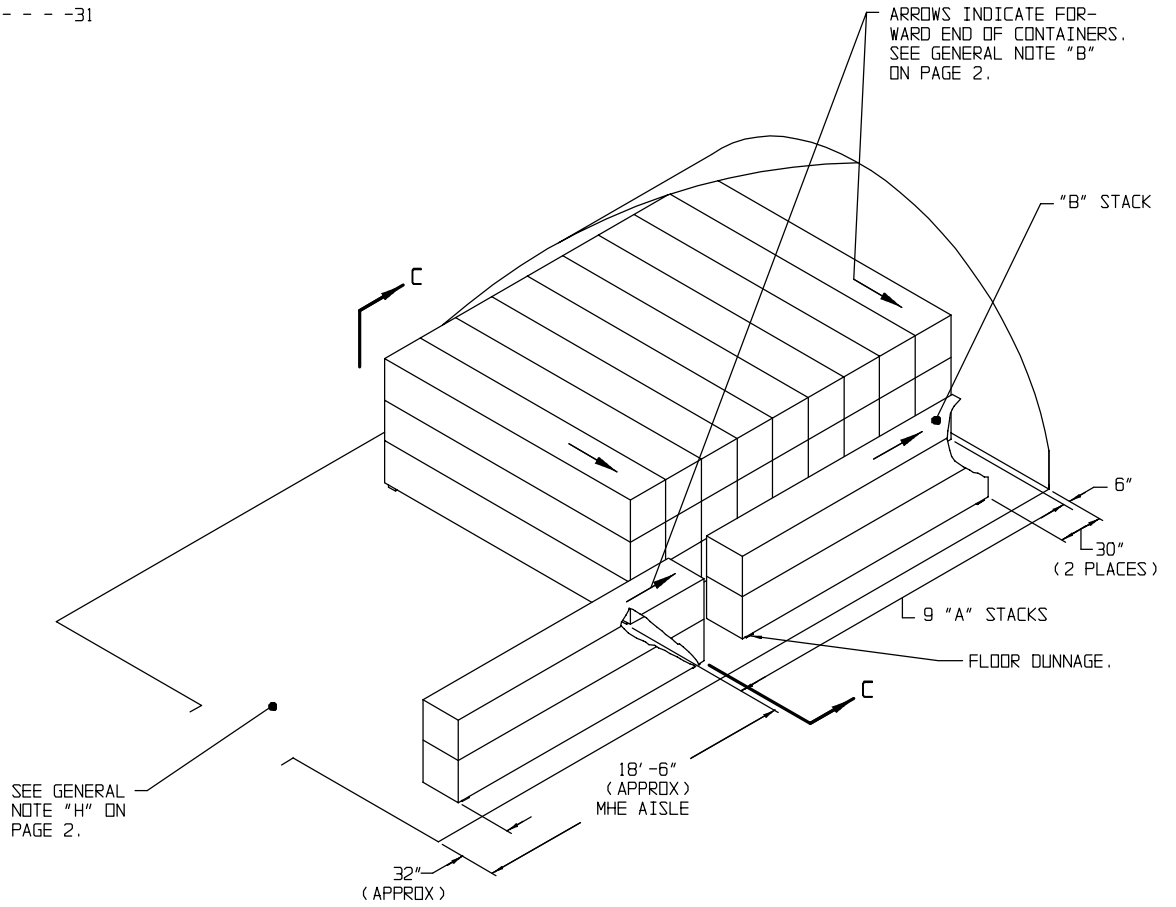
SECTION C-C

STORAGE IN 40'-0" MAGAZINE

(12'-1-3/4" HIGH)

ITEM QUANTITY

CONTAINERS- - - - - -31

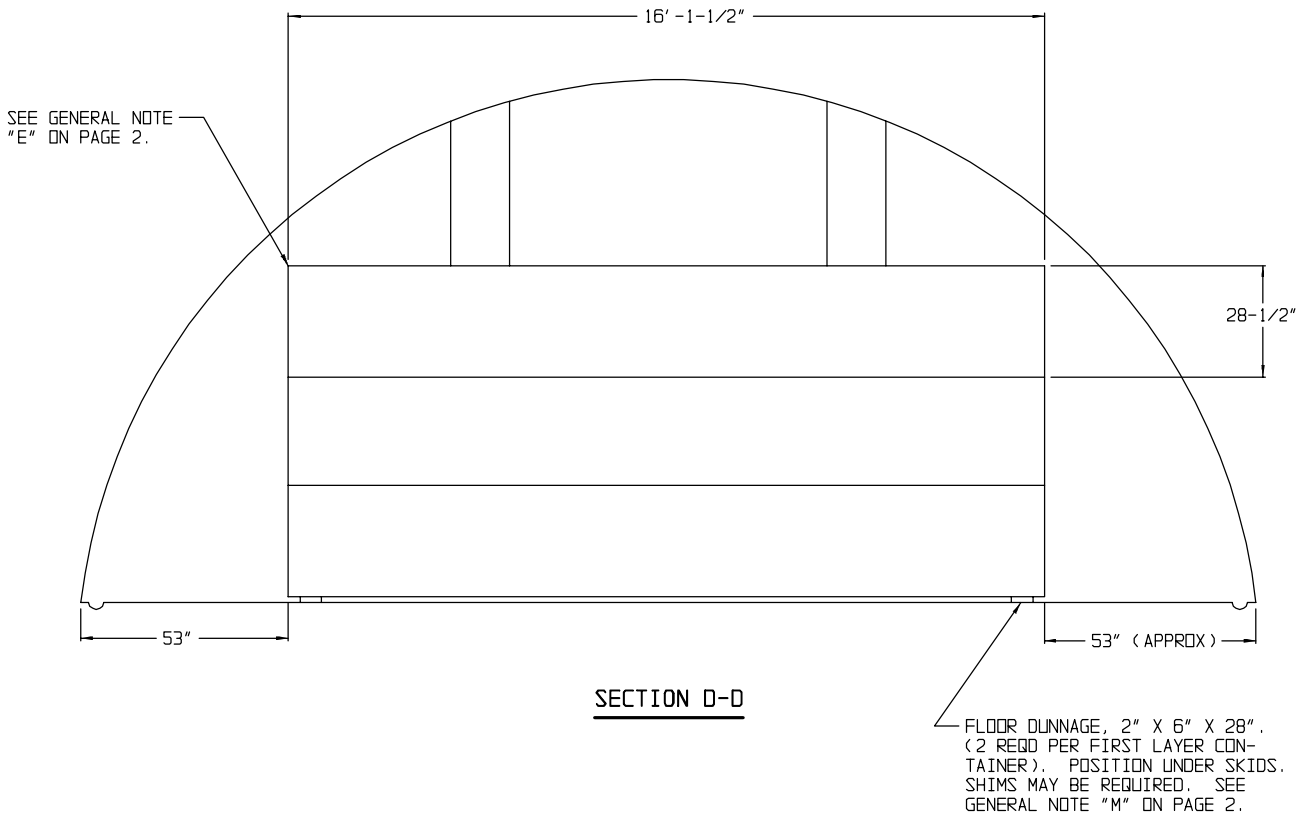
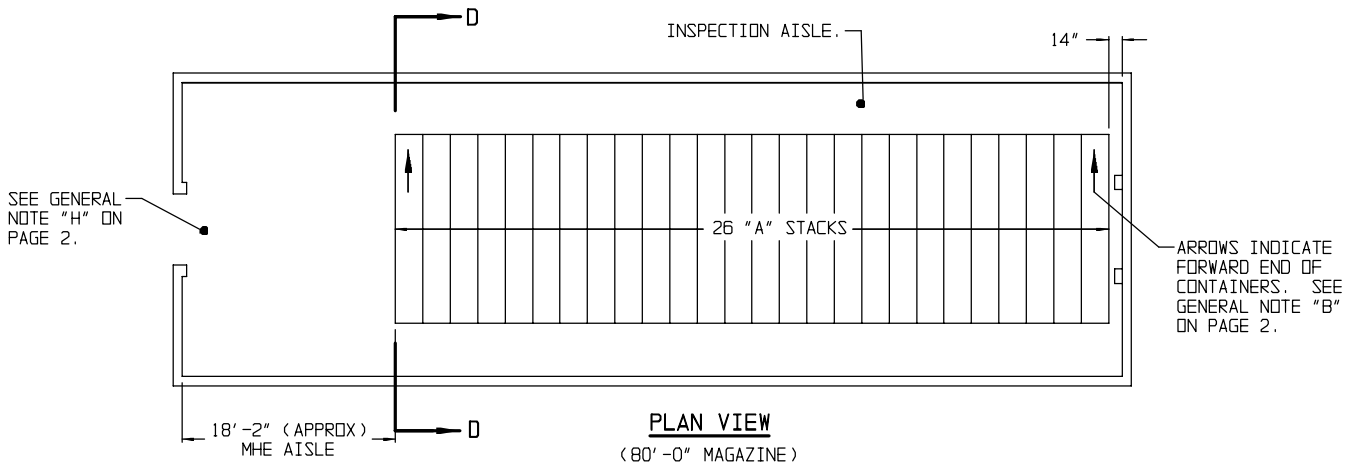


ISOMETRIC VIEW
(40'-0" MAGAZINE)

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

STORAGE IN 80'-0" MAGAZINE
(11'-0" HIGH)

ITEM	QUANTITY
CONTAINERS-	----- 78

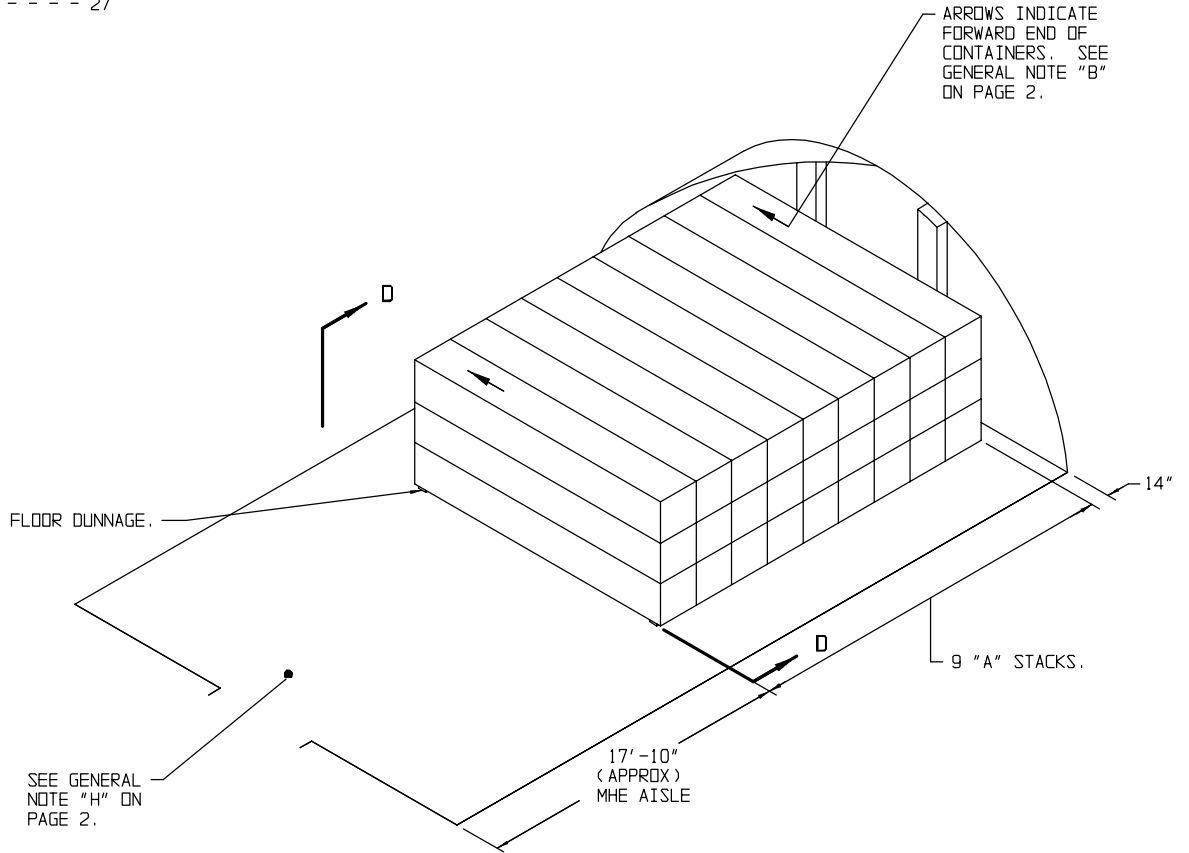


STORAGE IN 40'-0" MAGAZINE

(11'-0" HIGH)

ITEM QUANTITY

CONTAINERS - - - - - 27



ISOMETRIC VIEW

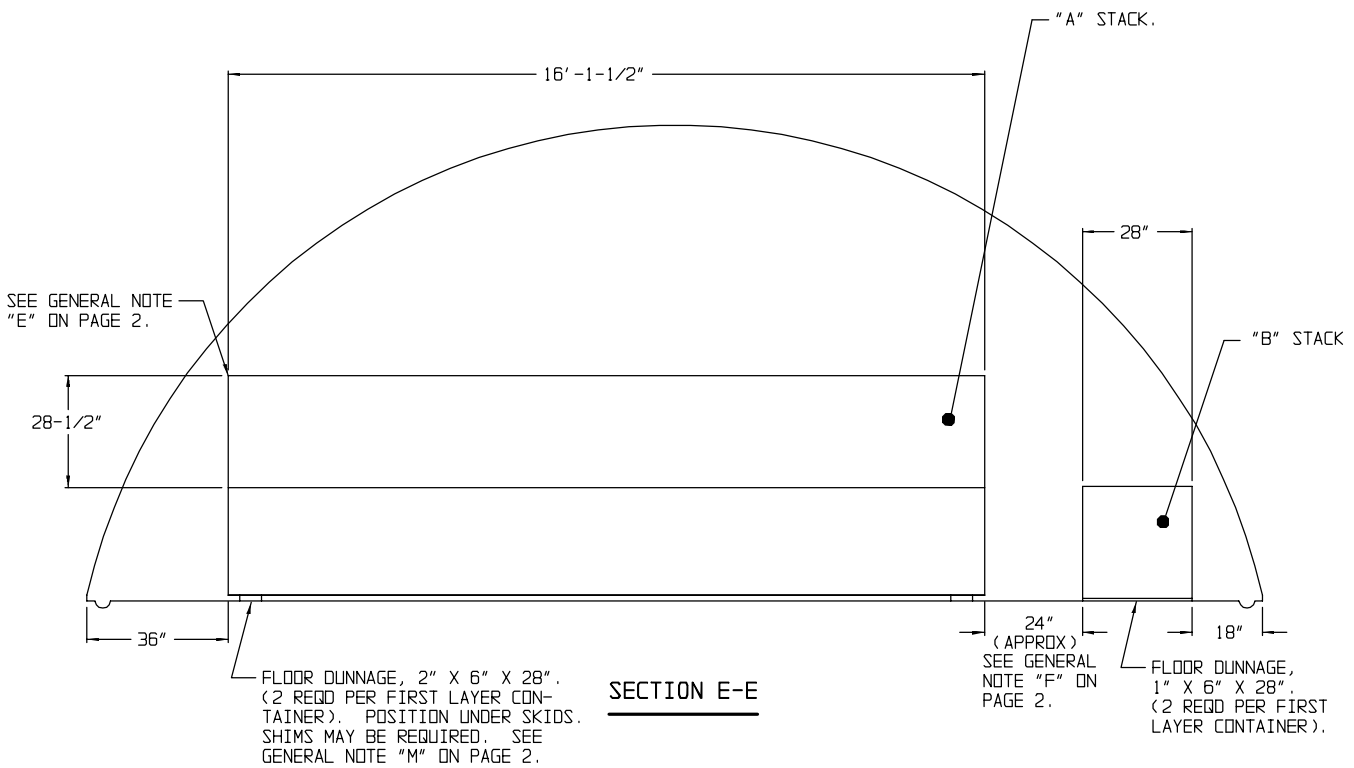
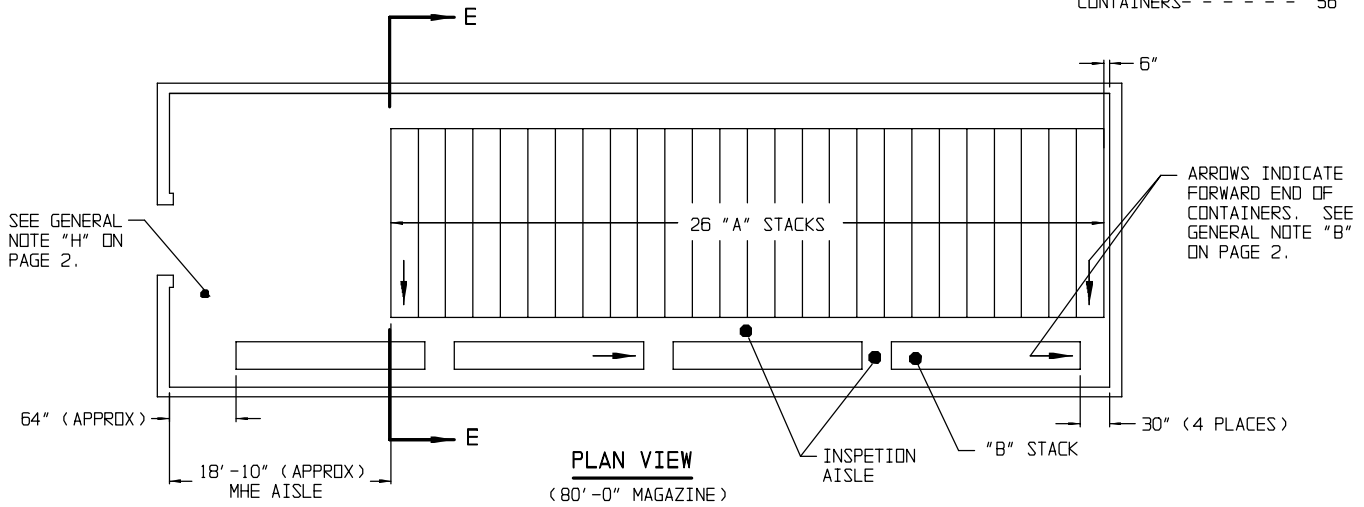
(40'-0" MAGAZINE)

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

STORAGE IN 80'-0" MAGAZINE

(10'-0" HIGH)

ITEM	QUANTITY
CONTAINERS-	56

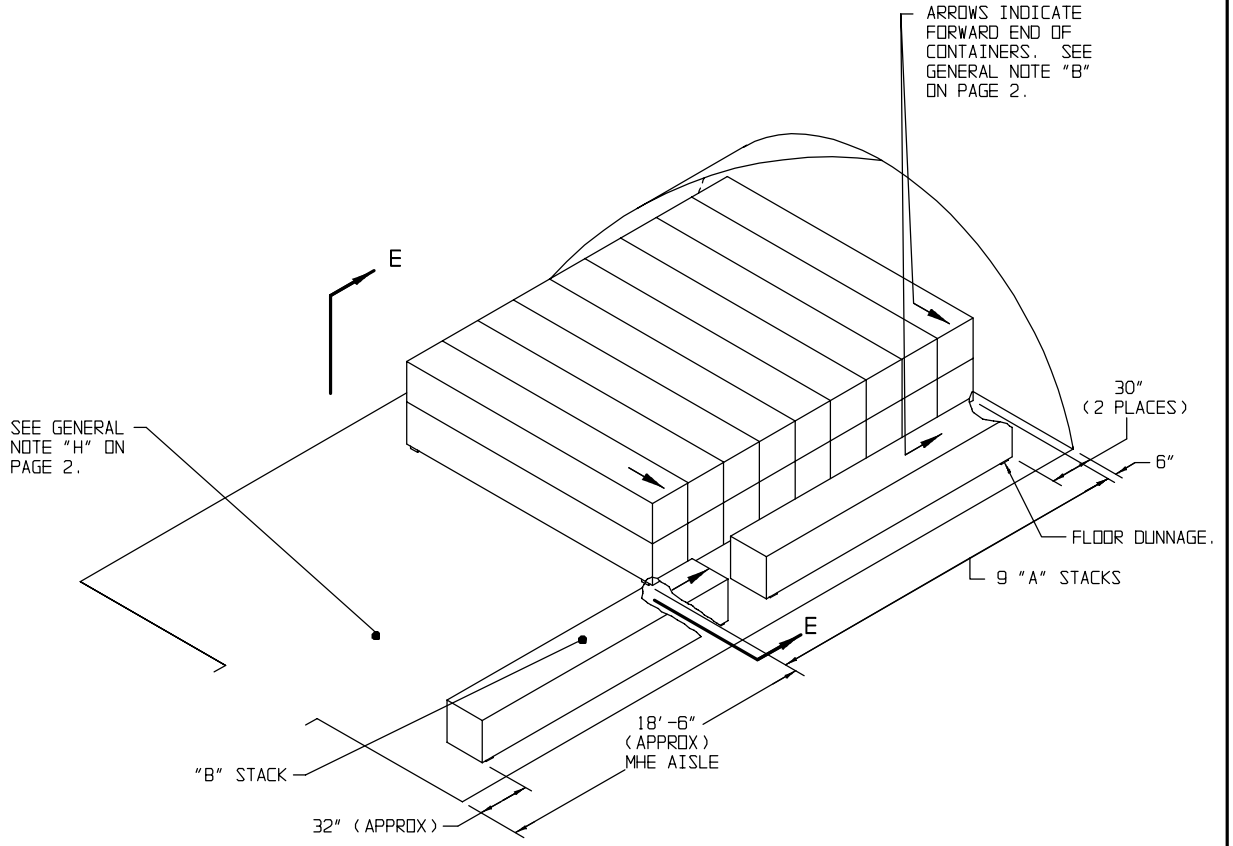


STORAGE IN 40'-0" MAGAZINE

(10'-0" HIGH)

ITEM QUANTITY

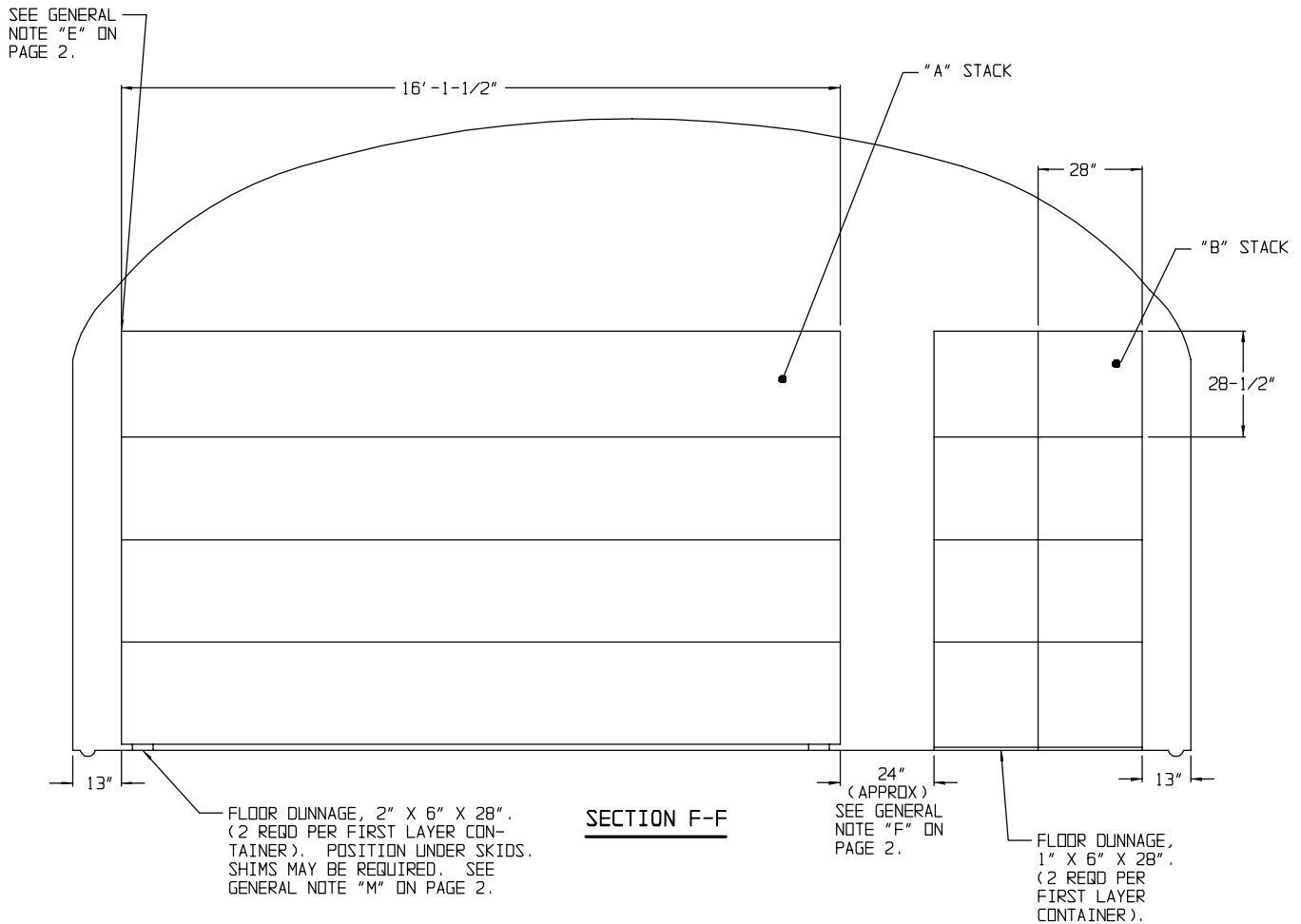
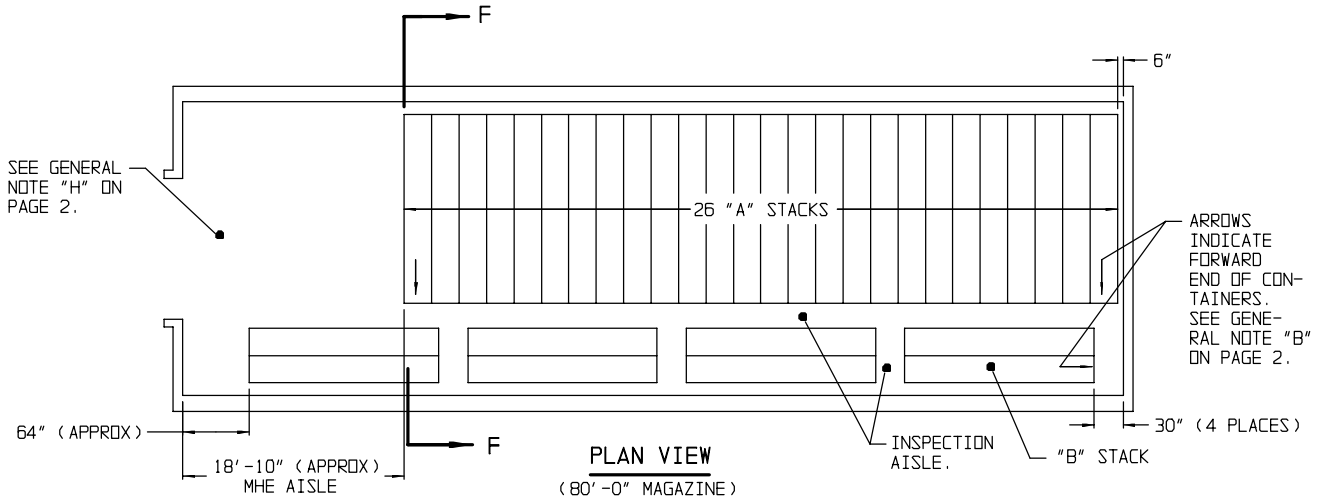
CONTAINERS- - - - - 20



ISOMETRIC VIEW

(40'-0" MAGAZINE)

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



STORAGE IN 80'-0" MAGAZINE

(14'-0" HIGH)

ITEM

QUANTITY

CONTAINERS - - - - - 136

ARROWS INDICATE
FORWARD END
OF CONTAINERS.
SEE GENERAL
NOTE "B"
ON PAGE 2.

"A" STACK

FLOOR DUNNAGE.

"B" STACK

SEE GENERAL
NOTE "H"
ON PAGE 2.

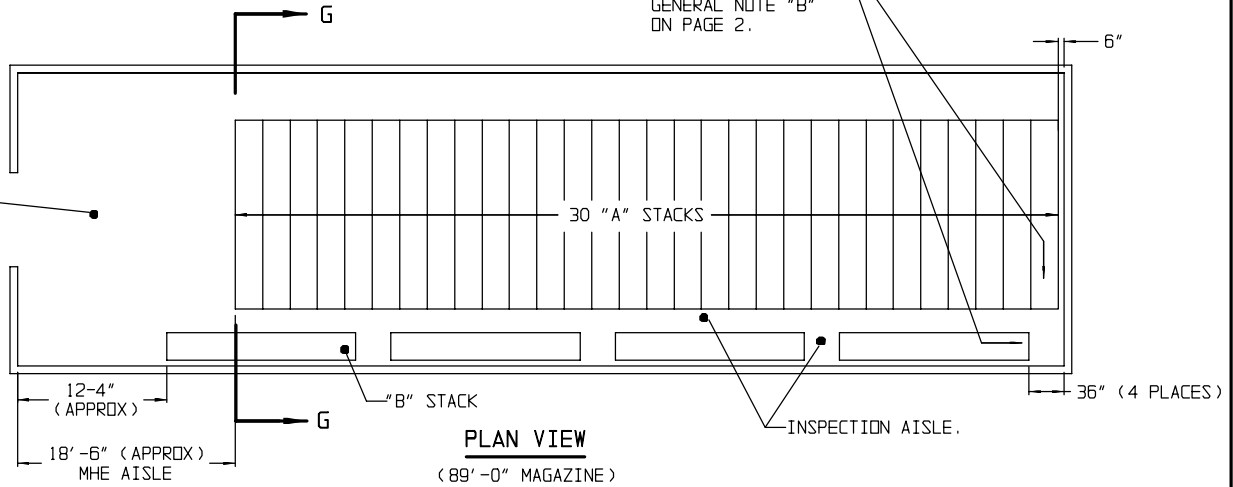
FOR "GENERAL NOTES" AND "MATERIAL
SPECIFICATIONS", SEE PAGE 2.

ISOMETRIC VIEW

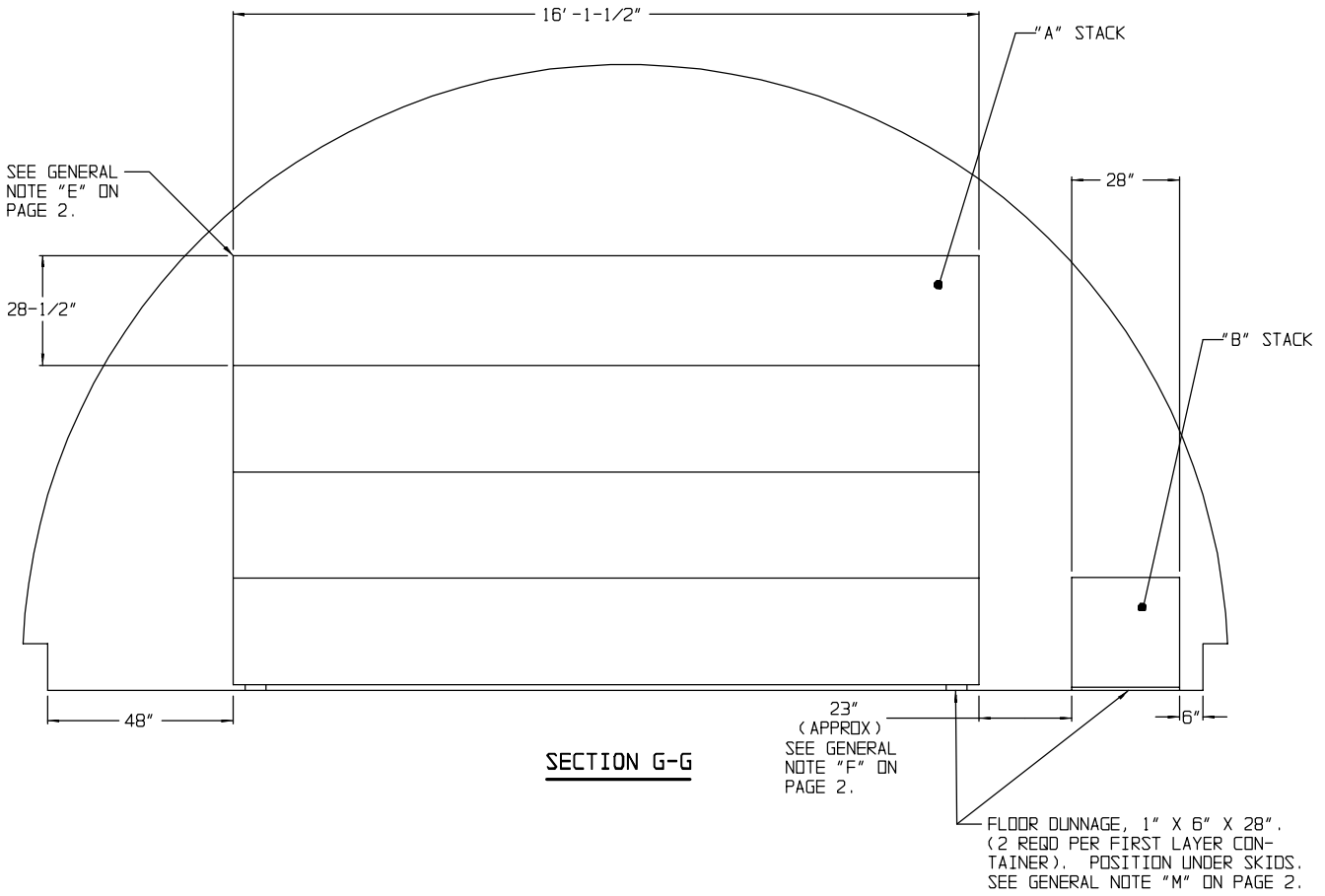
(80'-0" MAGAZINE)

ARROWS INDICATE FORWARD END OF CONTAINERS. SEE GENERAL NOTE "B" ON PAGE 2.

SEE GENERAL NOTE "H" ON PAGE 2.



SEE GENERAL NOTE "E" ON PAGE 2.



STORAGE IN 89'-0" MAGAZINE

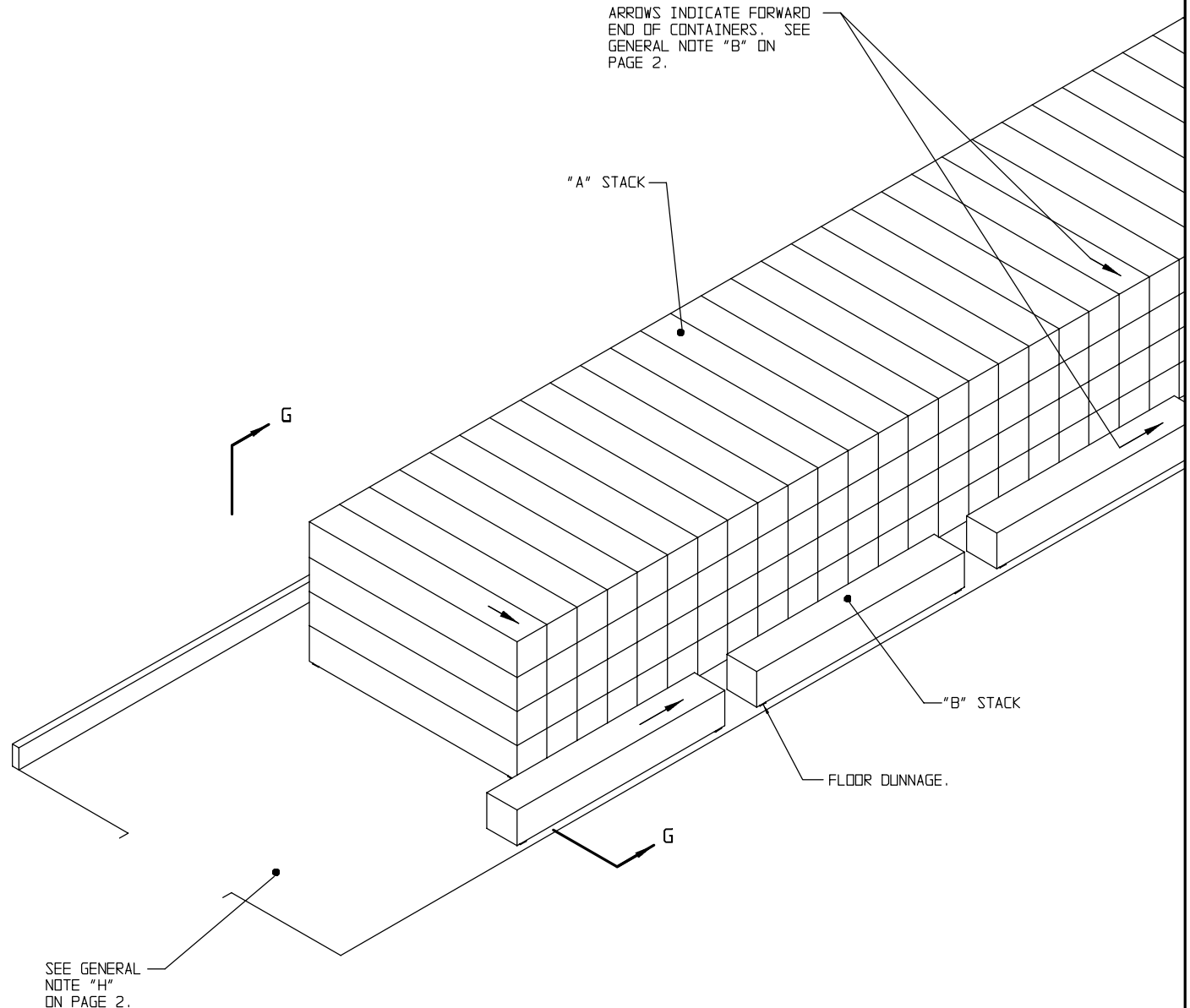
(13'-6" HIGH)

ITEM

QUANTITY

CONTAINERS - - - - - 124

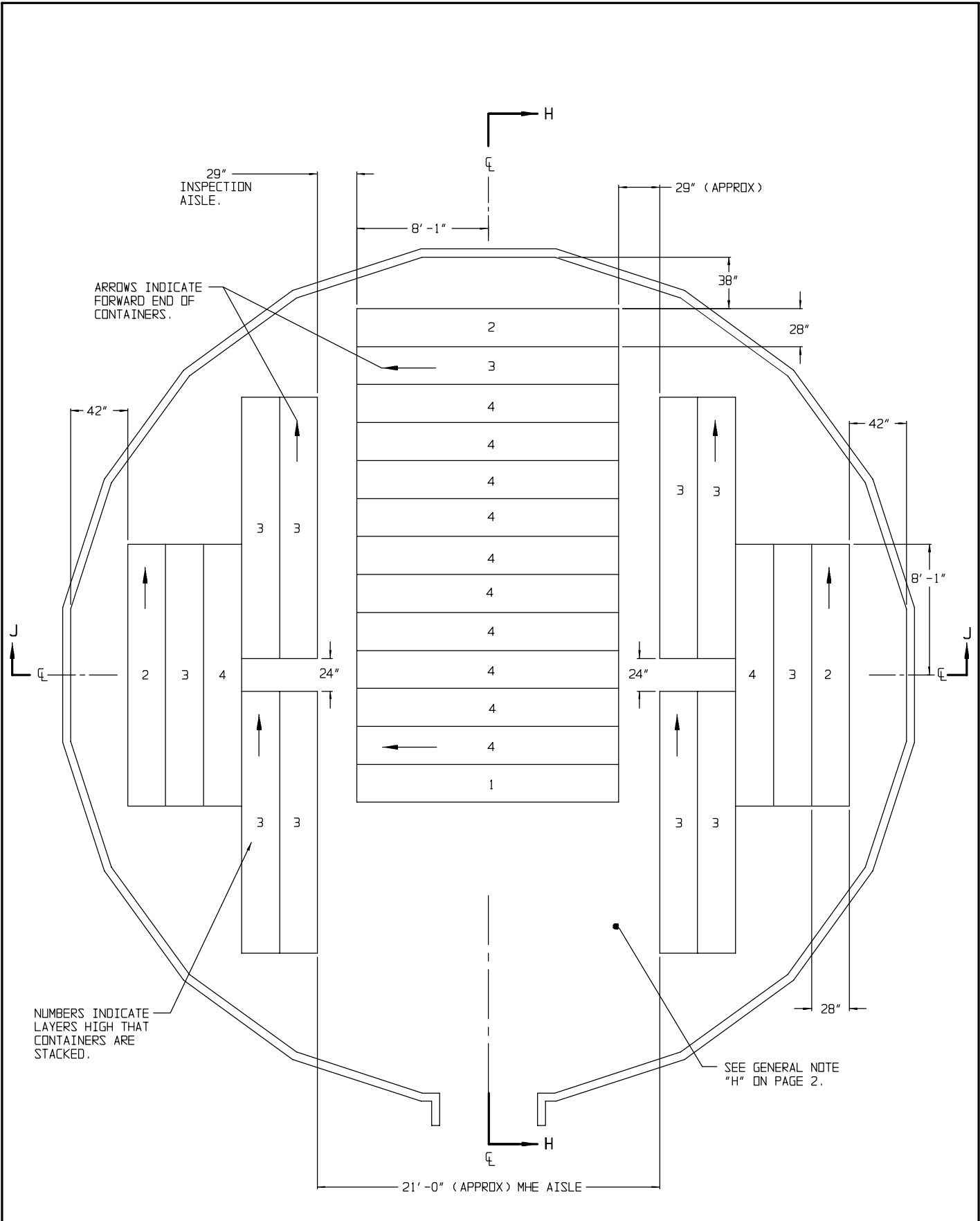
ARROWS INDICATE FORWARD
END OF CONTAINERS. SEE
GENERAL NOTE "B" ON
PAGE 2.



ISOMETRIC VIEW

(89'-0" MAGAZINE)

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



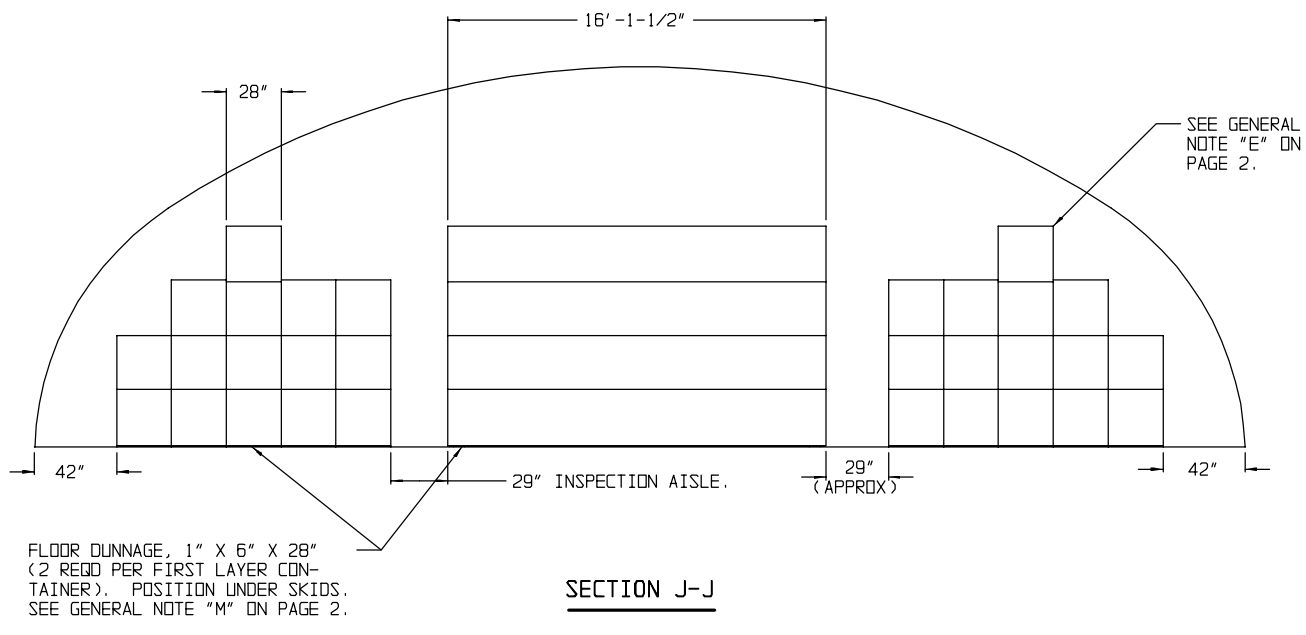
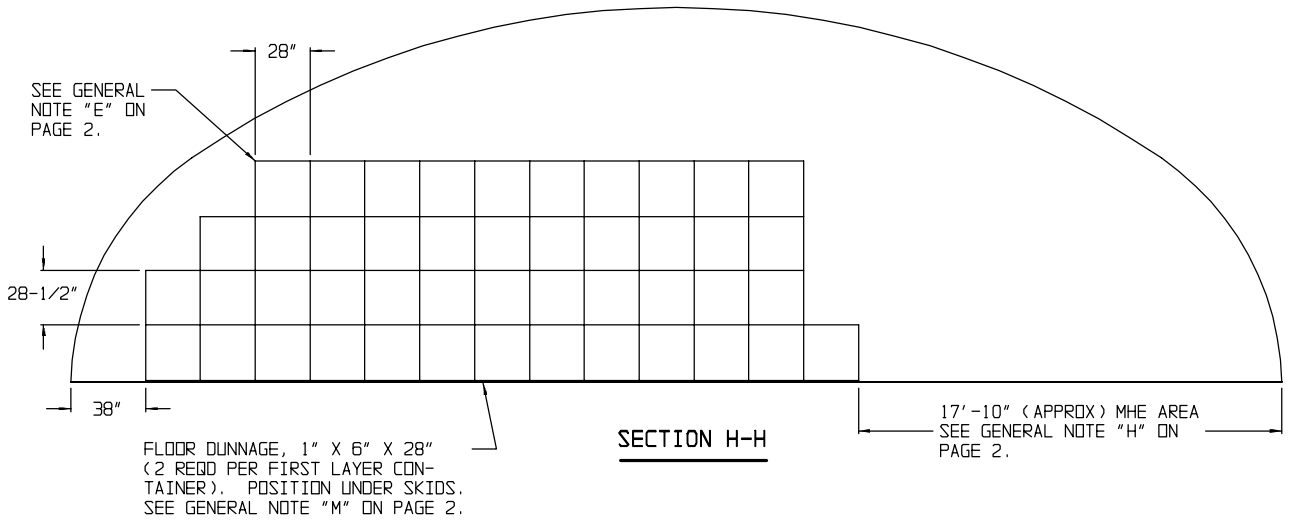
PLAN VIEW

(52'-0" DIA MAGAZINE)

STORAGE PROCEDURES IN 52'-0" DIA CORBETTA MAGAZINE

STORAGE IN 52'-0" DIA MAGAZINE

ITEM	QUANTITY
CONTAINERS - - - - -	88

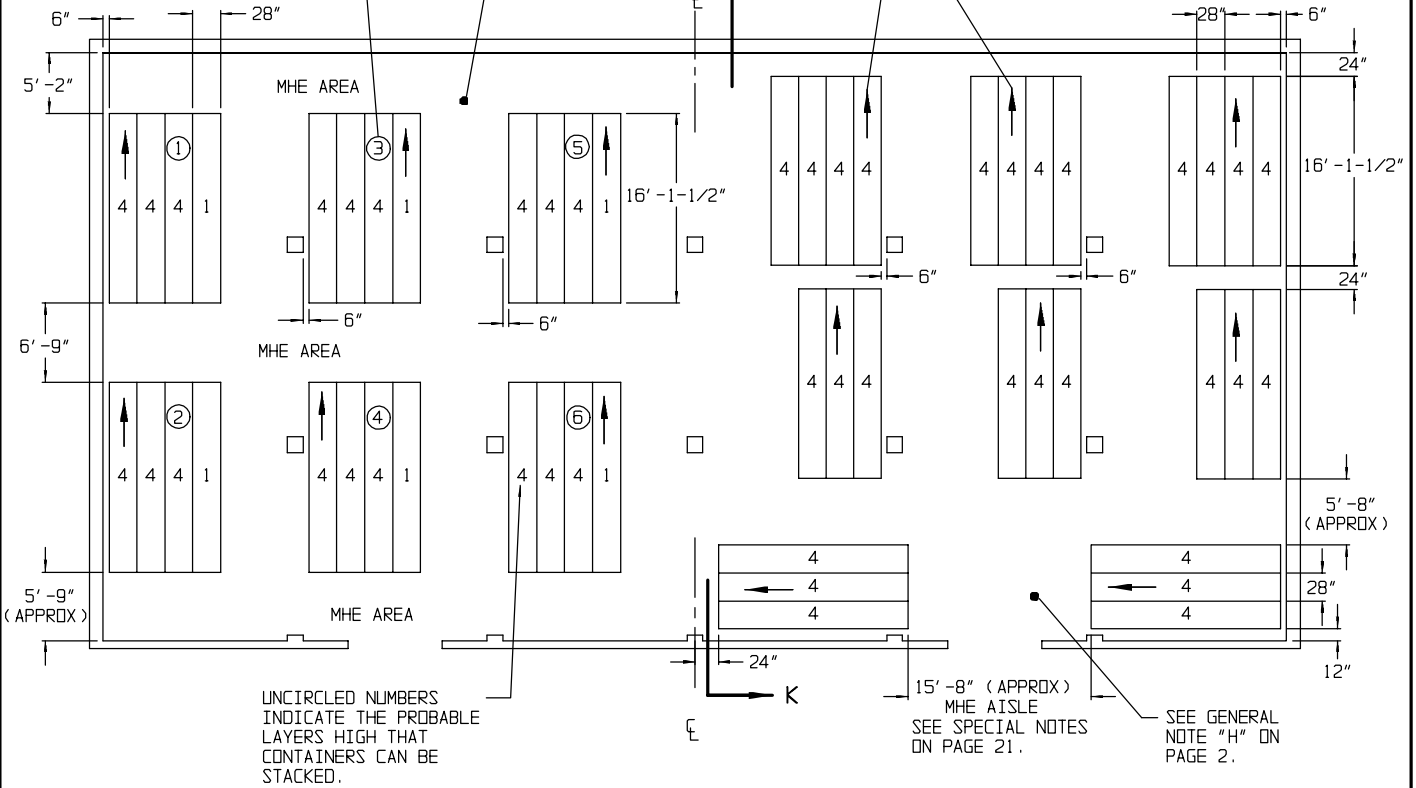


FOR "GENERAL NOTES" AND "MATERIAL SPECIFICATIONS", SEE PAGE 2.

CIRCLED NUMBERS INDICATE THE SEQUENCE OF POSITIONING A GROUP OF CONTAINERS.

ARROWS INDICATE FORWARD END OF CONTAINERS. SEE GENERAL NOTE "B" ON PAGE 2.

SEE SPECIAL NOTES ON PAGE 21.



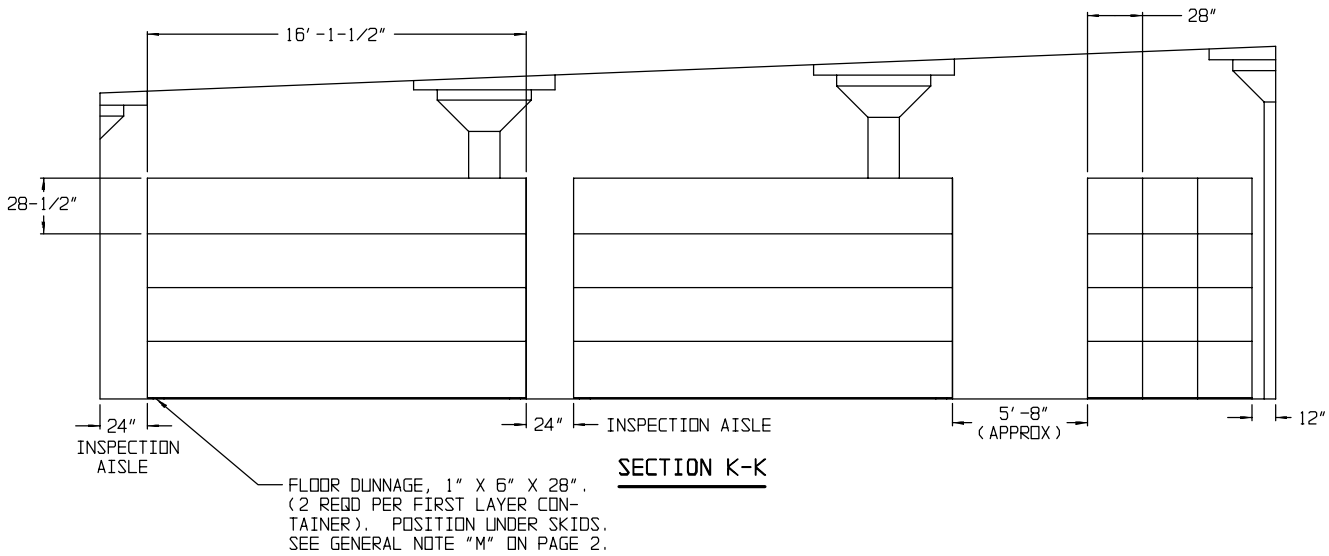
PLAN VIEW

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

UNCIRCLED NUMBERS INDICATE THE PROBABLE LAYERS HIGH THAT CONTAINERS CAN BE STACKED.

15'-8" (APPROX) MHE AISLE
SEE SPECIAL NOTES ON PAGE 21.

SEE GENERAL NOTE "H" ON PAGE 2.



SECTION K-K

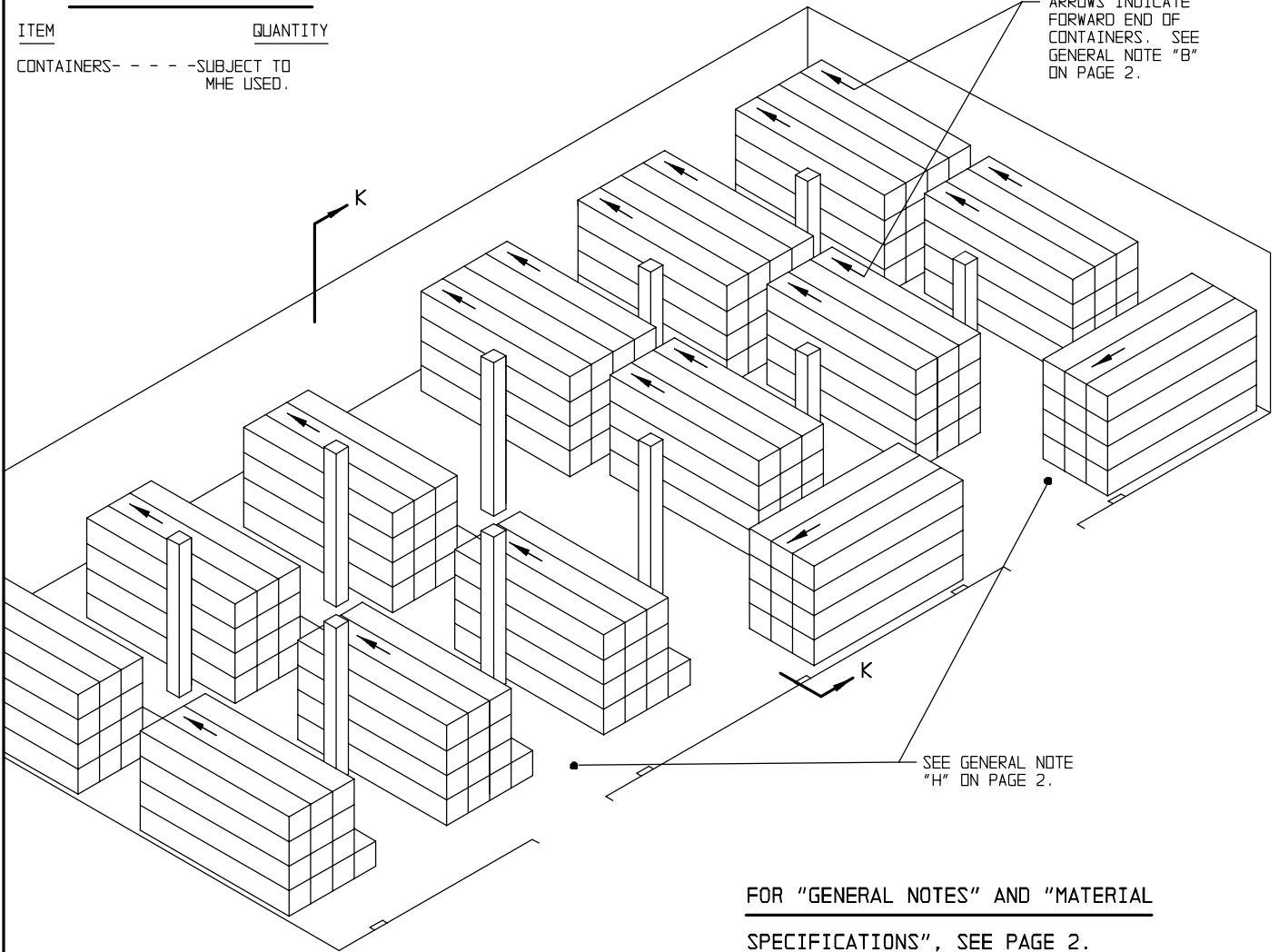
FLOOR DUNNAGE, 1" X 6" X 28". (2 REQD PER FIRST LAYER CONTAINER). POSITION UNDER SKIDS. SEE GENERAL NOTE "M" ON PAGE 2.

**STORAGE IN 100'-8" X 50'-0"
RECTANGULAR MAGAZINE**

ITEM QUANTITY

CONTAINERS- - - -SUBJECT TO
MHE USED.

ARROWS INDICATE
FORWARD END OF
CONTAINERS. SEE
GENERAL NOTE "B"
ON PAGE 2.



ISOMETRIC VIEW

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

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

SPECIAL NOTES:

1. DUE TO THE LENGTH OF THE CONTAINER AND THE LOCATION OF THE COLUMNS IN THE MAGAZINE, THE PLAN VIEW DEPICTS TWO TYPES OF STORAGE PATTERNS WHICH CAN BE ACCOMPLISHED DEPENDING ON THE AVAILABLE MHE.
2. THE RIGHT HALF OF THE MAGAZINE DEPICTS 4 CONTAINER HIGH STACKS WHICH CAN BE ACCOMPLISHED BY USE OF A FRONT/SIDE LOADER FORKLIFT TRUCK. THE FORKLIFT TRUCK MUST BE CAPABLE OF SIDE HANDLING A 16'-1-1/2" LONG CONTAINER; MUST HAVE ADEQUATE CAPACITY FOR LIFTING A CONTAINER TO THE VARIOUS HEIGHTS FOR STACKING; AND MUST HAVE THE CAPABILITY FOR MANEUVERING AROUND THE COLUMNS FOR PLACEMENT IN THE STACK. AN ADDITIONAL STACK CAN BE STORED AT ANY OF THE LOCATIONS SHOWN IF MHE PERMITS.
3. THE LEFT HALF OF THE MAGAZINE DEPICTS 4 CONTAINERS HIGH AND 1 CONTAINER HIGH STACKS WHICH CAN BE ACCOMPLISHED BY END-HANDLING A CONTAINER WITH 2 PALLET JACKS AND PLACING IT IN A STORAGE LOCATION. STACKING CONTAINERS UP TO 4 LAYERS HIGH CAN THEN BE ACCOMPLISHED BY USE OF A CONVENTIONAL FRONT LOADER FORKLIFT TRUCK. STACKS HAVE BEEN POSITIONED TO PROVIDE ADEQUATE SPACE FOR REMOVAL OF THE PALLET JACKS AND ALSO PROVIDE ACCESS FOR STACKING BY FORKLIFT TRUCK.
4. ALL REQUIREMENTS OF GENERAL NOTES "B" , "D" , "E" ,AND "F" ON PAGE 2 MUST BE COMPLIED WITH.

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

