STORAGE IN 81'-2"L X 26'-6"W X 12'-1-3/4"H ARCH TYPE MAGAZINES (IGLOO) OF PROPELLANTS AND COMPLETE ROUNDS PACKED IN METAL CONTAINERS, AND BULK POWDER, TNT, ETC. PACKED IN WOOD, FIBER, OR METAL CONTAINERS

REVISIONS			
1	DEC 85	WRF WJE	D Martin William F Ernst
2	OCT 88	WRF WJE	WR Ingram William F Ernst

DRAFTSMAN dh | PROJ ENG R+A WRF

CHECKER GRS | LOG ENGRG OFFICE W J Ernst

APPROVED, U.S. ARMY ARMAMENT, MUNITIONS AND CHEMICAL COMMAND
D Martin

APPROVED BY ORDER OF COMMANDING GENERAL, U.S. ARMY MATERIEL COMMAND (AMC)
William F Ernst
U.S. ARMY DEFENSE AMMUNITION CENTER AND SCHOOL

U.S. ARMY AMC DRAWING

DECEMBER 1985

CLASS	DIVISION	DRAWING	FILE
19	48	4007/2	IM1000

DO NOT SCALE

PROJECT FSA 8/2-59

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 OF PROPELLANTS, COMPLETE ROUNDS, BULK POWDER, ETC., IN 81'-2" LONG BY 26'-6" WIDE BY 12'-1-3/4" HIGH ARCH TYPE MAGAZINES (IGLOO).

C. THE STORAGE PROCEDURES DEPICTED HEREIN MAY ALSO BE UTILIZED TO STORE EXPLOSIVES IN 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 COMPLIED WITH.

D. WHEN USING BATTERY POWERED MHE IN ARCH TYPE MAGAZINES CONTAINING BULK PROPELLANT POWDER, THE MHE SHOULD BE TYPE EX RATED AND APPROPRIATELY LABELED FOR USE IN CLASS I, GROUP D HAZARDOUS LOCATIONS. IF BATTERY POWERED MHE OTHER THAN TYPE EX RATED IS TO BE USED, THE FOLLOWING CRITERIA WILL APPLY:

(1) VAPOR CONCENTRATION TESTS SHALL BE MADE IN REMOTE SECTIONS OF THE MAGAZINE BY COMPETENT PERSONNEL. TESTS SHOULD BE MADE AS SOON AS THE MAGAZINE DOOR IS OPENED AND AT INTERVALS NOT TO EXCEED ONE (1) HOUR.

(2) IN ORDER TO AFFORD MAXIMUM ASSURANCE OF FREEDOM OF ANY CONCENTRATION OF CONTAMINATED VAPOR, A CONSISTENT ZERO (0) PERCENT READING IS REQUIRED.

(3) AN "EXPLOSIMETER", MODEL 2, MINE SAFETY APPLICANCE COMPANY, PITTSBURGH, PENNSYLVANIA, (OR EQUAL) SHALL BE USED IN CONDUCTING THE REQUIRED TESTS.

(4) BATTERY POWERED MHE MUST CONFORM STRICTLY TO THE REQUIREMENTS CITED IN DARCOM-R 385-100 CHAPTER 24.

E. NOTICE: EXPLOSIVES MAY BE STORED IN MAGAZINES TO 500,000 POUNDS PROVIDING COMPLIANCE WITH DARCOM-R 385-100 CHAPTER 17 IS MAINTAINED. THE ALLOWABLE "EXPLOSIVE LIMIT" ESTABLISHED FOR A MAGAZINE IS NOT TO BE EXCEEDED.

F. STORED BOXES AND/OR UNITS MUST NOT CONTACT THE WALLS OF A MAGAZINE. TO PROVIDE FOR THIS MANDATORY CLEARANCE REQUIREMENT, BOXES AND/OR UNITS MAY BE ELIMINATED FROM A DEPICTED STORAGE PATTERN AS NECESSARY.

G. AISLE DIMENSIONS SHOWN MAY BE ADJUSTED TO SUIT LOCAL CONDITIONS AND/OR AVAILABLE MATERIAL HANDLING EQUIPMENT.

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

J. THE PROCEDURES WITHIN THIS DRAWING DEPICT STORAGE OF ONLY ONE LOT PER MAGAZINE. STORAGE OF MULTIPLE LOTS OR STORAGE OF COMPATIBLE ITEMS WITH DIFFERENT NATIONAL STOCK NUMBERS IN THE SAME MAGAZINE WILL REQUIRE CAREFUL PLANNING SO AS TO INSURE ACCESSIBILITY TO ANY LOT OR ITEM FOR INSPECTION/INVENTORY OR FOR REMOVAL. REFER TO PAGES 51 AND 52 FOR TYPICAL MULTIPLE LOT STORAGE PROCEDURES FOR PALLETIZED UNITS.

K. WHEN STORING UNPALLETIZED CONTAINERS/BOXES AND THE ITEMS CONTAIN MORE THAN ONE LOT, THE LOTS WILL BE SEPARATED BY A 3" MINIMUM SPACE AND EACH LOT MUST BE ACCESSIBLE FROM AN AISLE TO PERMIT REMOVAL OF A LOT WITHOUT HANDLING OR RELOCATING ITEMS OF ANOTHER LOT. THE SPACING AND ACCESSIBILITY CRITERIA ALSO APPLY TO COMPATIBLE ITEMS WITH DIFFERENT NATIONAL STOCK NUMBERS BEING HAND STACKED IN THE SAME MAGAZINE.

L. 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 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.

M. A STACK IS IDENTIFIED AS THE CONTAINERS/BOXES IN A GROUP WHICH IS ONE LONG, FULL HEIGHT, AND EXTENDING ACROSS THE ENTIRE WIDTH OF THE MAGAZINE. A DOUBLE STACK IS TWO SINGLE STACKS HAVING SOME DUNNAGE WHICH IS COMMON TO BOTH STACKS.

(CONTINUED AT RIGHT)

MATERIAL SPECIFICATIONS

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

NAILS----------: COMMON, FED SPEC FF-N-105.

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 IV, CLASS H, FINISH B (GRADE 2), FED SPEC QQ-S-781.

(GENERAL NOTES CONTINUED)

N. 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 PALLETIZED-STORAGE VIEWS HEREIN, UNLESS TWO UPPER PALLET UNITS 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 OF ADEQUATE CAPACITY WILL BE USED WHEN LIFTING TWO PALLET UNITS AS ONE LIFT.

O. ANY "LIGHT" PALLET UNIT THAT DOES NOT CONTAIN A FULL QUANTITY WILL NOT BE BURIED IN STORAGE. IT MUST BE POSITIONED ADJACENT TO AN AISLE, PREFERABLY IN FRONT OF THE LOT OR ON TOP OF THE LAST STACK ADJACENT TO OR NEAREST THE MHE AISLE.

P. IF AVAILABLE MHE PERMITS, ADDITIONAL PALLET UNITS MAY BE STORED WITHIN THE MHE AREA AND/OR OTHER AVAILABLE AREAS OF A MAGAZINE. THE ARROWS WHICH ARE ON SOME OF THE PLAN VIEWS HEREIN INDICATE THE DIRECTION OF STORAGE OF PALLET UNITS FROM THE WALL TOWARD THE MHE AISLE OR THE DOOR OPENING.

Q. PROPELLANTS, COMPLETE ROUNDS, BULK POWDER, ETC., PRESENTLY STORED IN ACCORDANCE WITH A PRIOR APPROVED DRAWING NEED NOT BE RE-STORED SOLELY TO CONFORM TO THE PROCEDURES SPECIFIED IN THIS DOCUMENT.

R. A STORAGE METHOD FOR PALLETIZED BOX/DRUM-PACKED BULK EXPLOSIVES ON PALLETS EQUIPPED WITH PALLET RACKS IS DELINEATED ON PAGE 48 THRU 50 AND 62 THRU 65. THIS METHOD CAN ALSO BE USED FOR STORING OTHER COMMODITIES AS IDENTIFIED IN THIS DRAWING. GENERALLY, WHEN COMPARED TO A "HAND-STACKED" STORAGE METHOD, THE STORAGE METHOD SHOWN ON PAGES 48 THRU 50 AND 62 THRU 65, WILL REQUIRE ABOUT 20 PERCENT MORE SPACE TO STORE THE SAME QUANTITY OF PACKAGES.

S. UNLESS OTHERWISE SPECIFIED, DUNNAGE LUMBER THROUGHOUT THIS PROCEDURAL DRAWING IS OF NOMINAL SIZE. FOR EXAMPLE, 1" X 4" MATERIAL IS ACTUALLY 3/4" THICK BY 3-1/2" WIDE AND 2" X 4" MATERIAL IS ACTUALLY 1-1/2" THICK BY 3-1/2" WIDE.

T. NOTICE: A STAGGERED NAILING PATTERN WILL BE USED WHEREVER POSSIBLE WHEN NAILS ARE DRIVEN INTO JOINTS OF DUNNAGE ASSEMBLIES. ALSO, A STAGGERED NAILING PATTERN WILL BE USED WHEN LAMINATING DUNNAGE. ADDITIONALLY, THE NAILING PATTERN FOR AN UPPER PIECE OF LAMINATED DUNNAGE WILL BE ADJUSTED AS REQUIRED SO THAT A NAIL FOR THAT PIECE WILL NOT BE DRIVEN THROUGH ONTO OR RIGHT BESIDE A NAIL IN A LOWER PIECE.

U. NAILING THROUGH ANY PORTION OF THE STORED BOXES AND/OR UNITS IS PROHIBITED.

V. WHEN ANY STRAP IS SEALED AT AN END-OVER-END LAP JOINT, USE ONE (1) SEAL WITH TWO (2) PAIR OF CRIMPS TO SEAL THE JOINT.

W. CONVERSION TO METRIC EQUIVALENTS: DIMENSIONS WITHIN THIS DOCUMENT ARE EXPRESSED IN INCHES, AND WEIGHTS ARE EXPRESSED IN POUNDS. WHEN NECESSARY, THE METRIC EQUIVALENTS MAY BE COMPUTED ON THE BASIS OF ONE INCH EQUALS 25.4MM, AND ONE POUND EQUALS 0.454KG.

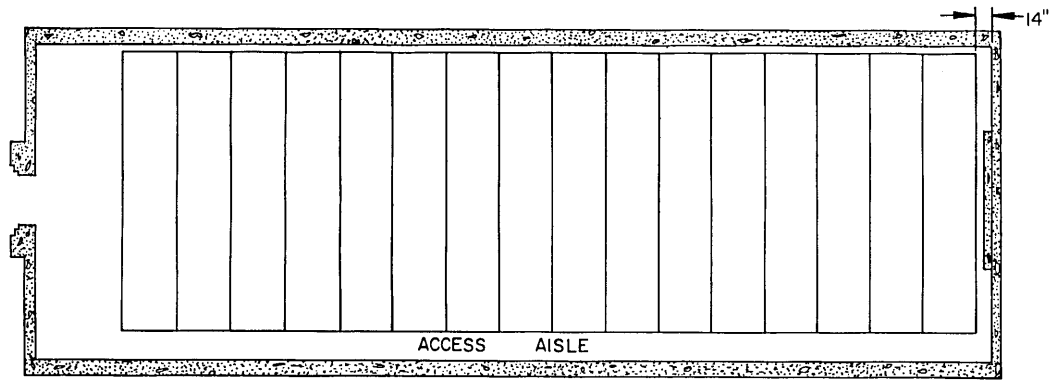
REVISIONS

REVISION NO. 1, DATED DECEMBER 1985, CONSISTS OF:

1. CHANGING THE TITLE BLOCK FROM U.S. ARMY DARCOM DRAWING TO U.S. ARMY AMC DRAWING.
2. ADDING PROCEDURES ON PAGE 41 FOR COMPLETE ROUNDS IN PA98 AND PA104 CONTAINERS.
3. CHANGING THE FLOOR DUNNAGE AND INTERMEDIATE DUNNAGE ON PAGES 42 THRU 45 AND PAGE 53 TO BE LONGITUDINAL.
4. ADDING SPECIAL PROCEDURES ON PAGES 80 THRU 85 FOR STORAGE OF FIBERBOARD BOXES AND FIBERBOARD DRUMS IN GEOGRAPHICAL AREAS WHERE THE HUMIDITY IS HIGH.
5. ADDING ALTERNATIVE PROCEDURES ON PAGE 89 FOR STORAGE OF POWDER, PROPELLANT, PACKED IN STEEL BOX, M2 AND MKVII.

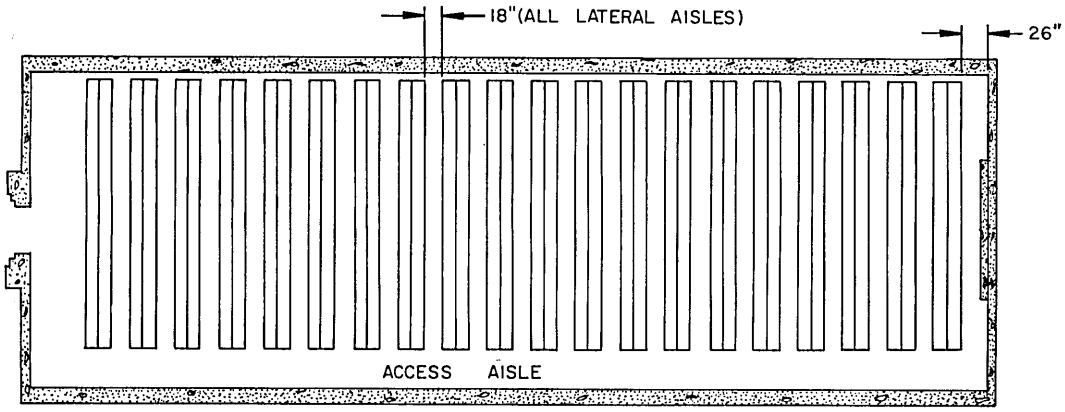
REVISION NO. 2, DATED OCTOBER 1988, CONSISTS OF:

1. REMOVING PALLETIZED TNT FROM PAGES 46 AND 47, AND REPLACING WITH UNPALLETIZED SMALL LOT PROCEDURES.
2. UPDATING SPECIAL NOTES.



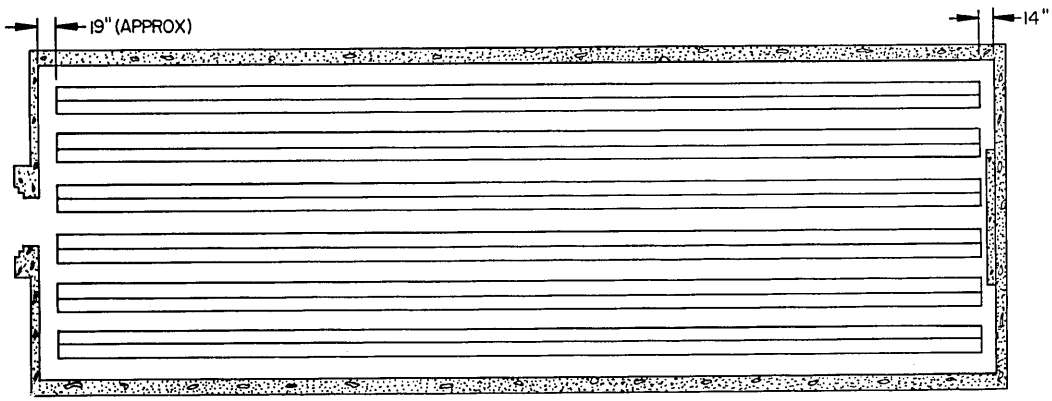
TYPICAL PLAN VIEW A

FOR USE WITH STORAGE METHODS SHOWN ON PAGES 5 THRU 40 AND PAGE 67. QUANTITY OF STACKS SHOWN ABOVE IS TYPICAL.



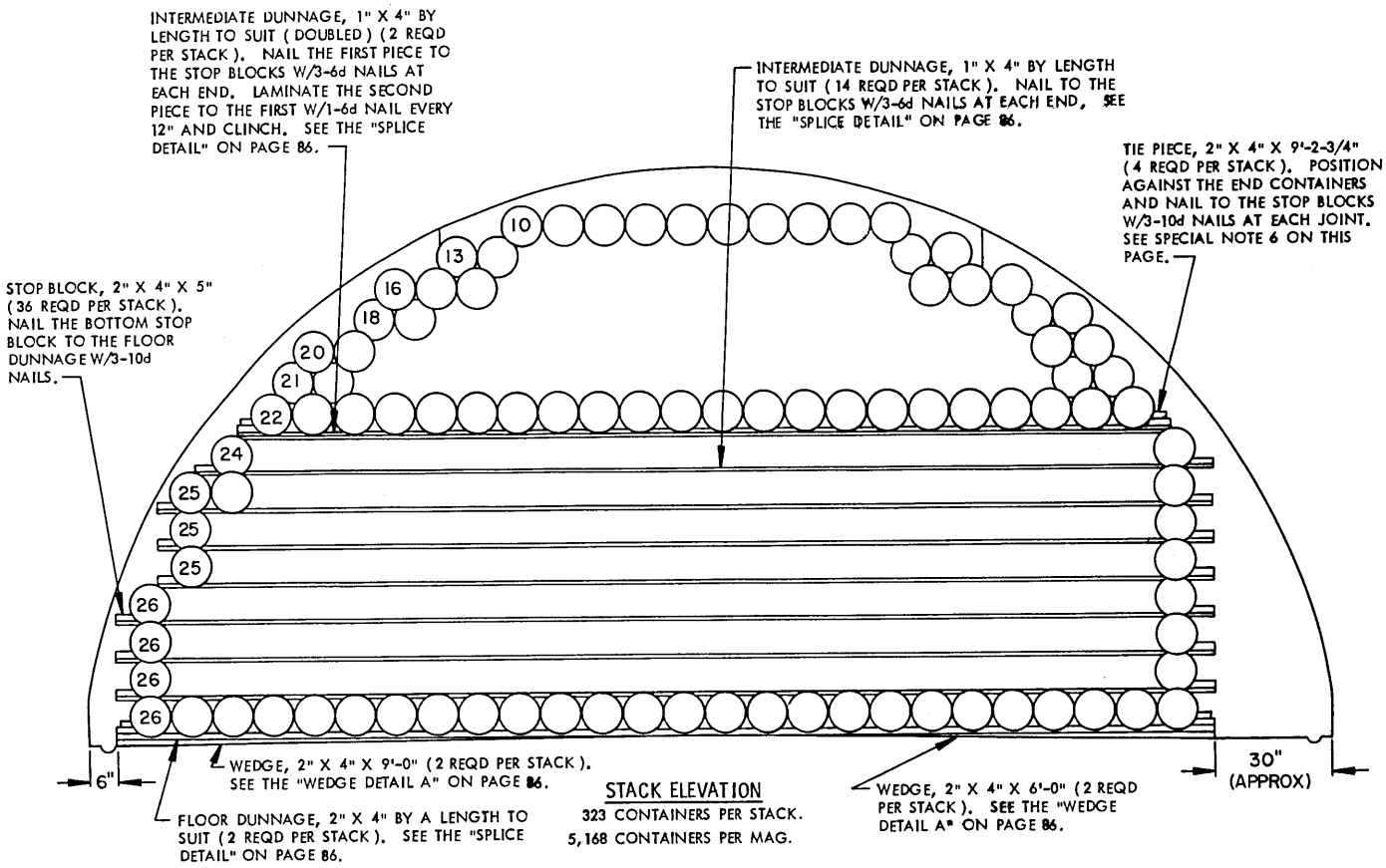
TYPICAL PLAN VIEW B

FOR USE WITH STORAGE METHODS SHOWN ON PAGES 68 THRU 71 AND 74 THRU 77. QUANTITY OF STACKS SHOWN ABOVE IS TYPICAL.



TYPICAL PLAN VIEW C

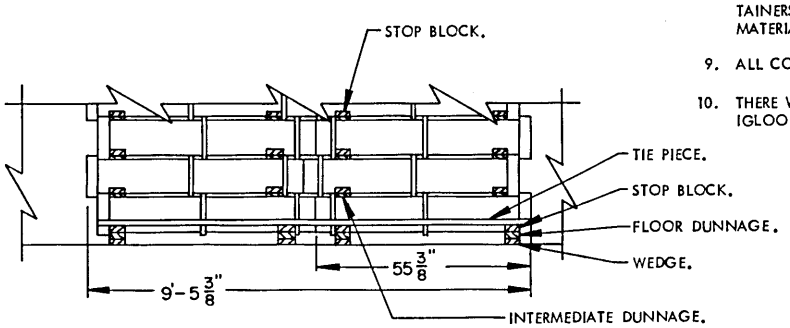
FOR USE WITH STORAGE METHOD SHOWN ON PAGE 61. QUANTITY OF ROWS SHOWN ABOVE IS ACCURATE.



STACK ELEVATION

323 CONTAINERS PER STACK.
5,168 CONTAINERS PER MAG.

BILL OF MATERIAL (PER STACK)		
LUMBER	LINEAR FEET	BOARD FEET
1" X 4" 2" X 4"	430 84	144 56
NAILS	NO. REQD	POUNDS
6d (2") 10d (3")	136 36	1 3/4
WEDGES PER STACK		
LUMBER	LENGTH	NO. REQD
2" X 4" 2" X 4"	6'-0" 9'-0"	2 2



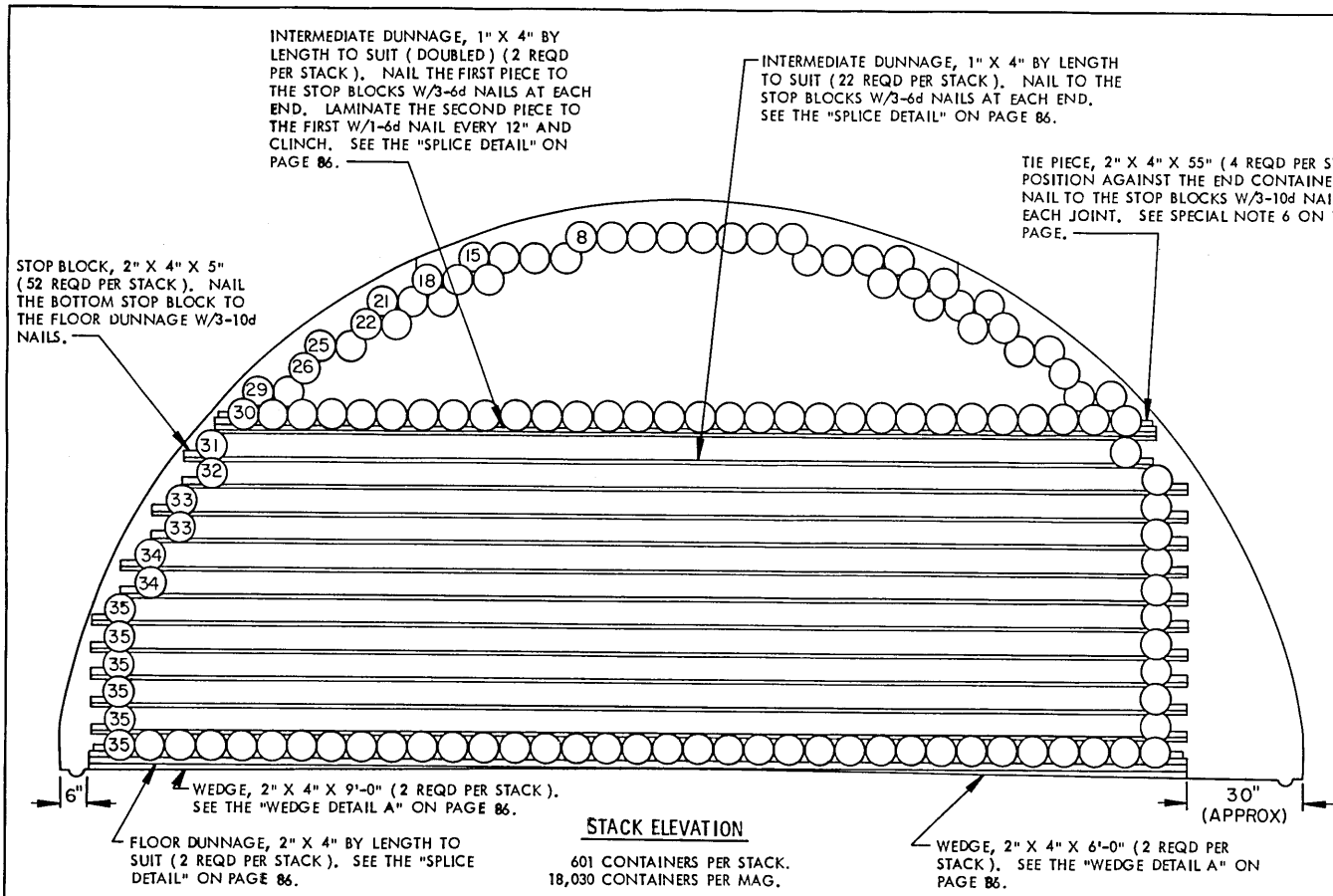
PARTIAL END VIEW OF DOUBLE STACK

SPECIAL NOTES:

1. STORAGE AS SHOWN IS FOR THE M10A4 CONTAINER. USE THIS SAME STORAGE FORMAT FOR ALL M10 SERIES CONTAINERS.

   CONTAINER DIMENSIONS-------55-3/8" LONG BY 10-15/32" DIAMETER.

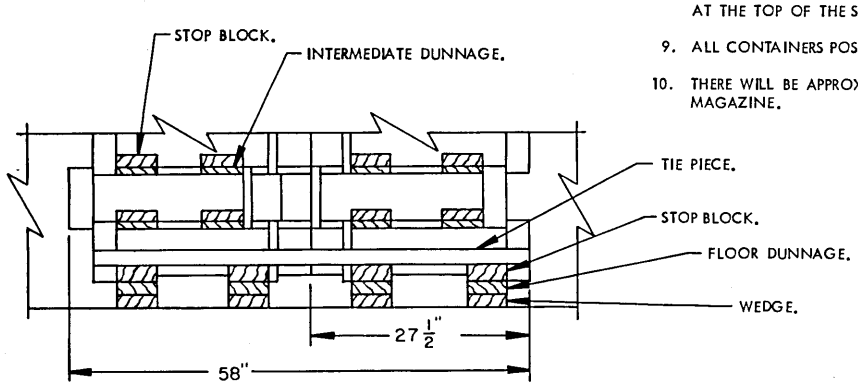
2. WHEN STORING THE M10A2 CONTAINER IT MAY BE NECESSARY TO ELIMINATE ONE (1) CONTAINER FROM EACH LAYER DUE TO SLIGHTLY LARGER DIAMETER OF THE CONTAINER.
3. THE NUMBERS SHOWN IN THE STACK ELEVATION INDICATE THE QUANTITY OF CONTAINERS PER LAYER IN A STACK.
4. SEE THE "TYPICAL PLAN VIEW A" ON PAGE 4.
5. STORE IN DOUBLE STACKS FOR BETTER STABILITY. SEE THE "PARTIAL END VIEW OF DOUBLE STACK" ON THIS PAGE.
6. NOTE: THE "TIE PIECE" EQUALS THE APPROXIMATE LENGTH OF TWO (2) CONTAINERS AND AIDS IN STABILIZING THE STACKS. A "TIE PIECE" IS USED ONLY ON THE BOTTOM LAYER AND TOP LAYER OF DUNNAGE.
7. NOTE: JOINTS IN INTERMEDIATE DUNNAGE MUST BE STAGGERED BOTH HORIZONTALLY AND VERTICALLY.
8. THE INTERMEDIATE DUNNAGE POSITIONED IMMEDIATELY UNDER THE NESTED CONTAINERS AT THE TOP OF THE STACK WILL BE OF DOUBLE THICKNESS 1" X 4". MATERIAL.
9. ALL CONTAINERS POSITIONED ABOVE LAYER NINE (9) ARE NESTED.
10. THERE WILL BE APPROXIMATELY 51" OF SPACE AT THE FRONT OF AN 81'-2" LONG IGLOO MAGAZINE.



STACK ELEVATION

601 CONTAINERS PER STACK.
18,030 CONTAINERS PER MAG.

BILL OF MATERIAL (PER STACK)		
LUMBER	LINEAR FEET	BOARD FEET
1" X 4" 2" X 4"	625 82	209 55
NAILS	NO. REQD	POUNDS
6d (2") 10d (3")	186 36	1-1/4 3/4
WEDGES PER STACK		
LUMBER	LENGTH	NO. REQD
2" X 4" 2" X 4"	6'-0" 9'-0"	2 2



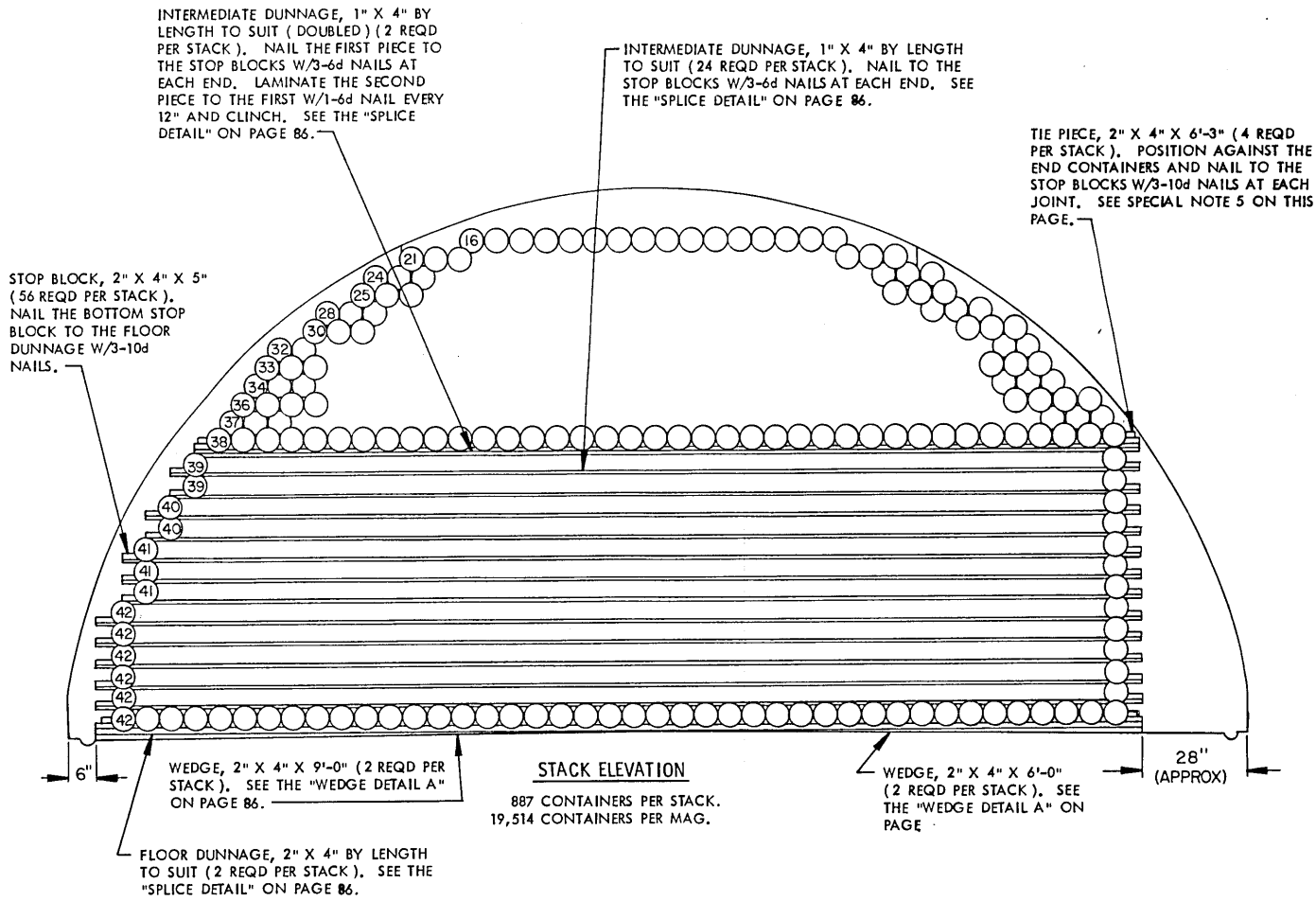
PARTIAL END VIEW OF DOUBLE STACK

SPECIAL NOTES:

1. STORAGE AS SHOWN IS FOR THE M13A2 CONTAINER. USE THIS SAME STORAGE FORMAT FOR ALL M13 SERIES CONTAINERS.

   CONTAINER DIMENSIONS-------27-1/2" LONG BY 7-25/32" DIAMETER.

2. WHEN STORING THE M13A1 CONTAINER IT MAY BE NECESSARY TO ELIMINATE SOME CONTAINERS FROM EACH LAYER DUE TO SLIGHTLY LARGER DIAMETER OF THE CONTAINER.
3. THE NUMBERS SHOWN IN THE STACK ELEVATION INDICATE THE QUANTITY OF CONTAINERS PER LAYER IN A STACK.
4. SEE THE "TYPICAL PLAN VIEW A" ON PAGE 4.
5. STORE IN DOUBLE STACKS FOR BETTER STABILITY. SEE THE "PARTIAL END VIEW OF DOUBLE STACK" ON THIS PAGE.
6. NOTE: THE "TIE PIECE" EQUALS THE APPROXIMATE LENGTH OF TWO (2) CONTAINERS AND AIDS IN STABILIZING THE STACKS. A "TIE PIECE" IS USED ONLY ON THE BOTTOM LAYER AND TOP LAYER OF DUNNAGE.
7. NOTE: JOINTS IN INTERMEDIATE DUNNAGE MUST BE STAGGERED BOTH HORIZONTALLY AND VERTICALLY.
8. THE INTERMEDIATE DUNNAGE POSITIONED IMMEDIATELY UNDER THE NESTED CONTAINERS AT THE TOP OF THE STACK WILL BE OF DOUBLE THICKNESS 1" X 4" MATERIAL.
9. ALL CONTAINERS POSITIONED ABOVE LAYER THIRTEEN (13) ARE NESTED.
10. THERE WILL BE APPROXIMATELY 7'-4" OF SPACE AT THE FRONT OF AN 81'-2" IGLOO MAGAZINE.



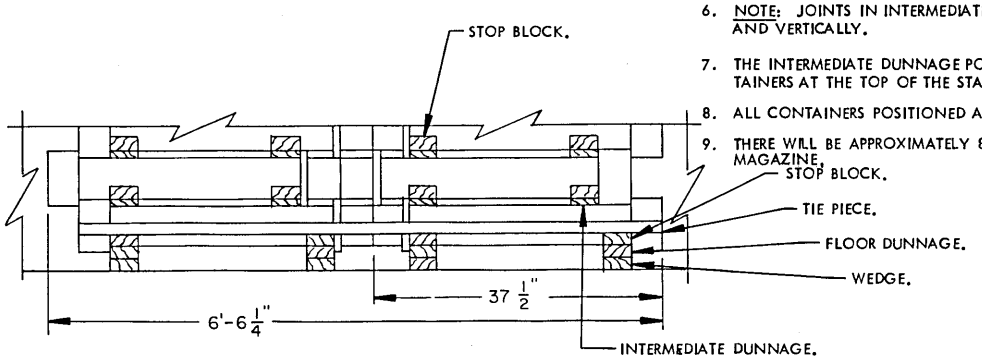
BILL OF MATERIAL (PER STACK)		
LUMBER	LINEAR FEET	BOARD FEET
1" X 4" 2" X 4"	687 88	229 59
NAILS	NO. REQD	POUNDS
6d (2") 10d (3")	200 36	1-1/4 3/4
WEDGES PER STACK		
LUMBER	LENGTH	NO. REQD
2" X 4" 2" X 4"	6'-0" 9'-0"	2 2

SPECIAL NOTES:

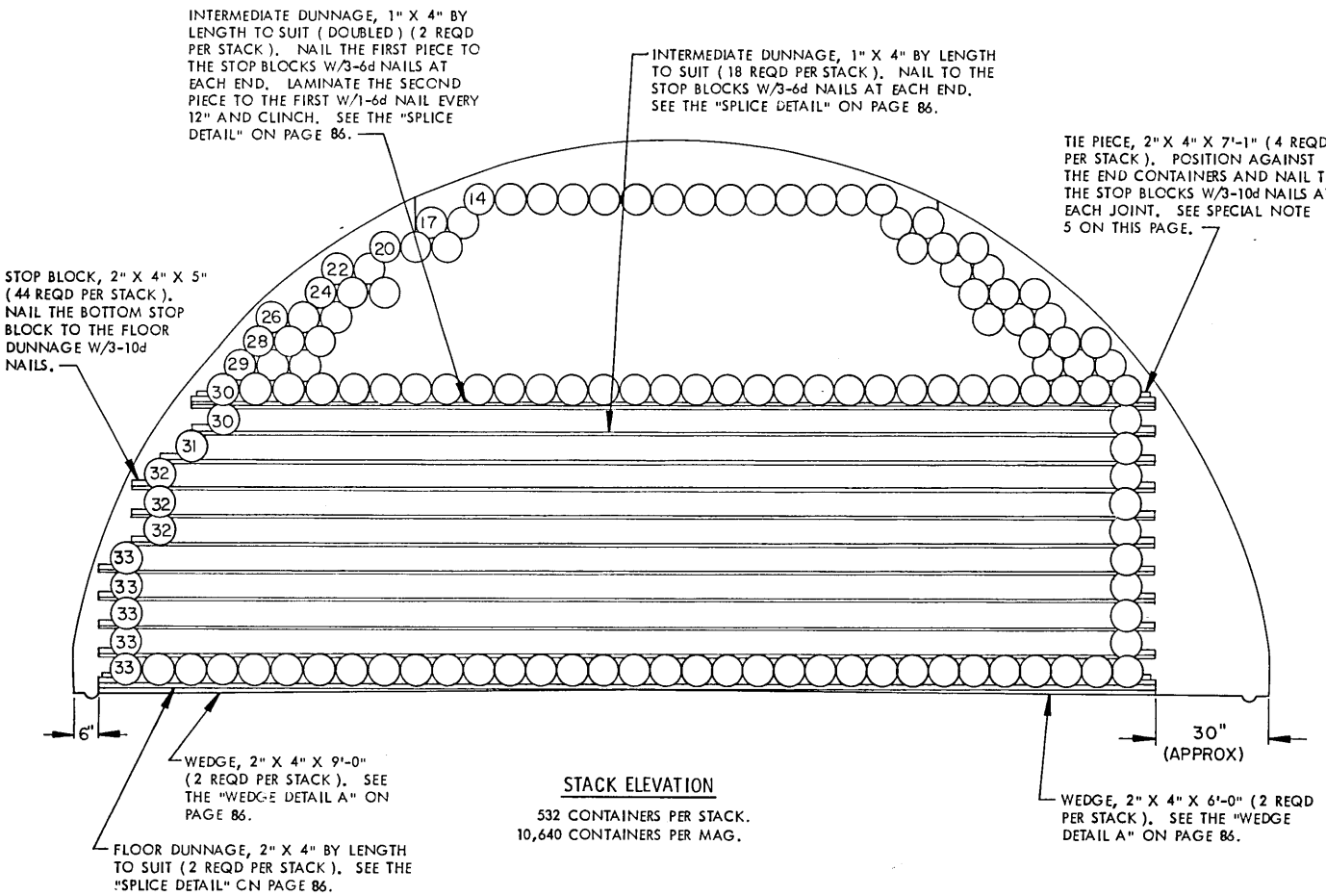
1. STORAGE AS SHOWN IS FOR THE M14 CONTAINER. USE THIS SAME STORAGE FORMAT FOR ALL M14 SERIES CONTAINERS.

   CONTAINER DIMENSIONS-------37-1/2" LONG BY 6-11/16" DIAMETER.

2. THE NUMBERS SHOWN IN THE STACK ELEVATION INDICATE THE QUANTITY OF CONTAINERS PER LAYER IN A STACK.
3. SEE THE "TYPICAL PLAN VIEW A" ON PAGE 4.
4. STORE IN DOUBLE STACKS FOR BETTER STABILITY. SEE THE "PARTIAL END VIEW OF DOUBLE STACK" ON THIS PAGE.
5. NOTE: THE "TIE PIECE" EQUALS THE APPROXIMATE LENGTH OF TWO (2) CONTAINERS AND AIDS IN STABILIZING THE STACKS. A "TIE PIECE" IS USED ONLY ON THE BOTTOM LAYER AND TOP LAYER OF DUNNAGE.
6. NOTE: JOINTS IN INTERMEDIATE DUNNAGE MUST BE STAGGERED BOTH HORIZONTALLY AND VERTICALLY.
7. THE INTERMEDIATE DUNNAGE POSITIONED IMMEDIATELY UNDER THE NESTED CONTAINERS AT THE TOP OF THE STACK WILL BE OF DOUBLE THICKNESS 1" X 4" MATERIAL.
8. ALL CONTAINERS POSITIONED ABOVE LAYER FOURTEEN (14) ARE NESTED.
9. THERE WILL BE APPROXIMATELY 8'-1" OF SPACE AT THE FRONT OF AN 81'-2" IGLOO MAGAZINE.



PARTIAL END VIEW OF DOUBLE STACK



STACK ELEVATION

532 CONTAINERS PER STACK.
10,640 CONTAINERS PER MAG.

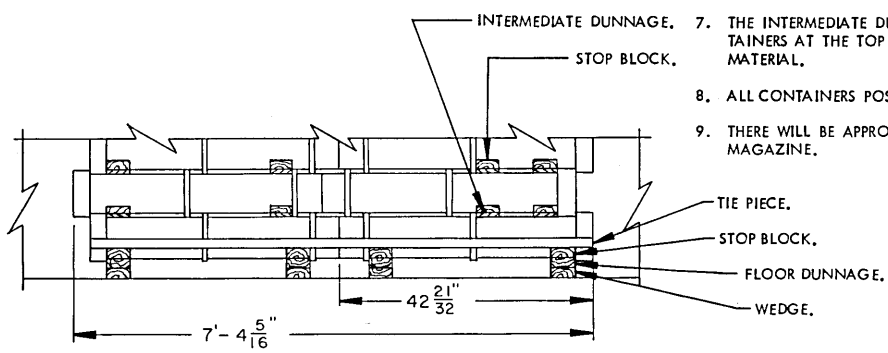
BILL OF MATERIAL (PER STACK)		
LUMBER	LINEAR FEET	BOARD FEET
1" X 4" 2" X 4"	535 84	179 56
NAILS	NO. REQD	POUNDS
6d (2") 10d (3")	164 36	1 3/4
WEDGES PER STACK		
LUMBER	LENGTH	NO. REQD
2" X 4" 2" X 4"	6'-0" 9'-0"	2 2

SPECIAL NOTES:

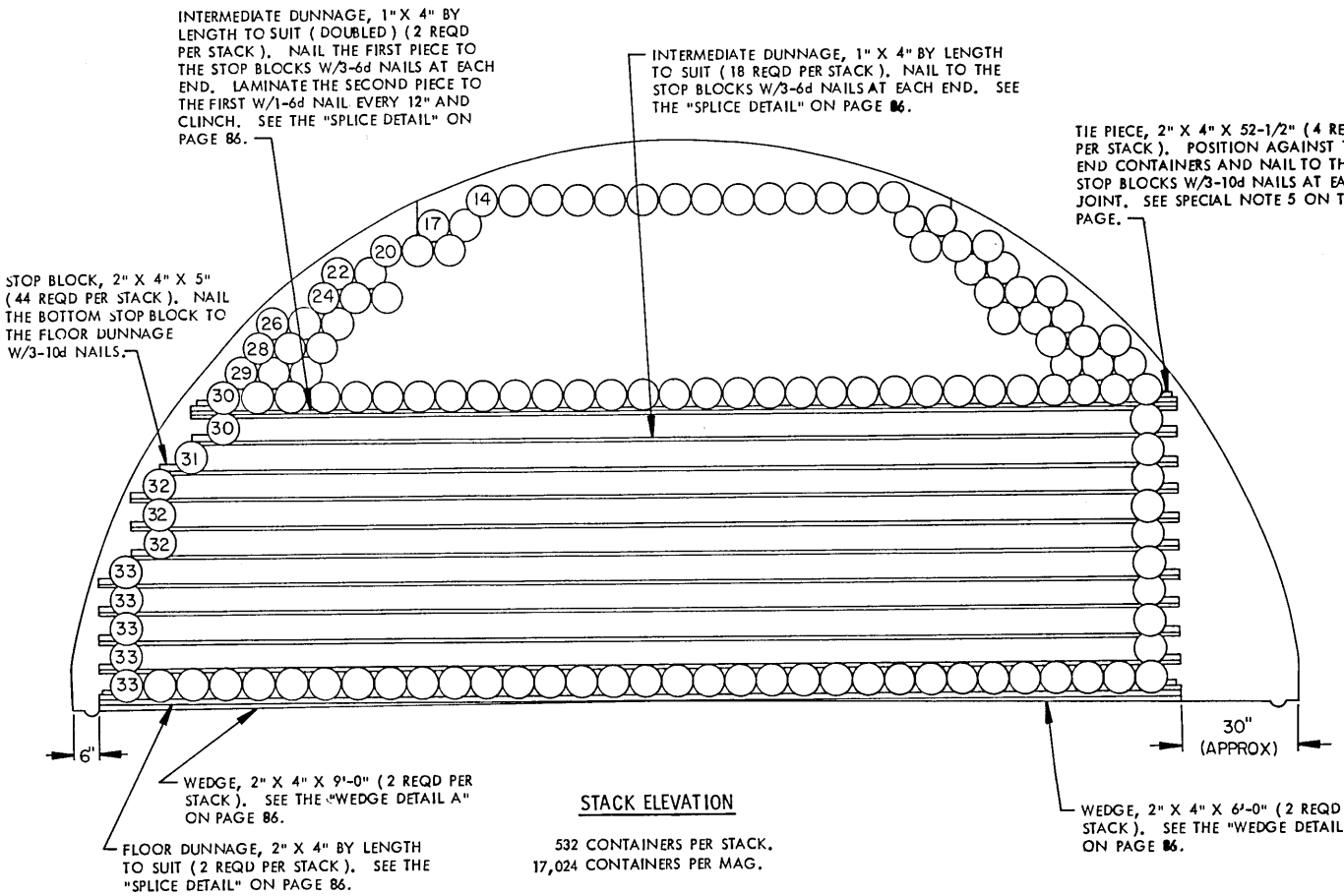
1. STORAGE AS SHOWN IS FOR THE M16A3 CONTAINER. USE THIS SAME STORAGE FORMAT FOR ALL M16 CONTAINERS.

   CONTAINER DIMENSIONS-------42-21/32" LONG BY 8-13/32" DIAMETER.

2. THE NUMBERS SHOWN IN THE STACK ELEVATION INDICATE THE QUANTITY OF CONTAINERS PER LAYER IN A STACK.
3. SEE THE "TYPICAL PLAN VIEW A" ON PAGE 4.
4. STORE IN DOUBLE STACKS FOR BETTER STABILITY. SEE THE "PARTIAL END VIEW OF DOUBLE STACK" ON THIS PAGE.
5. NOTE: THE "TIE PIECE" EQUALS THE APPROXIMATE LENGTH OF TWO (2) CONTAINERS AND AIDS IN STABILIZING THE STACKS. A "TIE PIECE" IS USED ONLY ON THE BOTTOM LAYER AND TOP LAYER OF DUNNAGE.
6. NOTE: JOINTS IN INTERMEDIATE DUNNAGE MUST BE STAGGERED BOTH HORIZONTALLY AND VERTICALLY.
7. THE INTERMEDIATE DUNNAGE POSITIONED IMMEDIATELY UNDER THE NESTED CONTAINERS AT THE TOP OF THE STACK WILL BE OF DOUBLE THICKNESS 1" X 4" MATERIAL.
8. ALL CONTAINERS POSITIONED ABOVE LAYER ELEVEN (11) ARE NESTED.
9. THERE WILL BE APPROXIMATELY 6'-3" OF SPACE AT THE FRONT OF AN 81'-2" IGLOO MAGAZINE.



PARTIAL END VIEW OF DOUBLE STACK



STACK ELEVATION

532 CONTAINERS PER STACK.
17,024 CONTAINERS PER MAG.

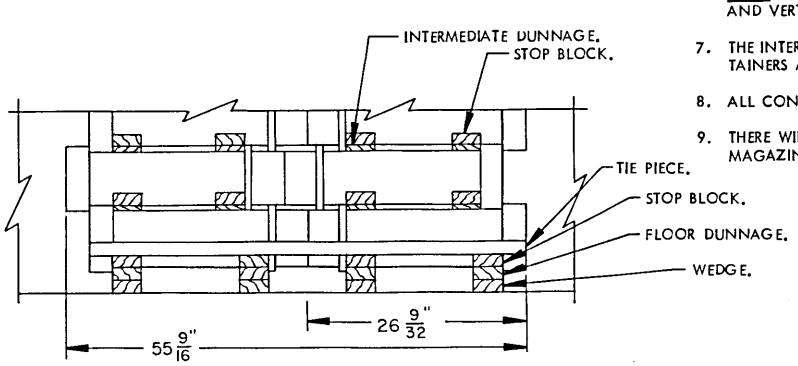
BILL OF MATERIAL (PER STACK)		
LUMBER	LINEAR FEET	BOARD FEET
1" X 4" 2" X 4"	535 79	179 53
NAILS	NO. REQD	POUNDS
6d (2") 10d (3")	164 36	1 3/4
WEDGE PER STACK		
LUMBER	LENGTH	NO. REQD
2" X 4" 2" X 4"	6'-0" 9'-0"	2 2

SPECIAL NOTES:

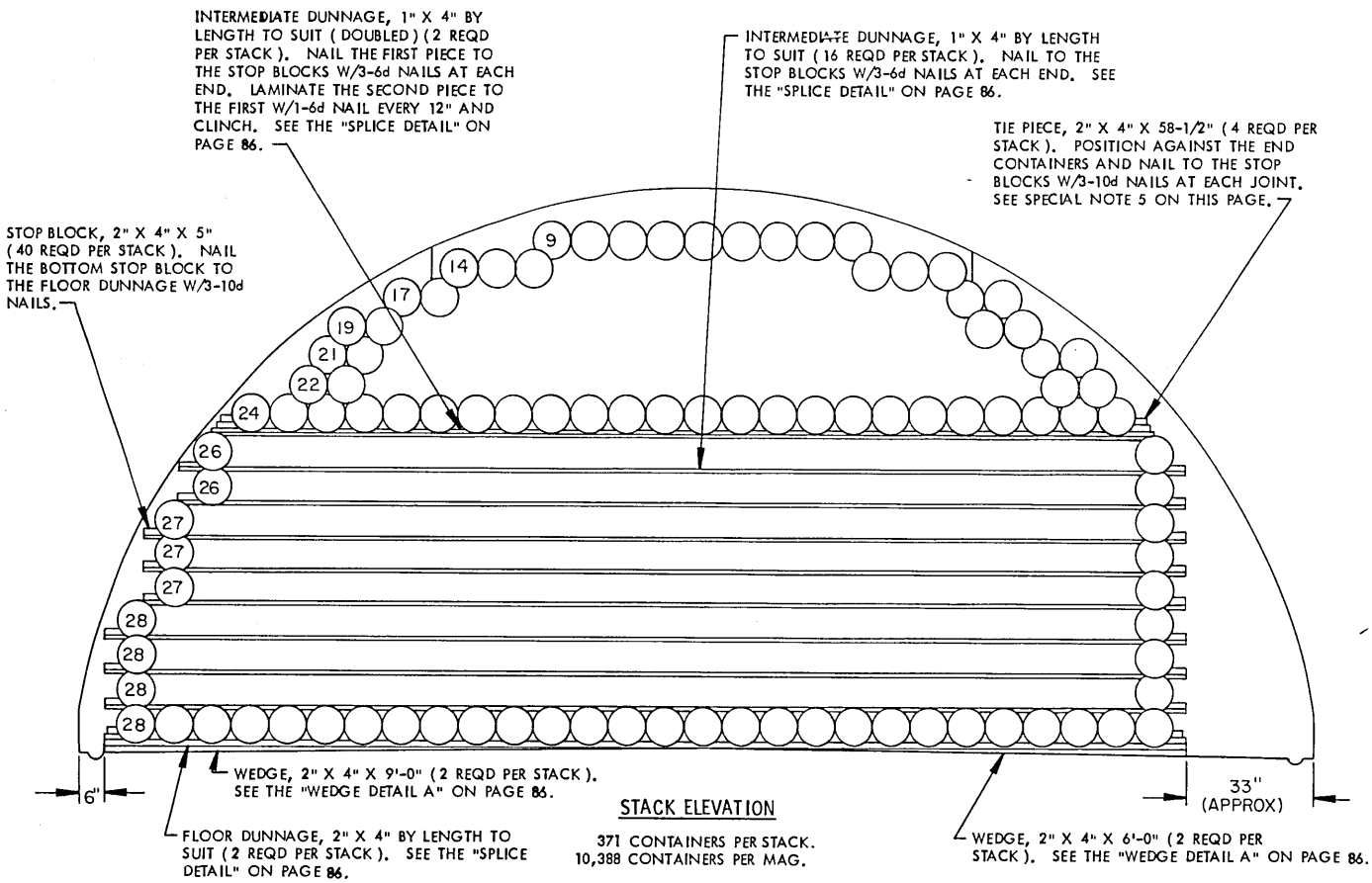
1. STORAGE AS SHOWN IS FOR THE M18A2 CONTAINER. USE THIS SAME STORAGE FORMAT FOR ALL M18 SERIES CONTAINERS.

   CONTAINER DIMENSIONS-------26-9/32" LONG BY 8-13/32" DIAMETER.

2. THE NUMBERS SHOWN IN THE STACK ELEVATION INDICATE THE QUANTITY OF CONTAINERS PER LAYER IN A STACK.
3. SEE THE "TYPICAL PLAN VIEW A" ON PAGE 4.
4. STORE IN DOUBLE STACKS FOR BETTER STABILITY. SEE THE "PARTIAL END VIEW OF DOUBLE STACK" ON THIS PAGE.
5. NOTE: THE "TIE PIECE" EQUALS THE APPROXIMATE LENGTH OF TWO (2) CONTAINERS AND AIDS IN STABILIZING THE STACKS. A "TIE PIECE" IS USED ONLY ON THE BOTTOM LAYER AND TOP LAYER OF DUNNAGE.
6. NOTE: JOINTS IN INTERMEDIATE DUNNAGE MUST BE STAGGERED BOTH HORIZONTALLY AND VERTICALLY.
7. THE INTERMEDIATE DUNNAGE POSITIONED IMMEDIATELY UNDER THE NESTED CONTAINERS AT THE TOP OF THE STACK WILL BE OF DOUBLE THICKNESS 1" X 4" MATERIAL.
8. ALL CONTAINERS POSITIONED ABOVE LAYER ELEVEN (11) ARE NESTED.
9. THERE WILL BE APPROXIMATELY 69" OF SPACE AT THE FRONT OF AN 81'-2" IGLOO MAGAZINE.



PARTIAL END VIEW OF DOUBLE STACK



STACK ELEVATION

371 CONTAINERS PER STACK.
10,388 CONTAINERS PER MAG.

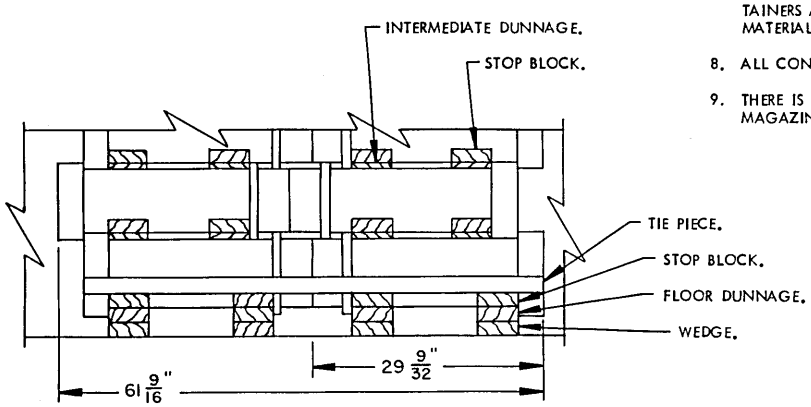
BILL OF MATERIAL (PER STACK)		
LUMBER	LINEAR FEET	BOARD FEET
1" X 4" 2" X 4"	475 77	159 52
NAILS	NO. REQD	POUNDS
6d (2") 10d (3")	150 36	1 3/4
WEDGES PER STACK		
LUMBER	LENGTH	NO. REQD
2" X 4" 2" X 4"	6'-0" 9'-0"	2 2

SPECIAL NOTES:

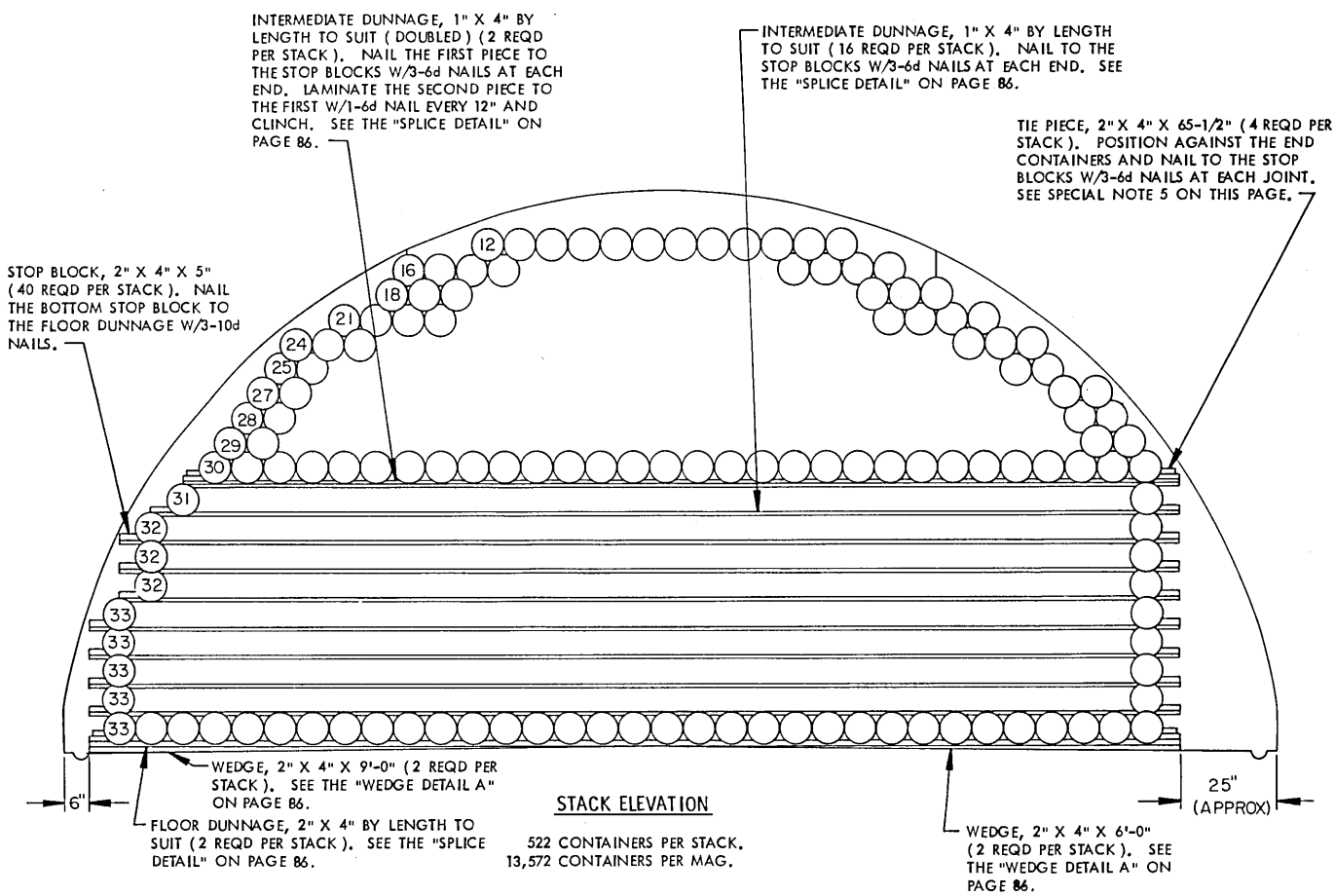
1. STORAGE AS SHOWN IS FOR THE M19A2 CONTAINER. USE THIS SAME STORAGE FORMAT FOR ALL M19 SERIES CONTAINERS.

   CONTAINER DIMENSIONS-------29-9/32" LONG BY 9-13/16" DIAMETER.

2. THE NUMBERS SHOWN IN THE STACK ELEVATION INDICATE THE QUANTITY OF CONTAINERS PER LAYER IN A STACK.
3. SEE THE "TYPICAL PLAN VIEW A" ON PAGE 4.
4. STORE IN DOUBLE STACKS FOR BETTER STABILITY. SEE THE "PARTIAL END VIEW OF DOUBLE STACK" ON THIS PAGE .
5. NOTE: THE "TIE PIECE" EQUALS THE APPROXIMATE LENGTH OF TWO (2) CONTAINERS AND AIDS IN STABILIZING THE STACKS. A "TIE PIECE" IS USED ONLY ON THE BOTTOM LAYER AND TOP LAYER OF DUNNAGE.
6. NOTE: JOINTS IN INTERMEDIATE DUNNAGE MUST BE STAGGERED BOTH HORIZONTALLY AND VERTICALLY.
7. THE INTERMEDIATE DUNNAGE POSITIONED IMMEDIATELY UNDER THE NESTED CONTAINERS AT THE TOP OF THE STACK WILL BE OF DOUBLE THICKNESS 1" X 4" MATERIAL.
8. ALL CONTAINERS POSITIONED ABOVE LAYER TEN (10) ARE NESTED.
9. THERE IS APPROXIMATELY 8'-0" OF SPACE AT THE FRONT OF AN 81'-2" IGLOO MAGAZINE.



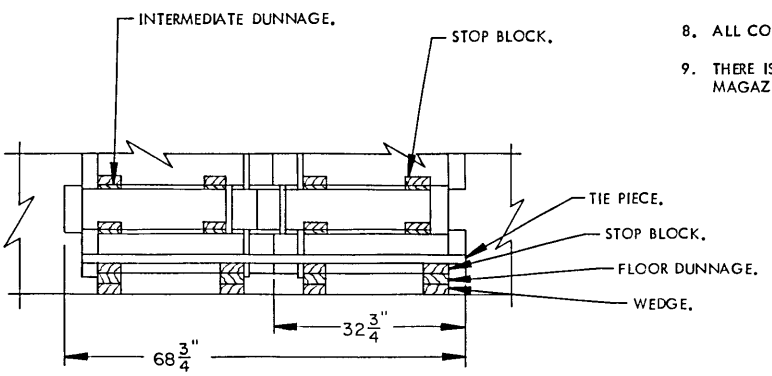
PARTIAL END VIEW OF DOUBLE STACK



STACK ELEVATION

522 CONTAINERS PER STACK.
13,572 CONTAINERS PER MAG.

BILL OF MATERIAL (PER STACK)		
LUMBER	LINEAR FEET	BOARD FEET
1" X 4" 2" X 4"	498 80	166 54
NAILS	NO. REQD	POUNDS
6d (2") 10d (3")	152 36	1 3/4
WEDGES PER STACK		
LUMBER	LENGTH	NO. REQD
2" X 4" 2" X 4"	6'-0" 9'-0"	2 2



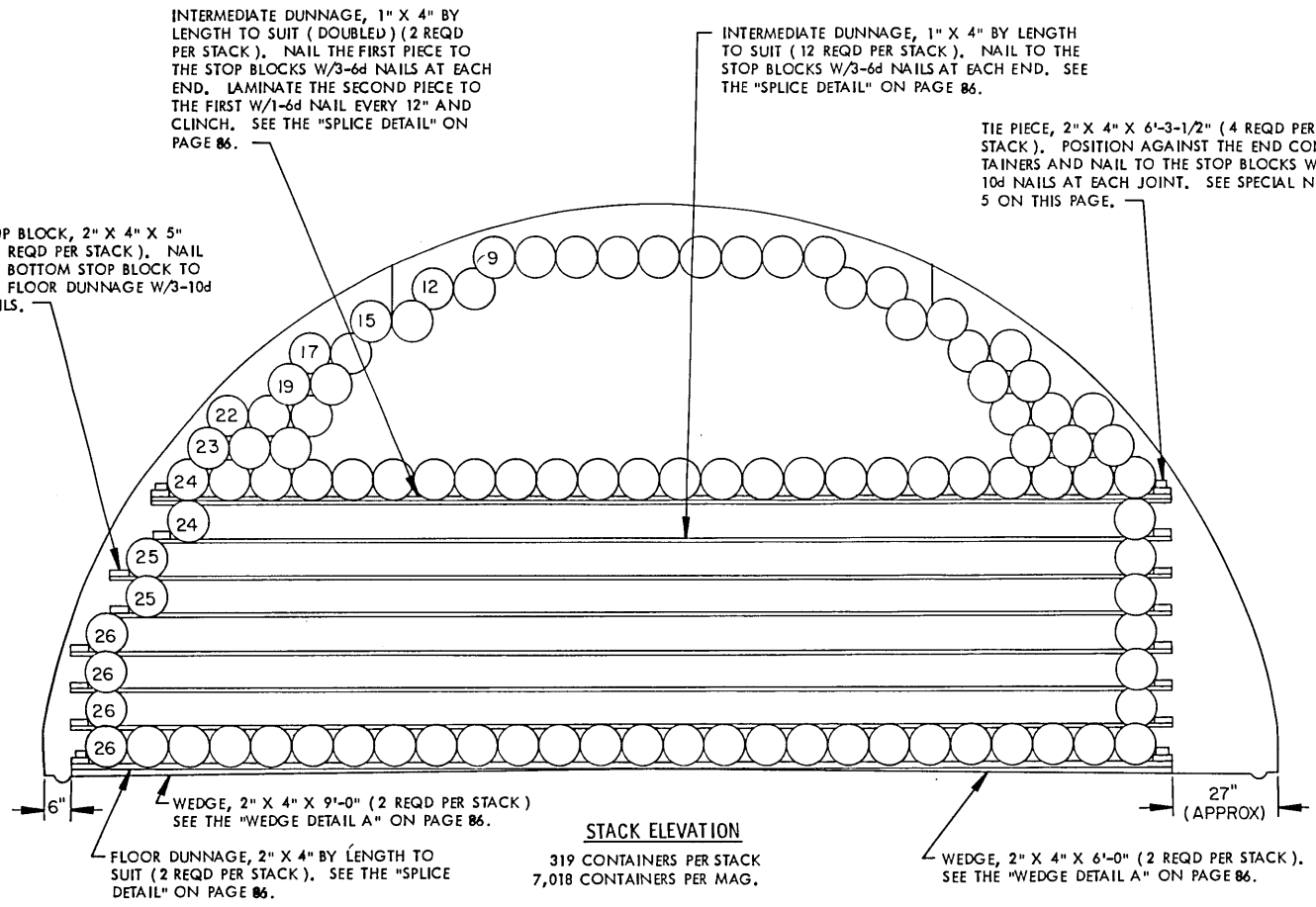
PARTIAL END VIEW OF DOUBLE STACK

SPECIAL NOTES:

1. STORAGE AS SHOWN IS FOR THE PA37 CONTAINER. USE THIS SAME STORAGE FORMAT FOR ALL PA37 SERIES CONTAINERS.

   CONTAINER DIMENSIONS-------32-3/4" LONG BY 8-13/32" DIAMETER.

2. THE NUMBERS SHOWN IN THE STACK ELEVATION INDICATE THE QUANTITY OF CONTAINERS PER LAYER IN A STACK.
3. SEE THE "TYPICAL PLAN VIEW A" ON PAGE 4.
4. STORE IN DOUBLE STACKS FOR BETTER STABILITY. SEE THE "PARTIAL END VIEW OF DOUBLE STACK" ON THIS PAGE.
5. NOTE: THE "TIE PIECE" EQUALS THE APPROXIMATE LENGTH OF TWO (2) CONTAINERS AND AIDS IN STABILIZING THE STACKS. A "TIE PIECE" IS USED ONLY ON THE BOTTOM LAYER AND TOP LAYER OF DUNNAGE.
6. NOTE: JOINTS IN INTERMEDIATE DUNNAGE MUST BE STAGGERED BOTH HORIZONTALLY AND VERTICALLY.
7. THE INTERMEDIATE DUNNAGE POSITIONED IMMEDIATELY UNDER THE NESTED CONTAINERS AT THE TOP OF THE STACK WILL BE OF DOUBLE THICKNESS 1" X 4" MATERIAL.
8. ALL CONTAINERS POSITIONED ABOVE LAYER TEN (10) ARE NESTED.
9. THERE IS APPROXIMATELY 64" OF SPACE AT THE FRONT OF AN 81'-2" IGLOO MAGAZINE.



STACK ELEVATION

319 CONTAINERS PER STACK
7,018 CONTAINERS PER MAG.

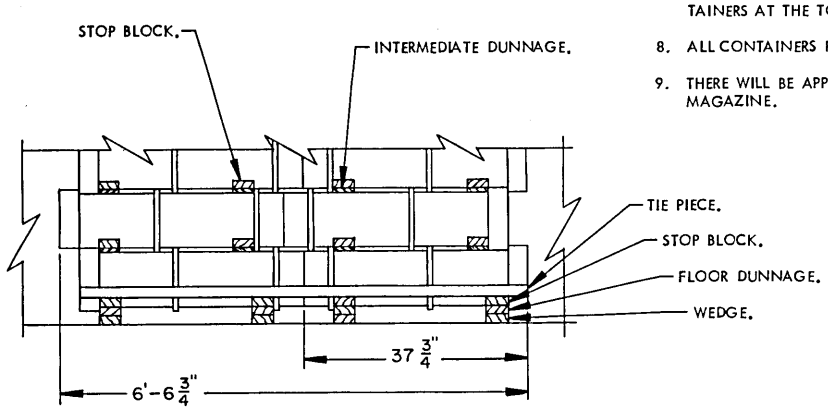
BILL OF MATERIAL (PER STACK)		
LUMBER	LINEAR FEET	BOARD FEET
1" X 4" 2" X 4"	393 78	131 52
NAILS	NO. REQD	POUNDS
6d (2") 10d (3")	128 36	1 3/4
WEDGES PER STACK		
LUMBER	LENGTH	NO. REQD
2" X 4" 2" X 4"	6'-0" 9'-0"	2 2

SPECIAL NOTES:

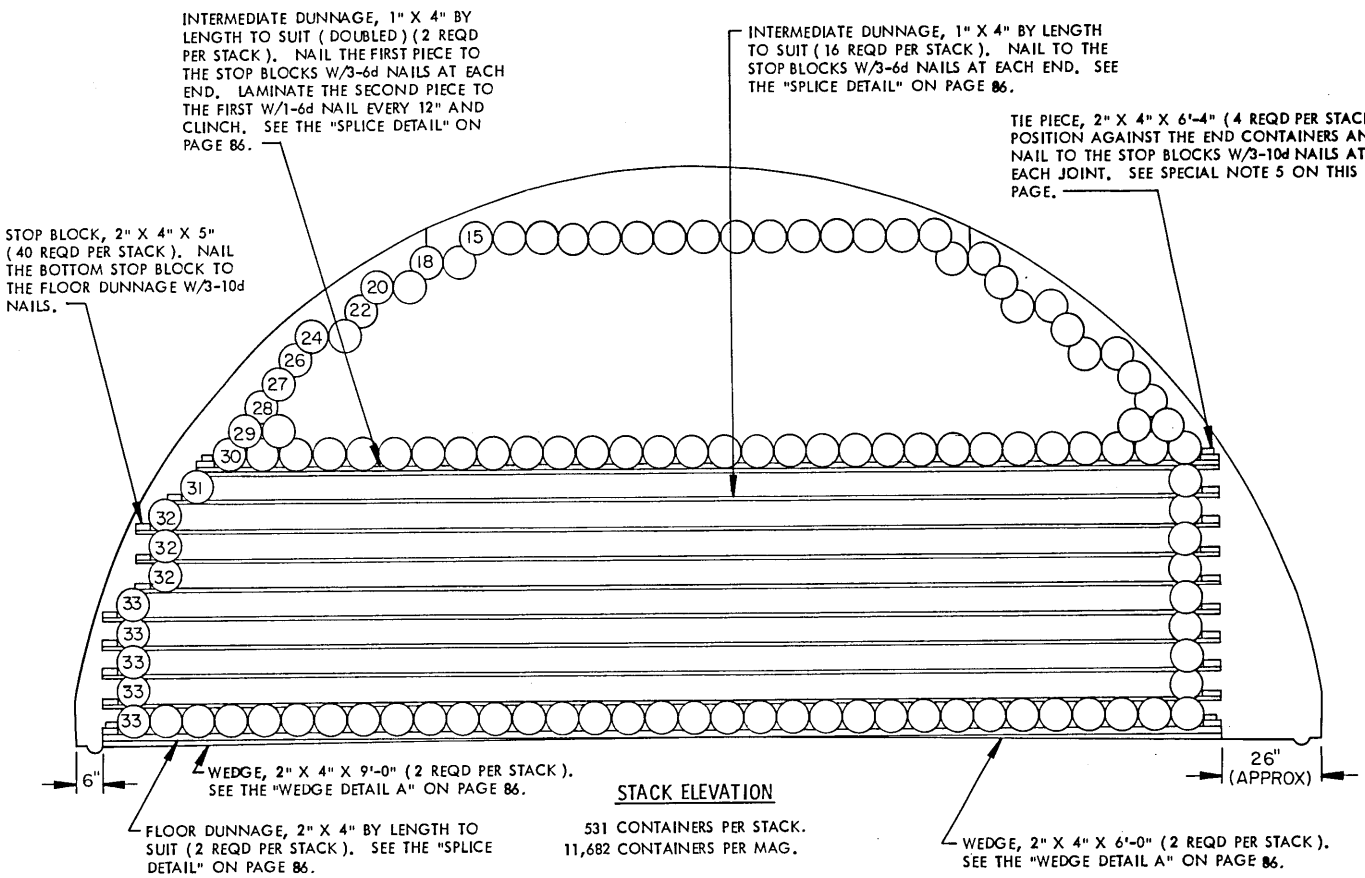
1. STORAGE AS SHOWN IS FOR THE PA66 CONTAINER. USE THIS SAME STORAGE FORMAT FOR ALL PA66 SERIES CONTAINERS.

   CONTAINER DIMENSIONS--------37-3/4" LONG BY 10-15/32" DIAMETER.

2. THE NUMBERS SHOWN IN THE STACK ELEVATION INDICATE THE QUANTITY OF CONTAINERS PER LAYER IN A STACK.
3. SEE THE "TYPICAL PLAN VIEW A" ON PAGE 4.
4. STORE IN DOUBLE STACKS FOR BETTER STABILITY. SEE THE "PARTIAL END VIEW OF DOUBLE STACK" ON THIS PAGE.
5. NOTE: THE "TIE PIECE" EQUALS THE APPROXIMATE LENGTH OF TWO (2) CONTAINERS AND AIDS IN STABILIZING THE STACKS. A "TIE PIECE" IS USED ONLY ON THE BOTTOM LAYER AND TOP LAYER OF DUNNAGE.
6. NOTE: JOINTS IN INTERMEDIATE DUNNAGE MUST BE STAGGERED BOTH HORIZONTALLY AND VERTICALLY.
7. THE INTERMEDIATE DUNNAGE POSITIONED IMMEDIATELY UNDER THE NESTED CONTAINERS AT THE TOP OF THE STACK WILL BE OF DOUBLE THICKNESS 1" X 4" MATERIAL.
8. ALL CONTAINERS POSITIONED ABOVE LAYER EIGHT (8) ARE NESTED.
9. THERE WILL BE APPROXIMATELY 7'-8" OF SPACE AT THE FRONT OF AN 81'-2" IGLOO MAGAZINE.



PARTIAL END VIEW OF DOUBLE STACK



STACK ELEVATION

531 CONTAINERS PER STACK.
11,682 CONTAINERS PER MAG.

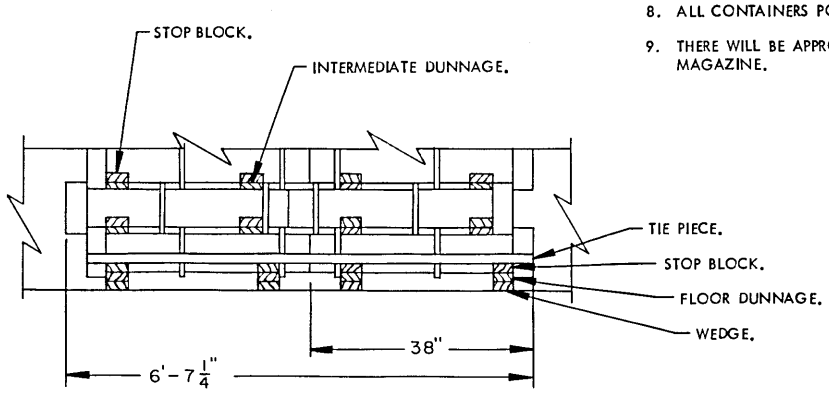
BILL OF MATERIAL (PER STACK)		
LUMBER	LINEAR FEET	BOARD FEET
1" X 4" 2" X 4"	498 81	166 54
NAILS	NO. REQD	POUNDS
6d (2") 10d (3")	152 36	1 3/4
WEDGES PER STACK		
LUMBER	LENGTH	NO. REQD
2" X 4" 2" X 4"	6'-0" 9'-0"	2 2

SPECIAL NOTES:

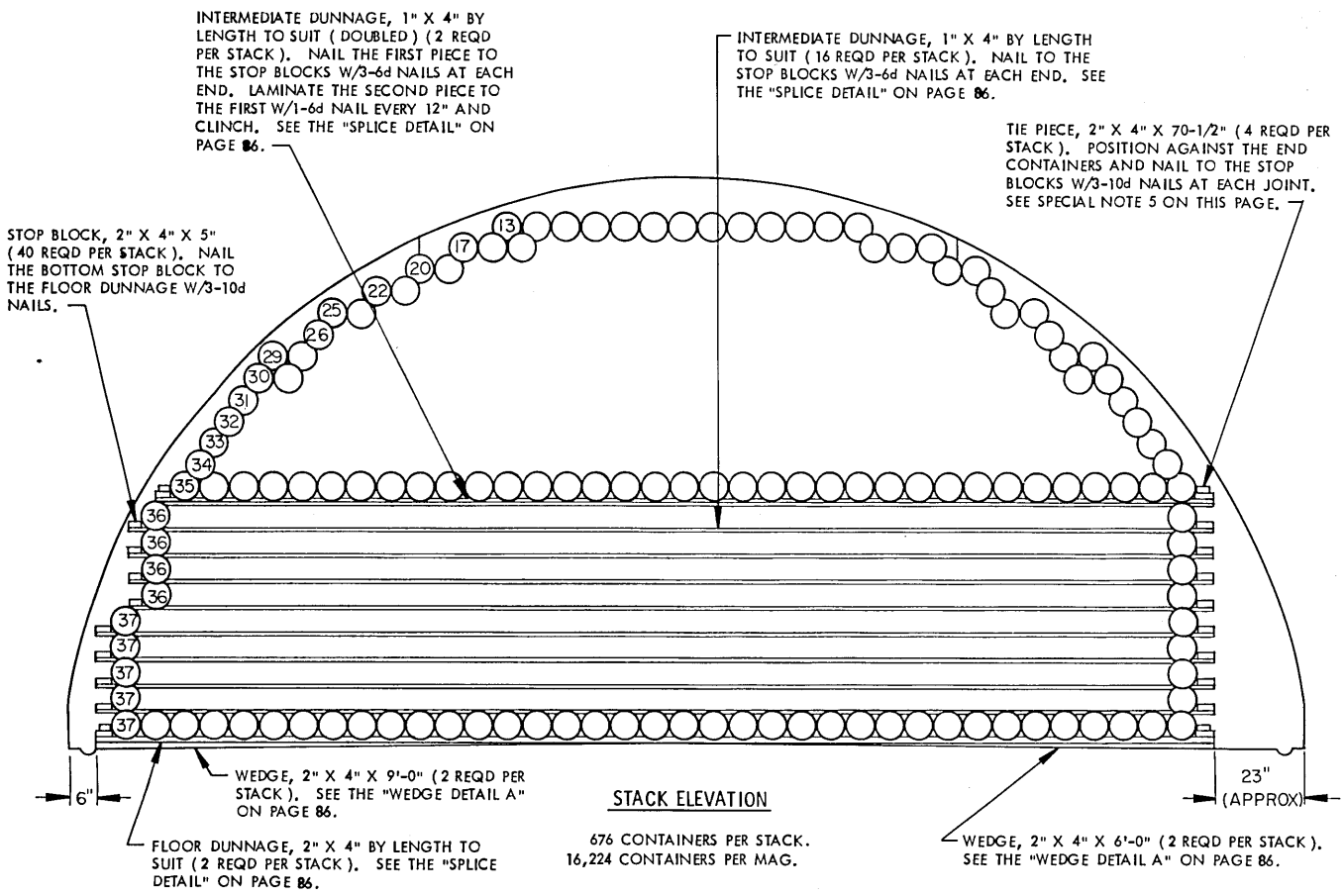
1. STORAGE AS SHOWN IS FOR THE PA68 CONTAINER. USE THIS SAME STORAGE FORMAT FOR ALL PA68 SERIES CONTAINERS.

   CONTAINER DIMENSIONS-------38" LONG BY 8-13/32" DIAMETER.

2. THE NUMBERS SHOWN IN THE STACK ELEVATION INDICATE THE QUANTITY OF CONTAINERS PER LAYER IN A STACK.
3. SEE THE "TYPICAL PLAN VIEW A" ON PAGE 4.
4. STORE IN DOUBLE STACKS FOR BETTER STABILITY. SEE THE "PARTIAL END VIEW OF DOUBLE STACK" ON THIS PAGE.
5. NOTE: THE "TIE PIECE" EQUALS THE APPROXIMATE LENGTH OF TWO (2) CONTAINERS AND AIDS IN STABILIZING THE STACKS. A "TIE PIECE" IS USED ONLY ON THE BOTTOM LAYER AND TOP LAYER OF DUNNAGE.
6. NOTE: JOINTS IN INTERMEDIATE DUNNAGE MUST BE STAGGERED BOTH HORIZONTALLY AND VERTICALLY.
7. THE INTERMEDIATE DUNNAGE POSITIONED IMMEDIATELY UNDER THE NESTED CONTAINERS AT THE TOP OF THE STACK WILL BE OF DOUBLE THICKNESS 1" X 4" MATERIAL.
8. ALL CONTAINERS POSITIONED ABOVE LAYER TEN (10) ARE NESTED.
9. THERE WILL BE APPROXIMATELY 7'-2" OF SPACE AT THE FRONT OF AN 81'-2" IGLOO MAGAZINE.



PARTIAL END VIEW OF DOUBLE STACK



STACK ELEVATION

676 CONTAINERS PER STACK.
16,224 CONTAINERS PER MAG.

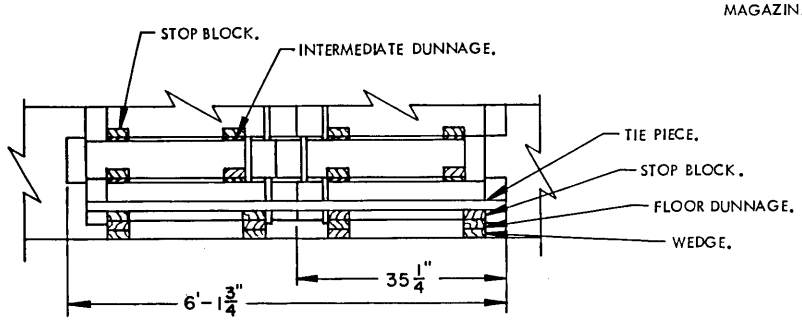
BILL OF MATERIAL (PER STACK)		
LUMBER	LINEAR FEET	BOARD FEET
1" X 4" 2" X 4"	506 81	169 54
NAILS	NO. REQD	POUNDS
6d (2") 10d (3")	154 36	1 3/4
WEDGES PER STACK		
LUMBER	LENGTH	NO. REQD
2" X 4" 2" X 4"	6'-0" 9'-0"	2 2

SPECIAL NOTES:

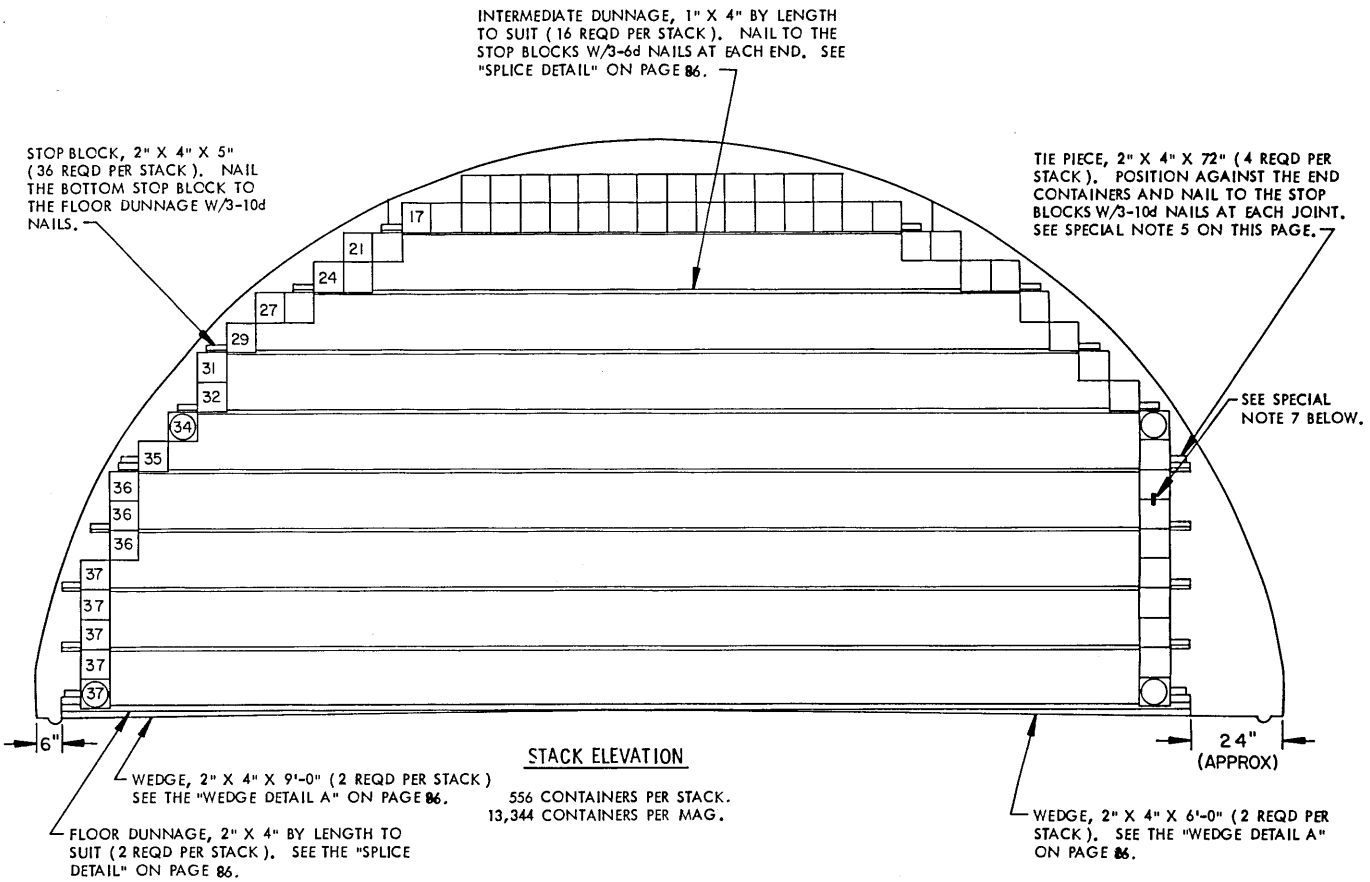
1. STORAGE AS SHOWN IS FOR THE PA75 CONTAINER. USE THIS SAME STORAGE FORMAT FOR ALL PA75 SERIES CONTAINERS.

   CONTAINER DIMENSIONS-------35-1/4" LONG BY 7-25/32" DIAMETER.

2. THE NUMBERS SHOWN IN THE STACK ELEVATION INDICATE THE QUANTITY OF CONTAINERS PER LAYER IN A STACK.
3. SEE THE "TYPICAL PLAN VIEW A" ON PAGE 4.
4. STORE IN DOUBLE STACKS FOR BETTER STABILITY. SEE THE "PARTIAL END VIEW OF DOUBLE STACK" ON THIS PAGE.
5. NOTE: THE "TIE PIECE" EQUALS THE APPRCXIMATE LENGTH OF TWO (2) CONTAINERS AND AIDS IN STABILIZING THE STACKS. A "TIE PIECE" IS USED ONLY ON THE BOTTOM LAYER AND TOP LAYER OF DUNNAGE.
6. NOTE: JOINTS IN INTERMEDIATE DUNNAGE MUST BE STAGGERED BOTH HORIZONTALLY AND VERTICALLY.
7. THE INTERMEDIATE DUNNAGE POSITIONED IMMEDIATELY UNDER THE NESTED CONTAINERS AT THE TOP OF THE STACK WILL BE OF DOUBLE THICKNESS 1" X 4" MATERIAL.
8. ALL CONTAINERS POSITIONED ABOVE LAYER TEN (10) ARE NESTED.
9. THERE WILL BE APPROXIMATELY 6'-1" OF SPACE AT THE FRONT OF AN 81'-2" IGLOO MAGAZINE.



PARTIAL END VIEW OF DOUBLE STACK



STACK ELEVATION

556 CONTAINERS PER STACK.
13,344 CONTAINERS PER MAG.

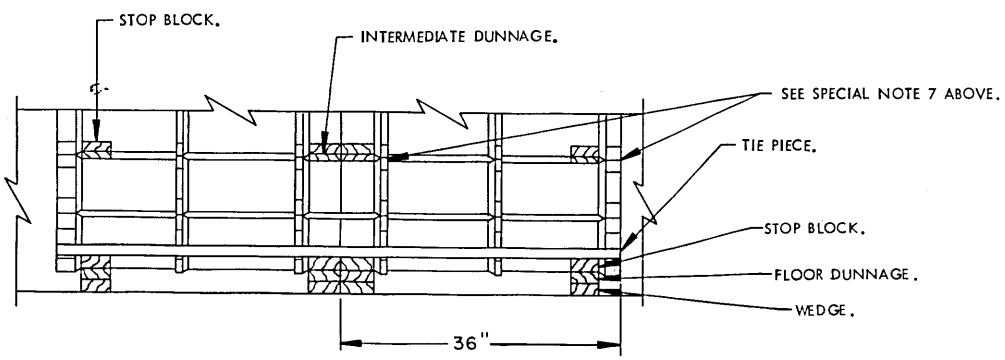
BILL OF MATERIAL (PER STACK)		
LUMBER	LINEAR FEET	BOARD FEET
1" X 4" 2" X 4"	348 79	116 53
NAILS	NO. REQD	POUNDS
6d (2") 10d (3")	96 36	3/4 1
	WEDGES PER STACK	
LUMBER	LENGTH	NO. REQD
2" X 4" 2" X 4"	6'-0" 9'-0"	2 2

SPECIAL NOTES:

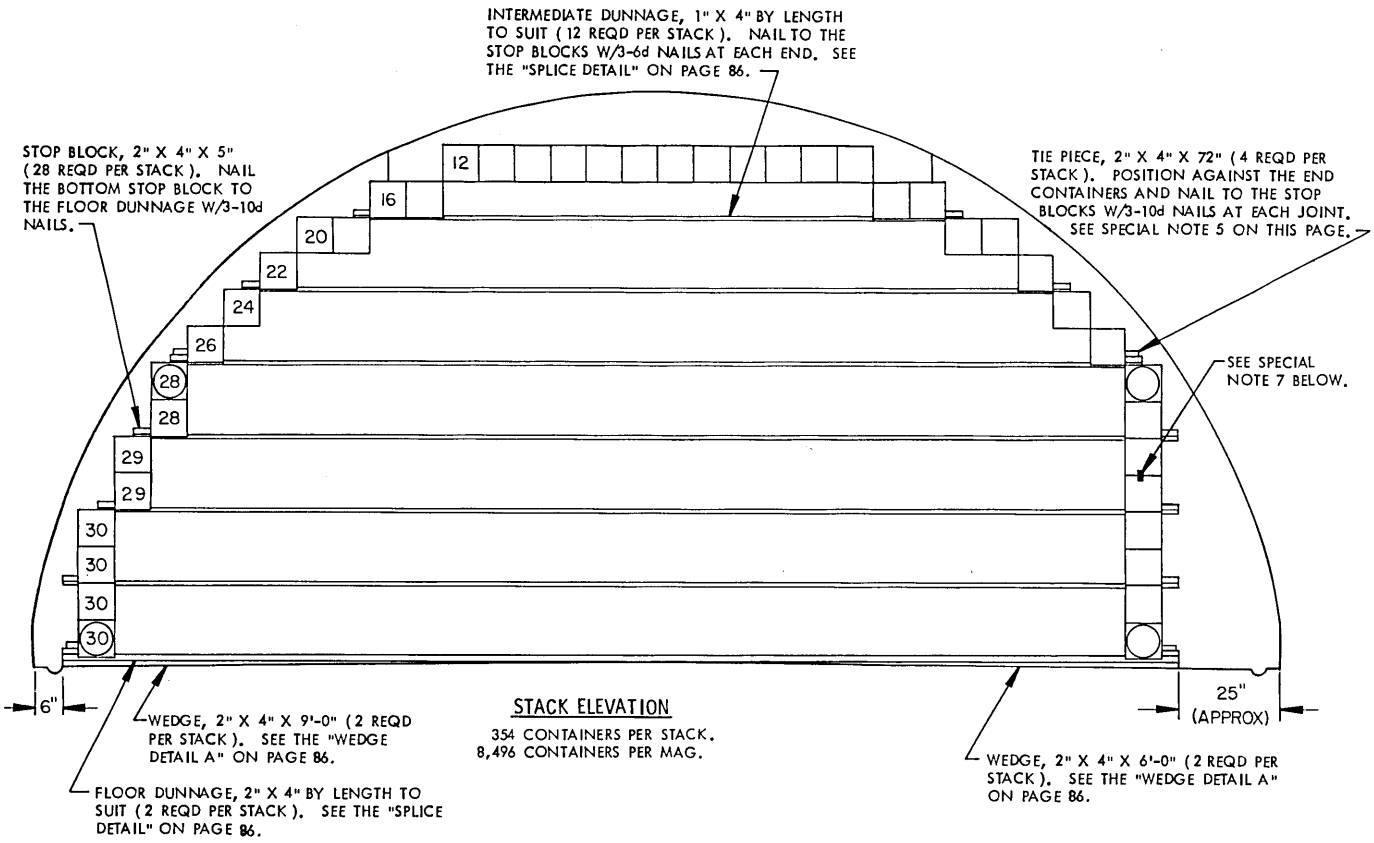
1. STORAGE AS SHOWN IS FOR THE PA91 CONTAINER. USE THIS SAME STORAGE FORMAT FOR ALL PA91 SERIES CONTAINERS.

   CONTAINER DIMENSIONS-------36" LONG BY 7-1/2" WIDE BY 7-1/2" HIGH.

2. THE NUMBERS SHOWN IN THE STACK ELEVATION INDICATE THE QUANTITY OF CONTAINERS PER LAYER IN A STACK.
3. SEE THE "TYPICAL PLAN VIEW A" ON PAGE 4.
4. STORE IN DOUBLE STACKS FOR BETTER STABILITY. SEE THE "PARTIAL END VIEW OF DOUBLE STACK" ON THIS PAGE.
5. NOTE: THE "TIE PIECE" EQUALS THE APPROXIMATE LENGTH OF TWO (2) CONTAINERS AND AIDS IN STABILIZING THE STACKS. A "TIE PIECE" IS USED ON THE BOTTOM LAYER AND AT THE FOURTH LAYER OF INTERMEDIATE DUNNAGE.
6. NOTE: JOINTS IN INTERMEDIATE DUNNAGE MUST BE STAGGERED BOTH HORIZONTALLY AND VERTICALLY.
7. NOTE: THE INTERLOCKING PINS ON EACH END OF A CONTAINER MUST INTERLOCK VERTICALLY WITH THE CONTAINER IN THE NEXT LAYER.
8. THERE WILL BE APPROXIMATELY 7'-10" OF SPACE AT THE FRONT OF AN 81'-2" IGLOO MAGAZINE.



PARTIAL END VIEW OF DOUBLE STACK



STACK ELEVATION

354 CONTAINERS PER STACK.
8,496 CONTAINERS PER MAG.

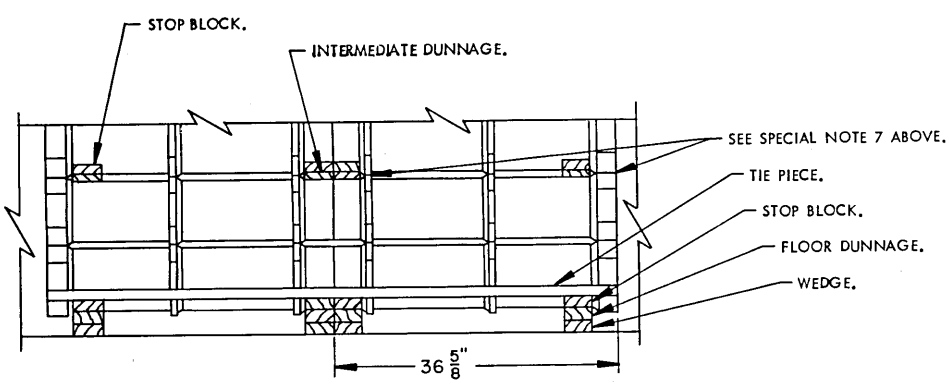
BILL OF MATERIAL (PER STACK)		
LUMBER	LINEAR FEET	BOARD FEET
1" X 4" 2" X 4"	260 76	87 51
NAILS	NO. REQD	POUNDS
6d (2") 10d (3")	72 36	1/2 3/4
WEDGES PER STACK		
LUMBER	LENGTH	NO. REQD
2" X 4" 2" X 4"	6'-0" 9'-0"	2 2

SPECIAL NOTES:

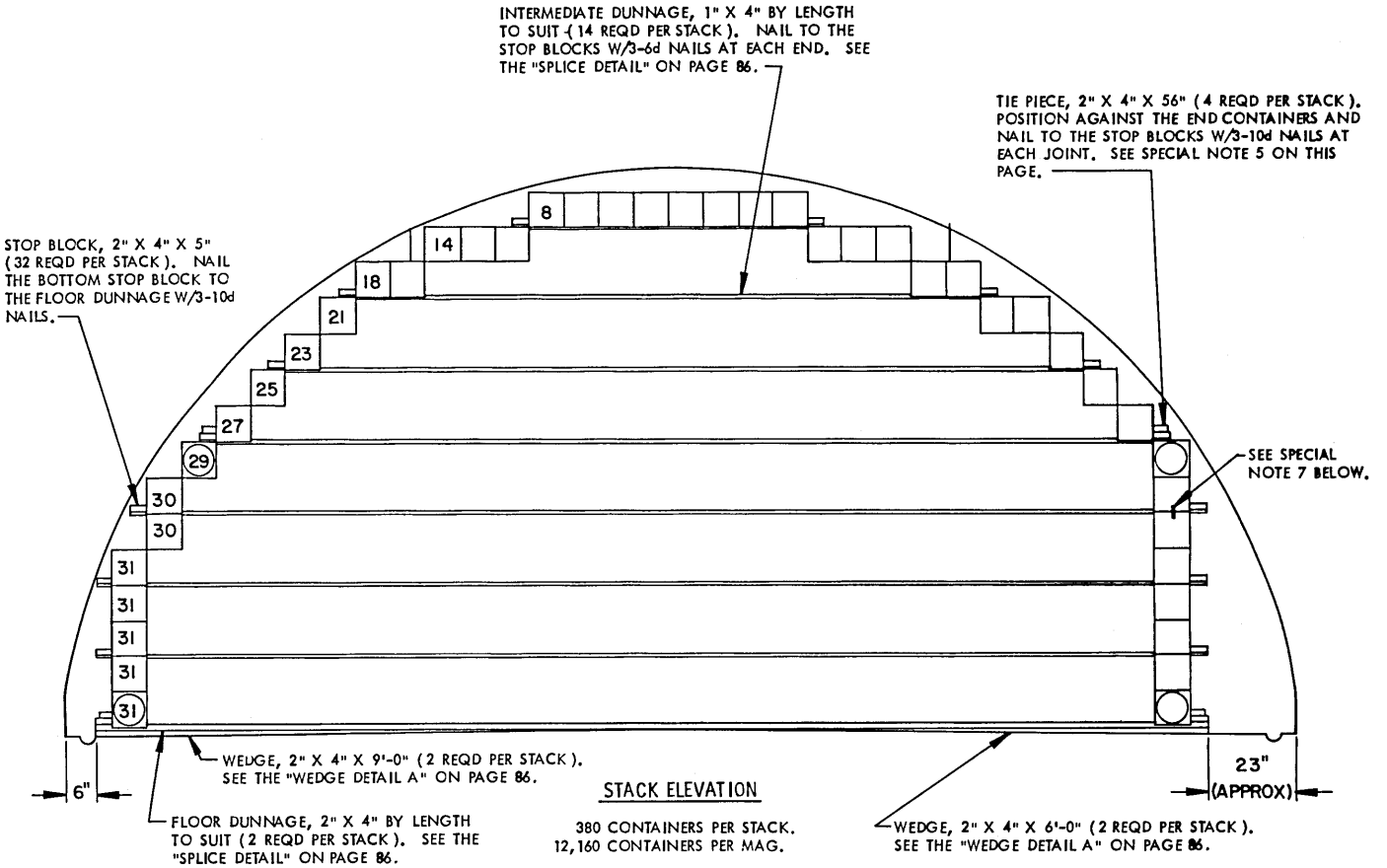
1. STORAGE AS SHOWN IS FOR THE PA92 CONTAINER. USE THIS SAME STORAGE FORMAT FOR ALL PA92 SERIES CONTAINERS.

   CONTAINER DIMENSIONS-------36-5/8" LONG BY 9-1/4" WIDE BY 9-1/4" HIGH.

2. THE NUMBERS SHOWN IN THE STACK ELEVATION INDICATE THE QUANTITY OF CONTAINERS PER LAYER IN A STACK.
3. SEE THE "TYPICAL PLAN VIEW A" ON PAGE 4.
4. STORE IN DOUBLE STACKS FOR BETTER STABILITY. SEE THE "PARTIAL END VIEW OF DOUBLE STACK" ON THIS PAGE.
5. NOTE: THE "TIE PIECE" EQUALS THE APPROXIMATE LENGTH OF TWO (2) CONTAINERS AND AIDS IN STABILIZING THE STACKS. A "TIE PIECE" IS USED ON THE BOTTOM LAYER AND AT THE FOURTH LAYER OF INTERMEDIATE DUNNAGE.
6. NOTE: JOINTS IN INTERMEDIATE DUNNAGE MUST BE STAGGERED BOTH HORIZONTALLY AND VERTICALLY.
7. NOTE: THE INTERLOCKING PINS ON EACH END OF A CONTAINER MUST INTERLOCK VERTICALLY WITH THE CONTAINER IN THE NEXT LAYER.
8. THERE WILL BE APPROXIMATELY 6'-7" OF SPACE AT THE FRONT OF AN 81'-2" IGLOO MAGAZINE.



PARTIAL END VIEW OF DOUBLE STACK



STACK ELEVATION

380 CONTAINERS PER STACK.
12,160 CONTAINERS PER MAG.

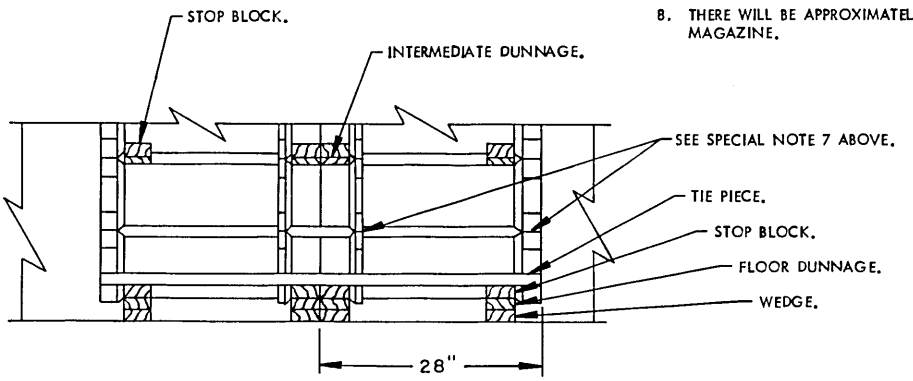
BILL OF MATERIAL (PER STACK)		
LUMBER	LINEAR FEET	BOARD FEET
1" X 4" 2" X 4"	281 75	94 50
NAILS	NO. REQD	POUNDS
6d (2") 10d (3")	84 36	1/2 3/4
WEDGES PER STACK		
LUMBER	LENGTH	NO. REQD
2" X 4" 2" X 4"	6'-0" 9'-0"	2 2

SPECIAL NOTES:

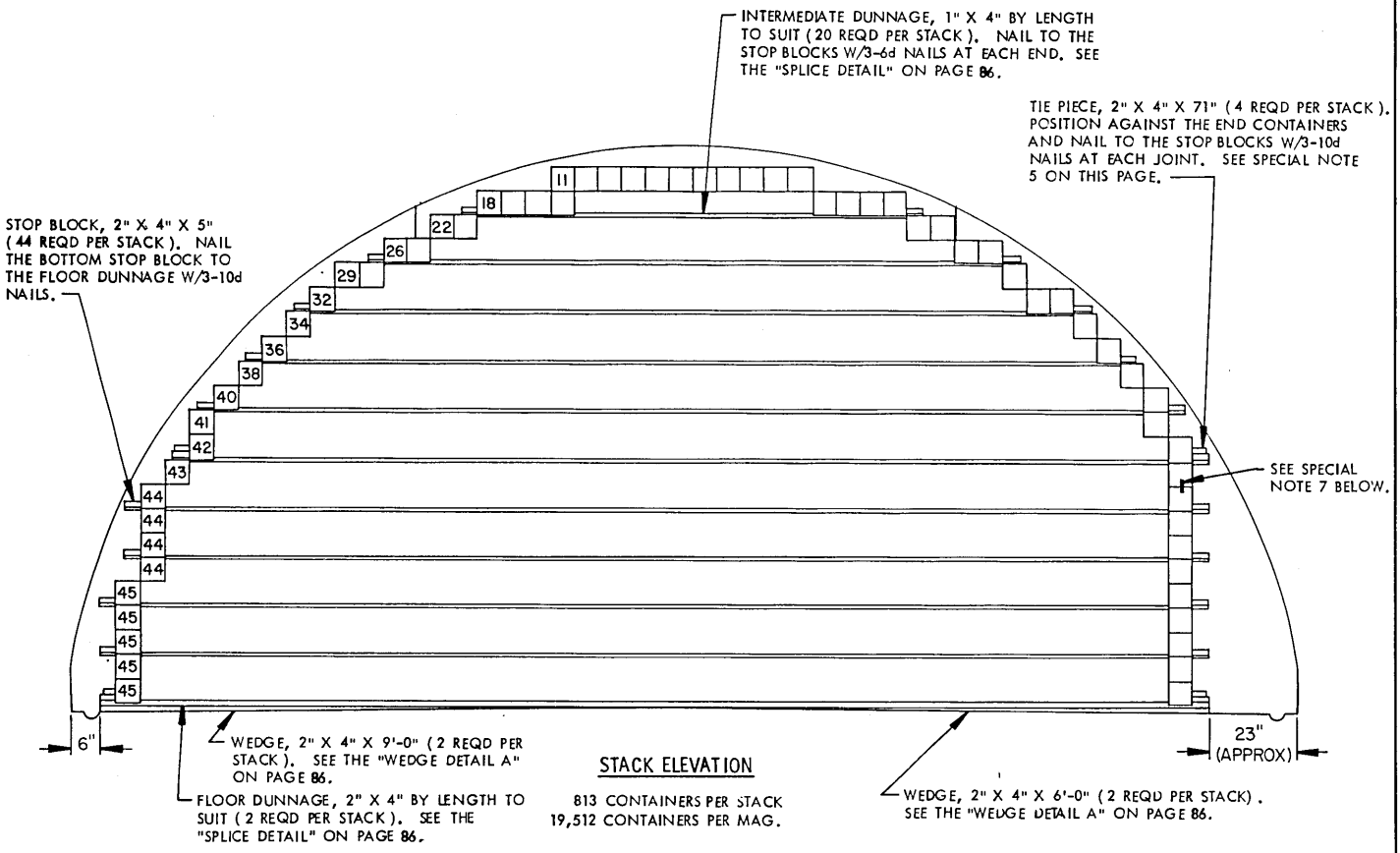
1. STORAGE AS SHOWN IS FOR THE PA93 CONTAINER. USE THIS SAME STORAGE FORMAT FOR ALL PA93 SERIES CONTAINERS.

   CONTAINER DIMENSIONS-------28" LONG BY 9" WIDE BY 9" HIGH.

2. THE NUMBERS SHOWN IN THE STACK ELEVATION INDICATE THE QUANTITY OF CONTAINERS PER LAYER IN A STACK.
3. SEE THE "TYPICAL PLAN VIEW A" ON PAGE 4.
4. STORE IN DOUBLE STACKS FOR BETTER STABILITY. SEE THE "PARTIAL END VIEW OF DOUBLE STACK" ON THIS PAGE.
5. NOTE: THE "TIE PIECE" EQUALS THE APPROXIMATE LENGTH OF TWO (2) CONTAINERS AND AIDS IN STABILIZING THE STACKS. A "TIE PIECE" IS USED ON THE BOTTOM LAYER AND AT THE FOURTH LAYER OF INTERMEDIATE DUNNAGE.
6. NOTE: JOINTS IN INTERMEDIATE DUNNAGE MUST BE STAGGERED BOTH HORIZONTALLY AND VERTICALLY.
7. NOTE: THE INTERLOCKING PINS ON EACH END OF A CONTAINER MUST INTERLOCK VERTICALLY WITH THE CONTAINER IN THE NEXT LAYER.
8. THERE WILL BE APPROXIMATELY 62" OF SPACE AT THE FRONT OF AN 81'-2" IGLOO MAGAZINE.



PARTIAL END VIEW OF DOUBLE STACK



STACK ELEVATION

813 CONTAINERS PER STACK
19,512 CONTAINERS PER MAG.

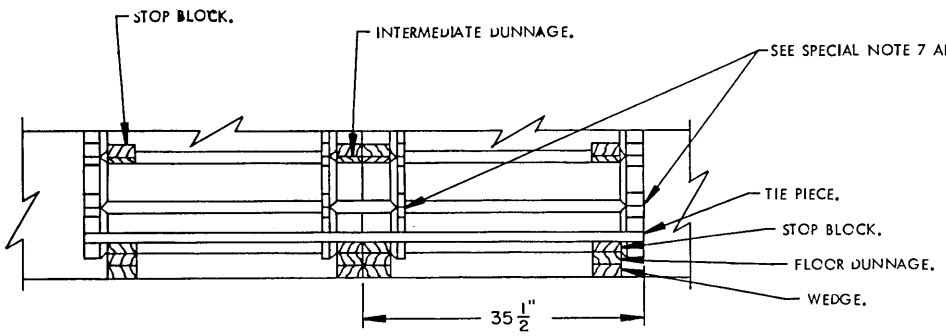
BILL OF MATERIAL (PER STACK)		
LUMBER	LINEAR FEET	BOARD FEET
1" X 4" 2" X 4"	381 83	127 56
NAILS	NO. REQD	POUNDS
6d (2") 10d (3")	120 36	3/4 3/4
WEDGES PER STACK		
LUMBER	LENGTH	NO. REQD
2" X 4" 2" X 4"	6'-0" 9'-0"	2 2

SPECIAL NOTES:

1. STORAGE AS SHOWN IS FOR THE PA94 CONTAINER. USE THIS SAME STORAGE FORMAT FOR ALL PA94 SERIES CONTAINERS.

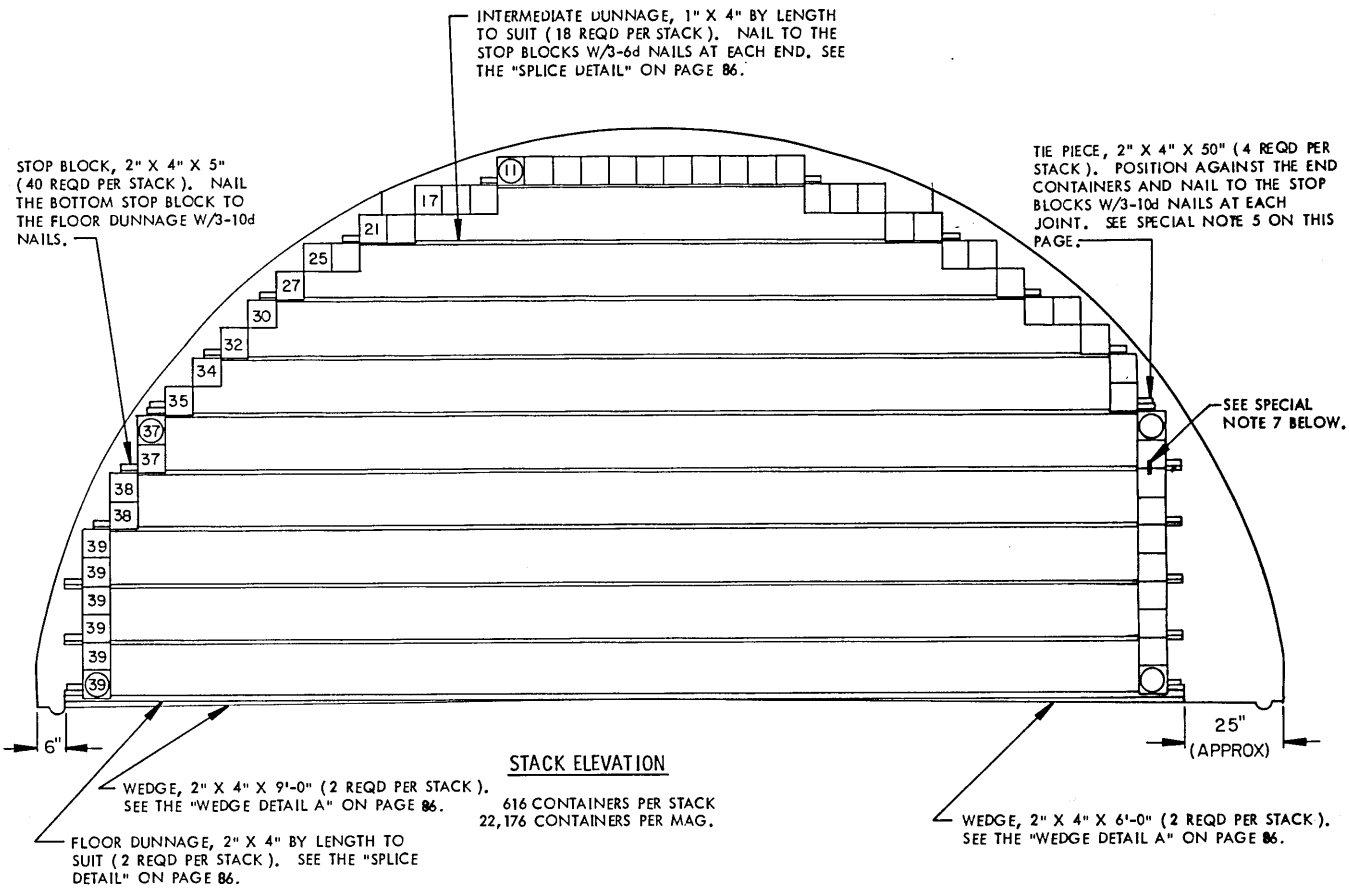
   CONTAINER DIMENSIONS--------35-1/2" LONG BY 6-1/4" WIDE BY 6-1/4" HIGH.

2. THE NUMBERS SHOWN IN THE STACK ELEVATION INDICATE THE QUANTITY OF CONTAINERS PER LAYER IN A STACK.
3. SEE THE "TYPICAL PLAN VIEW A" ON PAGE 4.
4. STORE IN DOUBLE STACKS FOR BETTER STABILITY. SEE THE "PARTIAL END VIEW OF DOUBLE STACKS" ON THIS PAGE.
5. NOTE: THE "TIE PIECE" EQUALS THE APPROXIMATE LENGTH OF TWO (2) CONTAINERS AND AIDS IN STABILIZING THE STACKS. A "TIE PIECE" IS USED ON THE BOTTOM LAYER AND AT THE FIFTH LAYER OF INTERMEDIATE DUNNAGE.
6. NOTE: JOINTS IN INTERMEDIATE DUNNAGE MUST BE STAGGERED BOTH HORIZONTALLY AND VERTICALLY.
7. NOTE: THE INTERLOCKING PINS ON EACH END OF A CONTAINER MUST INTERLOCK VERTICALLY WITH THE CONTAINER IN THE NEXT LAYER.
8. THERE WILL BE APPROXIMATELY 6'-10" OF SPACE AT THE FRONT OF AN 81'-2" IGLOO MAGAZINE.



PARTIAL END VIEW OF DOUBLE STACK

CHARGE, PROPELLING, IN PA94 SERIES CONTAINER



STACK ELEVATION

616 CONTAINERS PER STACK
22,176 CONTAINERS PER MAG.

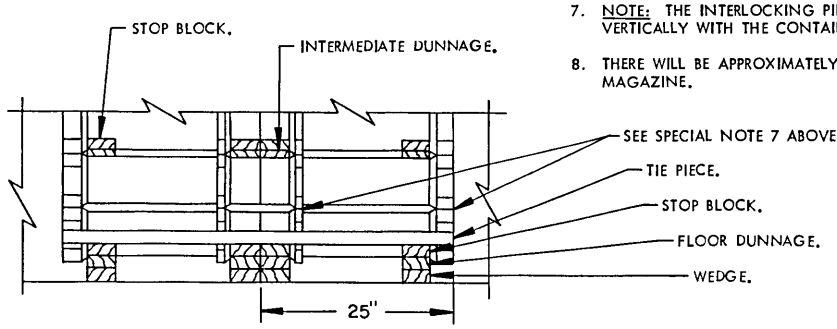
BILL OF MATERIAL (PER STACK)		
LUMBER	LINEAR FEET	BOARD FEET
1" X 4" 2" X 4"	441 77	147 52
NAILS	NO. REQD	POUNDS
6d (2") 10d (3")	108 36	3/4 3/4
WEDGES PER STACK		
LUMBER	LENGTH	NO. REQD
2" X 4" 2" X 4"	6'-0" 9'-0"	2 2

SPECIAL NOTES:

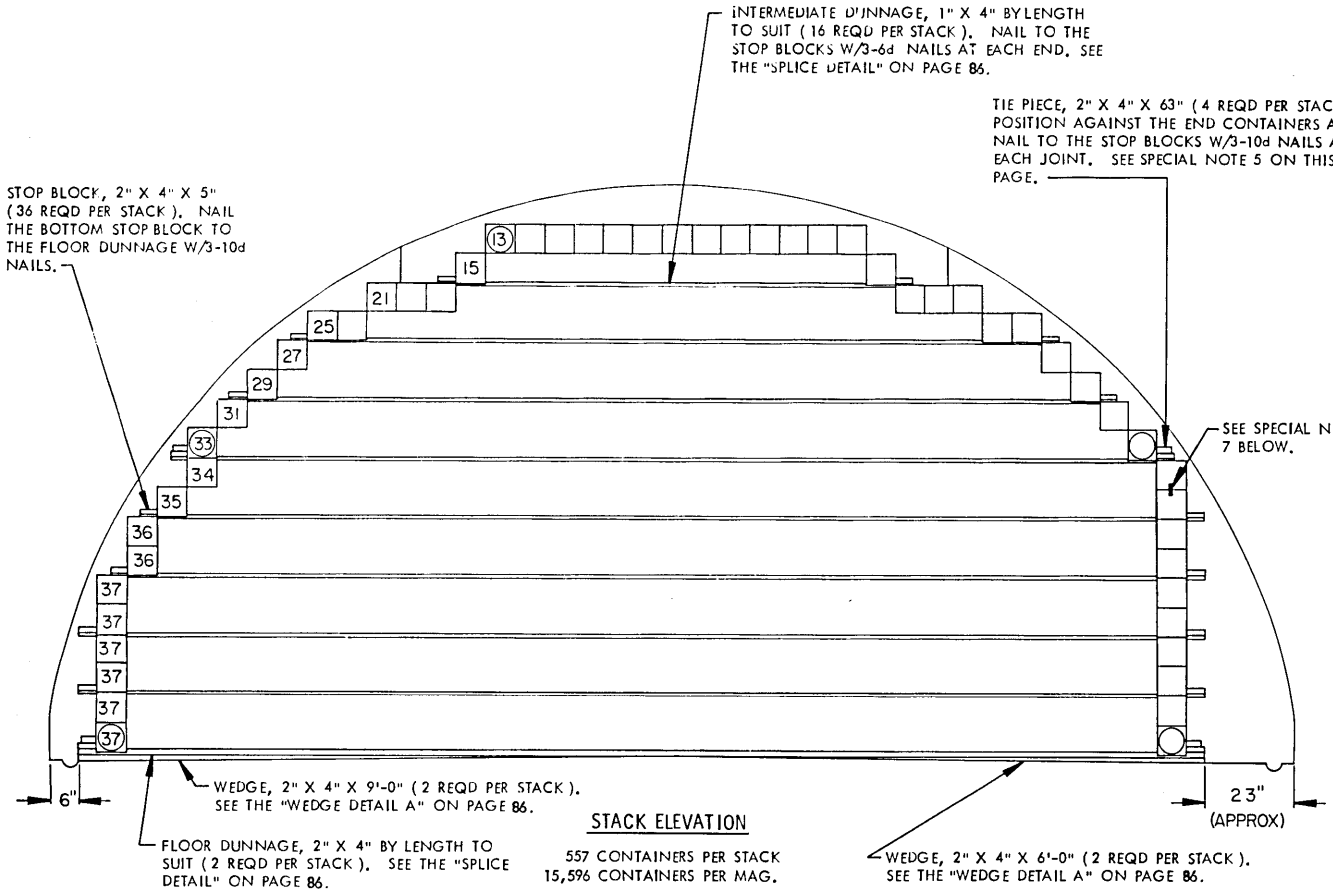
1. STORAGE AS SHOWN IS FOR THE PA95 CONTAINER. USE THIS SAME STORAGE FORMAT FOR ALL PA95 SERIES CONTAINERS.

   CONTAINER DIMENSIONS-------25" LONG BY 7'-1/8" WIDE BY 7-1/8" HIGH.

2. THE NUMBERS SHOWN IN THE STACK ELEVATION INDICATE THE QUANTITY OF CONTAINERS PER LAYER IN A STACK.
3. SEE THE "TYPICAL PLAN VIEW A" ON PAGE 4.
4. STORE IN DOUBLE STACKS FOR BETTER STABILITY. SEE THE "PARTIAL END VIEW OF DOUBLE STACK" ON THIS PAGE.
5. NOTE: THE "TIE PIECE" EQUALS THE APPROXIMATE LENGTH OF TWO (2) CONTAINERS AND AIDS IN STABILIZING THE STACKS. A "TIE PIECE" IS USED ON THE BOTTOM LAYER AND AT THE FIFTH LAYER OF INTERMEDIATE DUNNAGE.
6. NOTE: JOINTS IN INTERMEDIATE DUNNAGE MUST BE STAGGERED BOTH HORIZONTALLY AND VERTICALLY.
7. NOTE: THE INTERLOCKING PINS ON EACH END OF A CONTAINER MUST INTERLOCK VERTICALLY WITH THE CONTAINER IN THE NEXT LAYER.
8. THERE WILL BE APPROXIMATELY 58" OF SPACE AT THE FRONT OF AN 81'-2" IGLOO MAGAZINE.



PARTIAL END VIEW OF DOUBLE STACK



STACK ELEVATION

557 CONTAINERS PER STACK
15,596 CONTAINERS PER MAG.

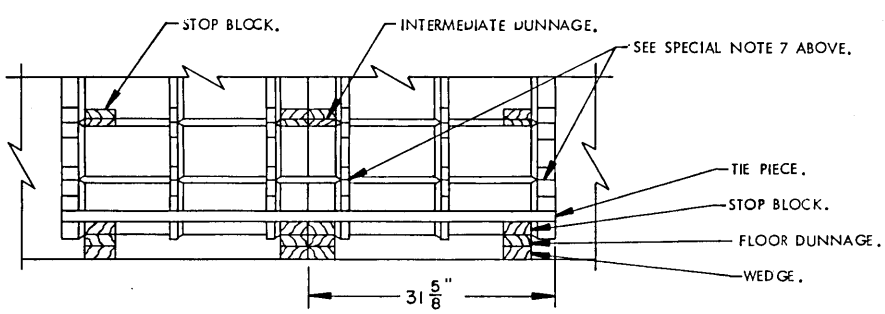
BILL OF MATERIAL (PER STACK)		
LUMBER	LINEAR FEET	BOARD FEET
1" X 4" 2" X 4"	361 78	121 52
NAILS	NO. REQD	POUNDS
6d (2") 10d (3")	96 36	3/4 3/4
WEDGES PER STACK		
LUMBER	LENGTH	NO. REQD
2" X 4" 2" X 4"	6'-0" 9'-0"	2 2

SPECIAL NOTES:

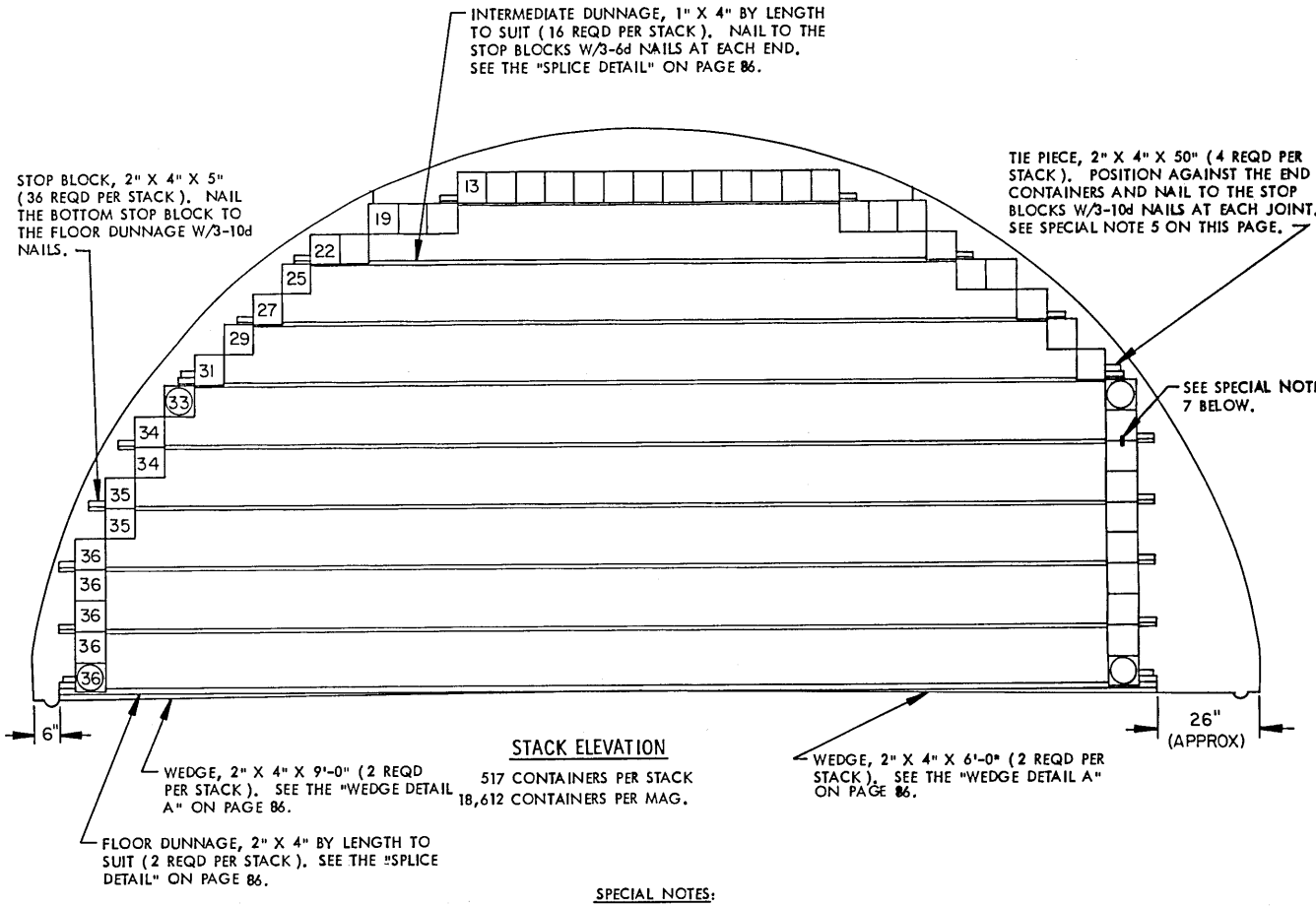
1. STORAGE AS SHOWN IS FOR THE PA96 CONTAINER. USE THIS SAME STORAGE FORMAT FOR ALL PA96 CONTAINERS.

   CONTAINER DIMENSIONS-------31-5/8" LONG BY 7-1/2" WIDE BY 7-1/2" HIGH.

2. THE NUMBERS SHOWN IN THE STACK ELEVATION INDICATE THE QUANTITY OF CONTAINERS PER LAYER IN A STACK.
3. SEE THE "TYPICAL PLAN VIEW A" ON PAGE 4.
4. STORE IN DOUBLE STACKS FOR BETTER STABILITY. SEE THE "PARTIAL END VIEW OF DOUBLE STACK" ON THIS PAGE.
5. NOTE: THE "TIE PIECE" EQUALS THE APPROXIMATE LENGTH OF TWO (2) CONTAINERS AND AIDS IN STABILIZING THE STACKS. A "TIE PIECE" IS USED ON THE BOTTOM LAYER AND AT THE FIFTH LAYER OF INTERMEDIATE DUNNAGE.
6. NOTE: JOINTS IN INTERMEDIATE DUNNAGE MUST BE STAGGERED BOTH HORIZONTALLY AND VERTICALLY.
7. NOTE: THE INTERLOCKING PINS ON EACH END OF A CONTAINER MUST INTERLOCK VERTICALLY WITH THE CONTAINER IN THE NEXT LAYER.
8. THERE WILL BE APPROXIMATELY 6' OF SPACE AT THE FRONT OF AN IGLOO MAGAZINE.



PARTIAL END VIEW OF DOUBLE STACK



STACK ELEVATION

517 CONTAINERS PER STACK
18,612 CONTAINERS PER MAG.

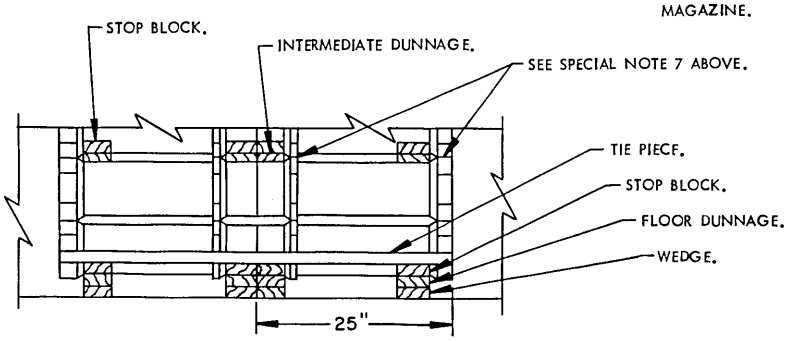
BILL OF MATERIAL (PER STACK)		
LUMBER	LINEAR FEET	BOARD FEET
1" X 4" 2" X 4"	336 75	112 50
NAILS	NO. REQD	POUNDS
6d (2") 10d (3")	96 36	3/4 3/4
WEDGES PER STACK		
LUMBER	LENGTH	NO. REQD
2" X 4" 2" X 4"	6'-0" 9'-0"	2 2

SPECIAL NOTES:

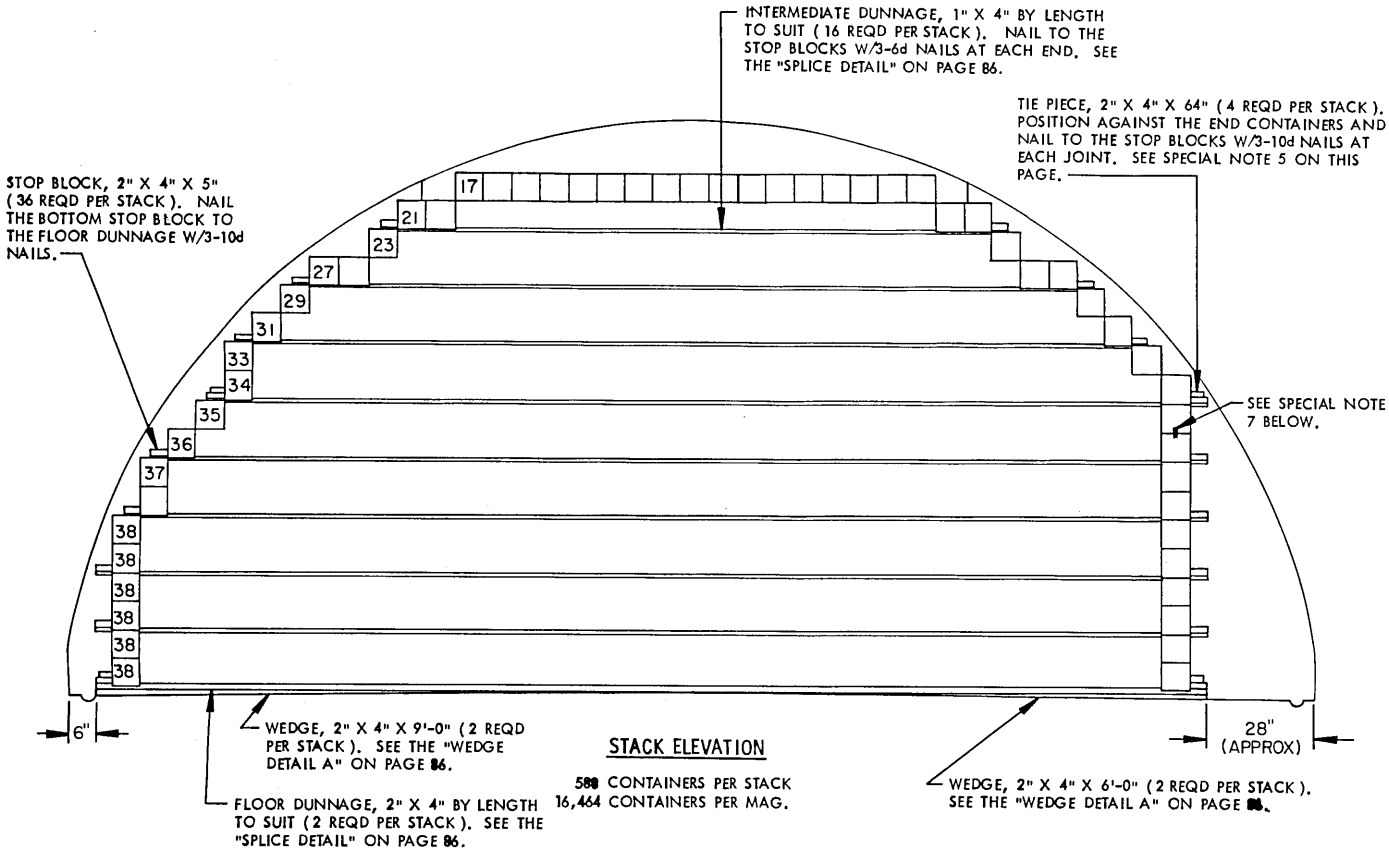
1. STORAGE AS SHOWN IS FOR THE PA97 CONTAINER. USE THIS SAME STORAGE FORMAT FOR ALL PA97 SERIES CONTAINERS.

   CONTAINER DIMENSIONS-------25" LONG BY 7-3/4" WIDE BY 7-3/4" HIGH.

2. THE NUMBERS SHOWN IN THE STACK ELEVATION INDICATE THE QUANTITY OF CONTAINERS PER LAYER IN A STACK.
3. SEE THE "TYPICAL PLAN VIEW A" ON PAGE 4.
4. STORE IN DOUBLE STACKS FOR BETTER STABILITY. SEE THE "PARTIAL END VIEW OF DOUBLE STACK" ON THIS PAGE.
5. NOTE: THE "TIE PIECE" EQUALS THE APPROXIMATE LENGTH OF TWO (2) CONTAINERS AND AIDS IN STABILIZING THE STACKS. A "TIE PIECE" IS USED ON THE BOTTOM LAYER AND AT THE FIFTH LAYER OF INTERMEDIATE DUNNAGE.
6. NOTE: JOINTS IN INTERMEDIATE DUNNAGE MUST BE STAGGERED BOTH HORIZONTALLY AND VERTICALLY.
7. NOTE: THE INTERLOCKING PINS ON EACH END OF A CONTAINER MUST INTERLOCK VERTICALLY WITH THE CONTAINER IN THE NEXT LAYER.
8. THERE WILL BE APPROXIMATELY 58" OF SPACE AT THE FRONT OF AN 81'-2" IGLOO MAGAZINE.



PARTIAL END VIEW OF DOUBLE STACK



STACK ELEVATION

588 CONTAINERS PER STACK
16,464 CONTAINERS PER MAG.

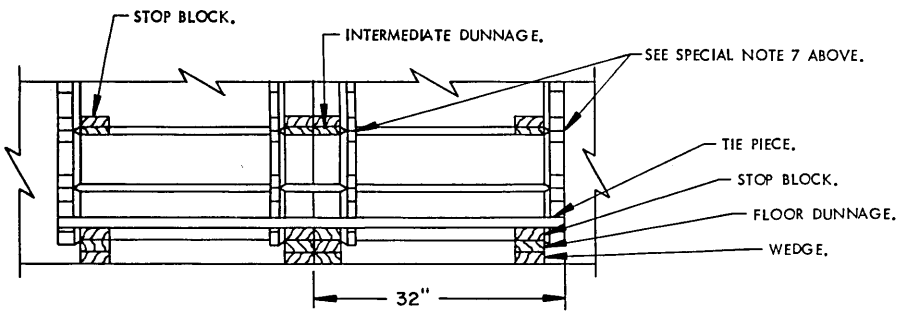
BILL OF MATERIAL (PER STACK)		
LUMBER	LINEAR FEET	BOARD FEET
1" X 4"	352	118
2" X 4"	77	52
NAILS	NO. REQD	POUNDS
6d (2")	96	3/4
10d (3")	36	3/4
WEDGES PER STACK		
LUMBER	LENGTH	NO. REQD
2" X 4"	6'-0"	2
2" X 4"	9'-0"	2

SPECIAL NOTES:

1. STORAGE AS SHOWN IS FOR THE PA99 CONTAINER. USE THIS SAME STORAGE FORMAT FOR ALL PA99 SERIES CONTAINERS.

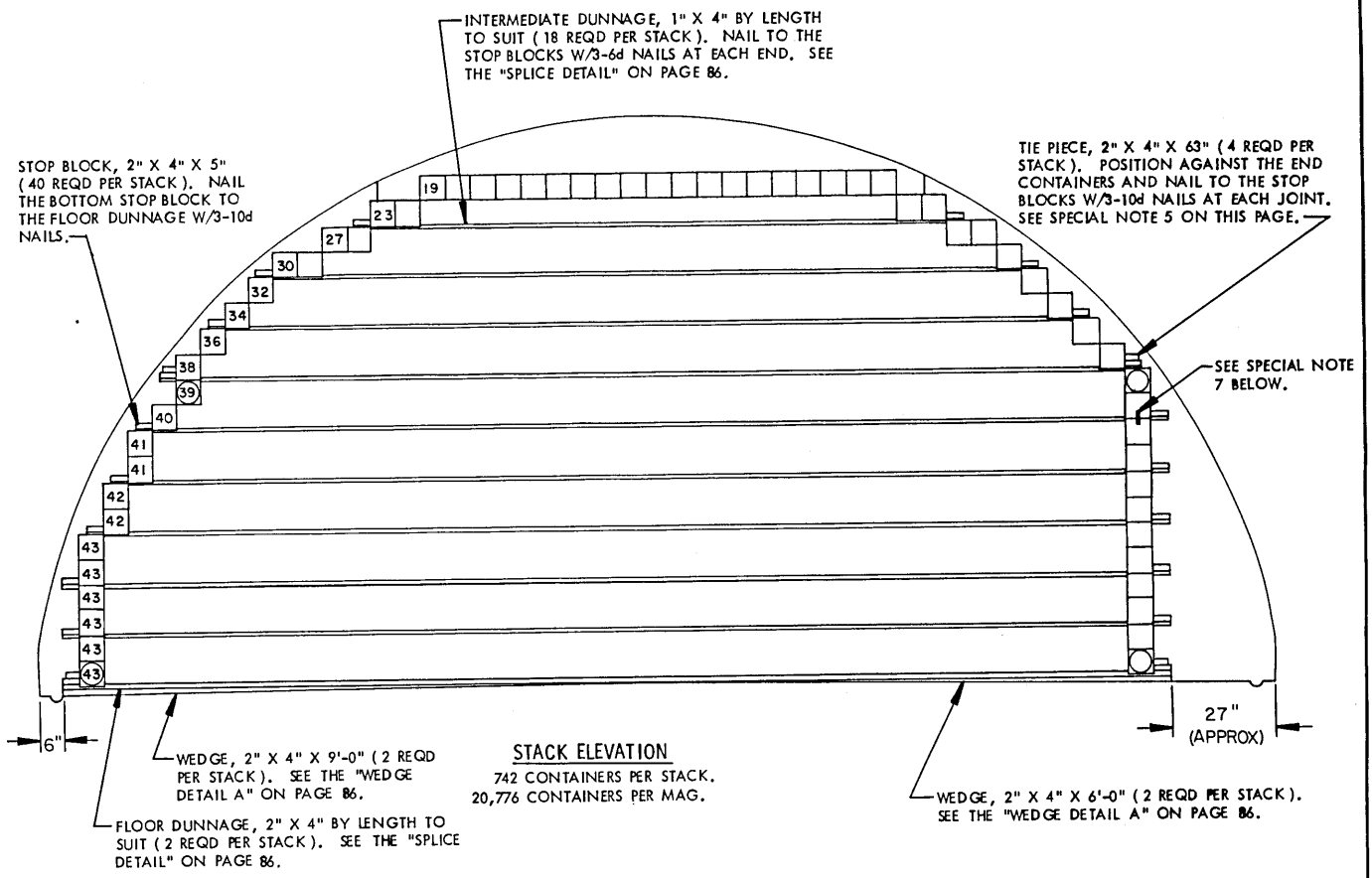
   CONTAINER DIMENSIONS-------32" LONG BY 7-1/4" WIDE BY 7-1/4" HIGH.

2. THE NUMBERS SHOWN IN THE STACK ELEVATION INDICATE THE QUANTITY OF CONTAINERS PER LAYER IN A STACK.
3. SEE THE "TYPICAL PLAN VIEW A" ON PAGE 4.
4. STORE IN DOUBLE STACKS FOR BETTER STABILITY. SEE THE "PARTIAL END VIEW OF DOUBLE STACK" ON THIS PAGE.
5. NOTE: THE "TIE PIECE" EQUALS THE APPROXIMATE LENGTH OF TWO (2) CONTAINERS AND AIDS IN STABILIZING THE STACKS. A "TIE PIECE" IS USED ON THE BOTTOM LAYER AND AT THE FIFTH LAYER OF INTERMEDIATE DUNNAGE.
6. NOTE: JOINTS IN INTERMEDIATE DUNNAGE MUST BE STAGGERED BOTH HORIZONTALLY AND VERTICALLY.
7. NOTE: THE INTERLOCKING PINS ON EACH END OF A CONTAINER MUST INTERLOCK VERTICALLY WITH THE CONTAINER IN THE NEXT LAYER.
8. THERE WILL BE APPROXIMATELY 62" OF SPACE AT THE FRONT OF AN 81'-2" IGLOO MAGAZINE.



PARTIAL END VIEW OF DOUBLE STACK

CHARGE, PROPELLING, IN PA99 SERIES CONTAINER



STACK ELEVATION

742 CONTAINERS PER STACK.
20,776 CONTAINERS PER MAG.

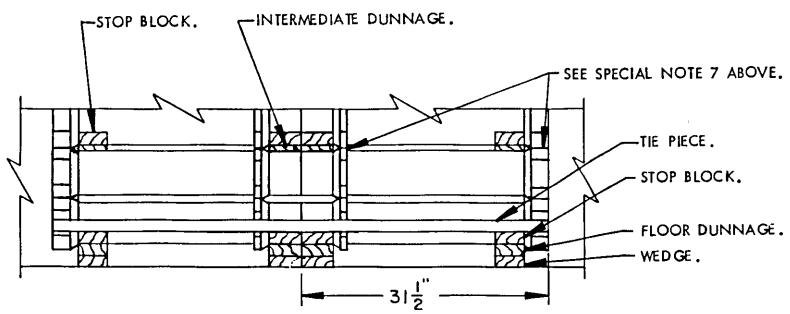
SPECIAL NOTES:

1. STORAGE AS SHOWN IS FOR THE PA100 CONTAINER. USE THIS SAME STORAGE FORMAT FOR ALL PA100 SERIES CONTAINERS.

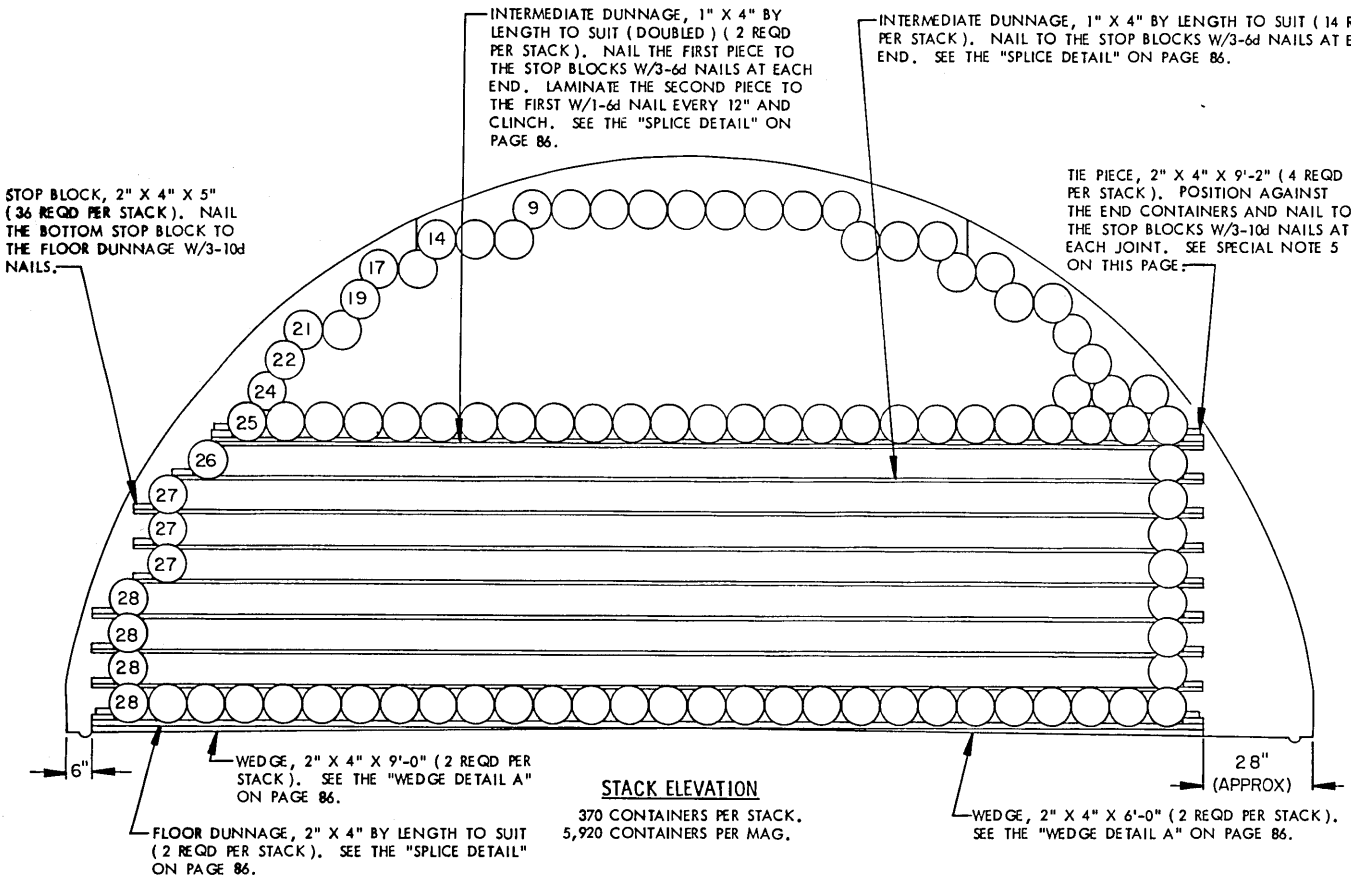
   CONTAINER DIMENSIONS--------31-1/2" LONG BY 6-1/2" WIDE BY 6-1/2" HIGH.

2. THE NUMBERS SHOWN IN THE STACK ELEVATION INDICATE THE QUANTITY OF CONTAINERS PER LAYER IN A STACK.
3. SEE THE "TYPICAL PLAN VIEW A" ON PAGE 4.
4. STORE IN DOUBLE STACKS FOR BETTER STABILITY. SEE THE "PARTIAL END VIEW OF DOUBLE STACK" ON THIS PAGE.
5. NOTE: THE "TIE PIECE" EQUALS THE APPROXIMATE LENGTH OF TWO (2) CONTAINERS AND AIDS IN STABILIZING THE STACKS. A "TIE PIECE" IS USED ON THE BOTTOM LAYER AND AT THE SIXTH LAYER OF INTERMEDIATE DUNNAGE.
6. NOTE: JOINTS IN INTERMEDIATE DUNNAGE MUST BE STAGGERED BOTH HORIZONTALLY AND VERTICALLY.
7. NOTE: THE INTERLOCKING PINS ON EACH END OF A CONTAINER MUST INTERLOCK VERTICALLY WITH THE CONTAINER IN THE NEXT LAYER.
8. THERE WILL BE APPROXIMATELY 6'-4" OF SPACE AT THE FRONT OF AN 81'-2" IGLOO MAGAZINE.

BILL OF MATERIAL (PER STACK)		
LUMBER	LINEAR FEET	BOARD FEET
1" X 4" 2" X 4"	408 79	136 53
NAILS	NO. REQD	POUNDS
6d (2") 10d (3")	108 36	3/4 3/4
WEDGES PER STACK		
LUMBER	LENGTH	NO. REQD
2" X 4" 2" X 4"	6'-0" 9'-0"	2 2



PARTIAL END VIEW OF DOUBLE STACK



STACK ELEVATION

370 CONTAINERS PER STACK.
5,920 CONTAINERS PER MAG.

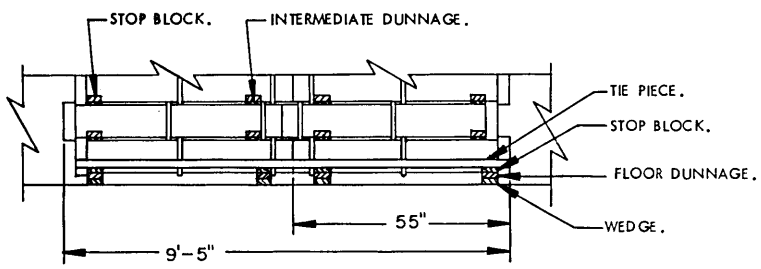
BILL OF MATERIAL (PER STACK)		
LUMBER	LINEAR FEET	BOARD FEET
1" X 4" 2" X 4"	439 85	147 57
NAILS	NO. REQD	POUNDS
6d (2") 10d (3")	138 36	1 3/4
WEDGES PER STACK		
LUMBER	LENGTH	NO. REQD
2" X 4" 2" X 4"	6'-0" 9'-0"	2 2

SPECIAL NOTES:

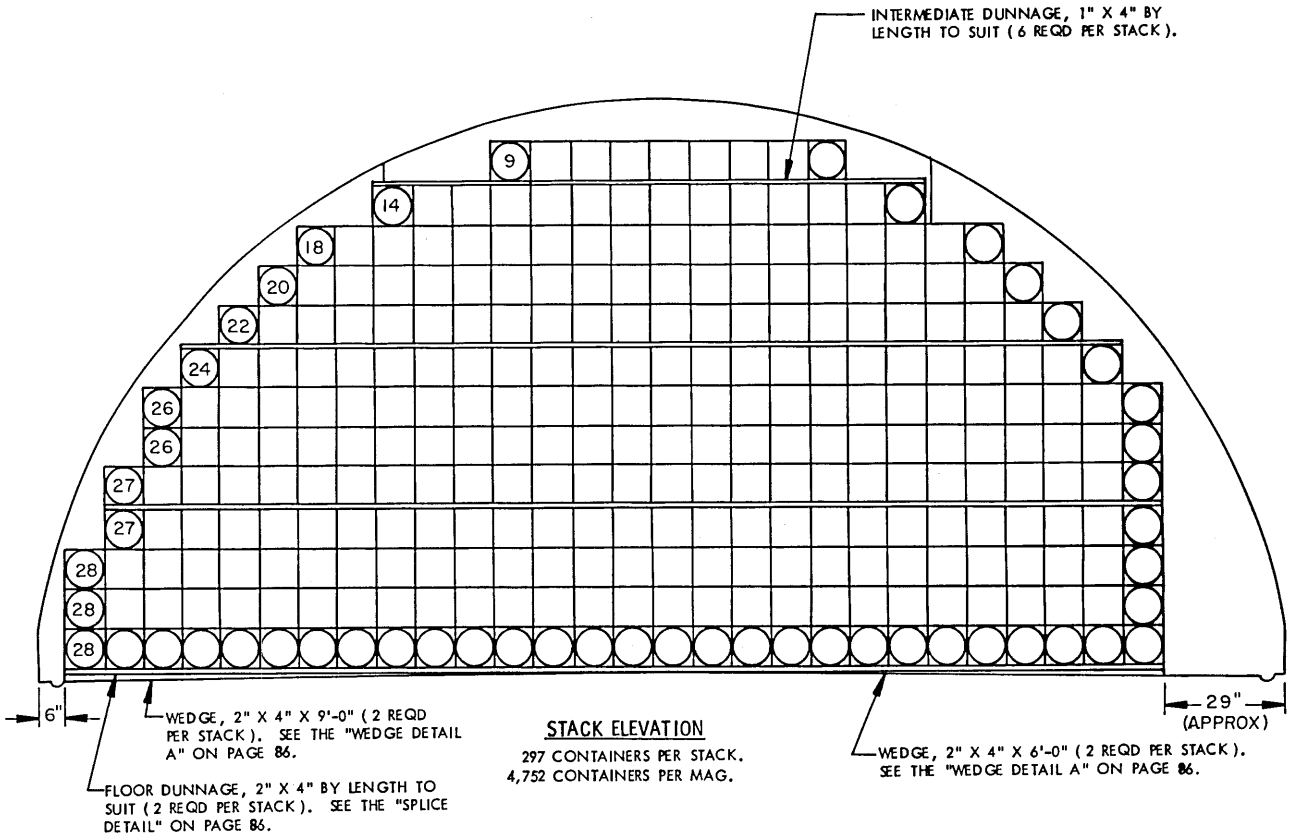
1. STORAGE AS SHOWN IS FOR THE M460 CONTAINER. USE THIS SAME STORAGE FORMAT FOR ALL M460 SERIES CONTAINERS.

   CONTAINER DIMENSIONS ------55" LONG BY 9-13/16" DIAMETER.

2. THE NUMBERS SHOWN IN THE STACK ELEVATION INDICATE THE QUANTITY OF CONTAINERS PER LAYER IN A STACK.
3. SEE THE "TYPICAL PLAN VIEW A" ON PAGE 4.
4. STORE IN DOUBLE STACKS FOR BETTER STABILITY. SEE THE "PARTIAL END VIEW OF DOUBLE STACK" ON THIS PAGE.
5. NOTE: THE "TIE PIECE" EQUALS THE APPROXIMATE LENGTH OF TWO (2) CONTAINERS AND AIDS IN STABILIZING THE STACKS. A "TIE PIECE" IS USED ONLY ON THE BOTTOM LAYER AND TOP LAYER OF DUNNAGE.
6. NOTE: JOINTS IN INTERMEDIATE DUNNAGE MUST BE STAGGERED BOTH HORIZONTALLY AND VERTICALLY.
7. THE INTERMEDIATE DUNNAGE POSITIONED IMMEDIATELY UNDER THE NESTED CONTAINERS AT THE TOP OF THE STACK WILL BE OF DOUBLE THICKNESS 1" X 4" MATERIAL.
8. ALL CONTAINERS POSITIONED ABOVE LAYER NINE (9) ARE NESTED.
9. THERE WILL BE APPROXIMATELY 54" OF SPACE AT THE FRONT OF AN 81'-2" IGLOO MAGAZINE.



PARTIAL END VIEW OF DOUBLE STACK



STACK ELEVATION

297 CONTAINERS PER STACK.
4,752 CONTAINERS PER MAG.

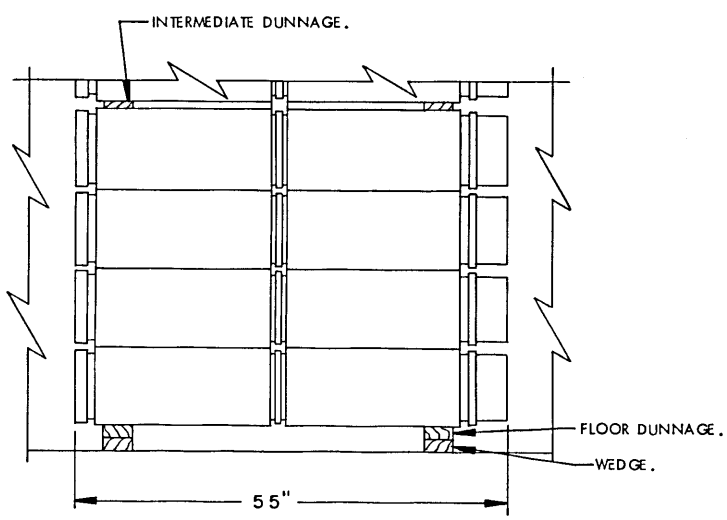
BILL OF MATERIAL (PER STACK)		
LUMBER	LINEAR FEET	BOARD FEET
1" X 4" 2" X 4"	120 52	40 35
WEDGES PER STACK		
LUMBER	LENGTH	NO. REQD
2" X 4" 2" X 4"	6'-0" 9'-0"	2 2

SPECIAL NOTES:

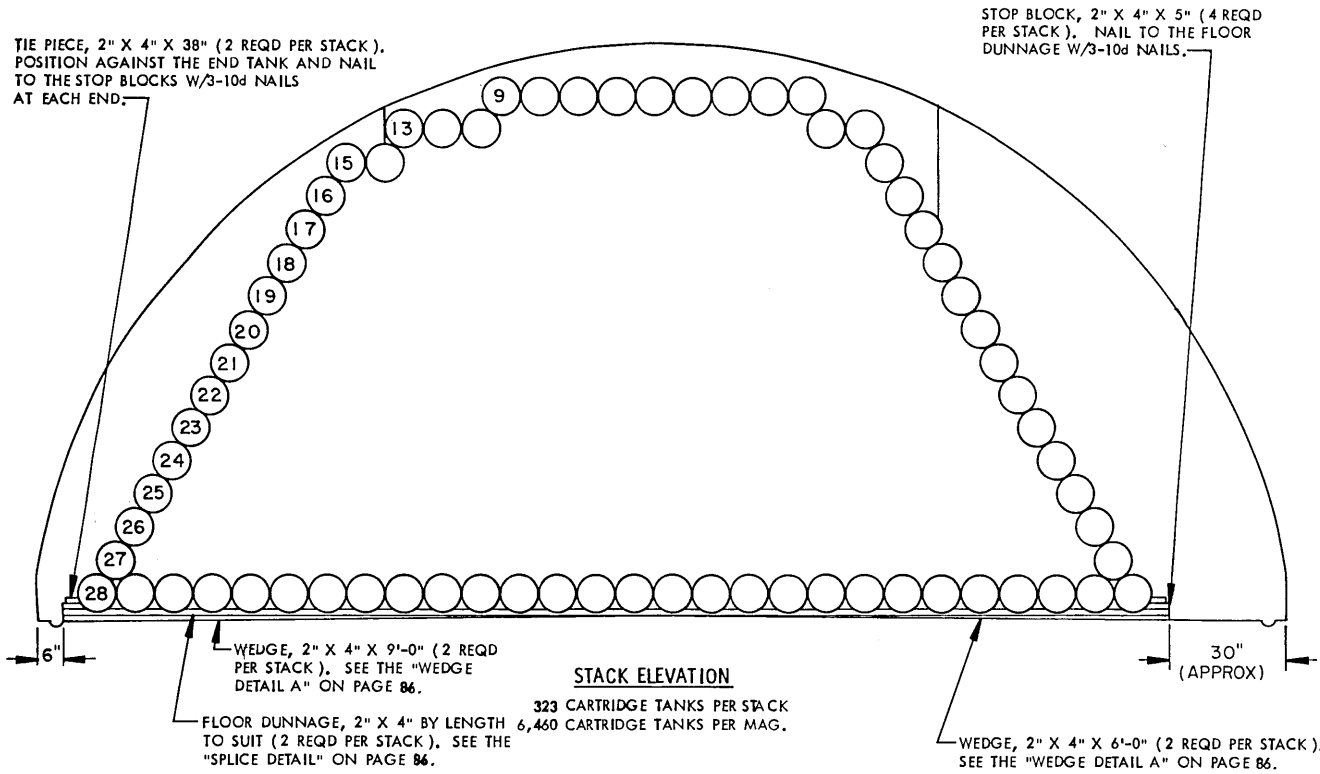
1. STORAGE AS SHOWN IS FOR THE M460 CONTAINER WITH THE PROTECTIVE COVER. USE THIS SAME STORAGE FORMAT FOR ALL M460 SERIES CONTAINERS HAVING THE PROTECTIVE COVER.

   CONTAINER DIMENSIONS---- 55" LONG BY 9-15/16" WIDE BY 9-15/16" HIGH.

2. THE NUMBERS SHOWN IN THE STACK ELEVATION INDICATE THE QUANTITY OF CONTAINERS PER LAYER IN A STACK.
3. SEE THE "TYPICAL PLAN VIEW A" ON PAGE 4.
4. NOTE: JOINTS IN INTERMEDIATE DUNNAGE MUST BE STAGGERED BOTH HORIZONTALLY AND VERTICALLY.
5. THERE WILL BE APPROXIMATELY 6'-6" OF SPACE AT THE FRONT OF AN 81'-2" IGLOO MAGAZINE.



PARTIAL END VIEW OF STACK



STACK ELEVATION

323 CARTRIDGE TANKS PER STACK
6,460 CARTRIDGE TANKS PER MAG.

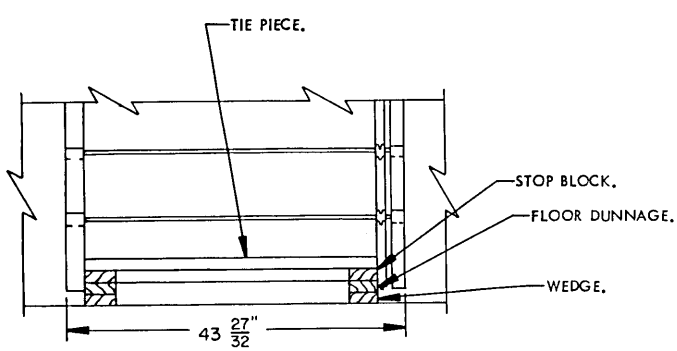
SPECIAL NOTES:

1. STORAGE AS SHOWN IS FOR THE MK4 CARTRIDGE TANK FOR 6"/47. USE THIS SAME STORAGE FORMAT FOR ALL MK4 CARTRIDGE TANK MODS.

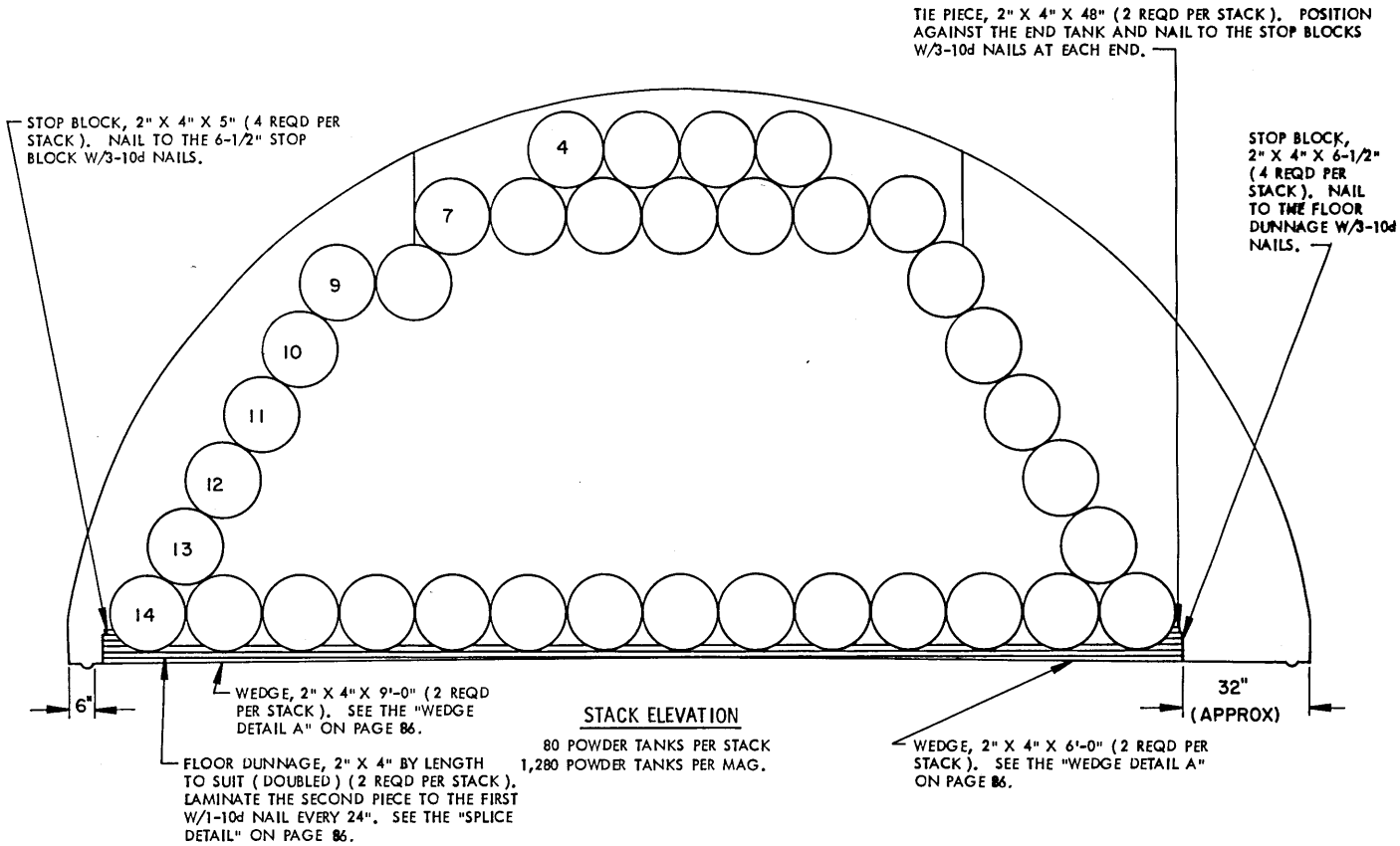
   TANK DIMENSIONS------43-27/32" LONG BY 9-21/32" DIAMETER.

2. THE NUMBERS SHOWN IN THE STACK ELEVATION INDICATE THE QUANTITY OF TANKS PER LAYER IN A STACK.
3. SEE THE "TYPICAL PLAN VIEW A" ON PAGE 4.
4. STAGGER ALL JOINTS IN FLOOR DUNNAGE.
5. THERE WILL BE APPROXIMATELY 6'-9" OF SPACE AT THE FRONT OF AN 81'-2" IGLOO MAGAZINE.

BILL OF MATERIAL (PER STACK)		
LUMBER	LINEAR FEET	BOARD FEET
2" X 4"	59	40
NAILS	NO. REQD	POUNDS
10d (3")	24	1/2
WEDGES PER STACK		
LUMBER	LENGTH	NO. REQD
2" X 4"	6'-0"	2
2" X 4"	9'-0"	2



PARTIAL END VIEW OF STACK



STACK ELEVATION

80 POWDER TANKS PER STACK
1,280 POWDER TANKS PER MAG.

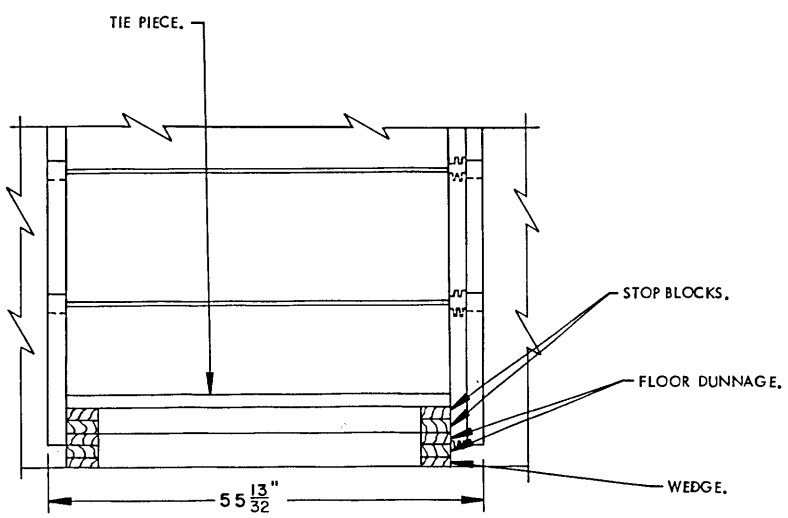
BILL OF MATERIAL (PER STACK)		
LUMBER	LINEAR FEET	BOARD FEET
2" X 4"	113	76
NAILS	NO. REQD	POUNDS
10d (3")	60	1
WEDGES PER STACK		
LUMBER	LENGTH	NO. REQD
2" X 4"	6'-0"	2
2" X 4"	9'-0"	2

SPECIAL NOTES:

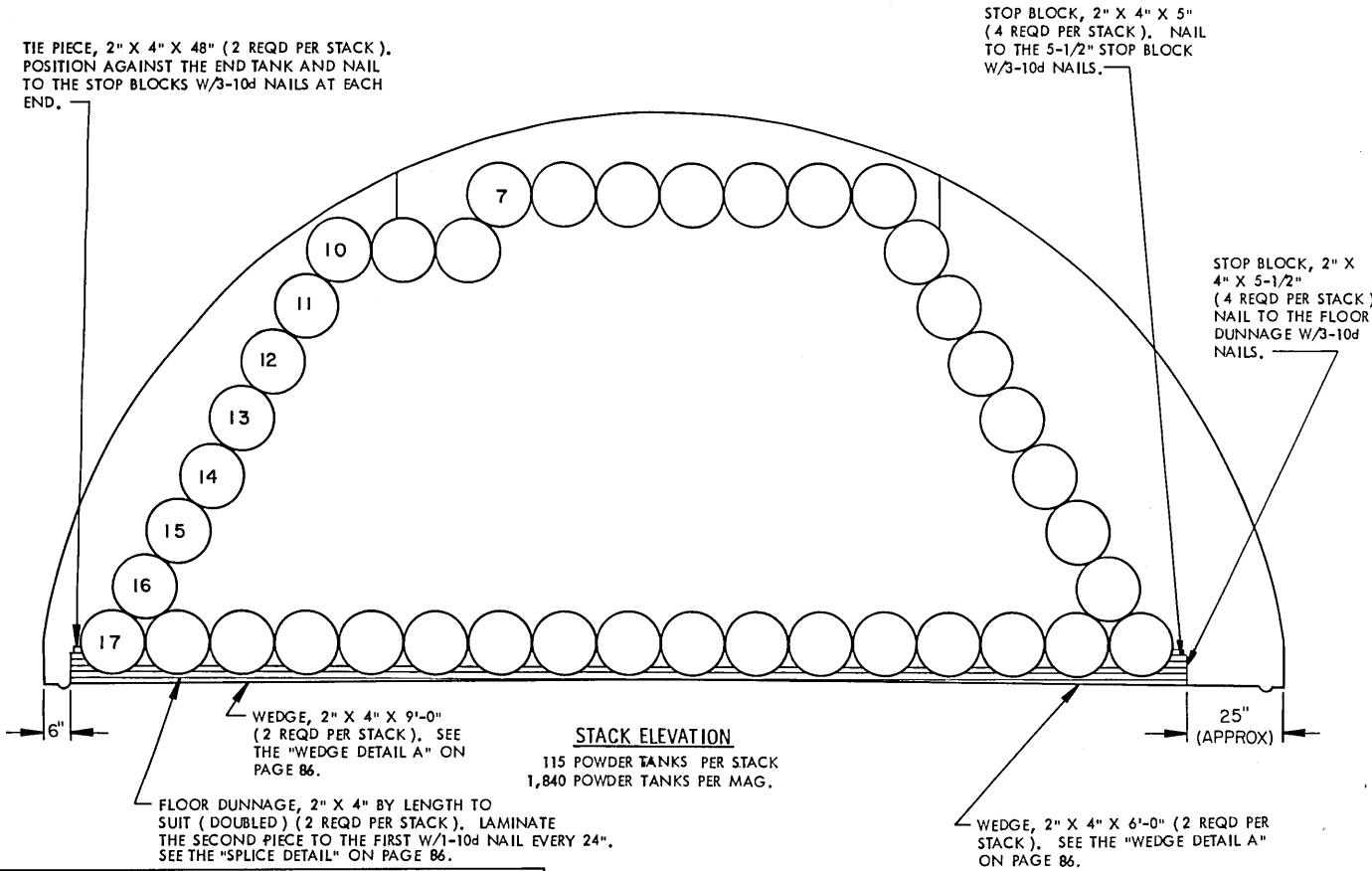
1. STORAGE AS SHOWN IS FOR THE MKIV POWDER TANK FOR 16"/50. USE THIS SAME STORAGE FORMAT FOR ALL MKIV POWDER TANK MODS.

   TANK DIMENSIONS--------55-13/32" LONG BY 19-1/2" DIAMETER.

2. THE NUMBERS SHOWN IN THE STACK ELEVATION INDICATE THE QUANTITY OF POWDER TANKS PER LAYER IN A STACK.
3. SEE THE "TYPICAL PLAN VIEW A" ON PAGE 4.
4. STAGGER ALL JOINTS IN FLOOR DUNNAGE.
5. THERE WILL BE APPROXIMATELY 6' OF SPACE AT THE FRONT OF AN 81'-2" IGLOO MAGAZINE.



PARTIAL END VIEW OF STACK



STACK ELEVATION

115 POWDER TANKS PER STACK
1,840 POWDER TANKS PER MAG.

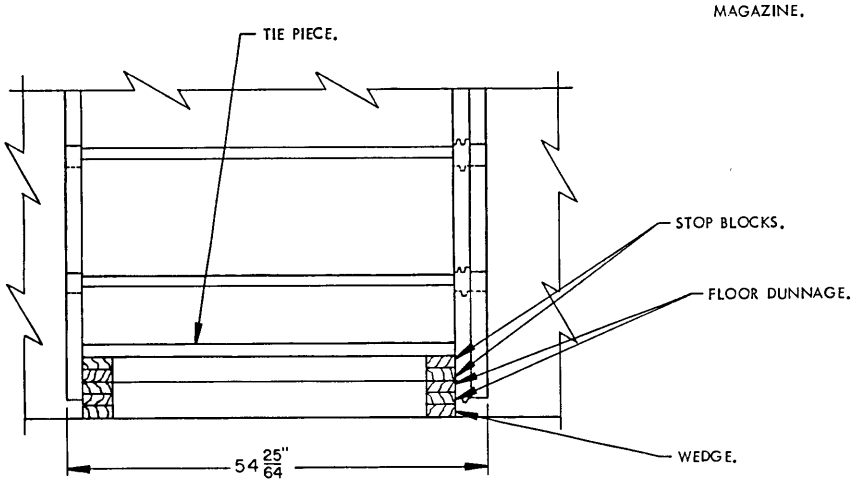
BILL OF MATERIAL (PER STACK)		
LUMBER	LINEAR FEET	BOARD FEET
2" X 4"	115	77
NAILS	NO. REQD	POUNDS
10d (3")	60	1
WEDGES PER STACK		
LUMBER	LENGTH	NO. REQD
2" X 4"	6'-0"	2
2" X 4"	9'-0"	2

SPECIAL NOTES:

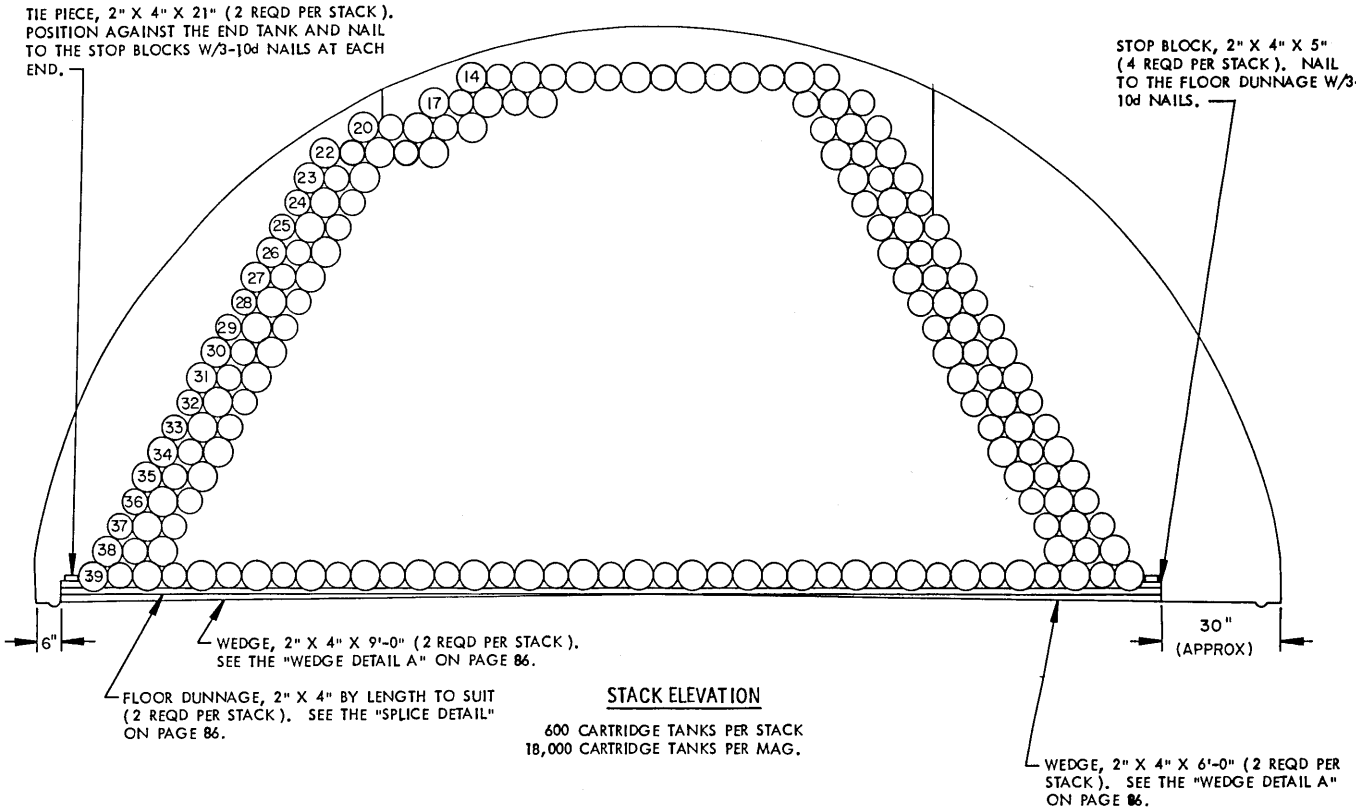
1. STORAGE AS SHOWN IS FOR THE MK8, MOD.0 POWDER TANK FOR 16". USE THE SAME STORAGE FORMAT FOR ALL MK8 POWDER TANK MODS.

   TANK DIMENSIONS-------54-25/64" LONG BY 16-1/4" DIAMETER.

2. THE NUMBERS SHOWN IN THE STACK ELEVATION INDICATE THE QUANTITY OF TANKS PER LAYER IN A STACK.
3. SEE THE "TYPICAL PLAN VIEW A" ON PAGE 4.
4. STAGGER ALL JOINTS IN FLOOR DUNNAGE.
5. THERE WILL BE APPROXIMATELY 7'-4" OF SPACE AT THE FRONT OF AN 81'-2" IGLOO MAGAZINE.



PARTIAL END VIEW OF STACK



STACK ELEVATION

600 CARTRIDGE TANKS PER STACK
18,000 CARTRIDGE TANKS PER MAG.

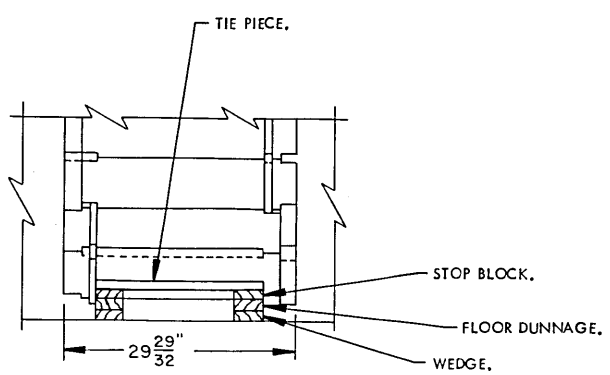
BILL OF MATERIAL (PER STACK)		
LUMBER	LINEAR FEET	BOARD FEET
2" X 4"	57	38
NAILS	NO. REQD	POUNDS
10d (3")	24	1/2
WEDGES PER STACK		
LUMBER	LENGTH	NO. REQD
2" X 4"	6'-0"	2
2" X 4"	9'-0"	2

SPECIAL NOTES:

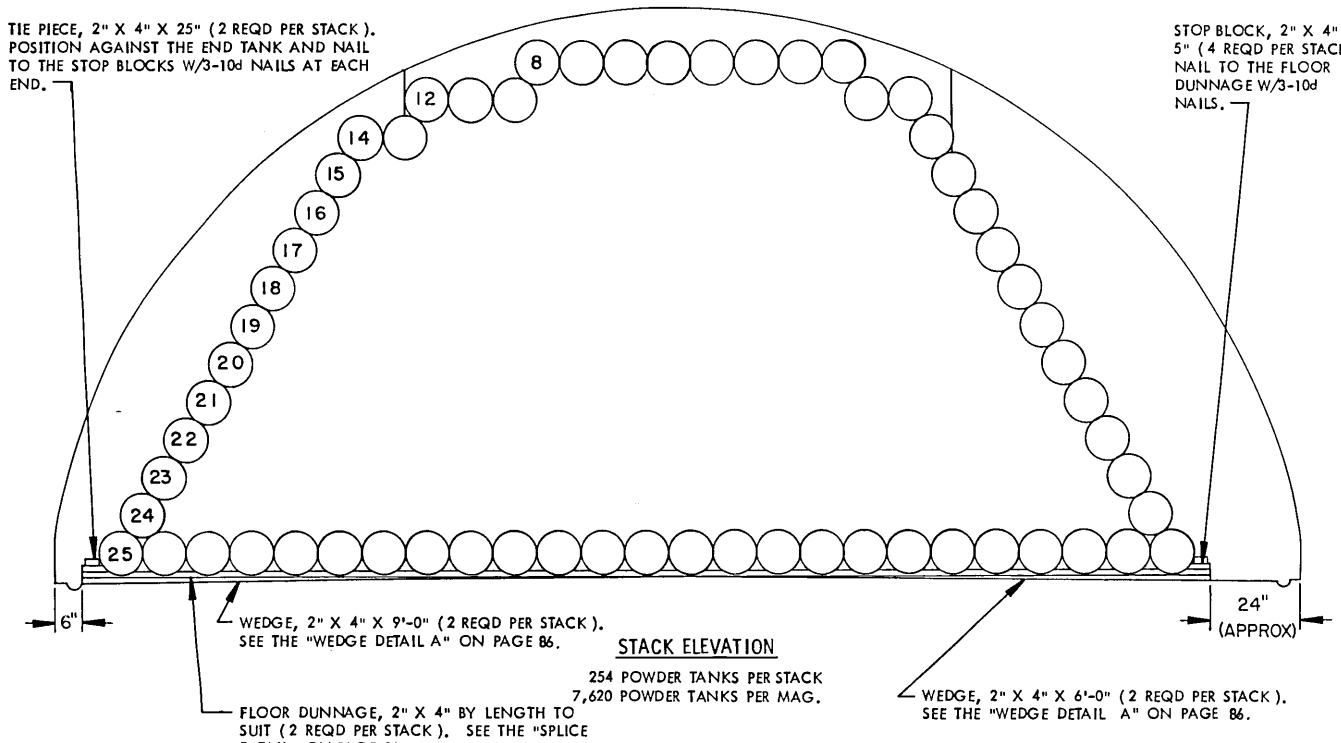
1. STORAGE AS SHOWN IS FOR THE MK9, MOD.1 AND MK15, MOD.1. CARTRIDGE TANKS FOR 5"/38. USE THE SAME STORAGE FORMAT FOR ALL MK9 AND MK15 CARTRIDGE TANK MODS.

   TANK DIMENSIONS-------29-29/32" LONG BY 7-15/32" DIAMETER.

2. THE NUMBERS SHOWN IN THE STACK ELEVATION INDICATE THE QUANTITY OF CARTRIDGE TANKS PER LAYER IN A STACK.
3. SEE THE "TYPICAL PLAN VIEW A" ON PAGE 4.
4. STAGGER ALL JOINTS IN FLOOR DUNNAGE.
5. THERE WILL BE APPROXIMATELY 61" OF SPACE AT THE FRONT OF AN 81'-2" IGLOO MAGAZINE.



PARTIAL END VIEW OF STACK



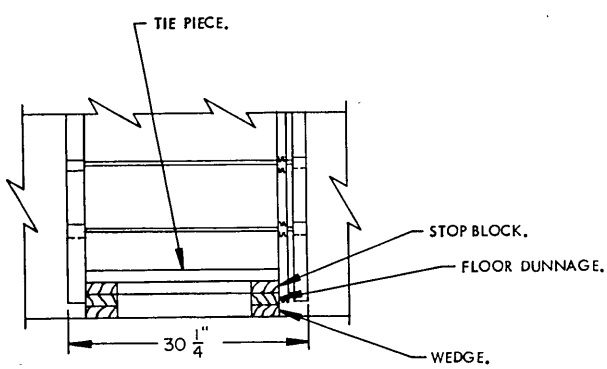
BILL OF MATERIAL (PER STACK)		
LUMBER	LINEAR FEET	BOARD FEET
2" X 4"	58	39
NAILS	NO. REQD	POUNDS
10d (3")	24	1/2
WEDGES PER STACK		
LUMBER	LENGTH	NO. REQD
2" X 4"	6'-0"	2
2" X 4"	9'-0"	2

SPECIAL NOTES:

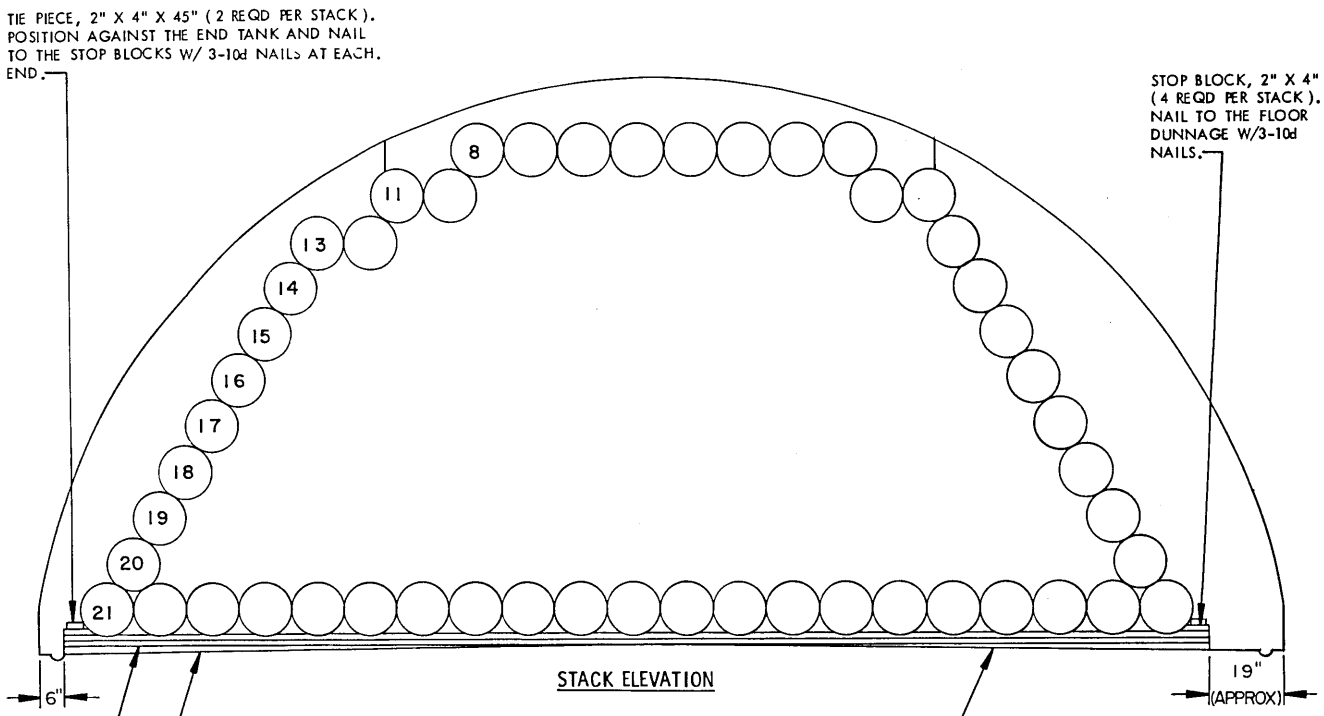
1. STORAGE AS SHOWN IS FOR THE MK10, MOD.1 POWDER TANK FOR 8"/55. USE THE SAME STORAGE FORMAT FOR ALL MK10 POWDER TANK MODS.

   TANK DIMENSIONS-------30-1/4" LONG BY 10-59/64" DIAMETER.

2. THE NUMBERS SHOWN IN THE STACK ELEVATION INDICATE THE QUANTITY OF POWDER TANKS PER LAYER IN A STACK.
3. SEE THE "TYPICAL PLAN VIEW A" ON PAGE 4.
4. STAGGER ALL JOINTS IN FLOOR DUNNAGE.
5. THERE WILL BE APPROXIMATELY 51" OF SPACE AT THE FRONT OF AN 81'-2" IGLOO MAGAZINE.



PARTIAL END VIEW OF STACK



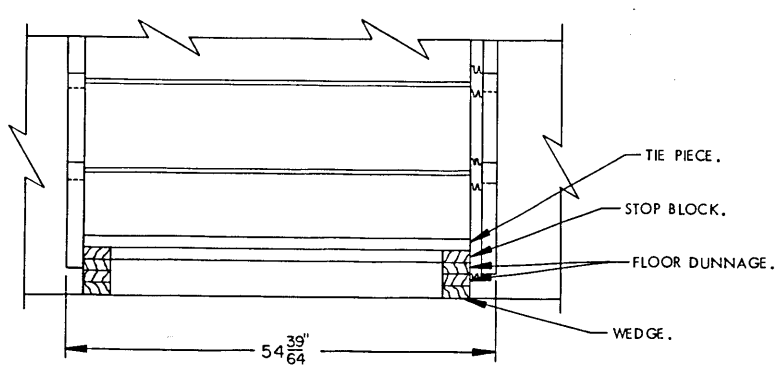
BILL OF MATERIAL (PER STACK)		
LUMBER	LINEAR FEET	BOARD FEET
2" X 4"	114	76
NAILS	NO. REQD	POUNDS
10d (3")	50	1
WEDGES PER STACK		
LUMBER	LENGTH	NO. REQD
2" X 4" 2" X 4"	6'-0" 9'-0"	2 2

SPECIAL NOTES:

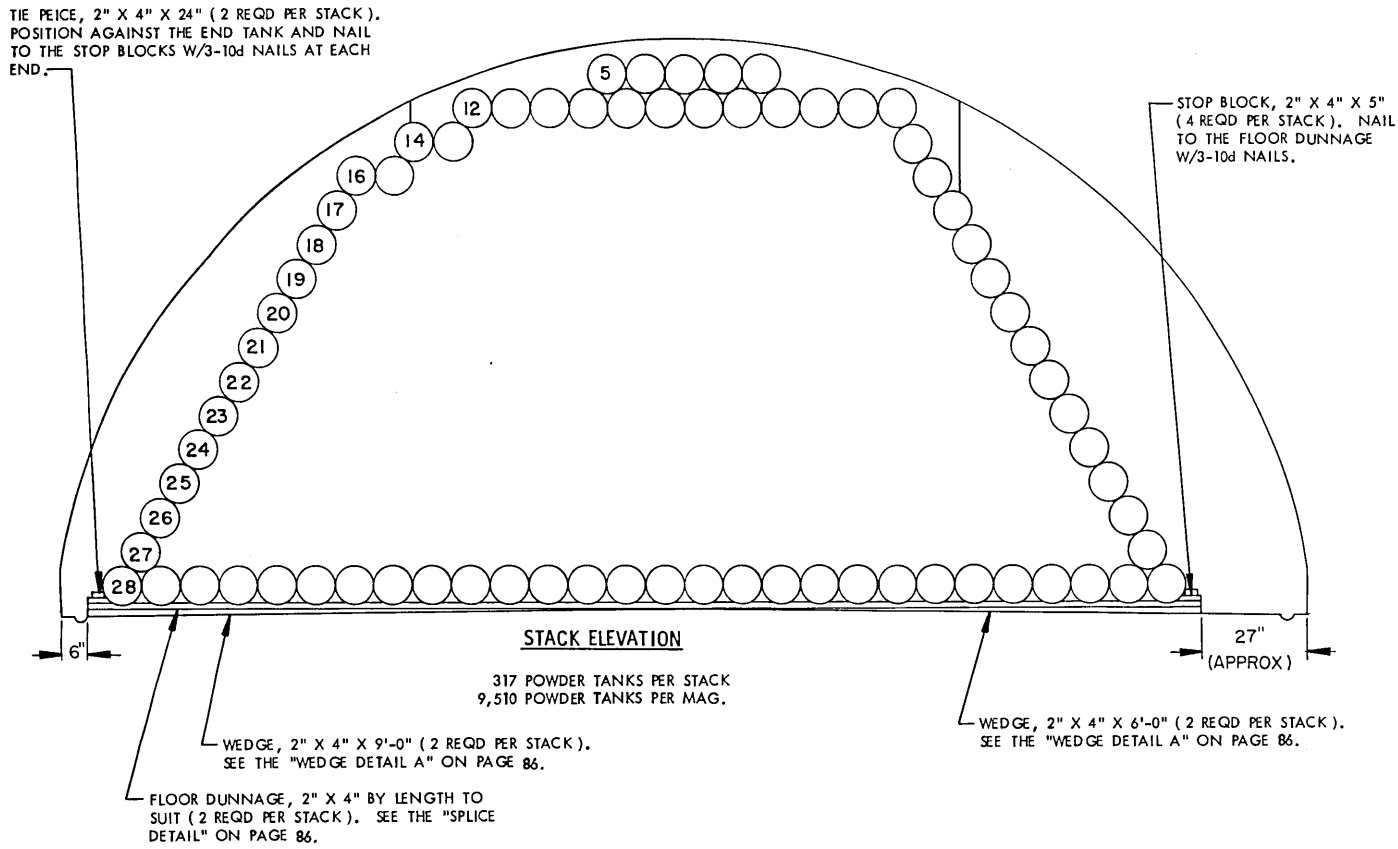
1. STORAGE AS SHOWN IS FOR THE MK11 MOD. 0 AND MK13 MOD. 0 CARTRIDGE TANKS FOR 8"/55. USE THE SAME STORAGE FORMAT FOR ALL MK11 AND MK13 CARTRIDGE TANK MODS.

   TANK DIMENSIONS--------54-39/64" LONG BY 13-5/16" DIAMETER.

2. THE NUMBERS SHOWN IN THE STACK ELEVATION INDICATE THE QUANTITY OF CARTRIDGE TANKS PER LAYER IN A STACK.
3. SEE THE "TYPICAL PLAN VIEW A" ON PAGE 4.
4. STAGGER ALL JOINTS IN FLOOR DUNNAGE.
5. THERE WILL BE APPROXIMATELY 7' OF SPACE AT THE FRONT OF AN 81'-2" IGLOO MAGAZINE.



PARTIAL END VIEW OF STACK



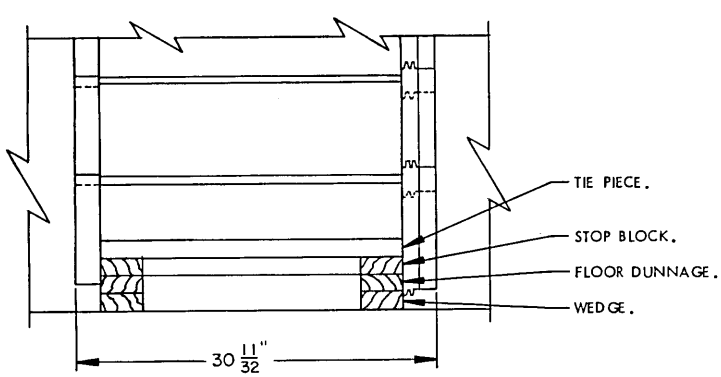
BILL OF MATERIAL (PER STACK)		
LUMBER	LINEAR FEET	BOARD FEET
2" X 4"	58	39
NAILS	NO. REQD	POUNDS
10d (3")	24	1/2
WEDGES PER STACK		
LUMBER	LENGTH	NO. REQD
2" X 4"	6'-0"	2
2" X 4"	9'-0"	2

SPECIAL NOTES:

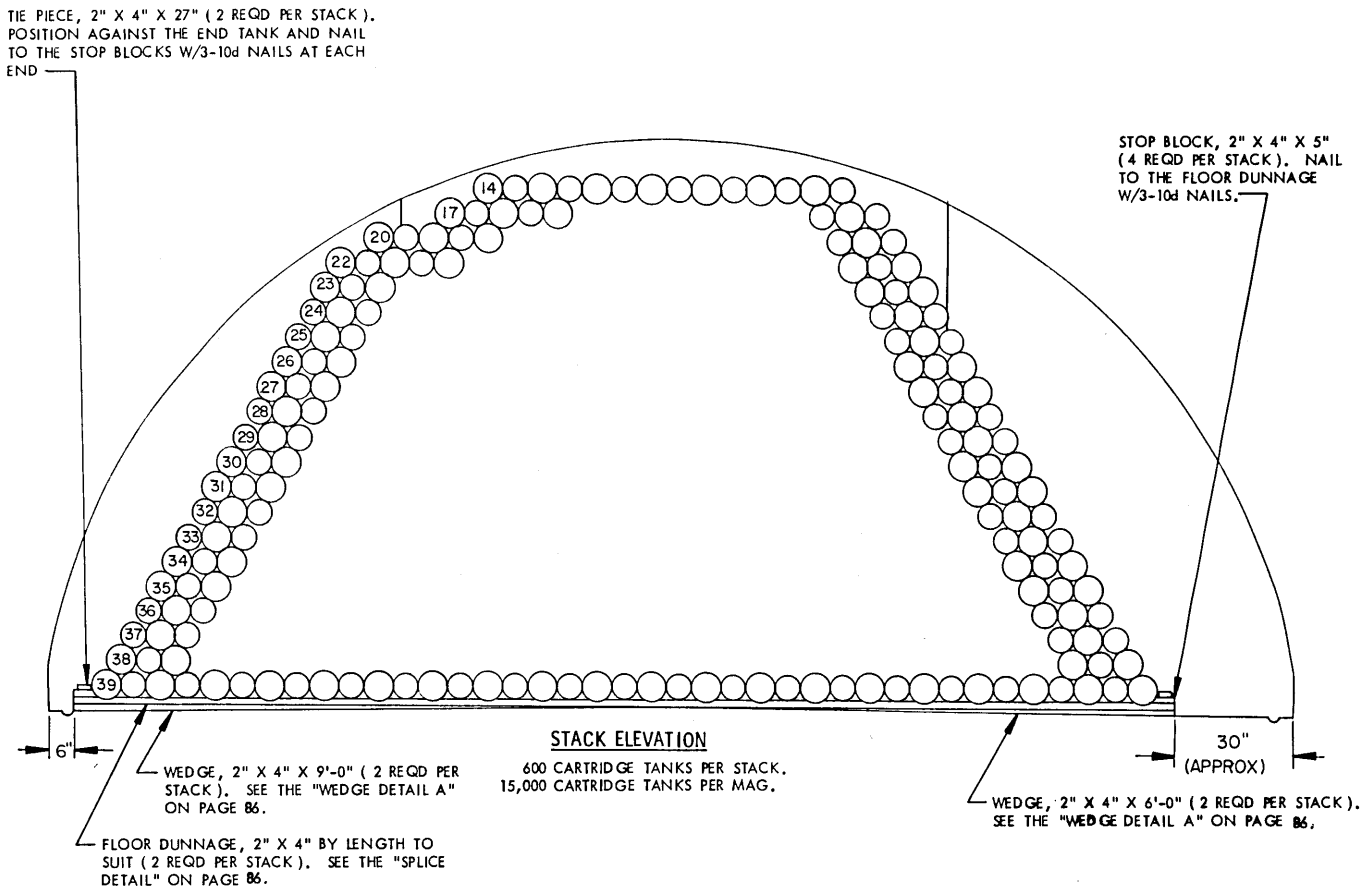
1. STORAGE AS SHOWN IS FOR THE ONE-HALF REDUCED CHARGE IN THE MK13, MOD. 0 POWDER TANK FOR 8"/55. USE THE SAME STORAGE FORMAT FOR ALL MK13 POWDER TANK MODS.

   TANK DIMENSIONS -------30-11/32" LONG BY 9-7/8" DIAMETER.

2. THE NUMBERS SHOWN IN THE STACK ELEVATION INDICATE THE QUANTITY OF POWDER TANKS PER LAYER IN A STACK.
3. SEE THE "TYPICAL PLAN VIEW A" ON PAGE 4.
4. STAGGER ALL JOINTS IN FLOOR DUNNAGE.
5. THERE WILL BE APPROXIMATELY 48" OF SPACE AT THE FRONT OF AN 81'-2" IGLOO MAGAZINE.



PARTIAL END VIEW OF STACK



STACK ELEVATION

600 CARTRIDGE TANKS PER STACK.
15,000 CARTRIDGE TANKS PER MAG.

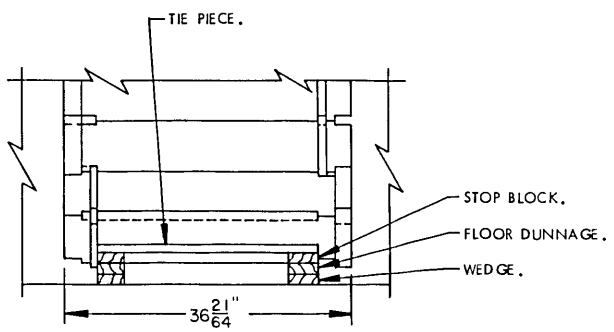
BILL OF MATERIAL (PER STACK)		
LUMBER	LINEAR FEET	BOARD FEET
2" X 4"	58	39
NAILS	NO. REQD	POUNDS
10d (3")	24	1/2
WEDGES PER STACK		
LUMBER	LENGTH	NO. REQD
2" X 4"	6'-0"	2
2" X 4"	9'-0"	2

SPECIAL NOTES:

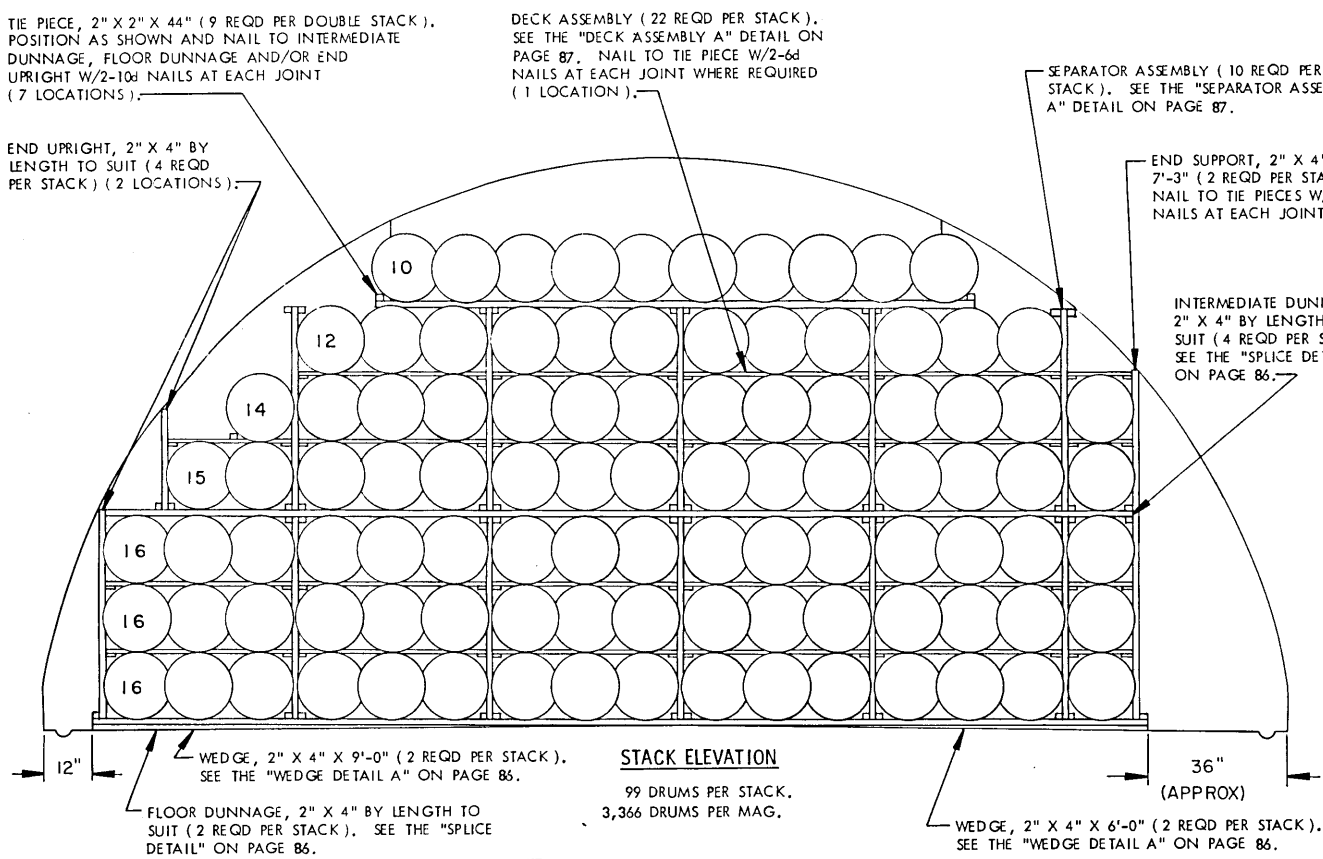
1. STORAGE AS SHOWN IS FOR THE MK14, MOD. 1 AND MK21, MOD. 0 CARTRIDGE TANKS FOR 5"/54. USE THIS SAME STORAGE FORMAT FOR ALL MK14 AND MK21 CARTRIDGE TANK MODS.

   TANK DIMENSIONS------36-21/64" LONG BY 7-15/32" DIAMETER.

2. THE NUMBERS SHOWN IN THE STACK ELEVATION INDICATE THE QUANTITY OF CARTRIDGE TANKS PER LAYER IN A STACK.
3. SEE THE "TYPICAL PLAN VIEW A" ON PAGE 4.
4. STAGGER ALL JOINTS IN FLOOR DUNNAGE.
5. THERE WILL BE APPROXIMATELY 50" OF SPACE AT THE FRONT OF AN 81'-2" IGLOO MAGAZINE.



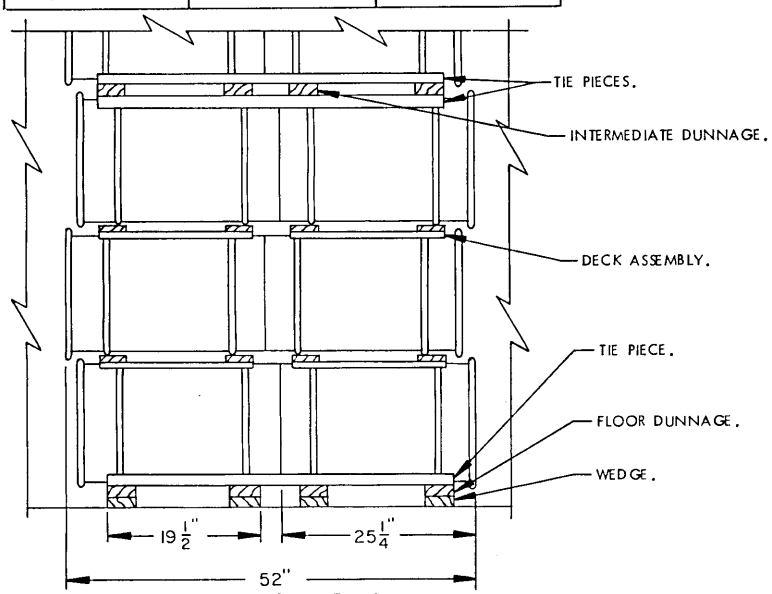
PARTIAL END VIEW OF STACK



STACK ELEVATION

99 DRUMS PER STACK.
3,366 DRUMS PER MAG.

BILL OF MATERIAL (PER STACK)		
LUMBER	LINEAR FEET	BOARD FEET
1" X 2"	74	13
1" X 4"	156	52
2" X 2"	84	28
2" X 4"	232	155
NAILS	NO. REQD	POUNDS
6d (2")	176	1-1/4
10d (3")	208	3-1/4
WEDGES PER STACK		
LUMBER	LENGTH	NO. REQD
2" X 4"	6'-0"	2
2" X 4"	9'-0"	2



PARTIAL END VIEW OF DOUBLE STACK

END SUPPORT PIECES HAVE BEEN OMITTED FOR CLARITY.

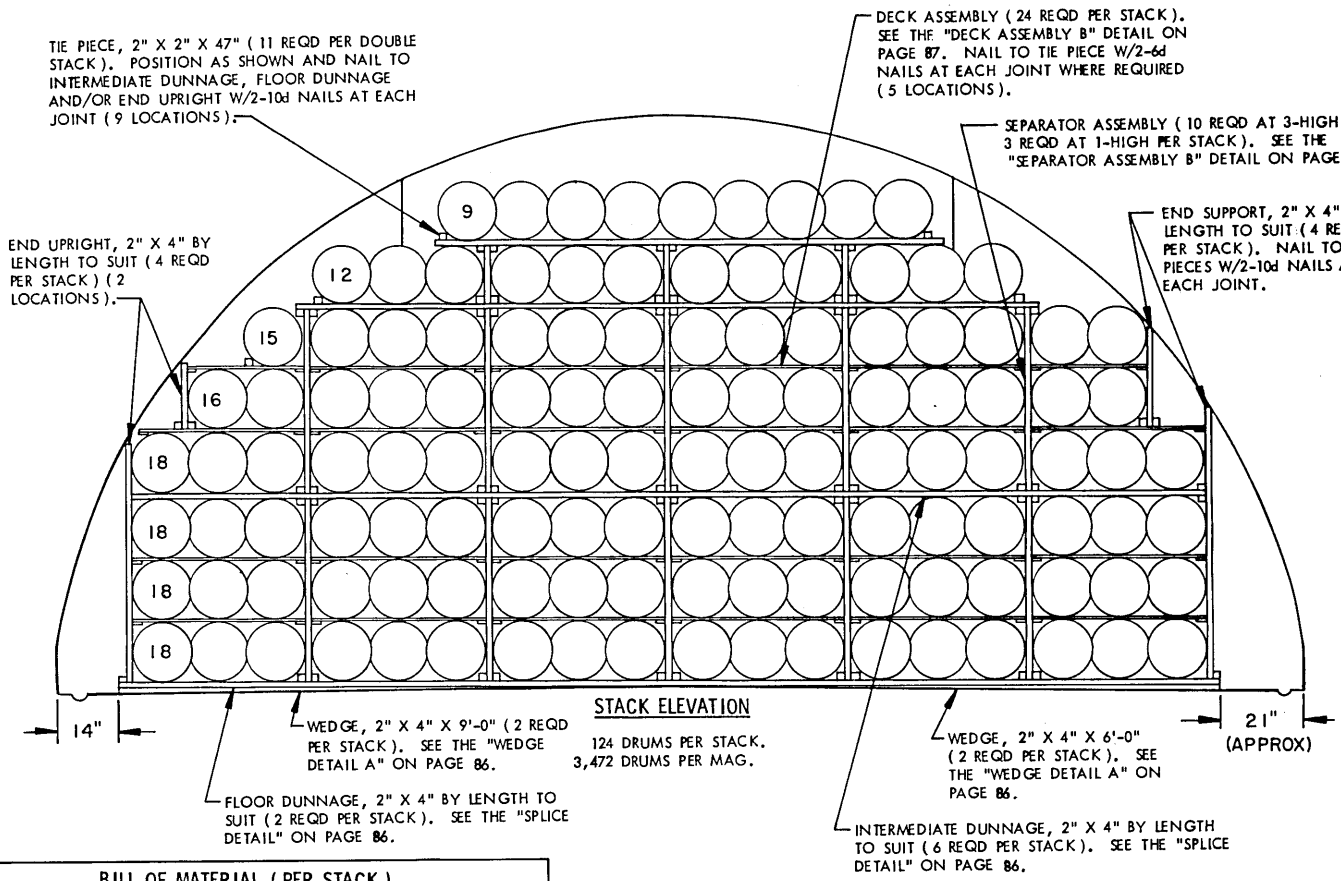
SPECIAL NOTES:

1. STORAGE AS SHOWN IS FOR THE PROPELLING CHARGES FOR THE 105MM HOWITZER PACKED IN METAL DRUM.

   DRUM DIMENSIONS------- 25-1/4" LONG BY 16-7/8" DIAMETER.

2. THE NUMBERS SHOWN IN THE STACK ELEVATION INDICATE THE QUANTITY OF CONTAINERS PER LAYER IN A STACK.
3. SEE THE "TYPICAL PLAN VIEW A" ON PAGE 4.
4. STORE IN DOUBLE STACKS FOR BETTER STABILITY. SEE THE "PARTIAL END VIEW OF DOUBLE STACK" ON THIS PAGE.
5. JOINTS IN INTERMEDIATE DUNNAGE MUST BE STAGGERED BOTH HORIZONTALLY AND VERTICALLY.
6. END SUPPORT AND/OR END UPRIGHT PIECES MUST CONTACT THE MAGAZINE WALL FOR SUPPORT.
7. THERE WILL BE APPROXIMATELY 6'-2" OF SPACE AT THE FRONT OF AN 81'-2" IGLOO MAGAZINE.

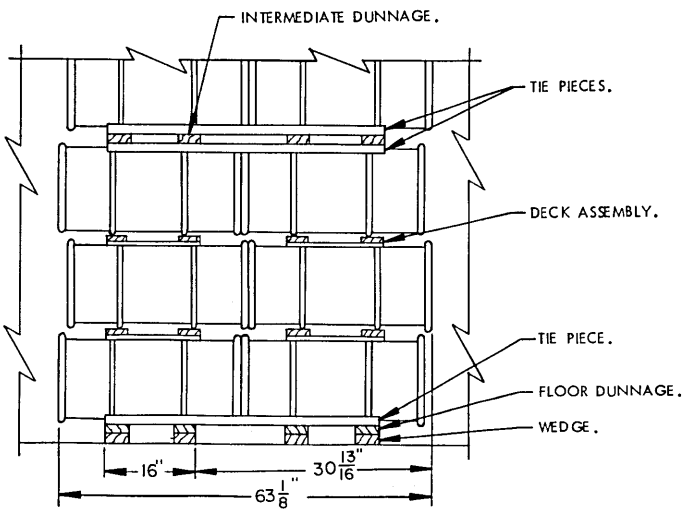
METAL DRUM WITH M67 CHARGE



STACK ELEVATION

124 DRUMS PER STACK.
3,472 DRUMS PER MAG.

BILL OF MATERIAL (PER STACK)		
LUMBER	LINEAR FEET	BOARD FEET
1" X 2"	65	11
1" X 4"	172	58
2" X 2"	92	31
2" X 4"	278	6
NAILS	NO. REQD	POUNDS
6d (2")	192	1-1/4
10d (3")	260	4
WEDGES PER STACK		
LUMBER	LENGTH	NO. REQD
2" X 4"	6'-0"	2
2" X 4"	9'-0"	2



PARTIAL END VIEW OF DOUBLE STACK

END SUPPORT PIECES HAVE BEEN OMITTED FOR CLARITY.

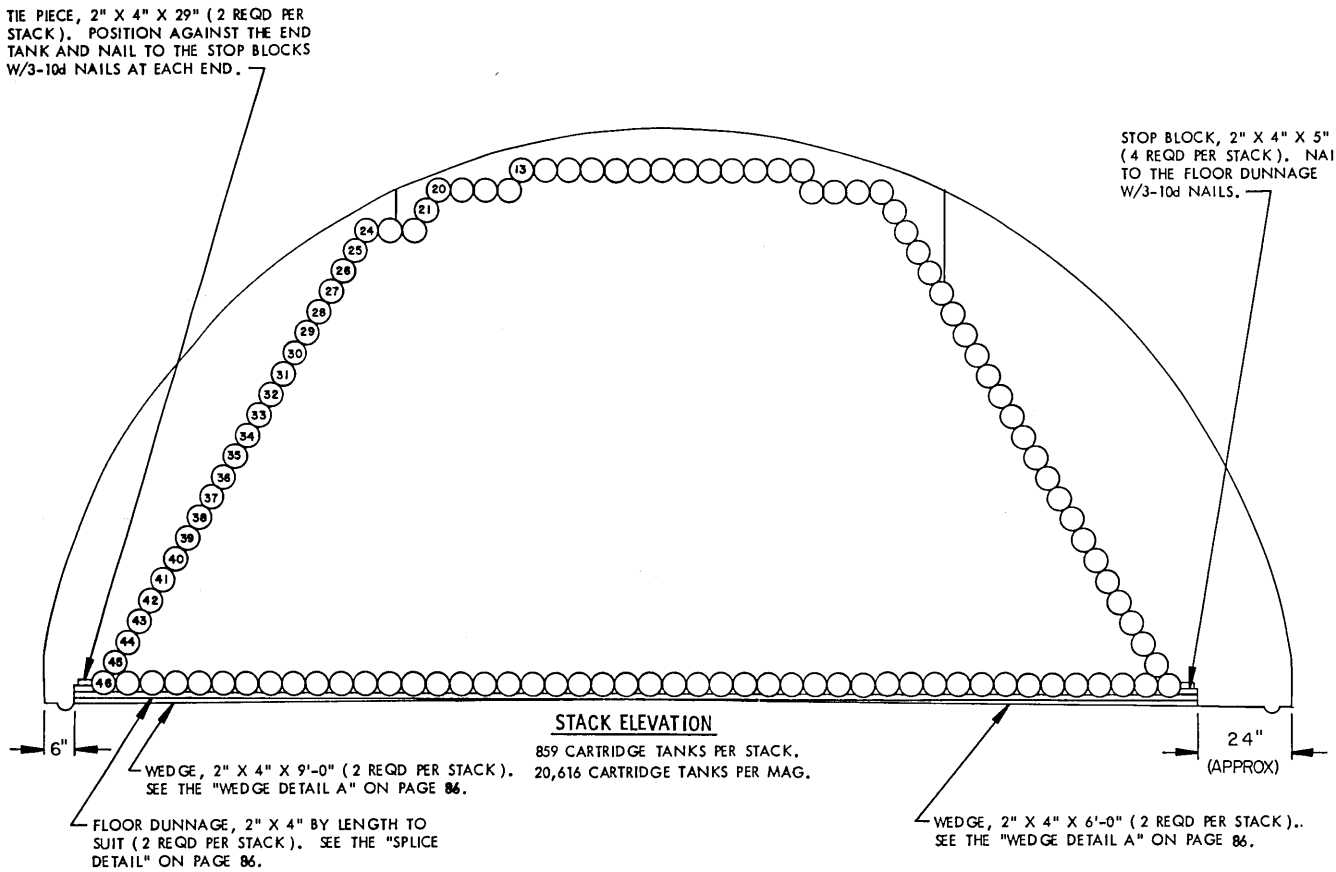
SPECIAL NOTES:

1. STORAGE AS SHOWN IS FOR THE PROPELLING CHARGES FOR THE 75MM AND 105MM HOWITZER PACKED IN METAL DRUM.

   DRUM DIMENSIONS -----30-13/16" LONG BY 15" DIAMETER.

2. THE NUMBERS SHOWN IN THE STACK ELEVATION INDICATE THE QUANTITY OF CONTAINERS PER LAYER IN A STACK.
3. SEE THE "TYPICAL PLAN VIEW A" ON PAGE 4.
4. STORE IN DOUBLE STACKS FOR BETTER STABILITY. SEE THE "PARTIAL END VIEW OF DOUBLE STACK" ON THIS PAGE.
5. JOINTS IN INTERMEDIATE DUNNAGE MUST BE STAGGERED BOTH HORIZONTALLY AND VERTICALLY.
6. END SUPPORT AND/OR END UPRIGHT PIECES MUST CONTACT THE MAGAZINE WALL FOR SUPPORT.
7. THERE WILL BE APPROXIMATELY 6'-2" OF SPACE AT THE FRONT OF AN 81'-2" IGLOO MAGAZINE.

METAL DRUM WITH CHARGES FOR 75MM AND 105MM HOWITZER



STACK ELEVATION

859 CARTRIDGE TANKS PER STACK.
20,616 CARTRIDGE TANKS PER MAG.

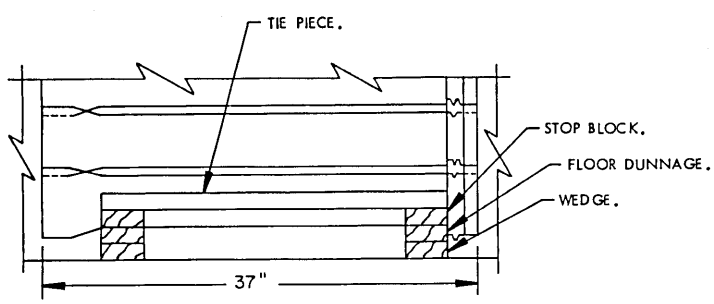
BILL OF MATERIAL (PER STACK)		
LUMBER	LINEAR FEET	BOARD FEET
2" X 4"	59	40
NAILS	NO. REQD	POUNDS
10d (3")	24	1/2
WEDGES PER STACK		
LUMBER	LENGTH	NO. REQD
2" X 4"	6'-0"	2
2" X 4"	9'-0"	2

SPECIAL NOTES:

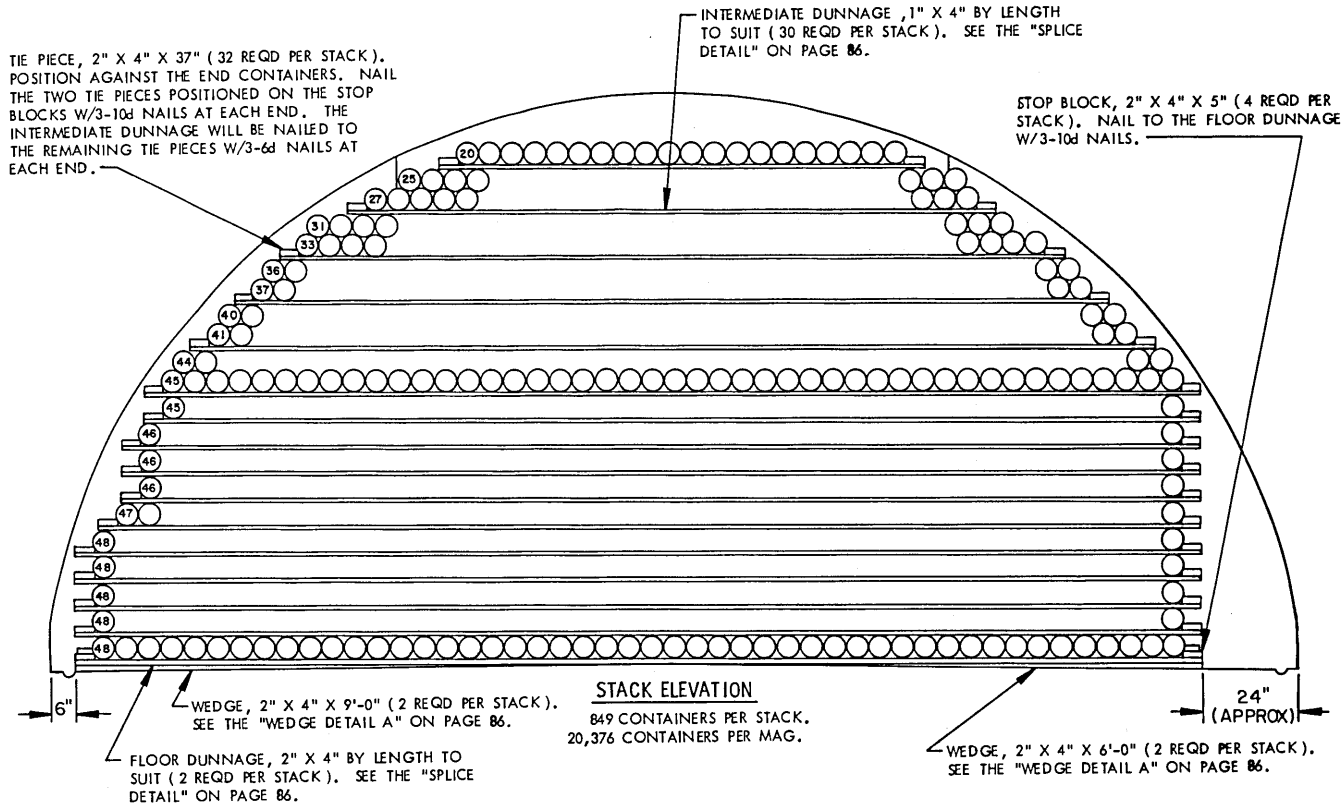
1. STORAGE AS SHOWN IS FOR THE MK5, MOD. 2 CARTRIDGE TANK FOR 3"/50. USE THIS SAME STORAGE FORMAT FOR ALL MK5 CARTRIDGE TANK MODS.

   TANK DIMENSIONS -----37" LONG BY 5-63/64" DIAMETER.

2. THE NUMBERS SHOWN IN THE STACK ELEVATION INDICATE THE QUANTITY OF TANKS PER LAYER IN A STACK.
3. SEE THE "TYPICAL PLAN VIEW A" ON PAGE 4.
4. STAGGER ALL JOINTS IN FLOOR DUNNAGE.
5. THERE WILL BE APPROXIMATELY 58" OF SPACE AT THE FRONT OF AN 81'-2" IGLOO MAGAZINE.



PARTIAL END VIEW OF STACK



SPECIAL NOTES:

1. STORAGE AS SHOWN IS FOR THE M152 SERIES CONTAINER. USE THIS SAME STORAGE FORMAT FOR ALL M152 SERIES CONTAINERS.

   CONTAINER DIMENSIONS ------ 37-1/8" LONG BY 6-1/8" DIAMETER.

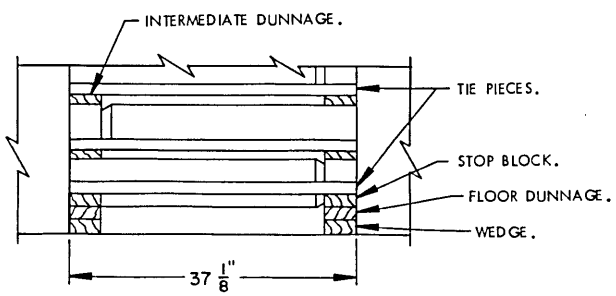
2. THE NUMBERS SHOWN IN THE STACK ELEVATION INDICATE THE QUANTITY OF CONTAINERS PER LAYER IN A STACK.

3. SEE THE "TYPICAL PLAN VIEW A" ON PAGE 4.

4. NOTE: JOINTS IN INTERMEDIATE DUNNAGE MUST BE STAGGERED BOTH HORIZONTALLY AND VERTICALLY.

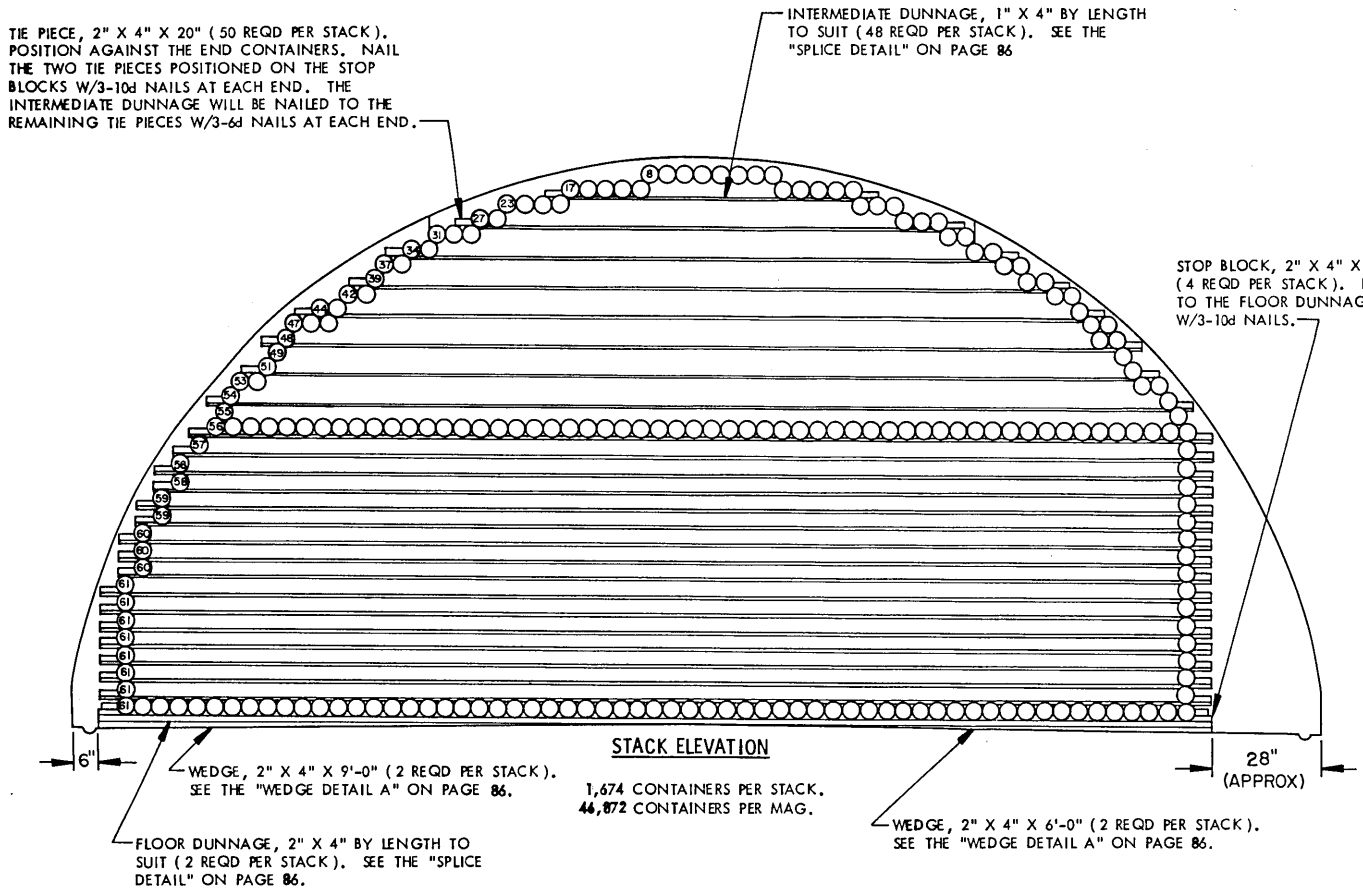
5. THERE WILL BE APPROXIMATELY 67" OF SPACE AT THE FRONT OF AN 81'-2" IGLOO MAGAZINE.

BILL OF MATERIAL (PER STACK)		
LUMBER	LINEAR FEET	BOARD FEET
1" X 4"	669	223
2" X 4"	153	102
NAILS	NO. REQD	POUNDS
6d (2")	180	1-1/4
10d (3")	24	1/2
WEDGES PER STACK		
LUMBER	LENGTH	NO. REQD
2" X 4"	6'-0"	2
2" X 4"	9'-0"	2



PARTIAL END VIEW OF STACK

COMPLETE ROUND, M152 SERIES CONTAINER



STACK ELEVATION

1,674 CONTAINERS PER STACK.
46,872 CONTAINERS PER MAG.

BILL OF MATERIAL (PER STACK)		
LUMBER	LINEAR FEET	BOARD FEET
1" X 4" 2" X 4"	1,059 137	353 92
NAILS	NO. REQD	POUNDS
6d (2") 10d (3")	288 24	1-3/4 1/2
WEDGES PER STACK		
LUMBER	LENGTH	NO. REQD
2" X 4" 2" X 4"	6'-0" 9'-0"	2 2

SPECIAL NOTES:

1. STORAGE AS SHOWN IS FOR THE M154 SERIES CONTAINER. USE THIS SAME STORAGE FORMAT FOR ALL M154 SERIES CONTAINERS.

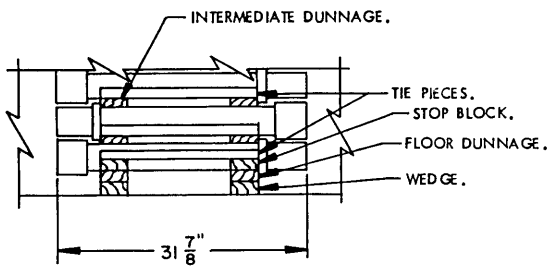
   CONTAINER DIMENSIONS --- 31-7/8" LONG BY 4-1/2" DIAMETER.

2. THE NUMBERS SHOWN IN THE STACK ELEVATION INDICATE THE QUANTITY OF CONTAINERS PER LAYER IN A STACK.

3. SEE THE "TYPICAL PLAN VIEW A" ON PAGE 4.

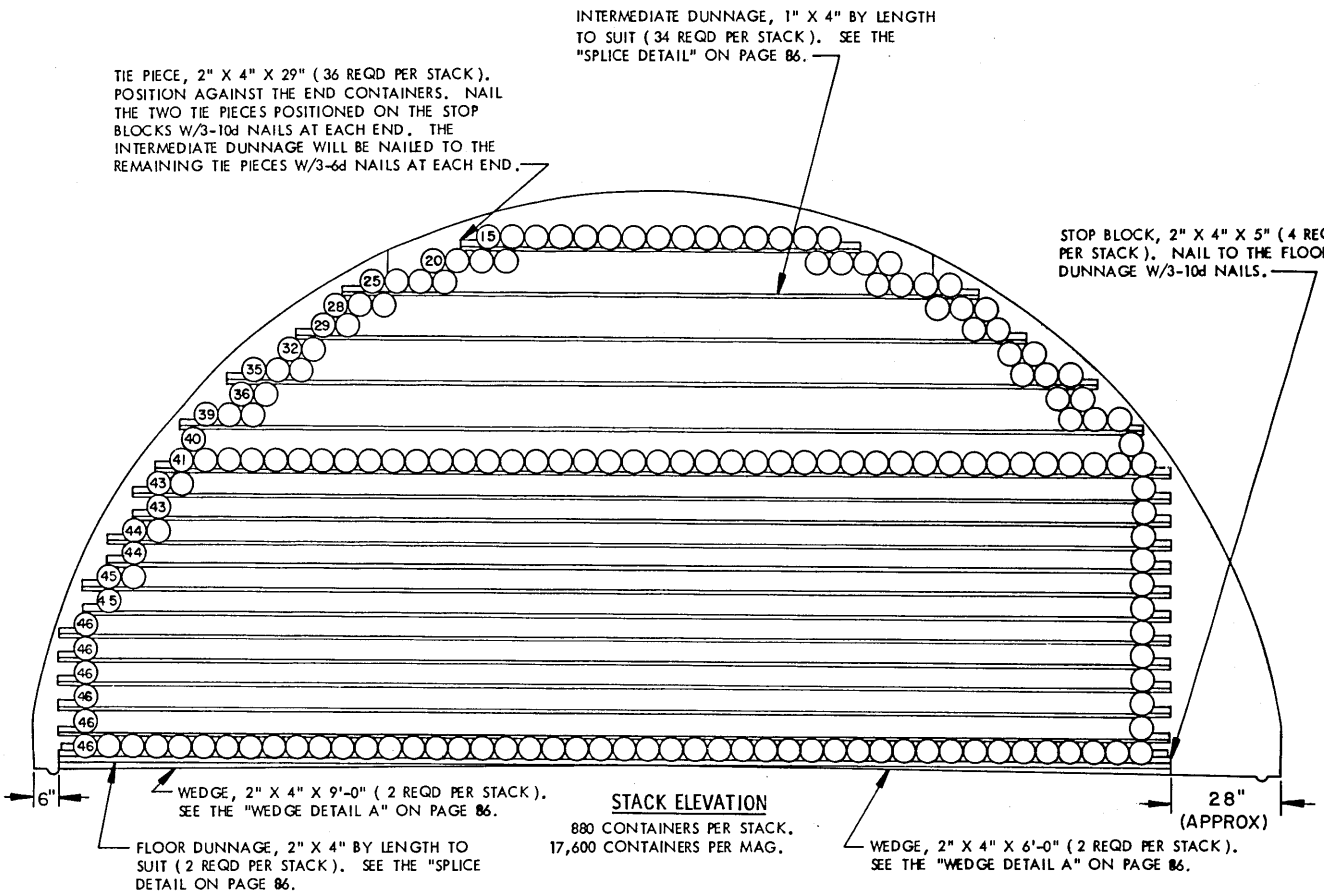
4. NOTE: JOINTS IN INTERMEDIATE DUNNAGE MUST BE STAGGERED BOTH HORIZONTALLY AND VERTICALLY.

5. THERE WILL BE APPROXIMATELY 66" OF SPACE AT THE FRONT OF AN 81'-2" IGLOO MAGAZINE.



PARTIAL END VIEW OF STACK

COMPLETE ROUND, M154 SERIES CONTAINER



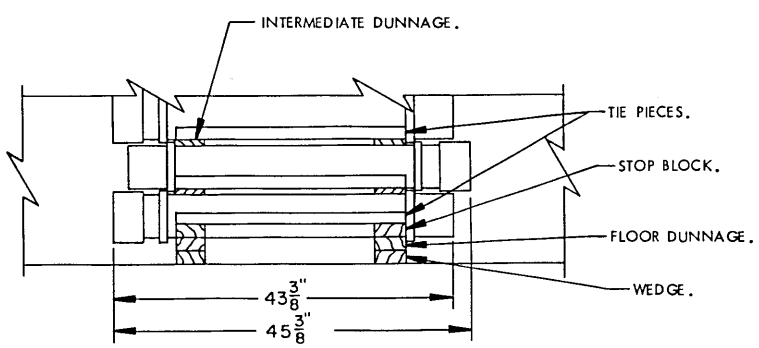
BILL OF MATERIAL (PER STACK)		
LUMBER	LINEAR FEET	BOARD FEET
1" X 4" 2" X 4"	771 140	257 94
NAILS	NO. REQD	POUNDS
6d (2") 10d (3")	204 24	1-1/4 1/2
WEDGES PER STACK		
LUMBER	LENGTH	NO. REQD
2" X 4" 2" X 4"	6'-0" 9'-0"	2 2

SPECIAL NOTES:

1. STORAGE AS SHOWN IS FOR THE M159 SERIES CONTAINER. USE THIS SAME STORAGE FORMAT FOR ALL M159 SERIES CONTAINERS.

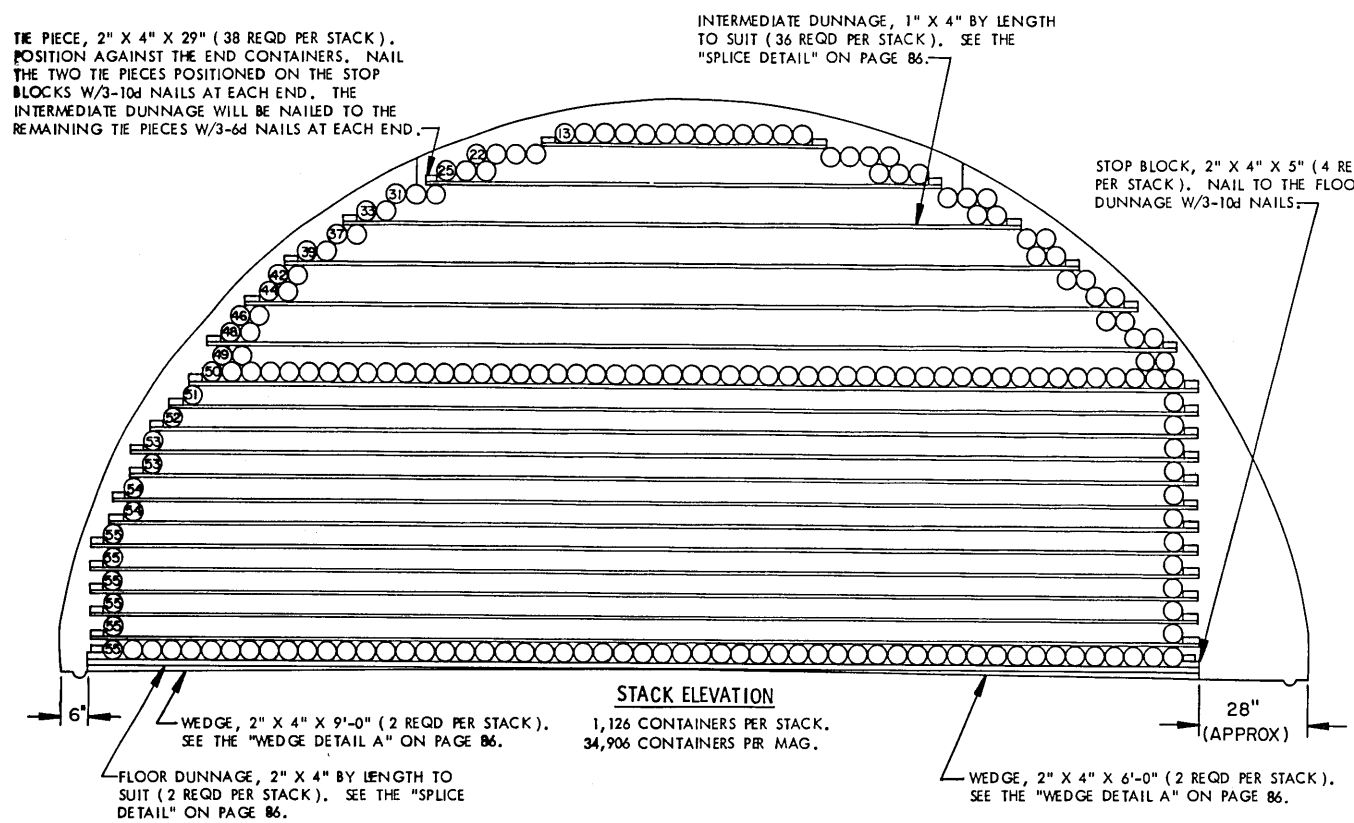
   CONTAINER DIMENSIONS - - - 43-3/8" LONG BY 6-1/8"DIAMETER.

2. THE NUMBERS SHOWN IN THE STACK ELEVATION INDICATE THE QUANTITY OF CONTAINERS PER LAYER IN A STACK.
3. SEE THE "TYPICAL PLAN VIEW A" ON PAGE 4.
4. NOTE: JOINTS IN INTERMEDIATE DUNNAGE MUST BE STAGGERED BOTH HORIZONTALLY AND VERTICALLY.
5. THERE WILL BE APPROXIMATELY 51" OF SPACE AT THE FRONT OF AN 81'-2" IGLOO MAGAZINE.



PARTIAL END VIEW OF STACK

COMPLETE ROUND, M159 SERIES CONTAINER



STACK ELEVATION

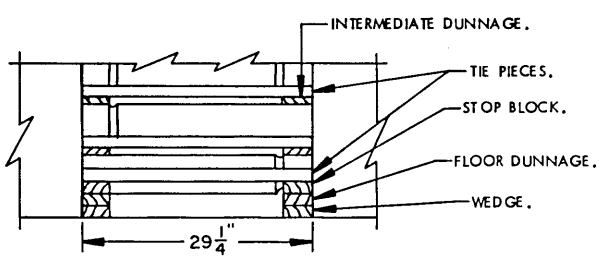
BILL OF MATERIAL (PER STACK)		
LUMBER	LINEAR FEET	BOARD FEET
1" X 4" 2" X 4"	780 145	260 97
NAILS	NO. REQD	POUNDS
6d (2") 10d (3")	216 24	1-1/2 1/2
WEDGES PER STACK		
LUMBER	LENGTH	NO. REQD
2" X 4" 2" X 4"	6'-0" 9'-0"	2 2

SPECIAL NOTES:

1. STORAGE AS SHOWN IS FOR THE M173 SERIES CONTAINER. USE THIS SAME STORAGE FORMAT FOR ALL M173 AND T53 SERIES CONTAINERS.

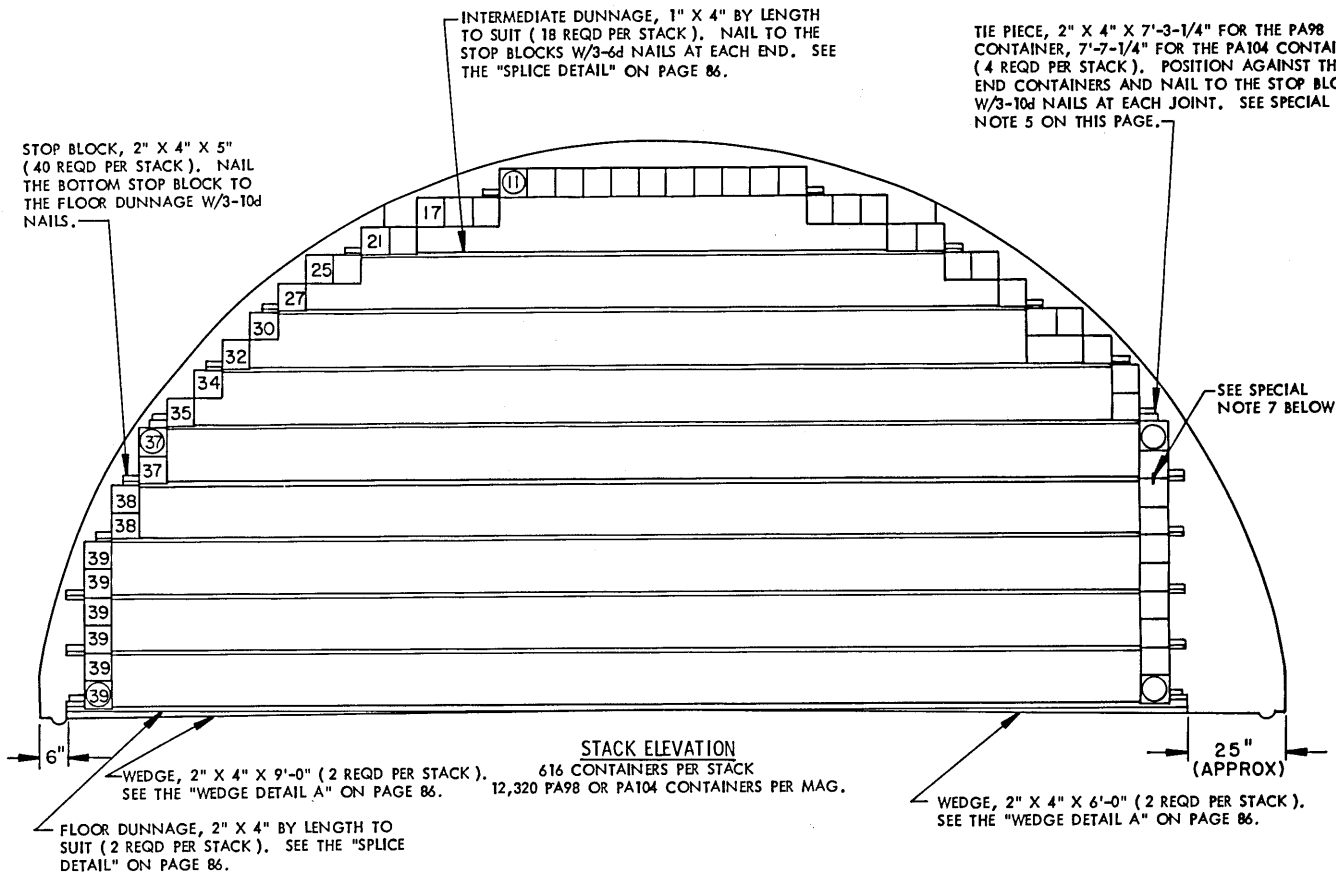
   CONTAINER DIMENSIONS -----29-1/4" LONG BY 5" DIAMETER.

2. THE NUMBERS SHOWN IN THE STACK ELEVATION INDICATE THE QUANTITY OF CONTAINERS PER LAYER IN A STACK.
3. SEE THE "TYPICAL PLAN VIEW A" ON PAGE 4.
4. NOTE: JOINTS IN INTERMEDIATE DUNNAGE MUST BE STAGGERED BOTH HORIZONTALLY AND VERTICALLY.
5. THERE WILL BE APPROXIMATELY 51" OF SPACE AT THE FRONT OF AN 81'-2" IGLOO MAGAZINE.



PARTIAL END VIEW OF STACK

COMPLETE ROUND, M173 AND T53 SERIES CONTAINERS



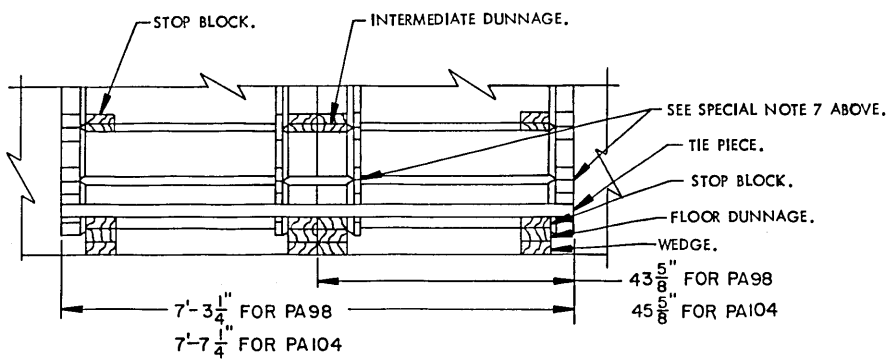
BILL OF MATERIAL (PER STACK)		
LUMBER	LINEAR FEET	BOARD FEET
1" X 4" 2" X 4"	441 80	147 54
NAILS	NO. REQD	POUNDS
6d (2") 10d (3")	108 36	3/4 3/4
WEDGES PER STACK		
LUMBER	LENGTH	NO. REQD
2" X 4" 2" X 4"	6'-0" 9'-0"	2 2

SPECIAL NOTES:

1. STORAGE AS SHOWN IS FOR THE PA98 AND PA104 CONTAINERS. USE THIS SAME STORAGE FORMAT FOR ALL PA98, AND PA104 SERIES CONTAINERS.

   PA98 CONTAINER DIMENSIONS---43-5/8" LONG BY 7 -1/8" WIDE BY 7-1/8" HIGH.
   PA104 CONTAINER DIMENSIONS- 45-5/8" LONG BY 7 -1/8" WIDE BY 7-1/8" HIGH.

2. THE NUMBERS SHOWN IN THE STACK ELEVATION INDICATE THE QUANTITY OF CONTAINERS PER LAYER IN A STACK.
3. SEE THE "TYPICAL PLAN VIEW A" ON PAGE 4.
4. STORE IN DOUBLE STACKS FOR BETTER STABILITY. SEE THE "PARTIAL END VIEW OF DOUBLE STACK" ON THIS PAGE.
5. NOTE: THE "TIE PIECE" EQUALS THE APPROXIMATE LENGTH OF TWO (2) CONTAINERS AND AIDS IN STABILIZING THE STACKS. A "TIE PIECE" IS USED ON THE BOTTOM LAYER AND AT THE FIFTH LAYER OF INTERMEDIATE DUNNAGE.
6. NOTE: JOINTS IN INTERMEDIATE DUNNAGE MUST BE STAGGERED BOTH HORIZONTALLY AND VERTICALLY.
7. NOTE: THE INTERLOCKING PINS ON EACH END OF A CONTAINER MUST INTERLOCK VERTICALLY WITH THE CONTAINER IN THE NEXT LAYER.
8. ON THE PA98 CONTAINER THERE WILL BE APPROXIMATELY 7'-3" OF SPACE AT THE FRONT OF THE MAGAZINE.
9. FOR THE PA104 CONTAINER THERE WILL BE APPROXIMATELY 47" OF SPACE AT THE FRONT OF THE MAGAZINE.



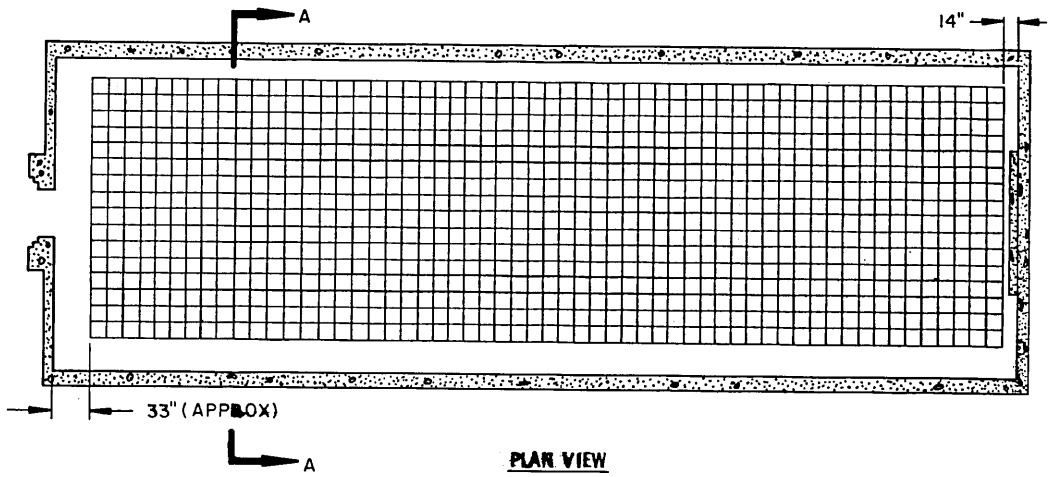
PARTIAL END VIEW OF DOUBLE STACK

COMPLETE ROUND, IN PA98 AND PA104 SERIES CONTAINERS

STORAGE IN 81'-2" MAGAZINE

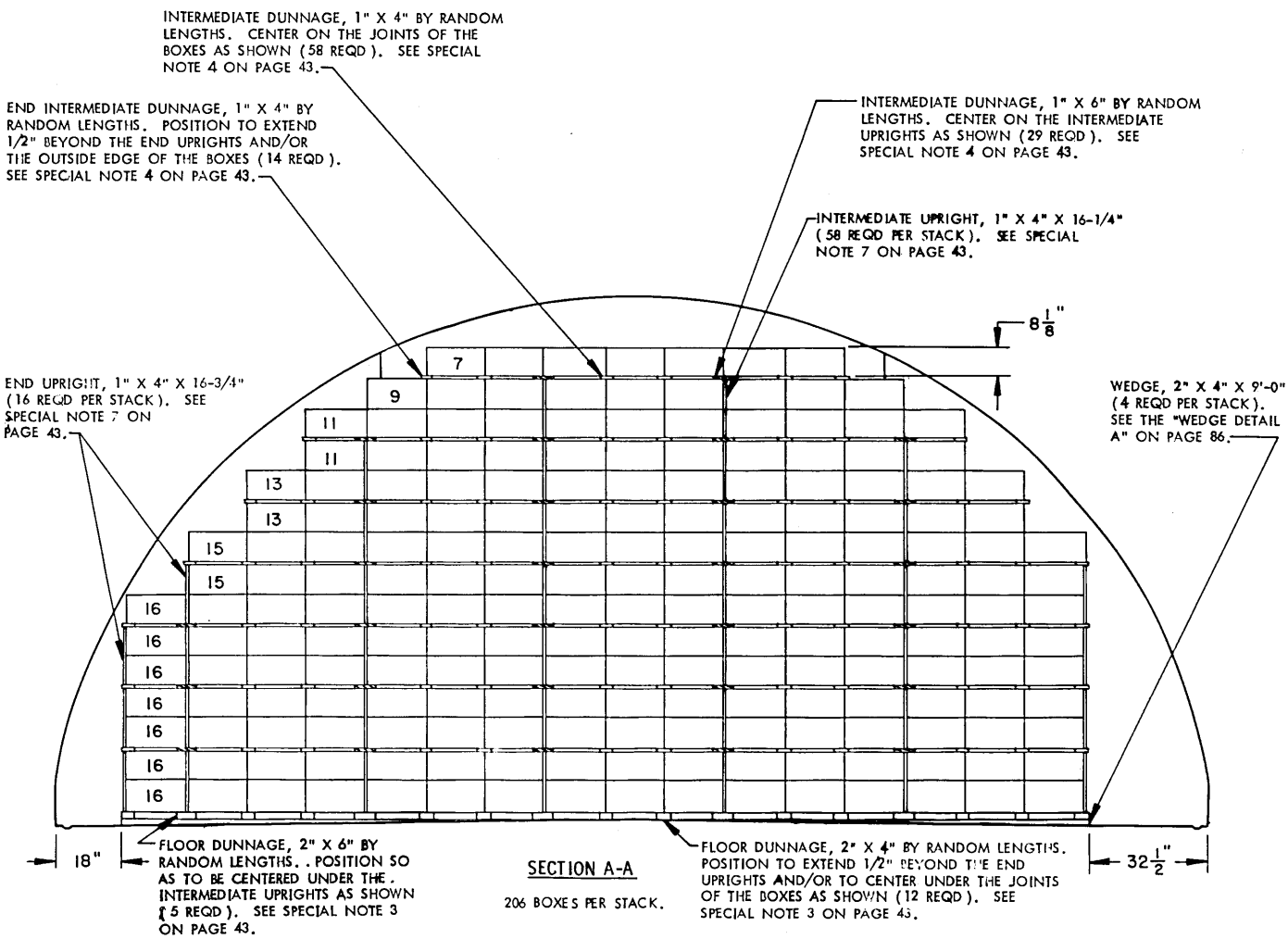
ITEM	QUANTITY	EXPLOSIVE WEIGHT
BOXED TNC-----	11,742 ---	469,680 LBS

SEE GENERAL NOTE "E" ON PAGE 2. AND SPECIAL NOTE 2 AND "TABLE 1" ON PAGE 43.



PLAN VIEW

81'-2" MAGAZINE
(57 STACKS)

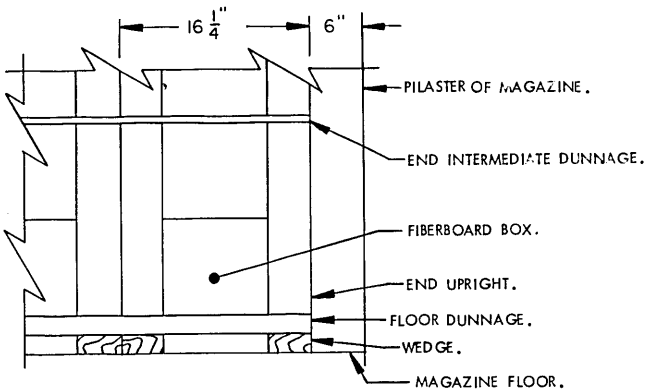


SECTION A-A

206 BOXES PER STACK.

STORAGE METHOD A

TNC, PENTOLITE, POTASSIUM PICRATE, COMP D-2, MAX 2, AND MOX 2B (PACKED IN FIBERBOARD BOX)



PARTIAL END VIEW OF STACK

SPECIAL NOTES:

1. STORAGE AS SHOWN IS FOR TNC AND SIMILAR BULK EXPLOSIVES PACKED IN FIBERBOARD BOX NO. 2. FOR DETAILS OF BOX SEE DRAWING NO. 7548645.

   DIMENSIONS ---------- 16-1/4" LONG BY 16-1/4" WIDE BY 8-1/8" HIGH. EXPLOSIVE WEIGHT FOR TNC -- 40 POUNDS.

2. STORAGE AS SHOWN IS FOR FIBERBOARD BOXES CONTAINING TNC. THE PROCEDURES ARE APPLICABLE FOR ALL THE ITEMS LISTED IN TABLE 1. FULL STACKS ARE SHOWN IN THE PLAN VIEW ON PAGE 42. ONE ADDITIONAL STACK OF ANY OF THE LISTED ITEMS, WITH THE EXCEPTION OF MAX 2 AND MOX 2B, MAY BE STORED IN A MAGAZINE IF THE SPACE PERMITS AND PROVIDED THE EXPLOSIVE LIMIT FOR THE MAGAZINE IS NOT EXCEEDED. THE NUMBER OF STACKS OF MAX 2 AND MOX 2B MUST BE REDUCED FROM THAT SHOWN IN ORDER TO AVOID EXCEEDING THE 500,000 POUND MAXIMUM EXPLOSIVE LIMIT.

3. RANDOM LENGTH MATERIAL MAY BE USED FOR THE 2" X 4" AND 2" X 6" FLOOR DUNNAGE PIECES. JOINTS IN THE RANDOM LENGTH MATERIAL MUST BE CENTERED ON THE WEDGES AS NEAR AS POSSIBLE. JOINTS IN LATERALLY ADJACENT FLOOR DUNNAGE PIECES NEED NOT BE STAGGERED.

4. RANDOM LENGTH MATERIAL, OF NOT LESS THAN 48" LENGTHS, MAY BE USED FOR THE 1" X 4" END INTERMEDIATE DUNNAGE AND/OR THE 1" X 4" AND 1" X 6" INTERMEDIATE DUNNAGE PIECES. THE JOINTS IN THE INTERMEDIATE DUNNAGE PIECES MUST BE LOCATED APPROXIMATELY CENTERED BETWEEN THE INTERMEDIATE AND/OR END UPRIGHT PIECES. THE JOINTS OF ADJACENT INTERMEDIATE DUNNAGE PIECES IN A LAYER WILL BE STAGGERED AT LEAST 16" FROM EACH OTHER AND/OR FROM A JOINT IN AN END INTERMEDIATE DUNNAGE PIECE. ALSO, THE JOINTS OF END INTERMEDIATE AND/OR THE INTERMEDIATE DUNNAGE PIECES IN AN UPPER LAYER WILL BE STAGGERED AT LEAST 16" FROM THE JOINTS IN THE NEXT LOWER LAYER.

5. CAUTION: TNC PACKED IN FIBERBOARD BOXES OF THE SIZE SHOWN AND SIMILAR BULK EXPLOSIVES PACKED IN FIBERBOARD BOXES WHICH ARE APPROXIMATELY THE SAME HEIGHT MUST NOT BE STACKED MORE THAN FIFTEEN (15) BOXES HIGH.

6. THE NUMBERS SHOWN IN SECTION A-A INDICATE THE QUANTITY OF BOXES PER LAYER IN A STACK.

7. WHEN STORING BOXES OF A HEIGHT OTHER THAN 8-1/8", THE LENGTH OF THE UPRIGHT PIECES MUST BE ADJUSTED TO COMPLY WITH THE FOLLOWING CRITERIA:

   A. INTERMEDIATE UPRIGHT PIECES MUST BE OF A LENGTH EQUAL TO THE HEIGHT OF TWO BOXES.

   B. END UPRIGHT PIECES MUST BE 1/2" LONGER THAN INTERMEDIATE UPRIGHT PIECES.

8. THE STORAGE PROCEDURES SHOWN ON PAGES 42 AND 43 SHOULD ONLY BE USED IN GEOGRAPHICAL AREAS WHICH HAVE LOW HUMIDITY LEVELS. FOR PROCEDURES APPLICABLE TO THE STORAGE OF THESE ITEMS IN GEOGRAPHICAL AREAS HAVING HIGH HUMIDITY, REFER TO THE PROCEDURES ON PAGES 80 AND 81.

9. IF PALLETIZED BOXES ARE TO BE STORED, REFER TO U.S. ARMY AMC DRAWING 19-48-4097-1-3-4-14-22PA1009 FOR PROCEDURES TO BE USED. FOR UNITIZATION PROCEDURES (SIDE PANEL METHOD) REFER TO USAMC AMMUNITION CENTER DRAWING C-AMXSV-4071. FOR UNITIZATION PROCEDURES (STRETCH NET METHOD) REFER TO U.S. ARMY AMC DRAWING 19-48-4177/1-20PA1007.

BILL OF MATERIAL		
LUMBER	LINEAR FEET	BOARD FEET
1" X 4"	199	67
1" X 6"	40	20
2" X 4"	17	12
2" X 6"	7	7
WEDGES PER STACK		
LUMBER	LENGTH	NO. REQD
2" X 4"	9'-0"	4

TABLE 1

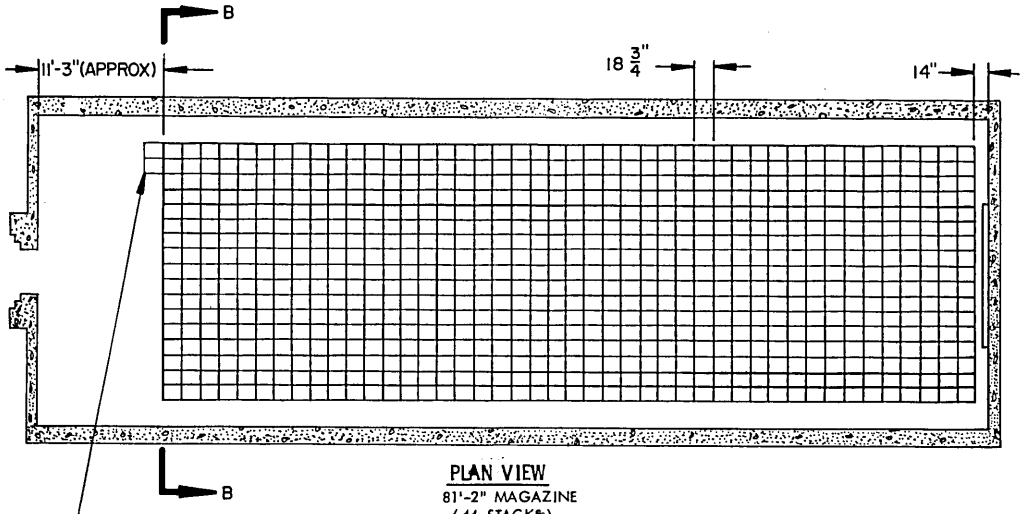
ITEM	EXPL WT/BX	MAX QUANTITY	MAX EXPLOSIVE
TNC	40 LBS	11,742	469,680 LBS
PENTOLITE	35 LBS	11,742	410,970 LBS
POTASSIUM PICRATE	35 LBS	11,742	410,970 LBS
COMPOSITION D-2	30 LBS	11,742	352,260 LBS
MAX 2	50 LBS	10,000	500,000 LBS
MOX 2B	50 LBS	10,000	500,000 LBS

STORAGE METHOD A
TNC, PENTOLITE, POTASSIUM PICRATE, COMP D-2,
MAX 2, AND MOX 2B (PACKED IN FIBERBOARD BOX)

STORAGE IN 81'-2" MAGAZINE

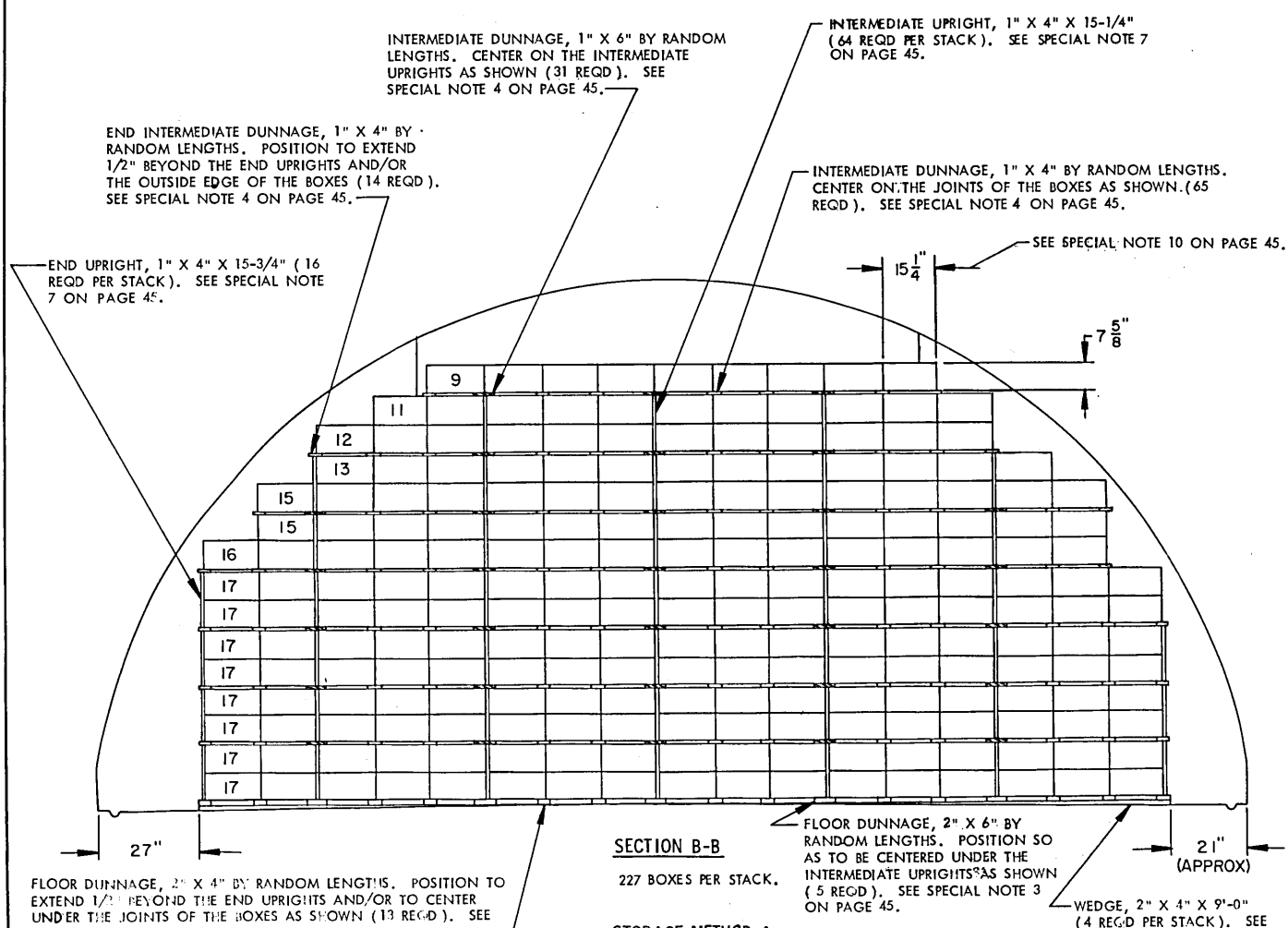
ITEM	QUANTITY	EXPLOSIVE WEIGHT
TNT (50 LB BOX)	10,000	500,000 LBS

SEE GENERAL NOTE "E" ON PAGE 2. AND SPECIAL NOTE 2 AND "TABLE 2" ON PAGE 45.



PLAN VIEW
81'-2" MAGAZINE
(44 STACKS)

THESE BOX STACKS ARE 6 BOXES IN HEIGHT.



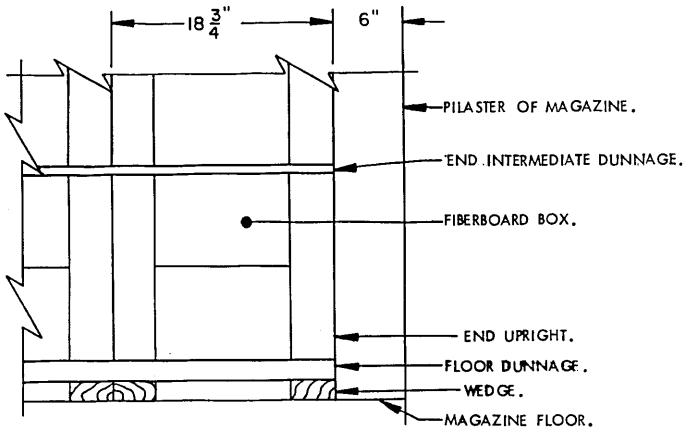
SECTION B-B

227 BOXES PER STACK.

STORAGE METHOD A

TNT, ALL COMP A, ALL COMP B, COMP C-3 & C-4, EXPLOSIVE D, CYCLOTOL, OCTOL, PBX, TETRYL, TOVEX AND PBXN 6 (PACKED IN FIBERBOARD BOX)

PROJECT FSA 8/2-59



PARTIAL END VIEW OF STACK

SPECIAL NOTES:

1. STORAGE AS SHOWN IS FOR TNT AND SIMILAR BULK EXPLOSIVES PACKED IN FIBERBOARD BOX NO. 4. FOR DETAILS OF THE BOX SEE DRAWING NO. 7548645

   DIMENSIONS -------- 18-3/4" LONG BY 15-1/4" WIDE BY 7-5/8" HIGH
   EXPLOSIVE WEIGHT ---- 50 OR 55 POUNDS

2. STORAGE AS SHOWN IS FOR FIBERBOARD BOXES CONTAINING 50 POUNDS OF TNT. THE PROCEDURES ARE ALSO APPLICABLE FOR 55-POUND BOXES OF TNT AND FOR ALL THE ITEMS LISTED IN TABLE 2 BELOW. NOTE THAT TNT IN 55-POUND BOXES IS LIMITED TO A MAXIMUM OF 9,090 BOXES. 10,000 BOXES OF TOVEX, PBXN 6 AND OF EXPLOSIVE D MAY BE STORED IF THE EXPLOSIVE LIMIT FOR THE MAGAZINE IS NOT EXCEEDED. THE NUMBER OF STACKS OF ALL THE OTHER ITEMS MUST BE REDUCED FROM THAT SHOWN IN ORDER TO AVOID EXCEEDING THE 500,000 POUND MAXIMUM EXPLOSIVE LIMIT.

3. RANDOM LENGTH MATERIAL MAY BE USED FOR THE 2" X 4" AND 2" X 6" FLOOR DUNNAGE PIECES. JOINTS IN THE RANDOM LENGTH MATERIAL MUST BE CENTERED ON THE WEDGES AS NEAR AS POSSIBLE. JOINTS IN LATERALLY ADJACENT FLOOR DUNNAGE PIECES NEED NOT BE STAGGERED.

4. RANDOM LENGTH MATERIAL, OF NOT LESS THAN 48" LENGTHS, MAY BE USED FOR THE 1" X 4" END INTERMEDIATE DUNNAGE AND/OR THE 1" X 4" AND 1" X 6" INTERMEDIATE DUNNAGE PIECES. THE JOINTS IN THE INTERMEDIATE DUNNAGE PIECES MUST BE LOCATED APPROXIMATELY CENTERED BETWEEN THE INTERMEDIATE AND/OR END UPRIGHT PIECES. THE JOINTS OF ADJACENT INTERMEDIATE DUNNAGE PIECES IN A LAYER WILL BE STAGGERED AT LEAST 16" FROM EACH OTHER AND/OR FROM A JOINT IN AN END INTERMEDIATE DUNNAGE PIECE. ALSO, THE JOINTS OF END INTERMEDIATE AND/OR THE INTERMEDIATE DUNNAGE PIECES IN AN UPPER LAYER WILL BE STAGGERED AT LEAST 16" FROM THE JOINTS IN THE NEXT LOWER LAYER.

5. CAUTION: TNT PACKED IN FIBERBOARD BOXES OF THE SIZE SHOWN AND SIMILAR BULK EXPLOSIVES PACKED IN FIBERBOARD BOXES WHICH ARE APPROXIMATELY THE SAME HEIGHT MUST NOT BE STACKED MORE THAN FIFTEEN (15) BOXES HIGH.

6. THE NUMBERS SHOWN IN SECTION B-B INDICATE THE QUANTITY OF BOXES PER LAYER IN A STACK.

7. WHEN STORING BOXES OF A HEIGHT OTHER THAN 7-5/8", THE LENGTH OF THE UPRIGHT PIECES MUST BE ADJUSTED TO COMPLY WITH THE FOLLOWING CRITERIA:

   A. INTERMEDIATE UPRIGHT PIECES MUST BE OF A LENGTH EQUAL TO THE HEIGHT OF TWO BOXES.

   B. END UPRIGHT PIECES MUST BE 1/2" LONGER THAN INTERMEDIATE UPRIGHT PIECES.

(CONTINUED AT LEFT)

(SPECIAL NOTES CONTINUED)

8. THE STORAGE PROCEDURES SHOWN ON PAGES 44 AND 45 SHOULD ONLY BE USED IN GEOGRAPHICAL AREAS WHICH HAVE LOW HUMIDITY LEVELS. FOR PROCEDURES APPLICABLE TO THE STORAGE OF THESE ITEMS IN GEOGRAPHICAL AREAS HAVING HIGH HUMIDITY, REFER TO THE PROCEDURES ON PAGES 82 AND 83.

9. IF PALLETIZED BOXES ARE TO BE STORED, REFER TO U.S. ARMY AMC DRAWING 19-48-4097-1-3-4-14-22PA1009 FOR PROCEDURES TO BE USED. FOR UNITIZATION PROCEDURES (SIDE PANEL METHOD) REFER TO USAMC AMMUNITION CENTER DRAWING C-AMXSV-4071 FOR UNITIZATION PROCEDURES (STRETCH NET METHOD) REFER TO U.S. ARMY AMC DRAWING 19-48-4177/1-20PA1007.

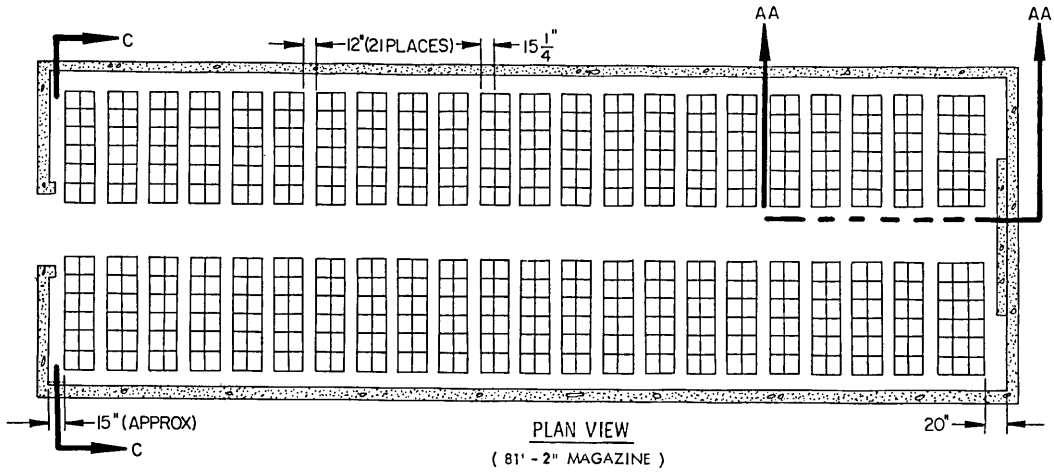
10. IN LIEU OF STORING BOXES SO THE 15-1/4" DIMENSION IS ACROSS THE WIDTH OF THE MAGAZINE, AS SHOWN, BOXES MAY BE PLACED WITH THE 18-3/4" DIMENSION ACROSS THE MAGAZINE IF STACK STABILITY IS IMPROVED BY DOING SO. THE NUMBER OF BOXES ACROSS THE MAGAZINE MUST BE REDUCED ACCORDINGLY.

BILL OF MATERIAL (PER STACK)		
LUMBER	LINEAR FEET	BOARD FEET
1" X 4"	226	76
1" X 6"	49	25
2" X 4"	21	14
2" X 6"	8	8
WEDGES PER STACK		
LUMBER	LENGTH	NO. REQD
2" X 4"	9'-0"	4

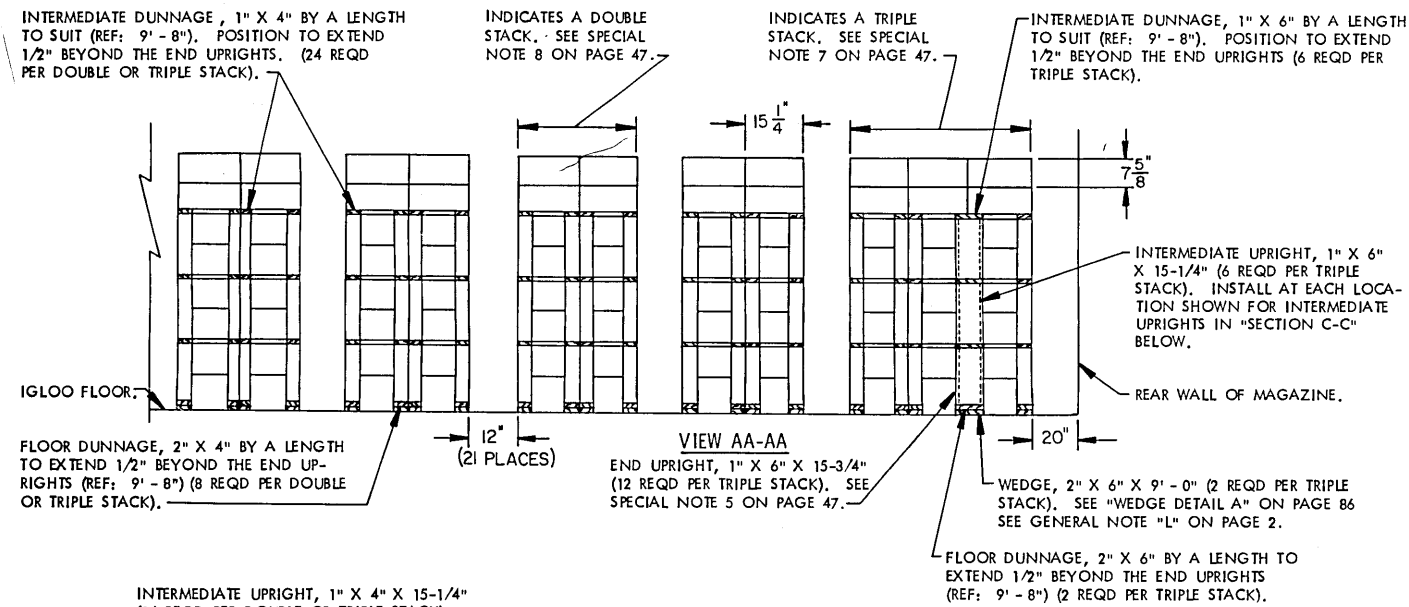
TABLE 2

ITEM	EXPL WT/BX	MAX QUANTITY	MAX EXPLOSIVE
TNT	50 LBS	10,000	500,000 LBS
TNT	55 LBS	9,090	499,950 LBS
ALL COMPOSITION A	60 LBS	8,333	499,980 LBS
ALL COMPOSITION B	60 LBS	8,333	499,980 LBS
COMPOSITION C 3 AND C 4	60 LBS	8,333	499,980 LBS
EXPLOSIVE D	50 LBS	10,000	500,000 LBS
CYCLOTOL	60 LBS	8,333	499,980 LBS
OCTOL	60 LBS	8,333	499,980 LBS
PBX	60 LBS	8,333	499,980 LBS
TETRYL	60 LBS	8,333	499,980 LBS
TOVEX	50 LBS	10,000	500,000 LBS
PBXN 6	50 LBS	10,000	500,000 LBS

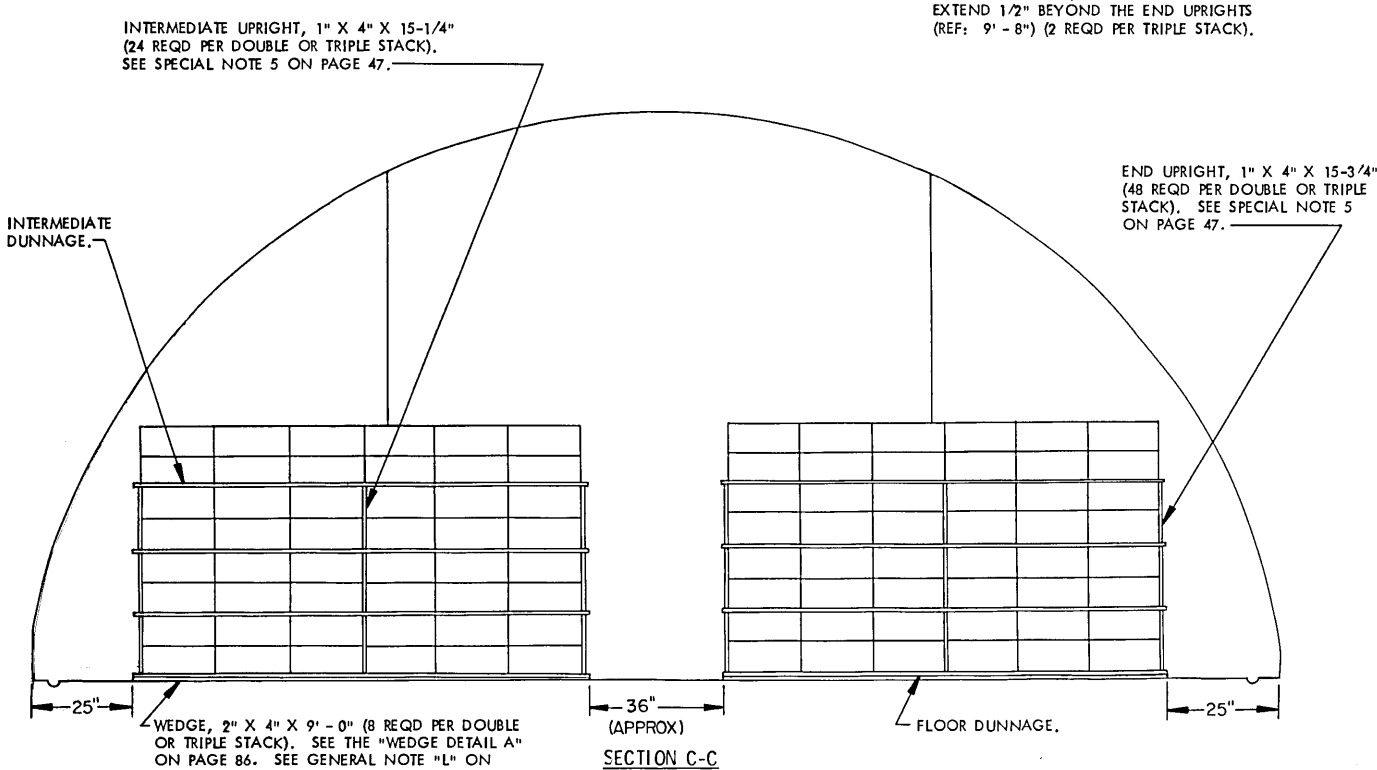
STORAGE METHOD A
TNT, ALL COMP A, ALL COMP B, COMP C-3 & C-4, EXPLOSIVE D, CYCLOTOL, OCTOL, PBX, TETRYL, TOVEX AND PBXN 6 (PACKED IN FIBERBOARD BOX)



PLAN VIEW
(81' - 2" MAGAZINE)



VIEW AA-AA



SECTION C-C

SMALL LOT STORAGE OF TOVEX, PBXN6, TNT, ALL COMP A, ALL COMP B, COMP C-3 & C-4, EXPLOSIVE D, CYCLOTOL, OCTOL, PBX AND TETRYL (PACKED IN FIBERBOARD BOX)

PROJECT FSA 8/2-59

SPECIAL NOTES:

1 STORAGE AS SHOWN IS TYPICAL ONLY, AND APPLIES TO NUMEROUS SMALL LOTS OF TNT AND SIMILAR BULK EXPLOSIVES PACKED IN FIBERBOARD BOX NO. 4. FOR DETAILS OF THE BOX, SEE PICATINNY ARSENAL DRAWING NO. 7548645

DIMENSIONS ---------- 18-3/4" LONG BY 15-1/4" WIDE BY 7-5/8" HIGH.
EXPLOSIVE WEIGHT ------- 50 POUNDS. SEE SPECIAL NOTE 6.

2 SIMILAR BULK EXPLOSIVES INCLUDE:

ITEM

(a) ALL COMPOSITION A.
(b) ALL COMPOSITION B.
(c) COMPOSITION C-3 AND C-4.
(d) EXPLOSIVE D.
(e) CYCLOTOL.
(f) OCTOL.
(g) PBX.
(h) TETRYL.
(j) TOVEX.
(k) PBXN 6.
(l) TNT

3. IF PALLETIZED BOXES ARE TO BE STORED, REFER TO U.S. ARMY AMC DRAWING 19-48-4097-1-3-4-14-22PA1009 FOR PROCEDURES TO BE USED. FOR UNITIZATION PROCEDURES (SIDE PANEL METHOD) REFER TO USAMC AMMUNITION CENTER DRAWING C-AMXSV-4071. FOR UNITIZATION PROCEDURES (STRETCH NET METHOD) REFER TO U.S. ARMY AMC DRAWING 19-48-4177/1-20PA1007.

4. CAUTION: TNT PACKED IN FIBERBOARD BOXES OF THE SIZE SHOWN AND SIMILAR BULK EXPLOSIVES PACKED IN FIBERBOARD BOXES WHICH ARE APPROXIMATELY THE SAME HEIGHT MUST NOT BE STACKED MORE THAN EIGHT (8) BOXES HIGH.

5. WHEN STORING BOXES OF A HEIGHT OTHER THAN 7-5/8", THE LENGTH OF THE UPRIGHT PIECES MUST BE ADJUSTED TO COMPLY WITH THE FOLLOWING CRITERIA:

A. INTERMEDIATE UPRIGHT PIECES MUST BE OF A LENGTH EQUAL TO THE HEIGHT OF TWO BOXES.

B. END UPRIGHT PIECES MUST BE 1/2" LONGER THAN INTERMEDIATE UPRIGHT PIECES.

6. STORAGE AS SHOWN IS FOR FIBERBOARD BOXES CONTAINING 50 POUNDS OF TNT. THE EXPLOSIVE WEIGHT FOR THE ITEM LISTED IN THIS NOTE AND IN SPECIAL NOTE 2 ABOVE WILL VARY FROM 40 TO 60 POUNDS. NOTE THAT BOXES ARE STORED WITH THE LABELS FACING A 12" AISLE FOR EASIER IDENTIFICATION.

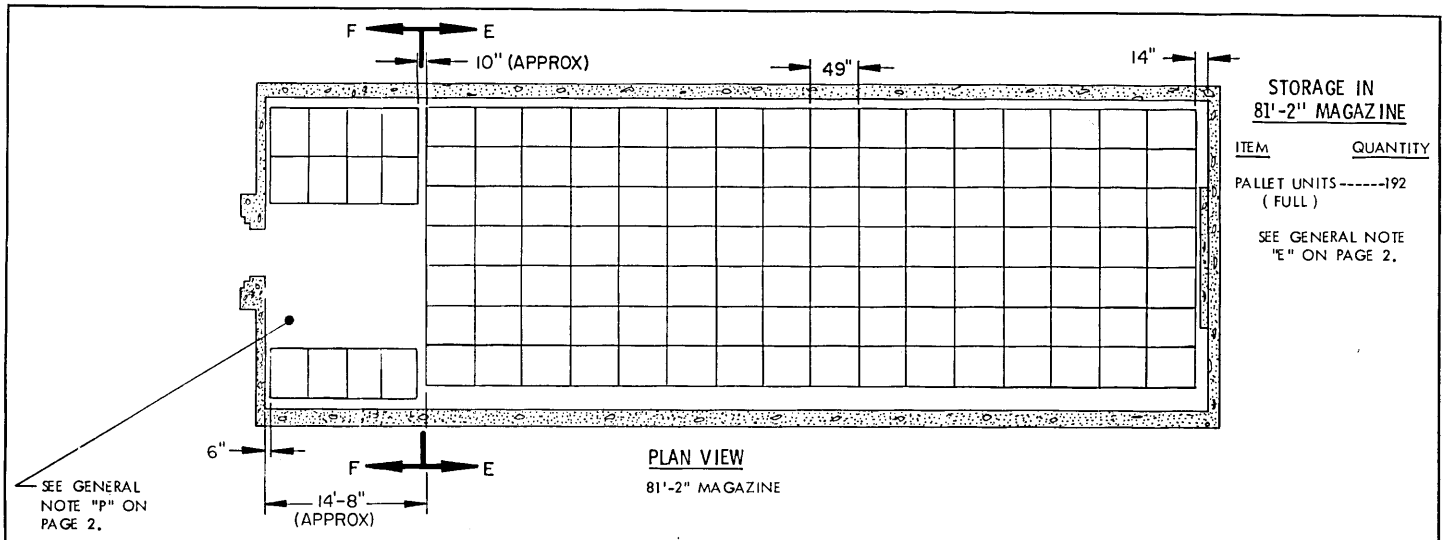
7. GENERALLY, THE LARGEST LOT SHOULD BE STORED IN THE REAR OR ON ONE SIDE OF THE MAGAZINE. THE TRIPLE STACK IN THE REAR OF THE MAGAZINE MAY ONLY CONTAIN TWO SEPARATE LOTS SINCE IDENTIFICATION OF THE BURIED ROW WOULD NOT BE POSSIBLE.

8 A DOUBLE STACK MAY CONSIST OF EITHER ONE INDIVIDUAL LOT, OR TWO SEPARATE LOTS, AS LONG AS THE SIDE OF THE BOX DISPLAYING THE LABEL FACES THE 12" AISLE.

BILL OF MATERIAL (PER TRIPLE STACK)		
LUMBER	LINEAR FEET	BOARD FEET
1" X 4"	325	109
1" X 6"	82	41
2" X 4"	78	52
2" X 6"	20	20
WEDGES		
LUMBER	LENGTH	NO. REQD
2" X 4"	9' - 0"	8
2" X 6"	9' - 0"	2

BILL OF MATERIAL (PER DOUBLE STACK)		
LUMBER	LINEAR FEET	BOARD FEET
1" X 4"	325	109
2" X 4"	78	52
WEDGES		
LUMBER	LENGTH	NO. REQD
2" X 4"	9' - 0"	8

SMALL LOT STORAGE OF TOVEX, PBXN6,
TNT, ALL COMP A, ALL COMP B, COMP C-3 & C-4, EXPLOSIVE D, CYCLOTOL, OCTOL, PBX AND TETRYL (PACKED IN FIBERBOARD BOX)

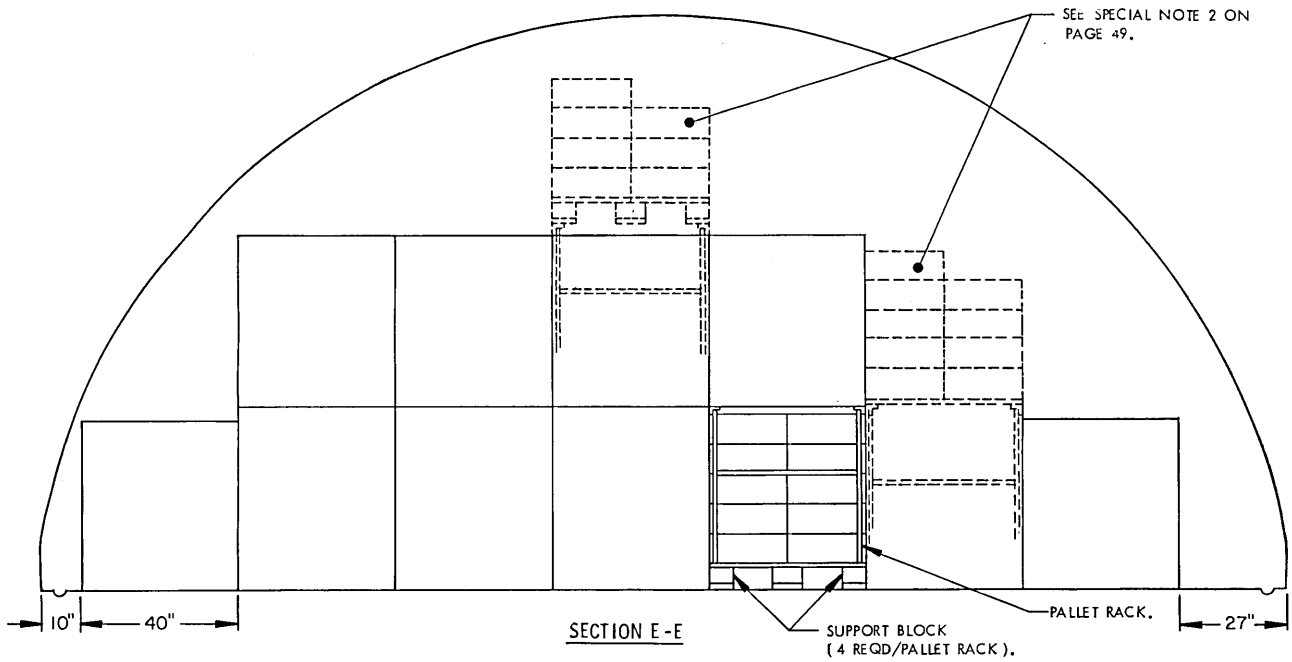


PLAN VIEW
81'-2" MAGAZINE

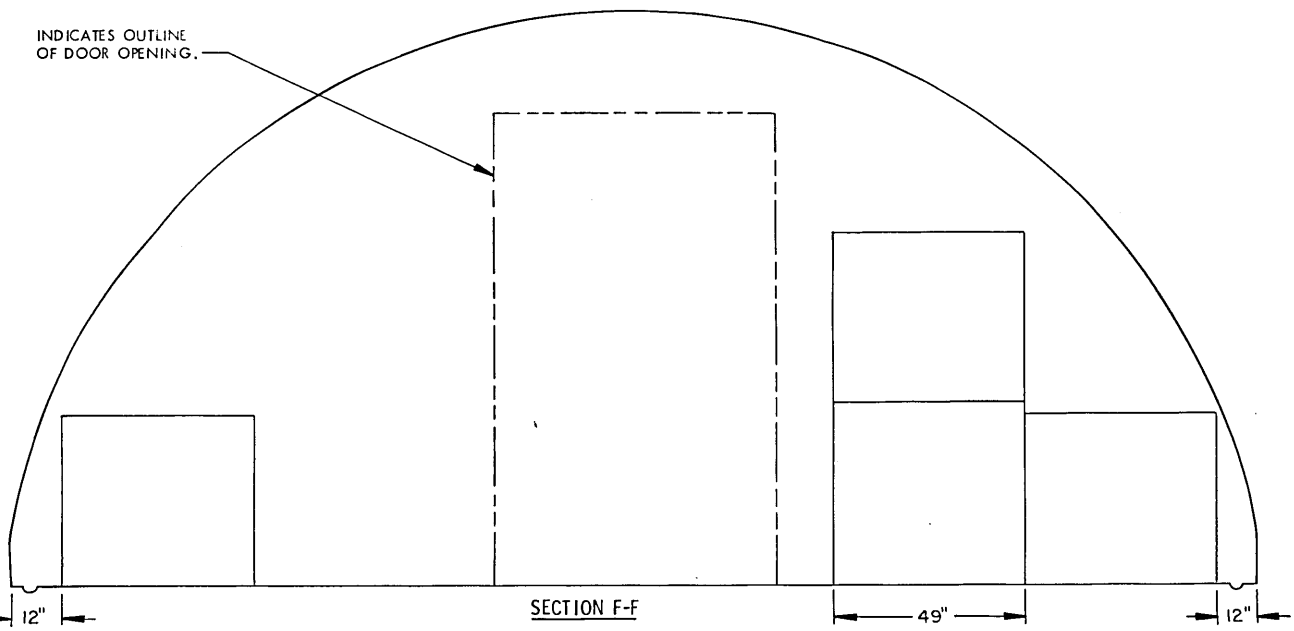
STORAGE IN 81'-2" MAGAZINE

ITEM	QUANTITY
PALLET UNITS (FULL)	192

SEE GENERAL NOTE "E" ON PAGE 2.



SECTION E-E



SECTION F-F

PALLET RACK STORAGE PROCEDURES FOR FIBERBOARD BOXES AND/OR DRUMS

SPECIAL NOTES:

1. EACH PALLET WHICH VERTICALLY SUPPORTS ANOTHER PALLET REQUIRES THE USE OF A PALLET RACK, INSTALLED AS TYPICALLY SHOWN BY THE "RACK INSTALLATION" DETAIL BELOW. THE STACK SHOWN IN SECTION E-E WILL REQUIRE SIX PALLET RACKS. THE STACK SHOWN IN SECTION F-F WILL REQUIRE ONLY ONE PALLET RACK. THE STORAGE ARRANGEMENT DELINEATED ON PAGE 48 SHOWS A TYPICAL STORAGE METHOD BASED ON THE 30-BOX PALLET UNIT DISPLAYED BELOW. ADJUSTMENTS MAY BE MADE AS REQUIRED TO THE STORAGE METHOD SHOWN TO COMPENSATE FOR A DIFFERENT SIZE PALLET UNIT. DIFFERENT TYPE AND SIZE PALLETS CAN BE USED WITH PALLET RACKS.

2. PALLET RACKS ARE ONLY SHOWN ON THE PALLETS WHICH ARE VERTICALLY SUPPORTING ANOTHER PALLET WITHIN THE STORAGE VIEWS ON PAGE 48. ON SOME OF THE "TOP PALLET UNITS" DEPICTED, PARTIAL PALLET UNITS CAN BE STORED IN THE UNUSED SPACE DUE TO THE CURVATURE OF THE MAGAZINE SIDE WALLS. A PALLET CAN BE USED UNDER A PARTIAL UNIT OR, IN LIEU OF A PALLET, A SHEET OF 3/4" THICK PLYWOOD MAY BE USED TO SUPPORT A PARTIAL UNIT. CAUTION: AN EXPLOSIVE WEIGHT LIMIT FOR A MAGAZINE IS NOT TO BE EXCEEDED.

3. THE PALLET RACK DEPICTED IN THE "RACK INSTALLATION" DETAIL BELOW IS DESIGNATED IN TM 743-200-1 CHAPTER 5, AS A PALLET SUPPORT SET. THE PALLET RACK SHOWN IS MIL SPEC MIL-S-21859 (NSN-3990-00-542-4771 FOR A 40" X 48" PALLET). A TIE ROD MUST BE INSTALLED TO TIE THE BASES OF THE TWO VERTICAL FRAME MEMBERS TOGETHER. OTHER TYPE PALLET RACKS MAY ALSO BE USED.

4. WHEN WIDE-TYPE PALLET RACKS ARE USED, A SUPPORT BLOCK 5-1/2" LONG BY 2-1/2" WIDE BY CUT-TO-FIT IN HEIGHT MUST BE POSITIONED UNDER THE WING OF THE PALLET AT EACH CORNER BETWEEN THE BOTTOM DECK BOARD AND THE STRINGER BOARD OF THE PALLET TO SUPPORT THE VERTICAL MEMBERS OF THE PALLET RACK. THE SUPPORT BLOCK IS REQUIRED FOR WING-END TYPE PALLETS. STACKING OF BOX PALLET UNITS EQUIPPED WITH WIDE-TYPE PALLET RACKS CAN BE ACCOMPLISHED BY SIDE-HANDLING OR END HANDLING WITH A FORKLIFT TRUCK, AS DESIRED, TO PRODUCE MOST EFFICIENT SPACE UTILIZATION.

5. WHEN NARROW-TYPE PALLET RACKS ARE USED, A SUPPORT BLOCK 4" X 4" X 8" (4 REQD PER FIRST LAYER UNIT) WILL BE REQUIRED AS SHOWN ON PAGE 50. THE HEIGHT OF THE BLOCKS WILL BE AS REQUIRED FOR EITHER THE FLUSH STRINGER TYPE OR FLUSH POST TYPE PALLET, SO AS TO TRANSMIT THE WEIGHT OF THE UPPER UNITS TO THE MAGAZINE FLOOR, THROUGH THE VERTICAL MEMBERS OF THE PALLET RACKS DOWN THROUGH THE SUPPORT BLOCKS.

6. WHEN STORING BOX PALLET UNITS OF CONTAINERS, OTHER THAN FIBERBOARD BOXES, PALLET RACKS CAN ONLY BE USED IF THE HEIGHT OF THE CONTAINERS DOES NOT EXCEED THE HEIGHT OF THE PALLET RACK. IF NARROW-TYPE PALLET RACKS ARE USED AND THE HEIGHT OF THE CONTAINERS DOES NOT PERMIT THE PALLET STRINGERS OF AN UPPER PALLET UNIT TO BEAR DIRECTLY ON THE TOP HORIZONTAL MEMBERS OF THE PALLET RACK, AS SHOWN IN THE STACKING PROCEDURES FOR END-HANDLED UNITS ON PAGE 50, SPANNER ASSEMBLIES

(CONTINUED AT RIGHT)

(SPECIAL NOTES CONTINUED)

MUST BE USED BETWEEN LAYERS OF UNITS SO THAT THE WEIGHT OF AN UPPER UNIT DOES NOT CONTACT THE TOP OF THE CONTAINERS OF THE LOWER UNIT. IF NARROW-TYPE PALLET RACKS ARE USED AND THE PALLET IS BEING SIDE-HANDLED, A SPANNER ASSEMBLY MUST BE USED TO PERMIT THE REMOVAL OF FORKLIFT TINES. IF WIDE-TYPE PALLET RACKS ARE USED AND THE BOTTOM DECK BOARDS (RUNNERS) OF THE UPPER PALLET BEAR DIRECTLY ON THE TOP HORIZONTAL MEMBERS OF THE PALLET RACK, SPANNER ASSEMBLIES WILL NOT BE REQUIRED.

7. THE FIBERBOARD BOXES, DRUMS OR OTHER CONTAINERS, STORED ON THE PALLET BASES MUST BE OF A SIZE WHICH WILL FIT BETWEEN THE VERTICAL FRAME MEMBERS OF THE PALLET RACK. HOWEVER, A SLIGHT OVERHANG AT THE OTHER TWO SIDES OF A PALLET IS PERMITTED. THE USE OF AN OVERHANG PATTERN MAY BE BENEFICIAL DUE TO THE SIZE OF THE UNIT PACK BEING STORED.

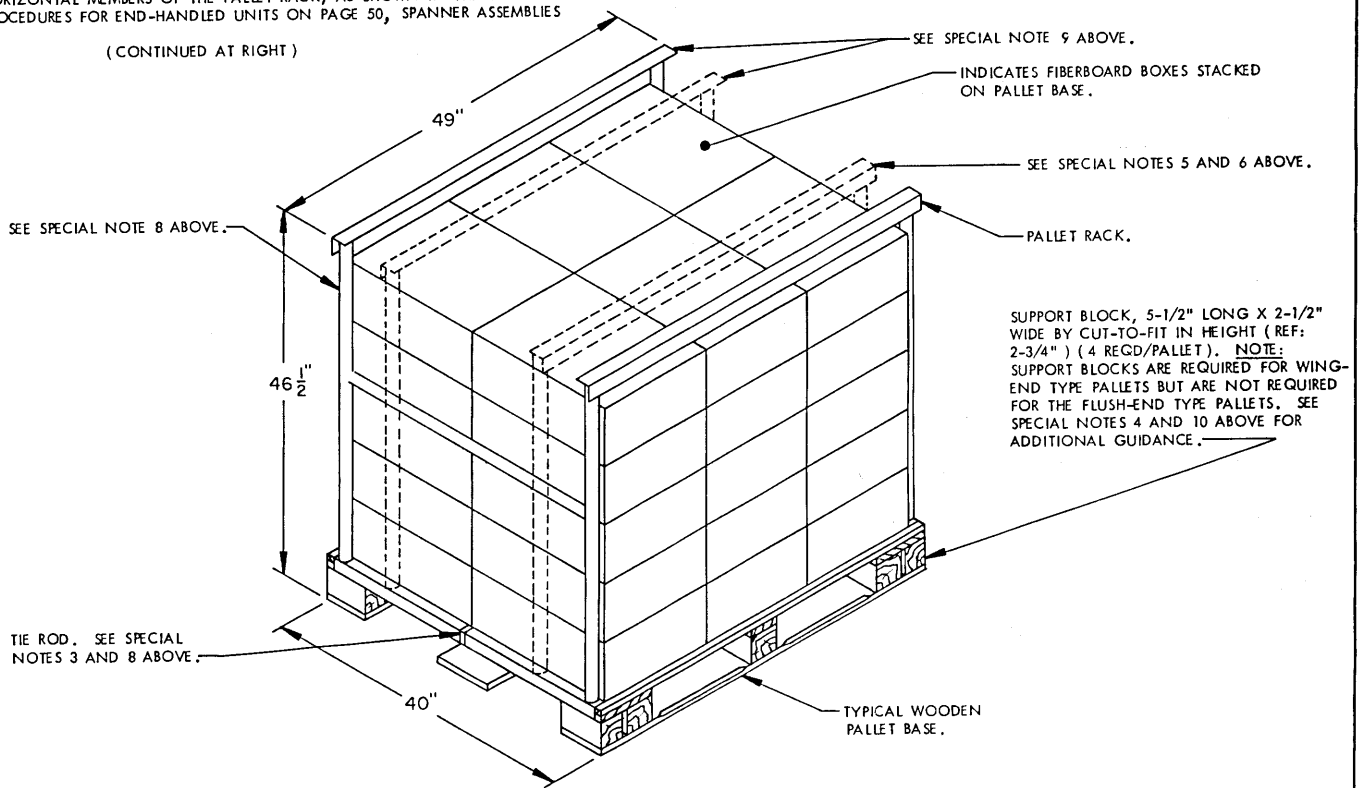
8. METAL-TO-METAL PINCH POINTS WITHIN A PALLET RACK ASSEMBLY MUST BE KEPT FREE OF EXPLOSIVE MATERIAL. FOR EXAMPLE, PIECES OF FIBERBOARD OR HEAVY PAPER SHOULD BE USED TO COVER ENDS OF THE TIE RODS, AND SLIP TYPE SOCKET JOINTS OF THE ASSEMBLY MUST BE CLEANED BEFORE ASSEMBLING PALLET RACK.

9. IF A RACK HAS PALLET LOCATING DEVICES ATTACHED TO THE TOP HORIZONTAL MEMBERS AND THEY INTERFERE WITH PROPER STACKING, PIECES OF WOODEN DUNNAGE SHOULD BE USED ON TOP OF THE HORIZONTAL MEMBERS TO PROVIDE A LEVEL SURFACE FOR AN UPPER BOX PALLET UNIT.

10. SHIMS OF REQUIRED THICKNESS PLYWOOD WILL BE USED IN CONJUNCTION WITH 4" X 4" X 8" SUPPORT BLOCKS TO PROVIDE SOLID CONTACT WITH THE STRINGER BOARD OF THE PALLET UNIT.

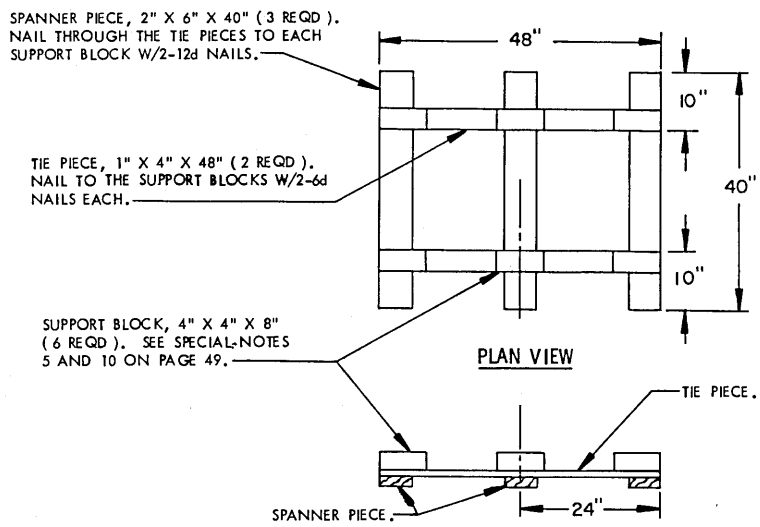
11. REFER TO PAGES 51 AND 52 FOR TYPICAL MULTIPLE LOT STORAGE PROCEDURES.

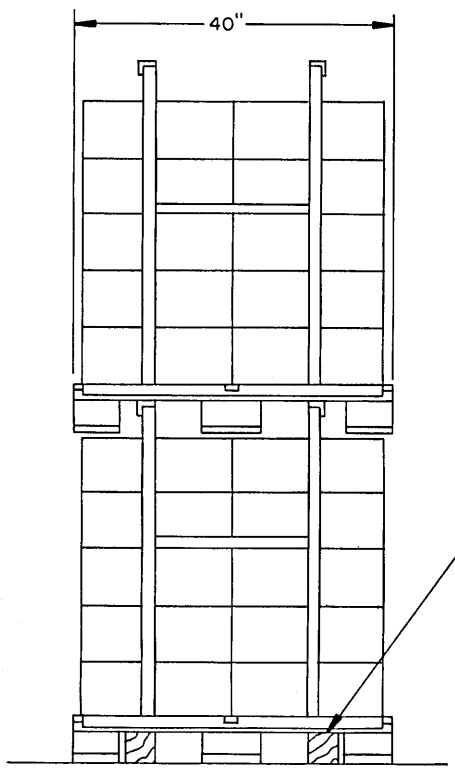
12. PALLETIZATION OF BOXES IS SOLELY FOR THE CONVENIENCE OF STORAGE AND WILL NOT BE USED FOR SHIPPING BOXES.



RACK INSTALLATION

A TYPICAL PALLET UNIT IS SHOWN WITH A PALLET RACK INSTALLED ON A 4-WAY ENTRY, WING-END TYPE PALLET (MIL-P-15011). USE OF FLUSH-END TYPE PALLETS NEGATES THE REQUIREMENT FOR SUPPORT BLOCKS.

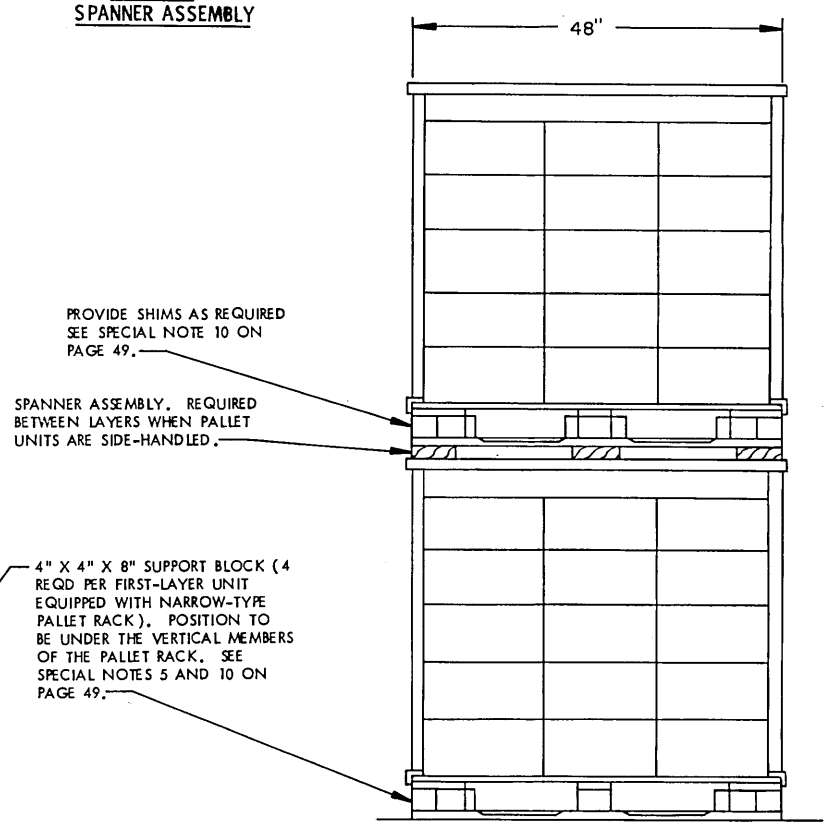




STACKING PROCEDURES FOR END-HANDLED PALLET UNITS

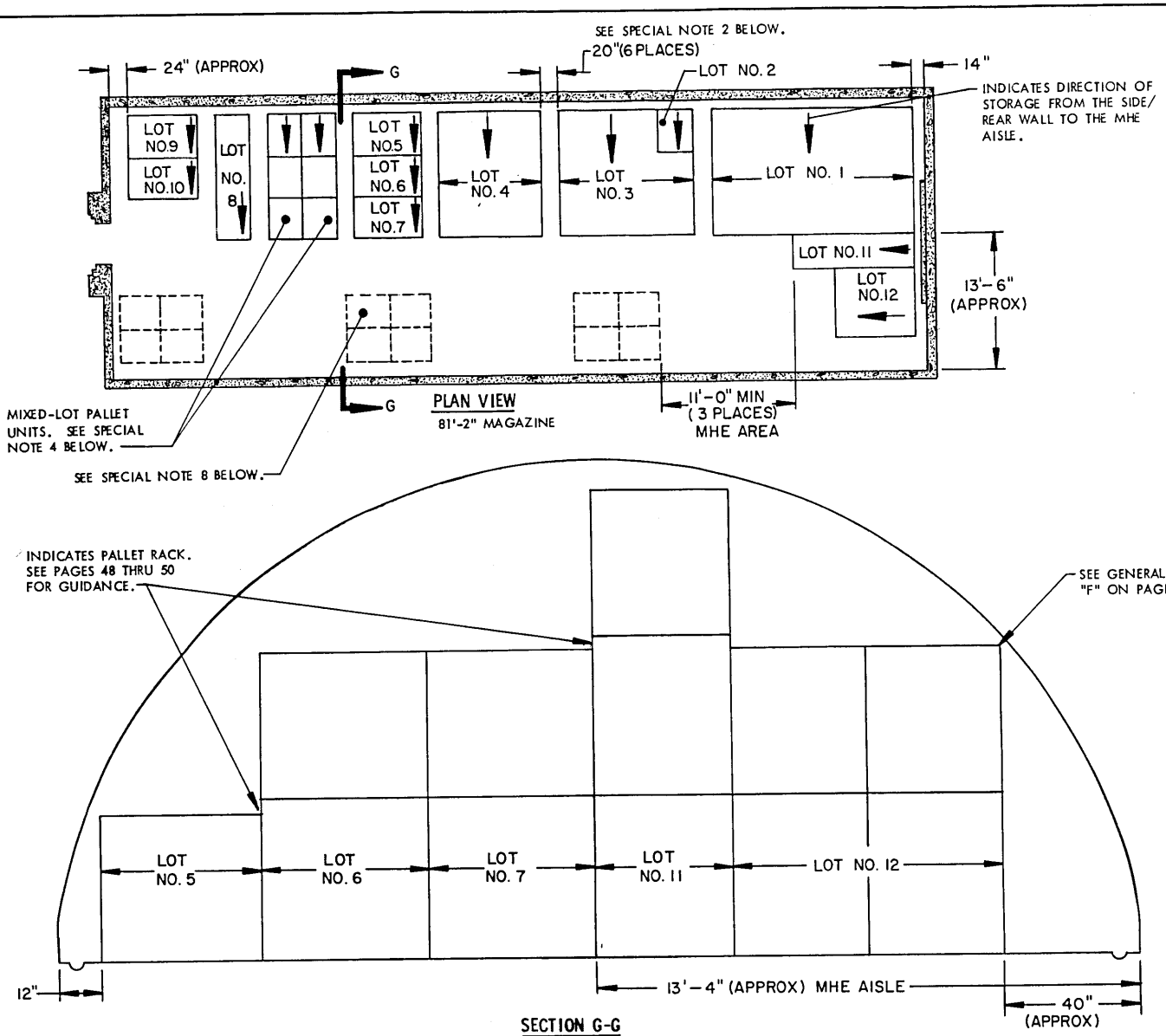
THE ABOVE VIEW DEPICTS THE USE OF THE NARROW-TYPE PALLET RACK.

NOTE: IF DESIRED, IN LIEU OF 4" X 4" MATERIAL, TWO PIECES OF 2" X 4" MATERIAL MAY BE POSITIONED ON EDGE AND LAMINATED.



STACKING PROCEDURES FOR SIDE-HANDLED PALLET UNITS

THE ABOVE VIEW DEPICTS THE USE OF THE NARROW-TYPE PALLET RACK.



SECTION G-G

SPECIAL NOTES:

1. 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 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 SPECIFIED IN THESE SPECIAL NOTES AND IN THE GENERAL NOTES ON PAGE 2.

4. A MIXED-LOT PALLET UNIT MAY HAVE FROM TWO LOTS PER PALLET UNIT UPWARDS TO AS MANY DIFFERENT LOTS AS THERE ARE CONTAINERS WITHIN THAT UNIT. HOWEVER, ALL LOTS WITHIN THE PALLET UNIT MUST HAVE THE SAME NATIONAL STOCK NUMBER AND CONDITION CODE.

5. 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 NO MORE THAN TWELVE (12) "LIFTS" *OF ANOTHER LOT OR LOTS HAVE TO BE MADE TO GAIN ACCESS TO THE SINGLE-LOT OR MIXED-LOT UNITS.

6. FOR STORAGE OF MULTIPLE LOTS, THE DISTANCE FROM THE SIDEWALL WILL BE BASED ON THE OVERHEAD CLEARANCE REQUIRED FOR MHE.

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

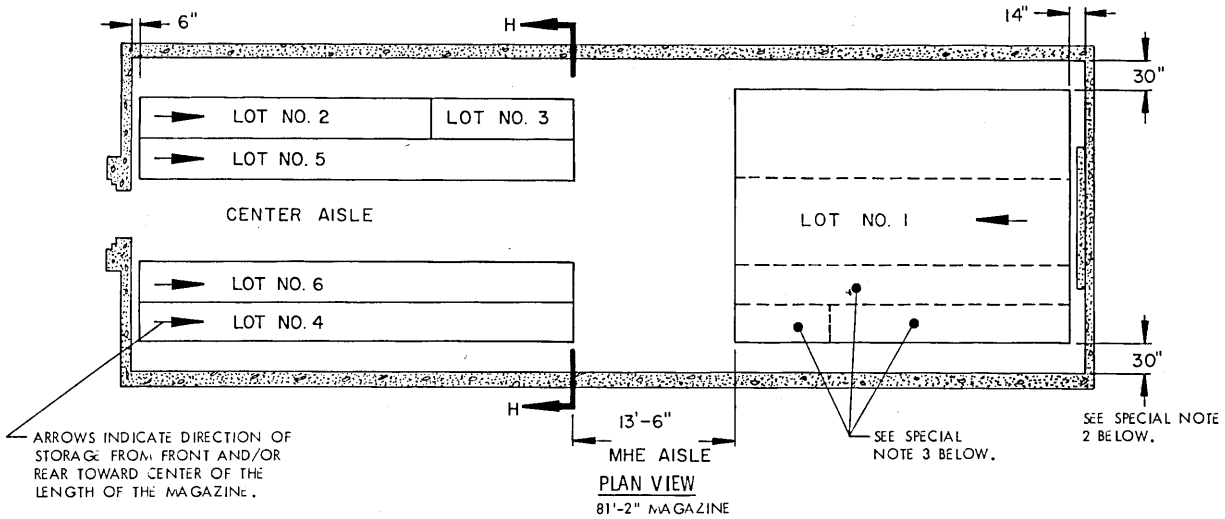
(SPECIAL NOTES CONTINUED AT RIGHT)

(SPECIAL NOTES CONTINUED)

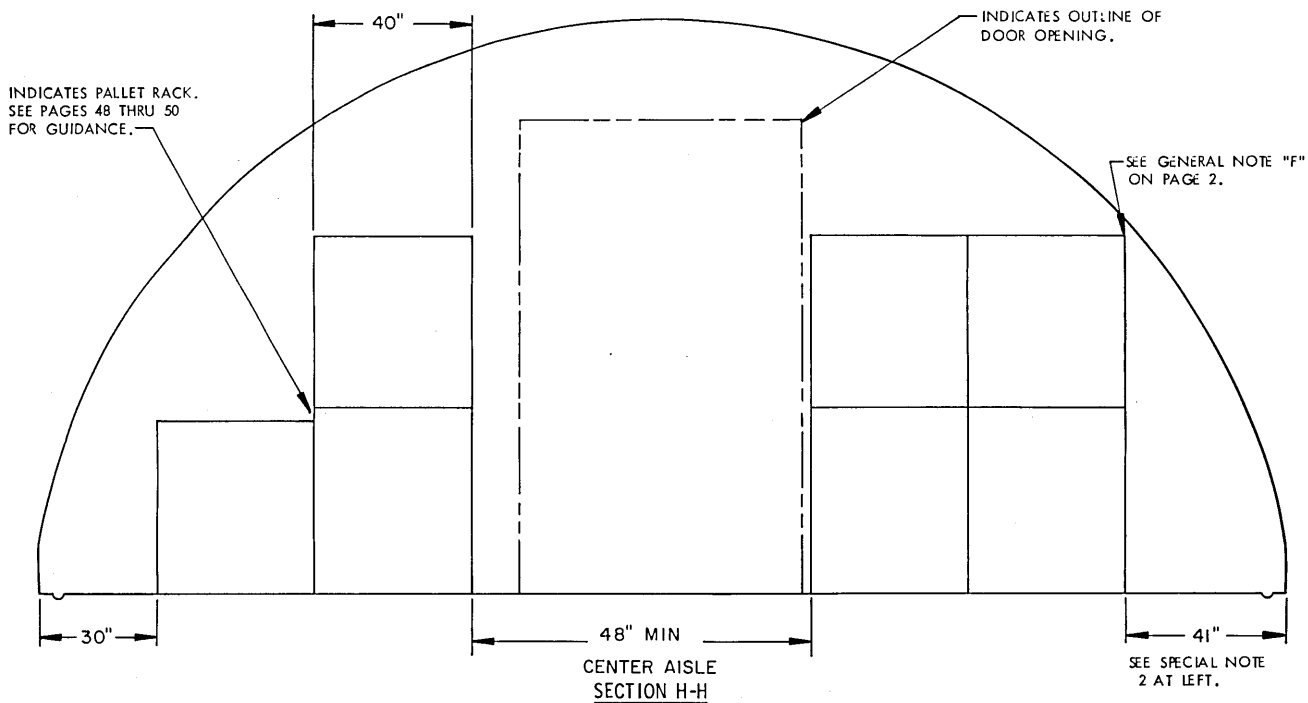
8. AREAS INCLOSED BY DOTTED LINES INDICATE LOCATIONS WHERE ADDITIONAL LOTS MAY BE STORED OR WHERE ADDITIONAL ITEMS MAY BE STORED, THAT ARE FROM THE LOT OR LOTS WHICH ARE DIRECTLY OR ALMOST DIRECTLY ACROSS THE CENTER AISLE ON THE OTHER SIDE OF THE MAGAZINE. COMPLIANCE WITH ALL OF THE MULTIPLE-LOT CRITERIA AS SET FORTH ON THIS PAGE MUST BE OBSERVED. THE SIZE OF THE LOTS BEING STORED AND THE CRITERIA OF SPECIAL NOTE 5, RELATIVE TO "12 LIFTS", 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'-0" MHE OPERATING AREA HAS BEEN SPECIFIED FOR ACCESS TO EACH "ADDITIONAL LOCATION" BY FORKLIFT TRUCK. THIS OPERATING AREA IS BASED ON REQUIREMENTS OF FORKLIFT TRUCKS COMMONLY USED IN STORAGE MAGAZINES. THE MHE 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" WIDE. AN AISLE SLIGHTLY WIDER THAN 48" WILL ENHANCE FORKLIFT TRUCK MOVEMENT WITHIN A MAGAZINE; HOWEVER, THIS AISLE SHOULD NOT BE WIDER IF A LOSS IN STORAGE RESULTS.

*A "LIFT" MAY CONSIST OF ONE (1) OR MORE PALLET UNITS, PROVIDING THE CAPACITY OF MHE PERMITS, AND SAFE HANDLING IS NOT JEOPARDIZED.

TYPICAL MULTIPLE - LOT STORAGE PROCEDURES
USING PALLET RACK STORAGE AIDS



PLAN VIEW
81'-2" MAGAZINE



SECTION H-H

SPECIAL NOTES:

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 ERECTING ROWS SIMILAR TO THOSE SHOWN IN THE FRONTAL AREA OR AS SHOWN BY DOTTED LINES.
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.

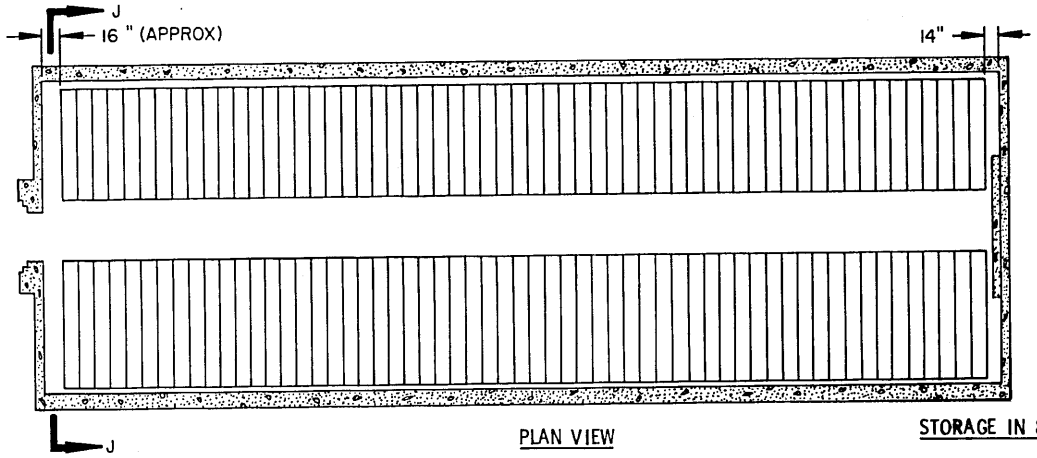
(SPECIAL NOTES CONTINUED AT RIGHT)

(SPECIAL NOTES CONTINUED)

5. FOR STORAGE OF MULTIPLE LOTS, THE DISTANCE FROM THE SIDEWALL WILL BE BASED ON THE OVERHEAD CLEARANCE REQUIRED FOR MHE.
6. 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.

*A "LIFT" MAY CONSIST OF ONE (1) OR MORE PALLET UNITS, PROVIDING THE CAPACITY OF MHE PERMITS, AND SAFE HANDLING IS NOT JEOPARDIZED.

TYPICAL MULTIPLE - LOT STORAGE PROCEDURES
USING PALLET RACK STORAGE AIDS



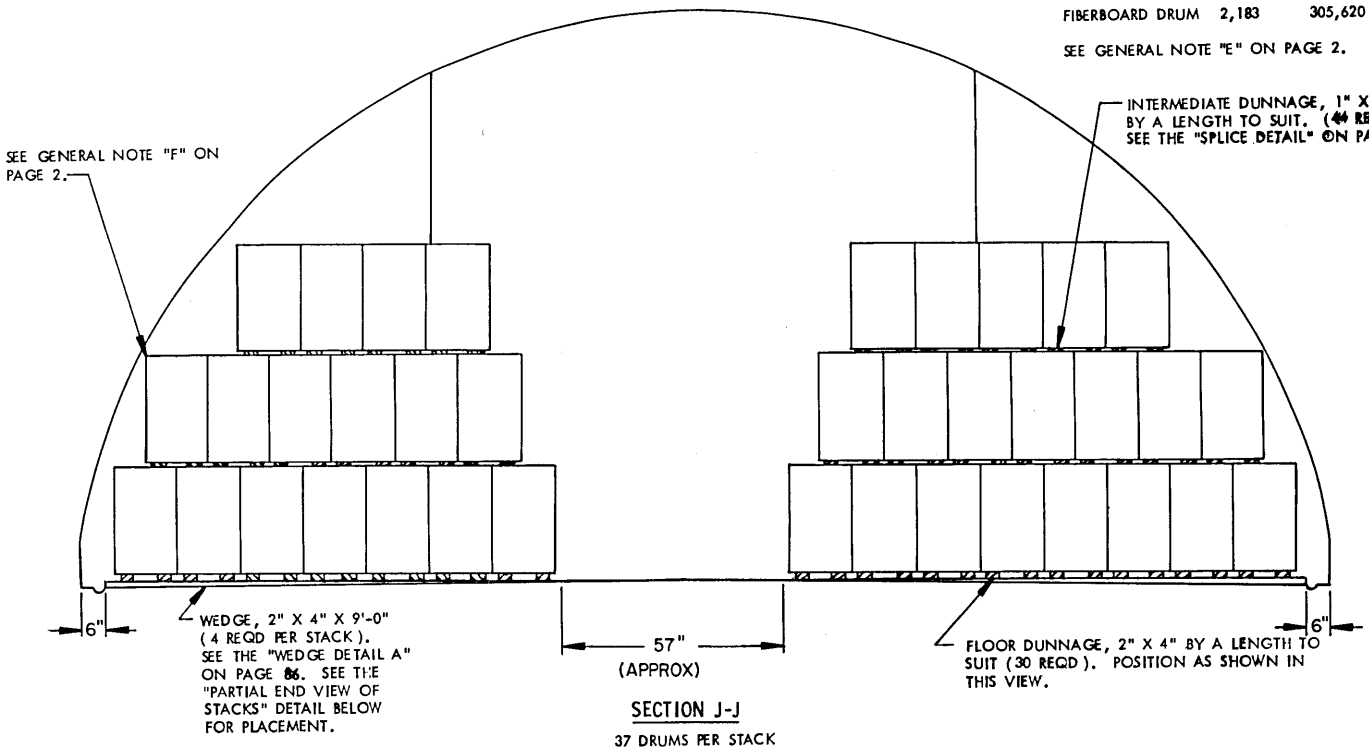
PLAN VIEW

81'-2" MAGAZINE
(59 STACKS)

STORAGE IN 81'-2' MAGAZINE

ITEM	QUANTITY	EXPLOSIVE WEIGHT
FIBERBOARD DRUM	2,183	305,620 LBS.

SEE GENERAL NOTE "E" ON PAGE 2.



SECTION J-J

37 DRUMS PER STACK

BILL OF MATERIAL (PER STACK)		
LUMBER	LINEAR FEET	BOARD FEET
1" X 4" 2" X 4"	60 40	20 27
WEDGES PER STACK		
LUMBER	LENGTH	NO. REQD
2" X 4"	9'-0"	4

SPECIAL NOTES:

1. STORAGE AS SHOWN IS FOR A FIBERBOARD DRUM.

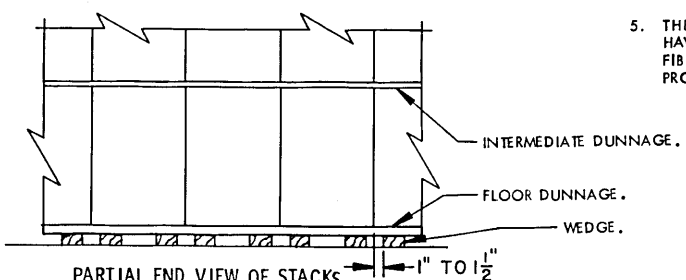
   DRUM DIMENSIONS ---------- 27" HIGH BY 16" DIAMETER
   EXPLOSIVE WEIGHT ----------140 POUNDS

2. RANDOM LENGTHS OF DUNNAGE MAY BE USED FOR THE INTERMEDIATE AND FLOOR DUNNAGE.

3. FIBERBOARD DRUMS, EXCEPT FOR NITROGUANIDINE, AS SHOWN ON PAGE 67, WILL NOT BE STACKED MORE THAN THREE LAYERS HIGH.

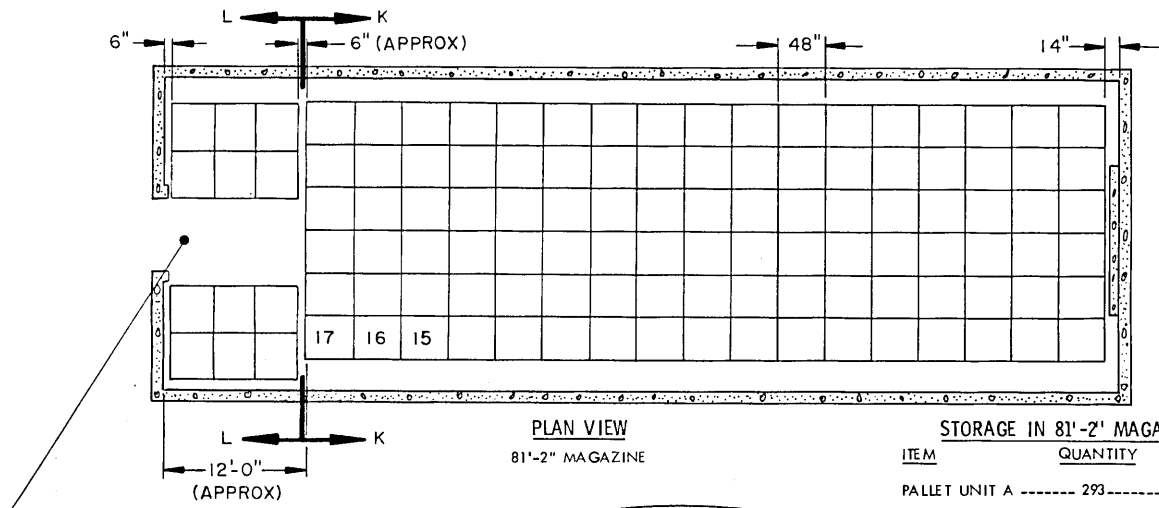
4. THE DRUMS IN EACH LAYER WILL BE STAGGERED ABOVE THE DRUMS IN THE LAYER BENEATH, AS SHOWN.

5. THESE STORAGE PROCEDURES SHOULD ONLY BE USED IN GEOGRAPHICAL AREAS WHICH HAVE LOW HUMIDITY LEVELS. FOR PROCEDURES APPLICABLE TO THE STORAGE OF FIBERBOARD DRUMS IN GEOGRAPHICAL AREAS HAVING HIGH HUMIDITY, REFER TO THE PROCEDURES ON PAGE 85.



PARTIAL END VIEW OF STACKS

STORAGE METHOD A
FIBERBOARD DRUM STORAGE, UNPALLETIZED



PLAN VIEW

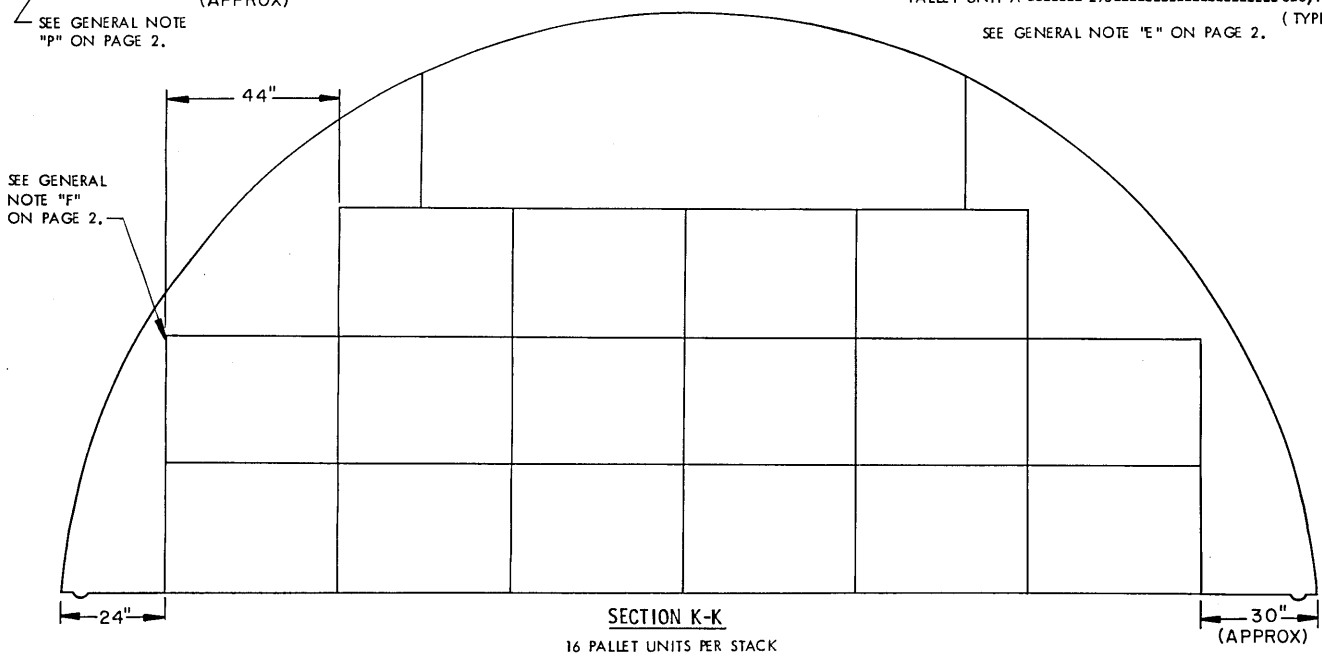
81'-2" MAGAZINE

SEE GENERAL NOTE "P" ON PAGE 2.

STORAGE IN 81'-2' MAGAZINE

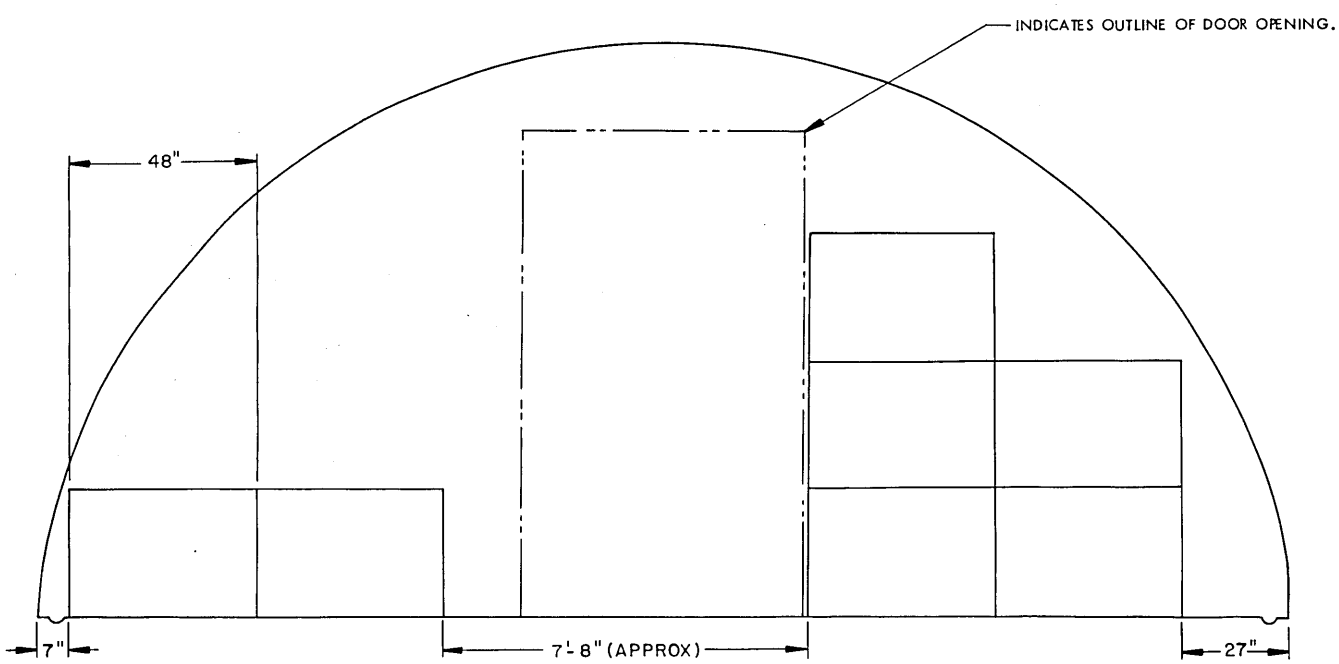
ITEM	QUANTITY	EXPLOSIVE WEIGHT
PALLET UNIT A	293	328,160 LBS. (TYPICAL)

SEE GENERAL NOTE 'E" ON PAGE 2.



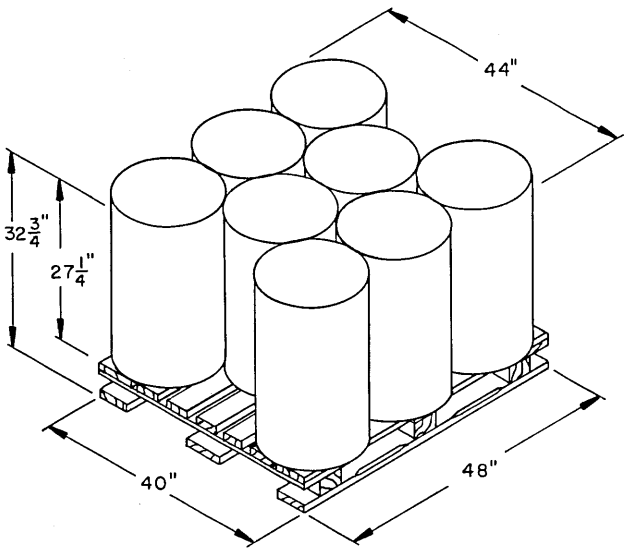
SECTION K-K

16 PALLET UNITS PER STACK
128 DRUMS PER STACK



SECTION L-L

FIBERBOARD DRUM STORAGE, PALLETIZED



TYPICAL PALLET UNIT A

DRUM SIZE ---------- 16" DIA X 27-1/4" HIGH
DRUM EXPLOSIVE WEIGHT---------- 140 POUNDS (TYPICAL)

SPECIAL NOTES:

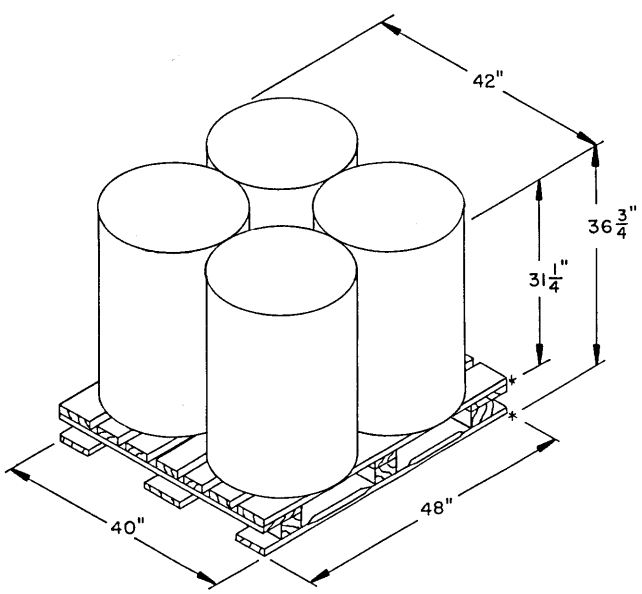
1. STORAGE AS SHOWN IS FOR FIBERBOARD DRUMS OF VARIOUS SIZES PLACED ON 40" X 48" PALLETS AND CONTAINING VARIOUS EXPLOSIVES.

   TYPICAL PALLET UNIT DIMENSIONS:
   UNIT A ----- 44" L X 48" W X 32-3/4" H
   UNIT B ----- 42" L X 48" W X 36-3/4" H
   UNIT C ----- 40" L X 51" W X 33" H

2. THE DRUM SIZES SHOWN ARE TYPICAL; ANY SIZE DRUM MAY BE PLACED ON A PALLET FOR STORAGE PURPOSES. ANY SIZE PALLET MAY BE USED, HOWEVER A SIZE SHOULD BE SELECTED WHICH WILL BE NEARLY FILLED WITH DRUMS IN ORDER TO PROVIDE GOOD STACKABILITY. ALSO, A PALLET SIZE SHOULD BE SELECTED THAT WILL PROVIDE FOR FULL OR ALMOST FULL BEARING OF THE DRUMS ON A PALLET. OVERHANG OF DRUMS ON A PALLET IS LIMITED TO NOT MORE THAN TWO INCHES (2").

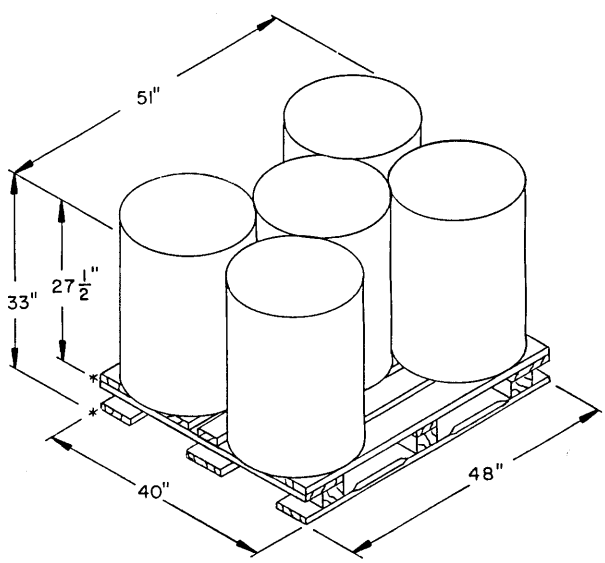
3. PALLETIZED DRUMS WILL NOT BE STACKED MORE THAN THREE LAYERS HIGH.

4. PALLETIZATION OF DRUMS IS SOLELY FOR THE CONVENIENCE OF STORAGE AND WILL NOT BE USED FOR SHIPPING DRUMS.



TYPICAL PALLET UNIT B

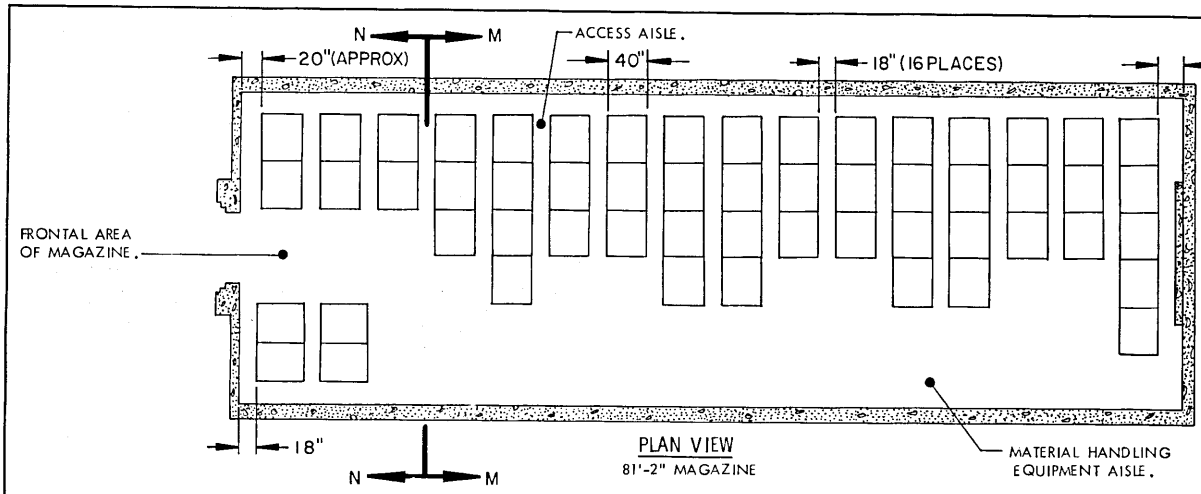
DRUM SIZE ---------- 20-1/2" DIA X 31-1/4" HIGH
DRUM EXPLOSIVE WEIGHT---------- 300 POUNDS (TYPICAL)



TYPICAL PALLET UNIT C

DRUM SIZE ---------- 19" DIA X 27-1/2" HIGH
DRUM EXPLOSIVE WEIGHT ---------- 200 POUNDS (TYPICAL)

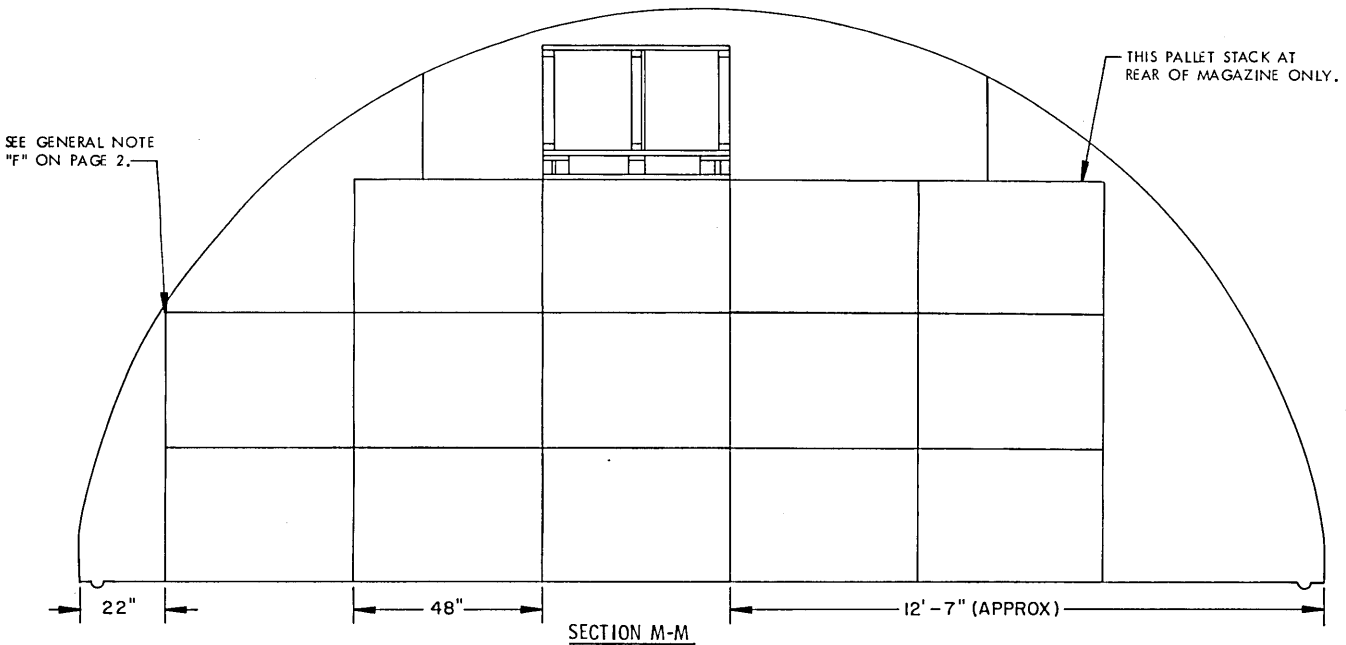
FIBERBOARD DRUM STORAGE, PALLETIZED



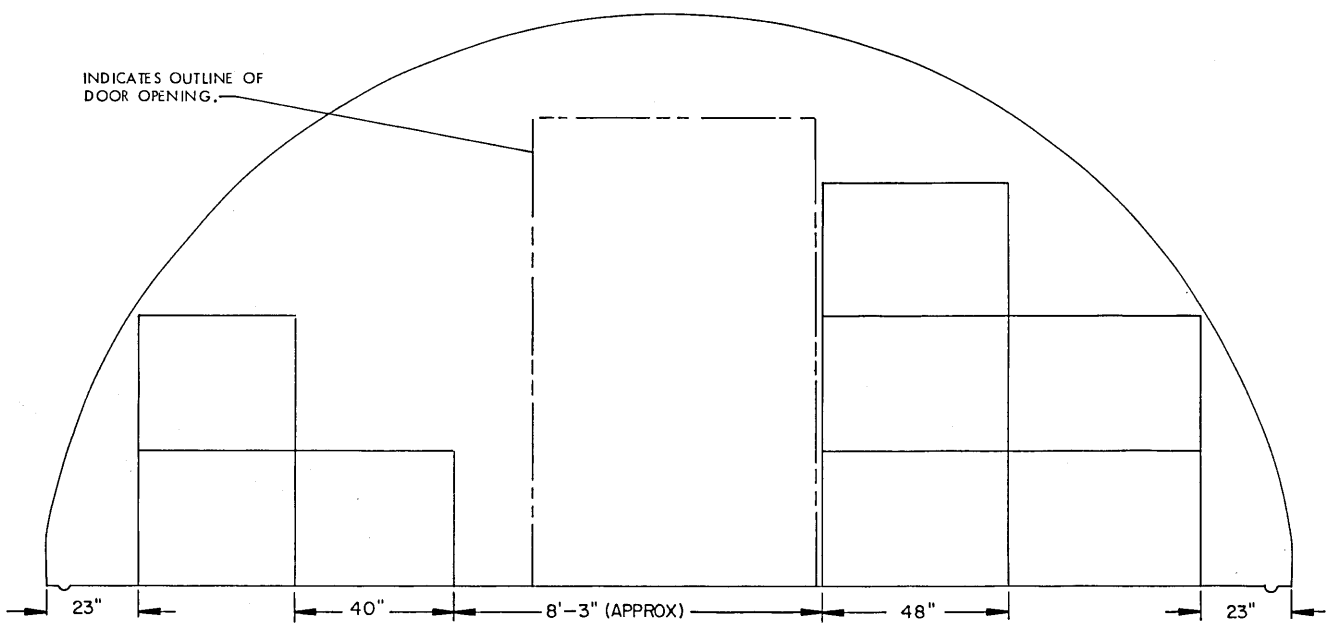
STORAGE IN
81'-2" MAGAZINE

ITEM	QUANTITY
PALLET UNIT	159
DRUMS	636
EXPLOSIVE WEIGHT	127,200 LBS

SEE GENERAL NOTE "E" ON PAGE 2.



SECTION M-M

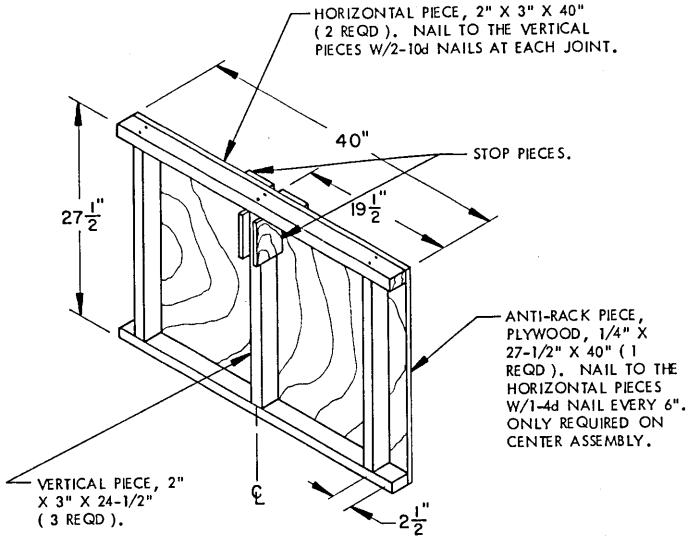


SECTION N-N

RDX, WET, IN FIBERBOARD DRUMS, PALLETIZED

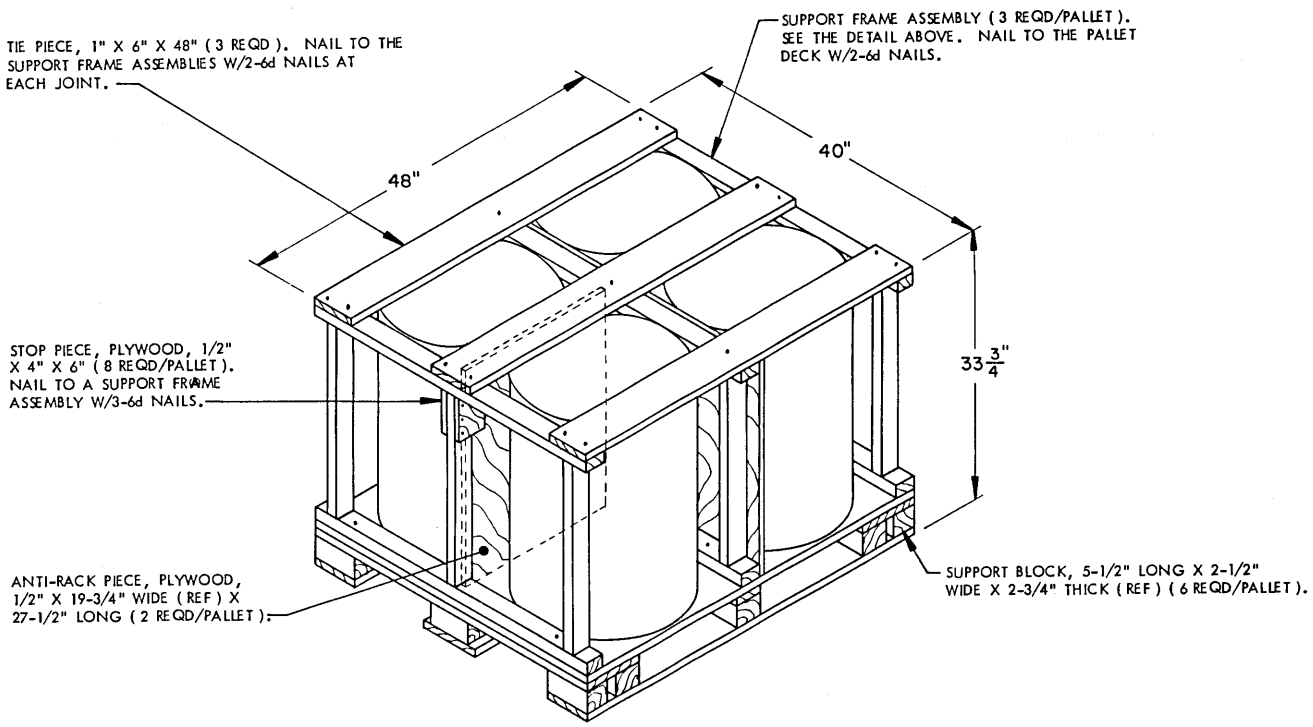
SPECIAL NOTES:

1. STORAGE AS SHOWN IS FOR THE RDX, WET, IN FIBERBOARD DRUMS (PALLETIZED).
   DRUM DIMENSIONS---------27-1/2" HIGH BY 19-1/2" DIAMETER.
   PALLET UNIT DIMENSIONS----- 40" LONG BY 48" WIDE BY 33-3/4" HIGH.
   EXPLOSIVE WEIGHT PER PALLET UNIT----------800 POUNDS.
2. THE METHOD OF STORAGE SHOWN PERMITS INSPECTION OF INDIVIDUAL DRUMS.
3. PALLETIZATION OF DRUMS IS SOLELY FOR THE CONVENIENCE OF STORAGE AND WILL NOT BE USED FOR SHIPPING DRUMS.
4. STORAGE AS SHOWN IS BASED ON THE USE OF FRONT LOADING FORKLIFT TRUCKS (MHE). IF A FORKLIFT TRUCK WITH FRONT/SIDE LOADER IS AVAILABLE, ADDITIONAL UNITS MAY BE STORED, PROVIDING THE STORAGE PATTERN IS REVERSED FROM WHAT IS SHOWN.



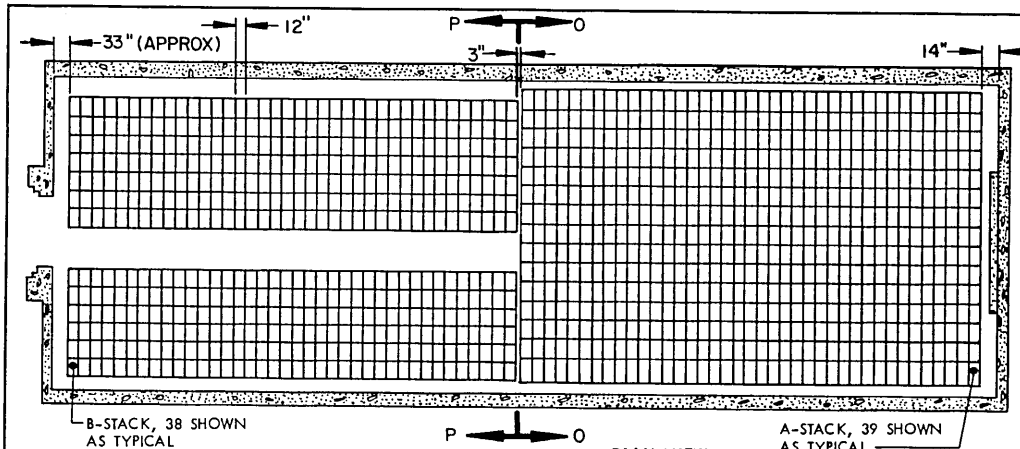
SUPPORT FRAME ASSEMBLY

THE DETAIL ABOVE DEPICTS THE CENTER SUPPORT FRAME ASSEMBLY. OMIT THE 1/4" PLYWOOD ANTI-RACK PIECE AND THE TWO STOP PIECES WHICH ARE NAILED THRU IT, FOR THE TWO OUTER ASSEMBLIES.



PALLET UNIT

RDX, WET, IN FIBERBOARD DRUMS PALLETIZED



PLAN VIEW
81'-2" MAGAZINE

SPECIAL NOTES:

1. STORAGE AS SHOWN IS FOR A WOODEN BOX.

   BOX DIMENSIONS----19-7/8" LONG BY 12" WIDE BY 12" HIGH.

2. WHENEVER PRACTICABLE THE LARGEST LOT SHOULD BE STORED IN THE REAR OF A MAGAZINE BY USING TYPE "A" STACKS. LOTS WILL NOT BE MIXED WITHIN STACKS. A THREE INCH (3") SEPARATION WILL BE ALLOWED BETWEEN ADJACENT LOTS. SMALL LOTS AND/OR PARTIAL STACKS MAY BE STORED IN THE FRONT OF THE MAGAZINE.

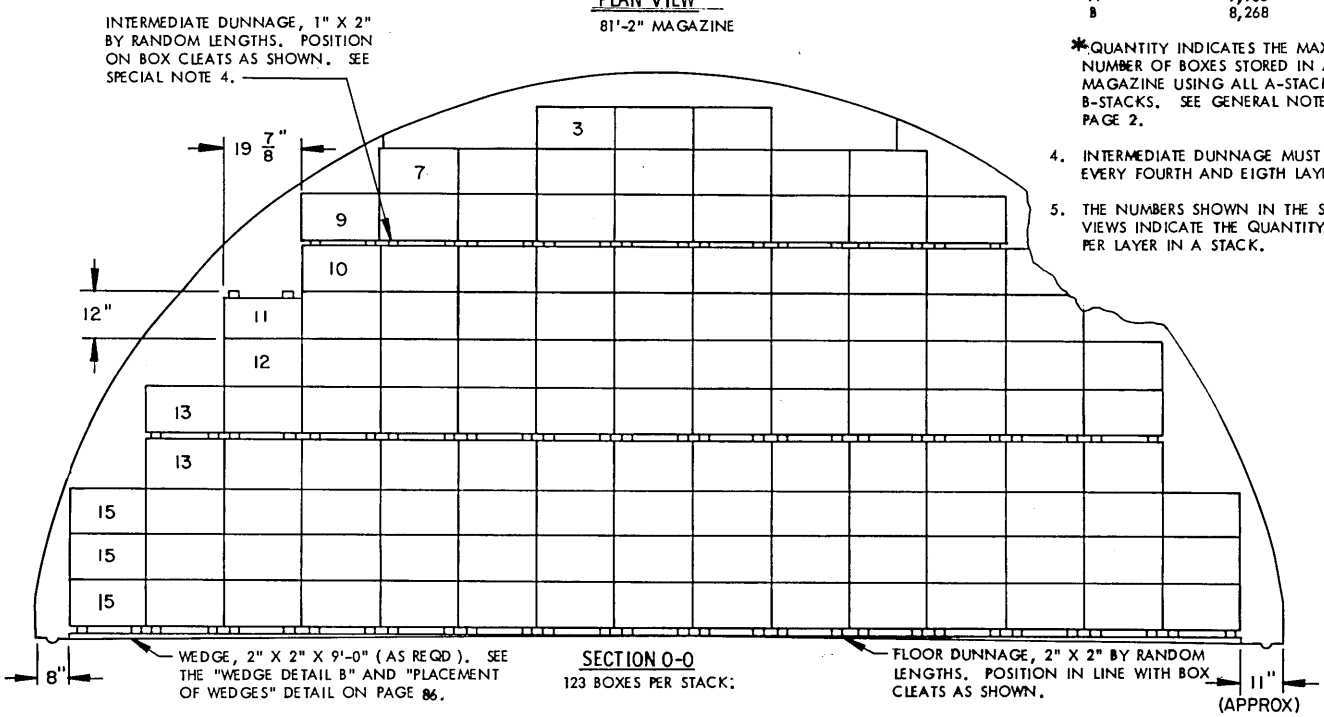
3. MAXIMUM STORAGE IN AN 81'-2" MAGAZINE.

STACK TYPE	MAXIMUM * QUANTITY	EXPLOSIVE WEIGHT
A	9,963	498,150 LBS
B	8,268	413,400 LBS

*QUANTITY INDICATES THE MAXIMUM NUMBER OF BOXES STORED IN AN 81'-2" MAGAZINE USING ALL A-STACKS OR ALL B-STACKS. SEE GENERAL NOTE "E" ON PAGE 2.

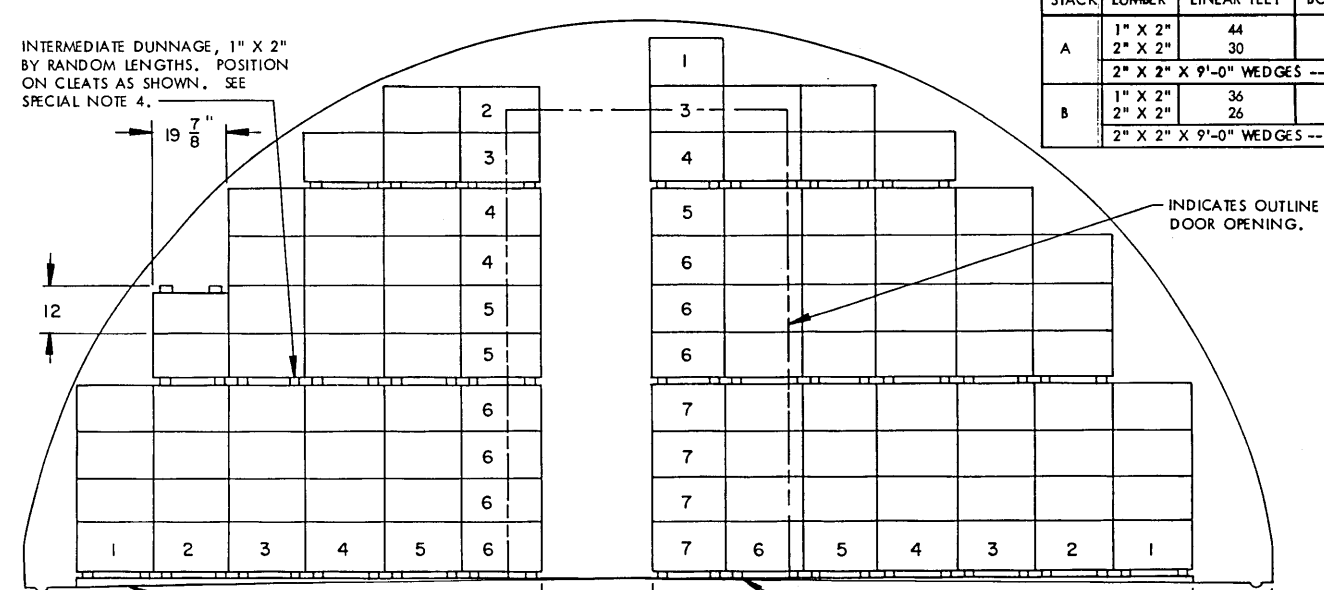
4. INTERMEDIATE DUNNAGE MUST BE USED ON EVERY FOURTH AND EIGTH LAYER.

5. THE NUMBERS SHOWN IN THE SECTION VIEWS INDICATE THE QUANTITY OF BOXES PER LAYER IN A STACK.



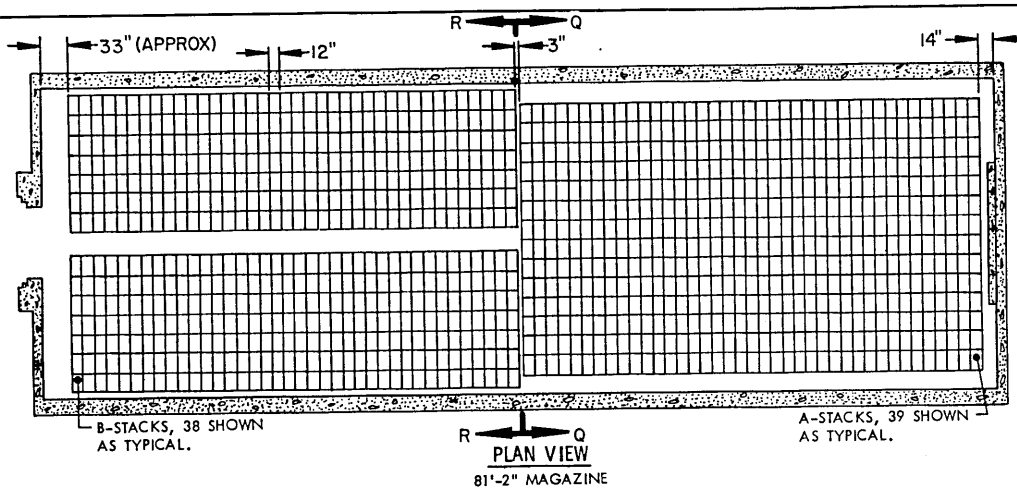
SECTION O-O
123 BOXES PER STACK:

BILL OF MATERIAL (PER STACK)			
STACK	LUMBER	LINEAR FEET	BOARD FEET
A	1" X 2"	44	15
	2" X 2"	30	10
	2" X 2" X 9'-0" WEDGES -- 2 REQD		
B	1" X 2"	36	6
	2" X 2"	26	9
	2" X 2" X 9'-0" WEDGES -- 2 REQD		



SECTION P-P
106 BOXES PER STACK

TNC, TNT, TETRYL, COMP A-3, COMP C-4 (PACKED IN WOODEN BOX)



PLAN VIEW
81'-2" MAGAZINE

SPECIAL NOTES:

1. STORAGE AS SHOWN IS FOR A WOODEN BOX.

   BOX DIMENSIONS--19-7/8" LONG BY 12" WIDE BY 10" HIGH.

2. WHENEVER PRACTICAL THE LARGEST LOT SHOULD BE STORED IN THE REAR OF A MAGAZINE BY USING TYPE "A" STACKS. LOTS WILL NOT BE MIXED WITHIN STACKS. A THREE INCH (3") SEPARATION WILL BE ALLOWED BETWEEN ADJACENT LOTS. SMALL LOTS AND/OR PARTIAL STACKS MAY BE STORED IN THE FRONT OF THE MAGAZINE.

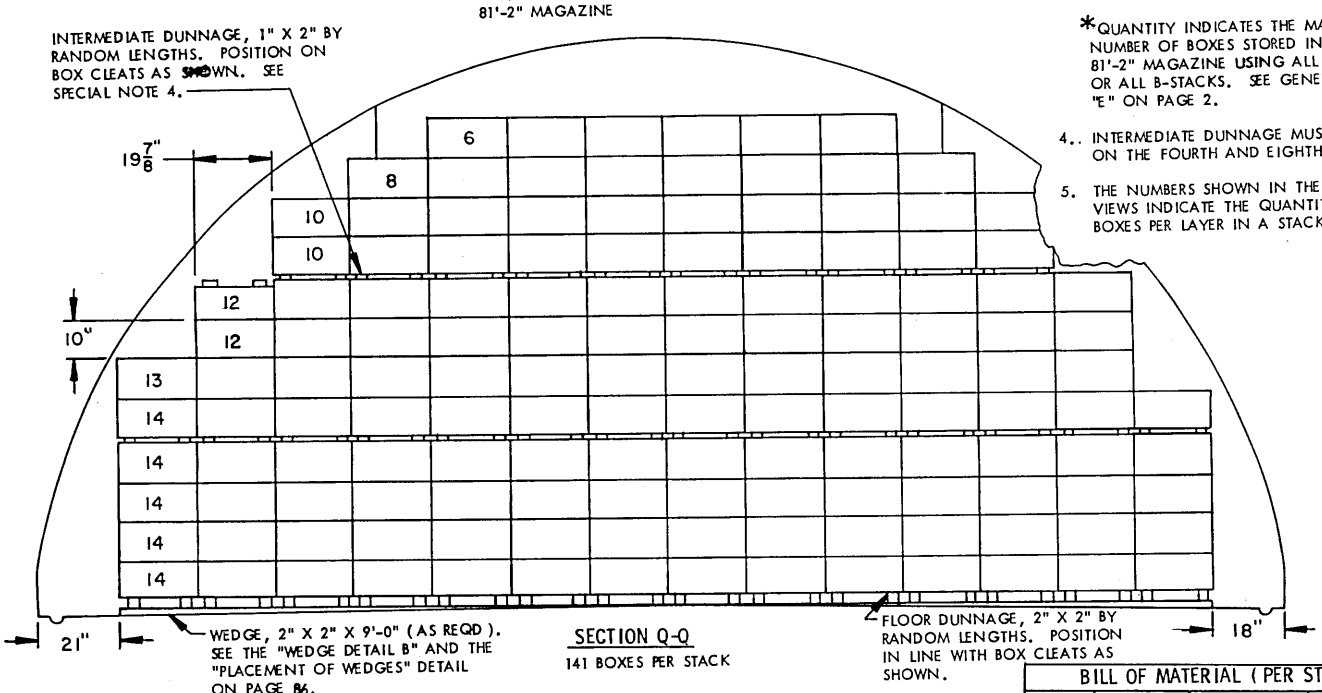
3. MAXIMUM STORAGE IN AN 81'-2" MAGAZINE.

STACK TYPE	MAXIMUM* QUANTITY	EXPLOSIVE WEIGHT
A	9,870	493,500 LBS
B	9,900	495,000 LBS

*QUANTITY INDICATES THE MAXIMUM NUMBER OF BOXES STORED IN AN 81'-2" MAGAZINE USING ALL A-STACKS OR ALL B-STACKS. SEE GENERAL NOTE "E" ON PAGE 2.

4. INTERMEDIATE DUNNAGE MUST BE USED ON THE FOURTH AND EIGHTH LAYERS.

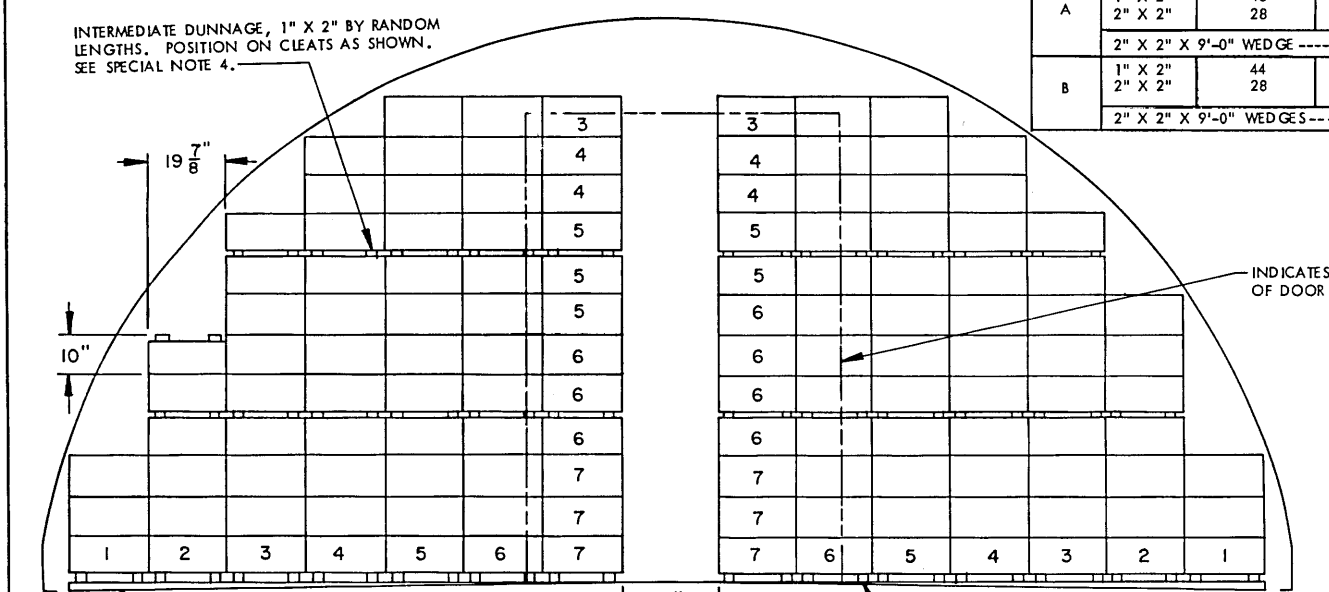
5. THE NUMBERS SHOWN IN THE SECTION VIEWS INDICATE THE QUANTITY OF BOXES PER LAYER IN A STACK.



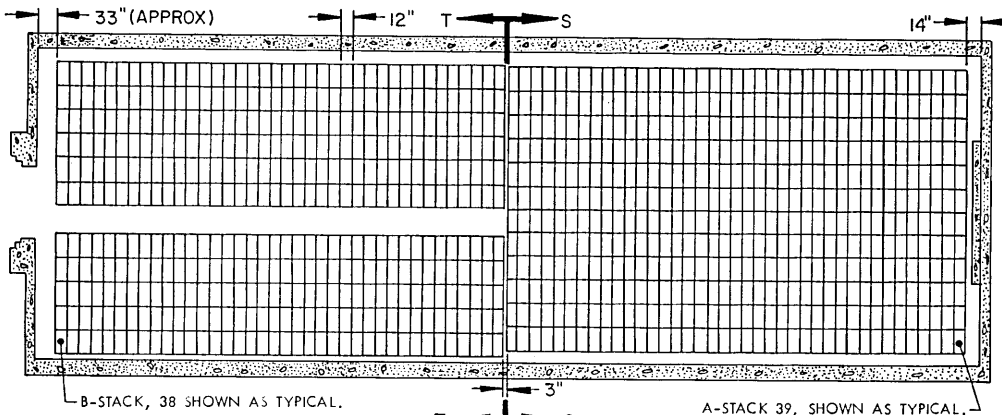
SECTION Q-Q
141 BOXES PER STACK

BILL OF MATERIAL (PER STACK)

STACK	LUMBER	LINEAR FEET	BOARD FEET
A	1" X 2"	48	8
	2" X 2"	28	10
	2" X 2" X 9'-0" WEDGE ----2 REQD		
B	1" X 2"	44	8
	2" X 2"	28	10
	2" X 2" X 9'-0" WEDGES----2 REQD		



SECTION R-R
132 BOXES PER STACK



PLAN VIEW
81'-2" MAGAZINE

SPECIAL NOTES:

1. STORAGE AS SHOWN IS FOR A WOODEN BOX.

   BOX DIMENSIONS ------24-1/8" LONG BY 12" WIDE BY 12" HIGH.
   EXPLOSIVE WEIGHT-----50 POUNDS

2. WHENEVER PRACTICABLE THE LARGEST LOT SHOULD BE STORED IN THE REAR OF A MAGAZINE BY USING TYPE "A" STACKS. LOTS WILL NOT BE MIXED WITHIN STACKS. A THREE INCH (3") SEPARATION WILL BE ALLOWED BETWEEN ADJACENT LOTS. SMALL LOTS AND/OR PARTIAL STACKS MAY BE STORED IN THE FRONT OF THE MAGAZINE.

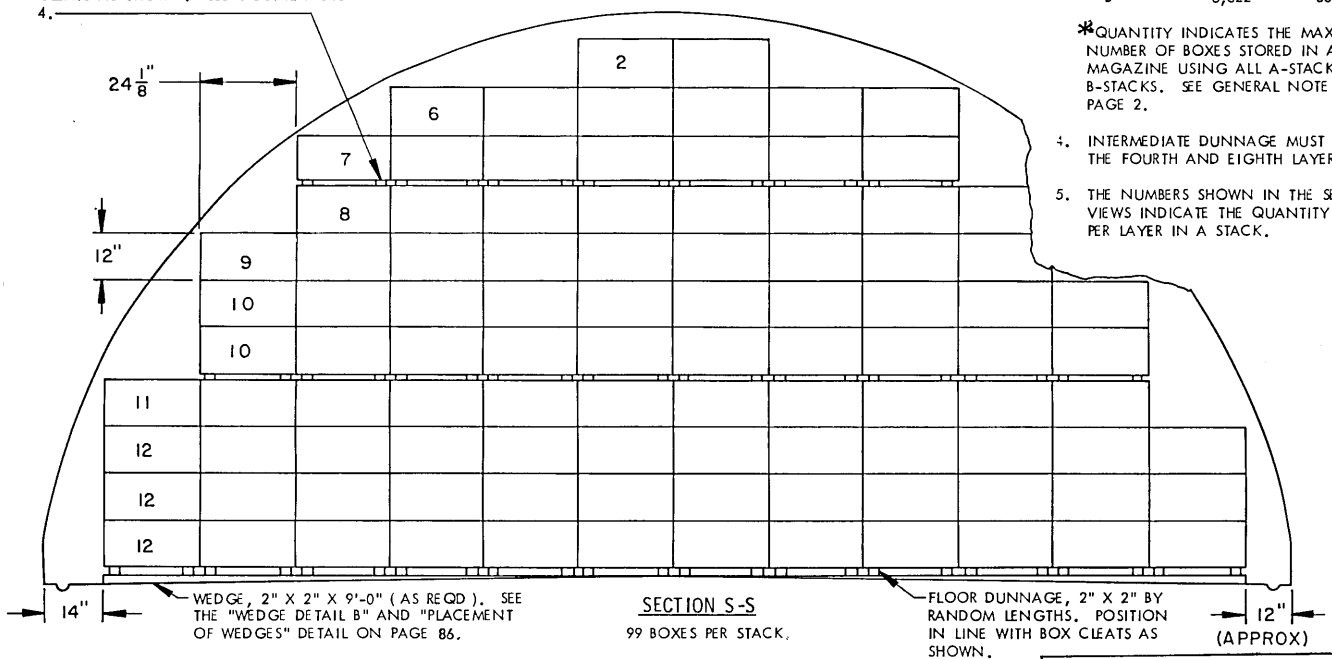
3. MAXIMUM STORAGE IN AN 81'-2" MAGAZINE.

STACK TYPE	MAXIMUM* QUANTITY	EXPLOSIVE WEIGHT
A	7,623	381,150 LBS
B	6,622	331,100 LBS

*QUANTITY INDICATES THE MAXIMUM NUMBER OF BOXES STORED IN AN 81'-2" MAGAZINE USING ALL A-STACKS OR ALL B-STACKS. SEE GENERAL NOTE "E" ON PAGE 2.

4. INTERMEDIATE DUNNAGE MUST BE USED ON THE FOURTH AND EIGHTH LAYERS.

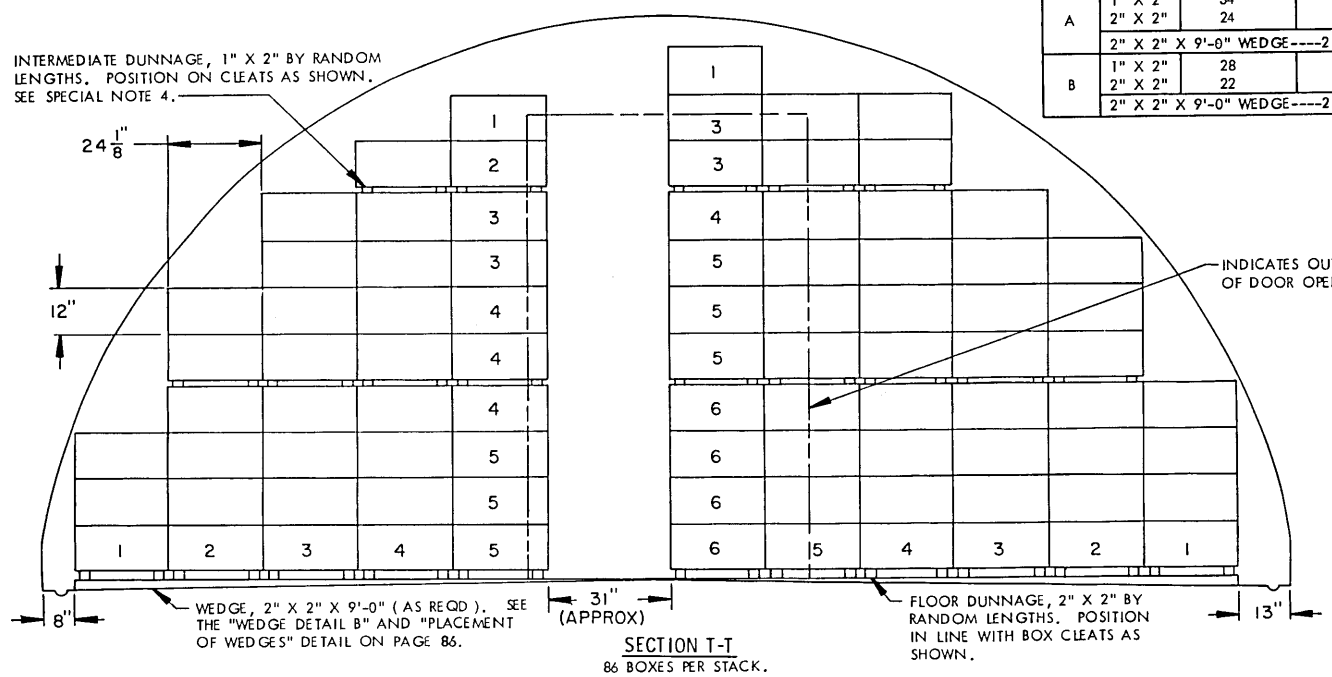
5. THE NUMBERS SHOWN IN THE SECTION VIEWS INDICATE THE QUANTITY OF BOXES PER LAYER IN A STACK.



SECTION S-S
99 BOXES PER STACK.

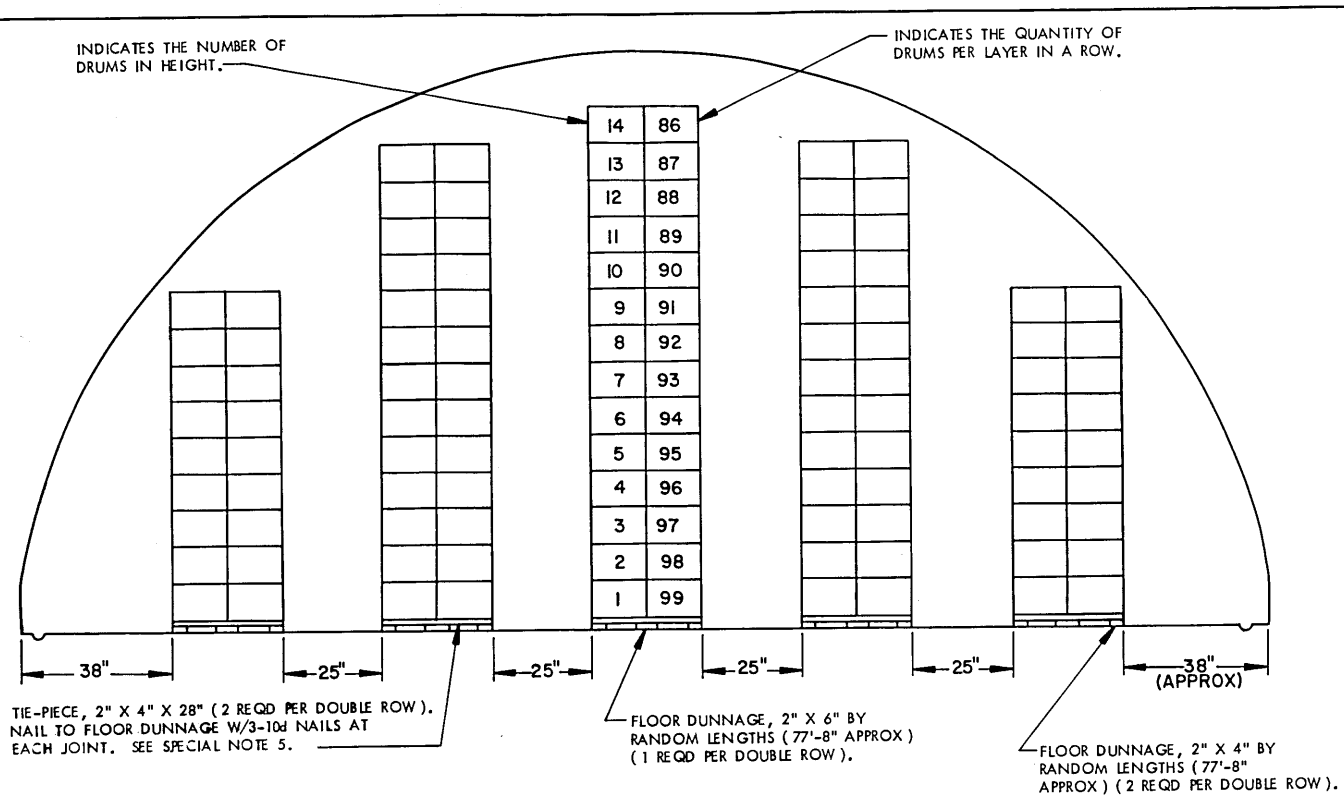
BILL OF MATERIAL (PER STACK)

STACK	LUMBER	LINEAR FEET	BOARD FEET
A	1" X 2"	34	6
	2" X 2"	24	8
	2" X 2" X 9'-0" WEDGE----2 REQD		
B	1" X 2"	28	5
	2" X 2"	22	8
	2" X 2" X 9'-0" WEDGE----2 REQD		



SECTION T-T
86 BOXES PER STACK.

PENTOLITE, EXPLOSIVE D, AND POTASSIUM PICRATE (PACKED IN WOODEN BOX)



END VIEW OF ROWS

BILL OF MATERIAL (PER DOUBLE ROW)		
LUMBER	LINEAR FEET	BOARD FEET
2" X 4" 2" X 6"	162 78	108 78
NAILS	NO. REQD	POUNDS
10d (3")	18	1/2

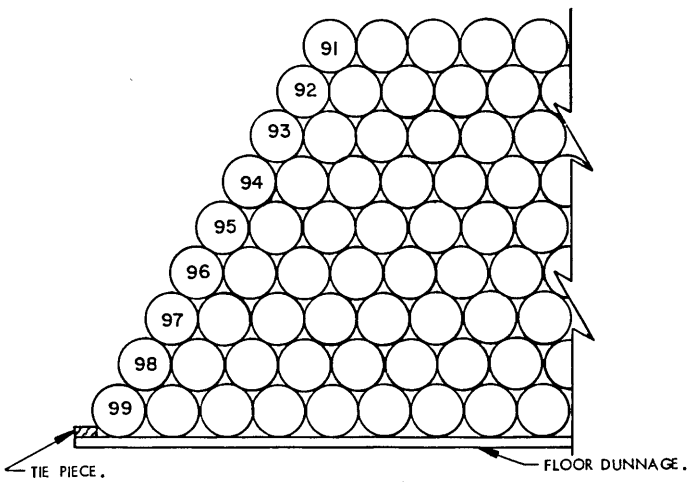
SPECIAL NOTES:

1. STORAGE AS SHOWN IS FOR A METAL DRUM.

   DRUM DIMENSIONS--------14" HIGH BY 9-3/8" DIAMETER.
2. SEE THE "TYPICAL PLAN VIEW C" ON PAGE 4.
3. STAGGER ALL JOINTS IN FLOOR DUNNAGE.
4. THE OPENING END OF ALL DRUMS MUST BE FACING THE AISLE.
5. CAUTION: ALL NAILING MUST BE DONE OUTSIDE OF THE MAGAZINE.
6. WHEN IT IS NECESSARY FOR STABILITY OF ROWS, LEVEL BY WEDGING AND/OR USING SHIMS UNDER THE FLOOR DUNNAGE.
7. THE WATER SHED SEAM ON THE DRUM MUST BE TURNED DOWN TO AVOID GATHERING OF MOISTURE.
8. THE METHOD OF STORAGE SHOWN PERMITS INSPECTION OF INDIVIDUAL DRUMS.
9. THE EXPLOSIVE WEIGHT FOR A DRUM IS 25 POUNDS. THE EXPLOSIVE WEIGHT FOR AN 81'-2" MAGAZINE WILL BE 271,150 POUNDS. SEE GENERAL NOTE "E" ON PAGE 2.

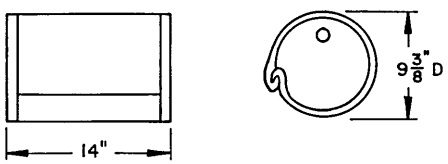
STORAGE IN 81'-2" MAGAZINE

ITEM	QUANTITY	EXPLOSIVE WT
DRUM--------	10,846 - - - - - - -	271,150 LBS



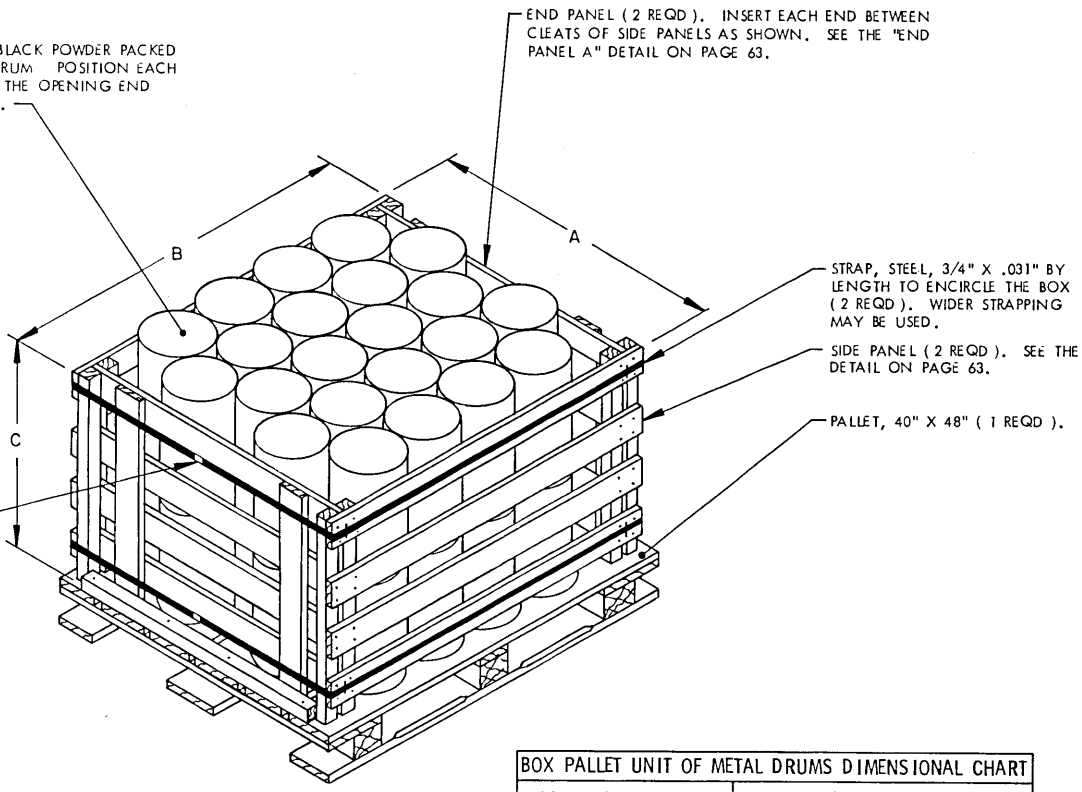
PARTIAL SIDE VIEW OF A ROW

THE ABOVE VIEW DEPICTS THE NESTING OF DRUMS. THE NUMBERS INDICATE THE QUANTITY OF DRUMS PER LAYER IN A ROW.



DRUM DETAIL

SEE SPECIAL NOTE 7.

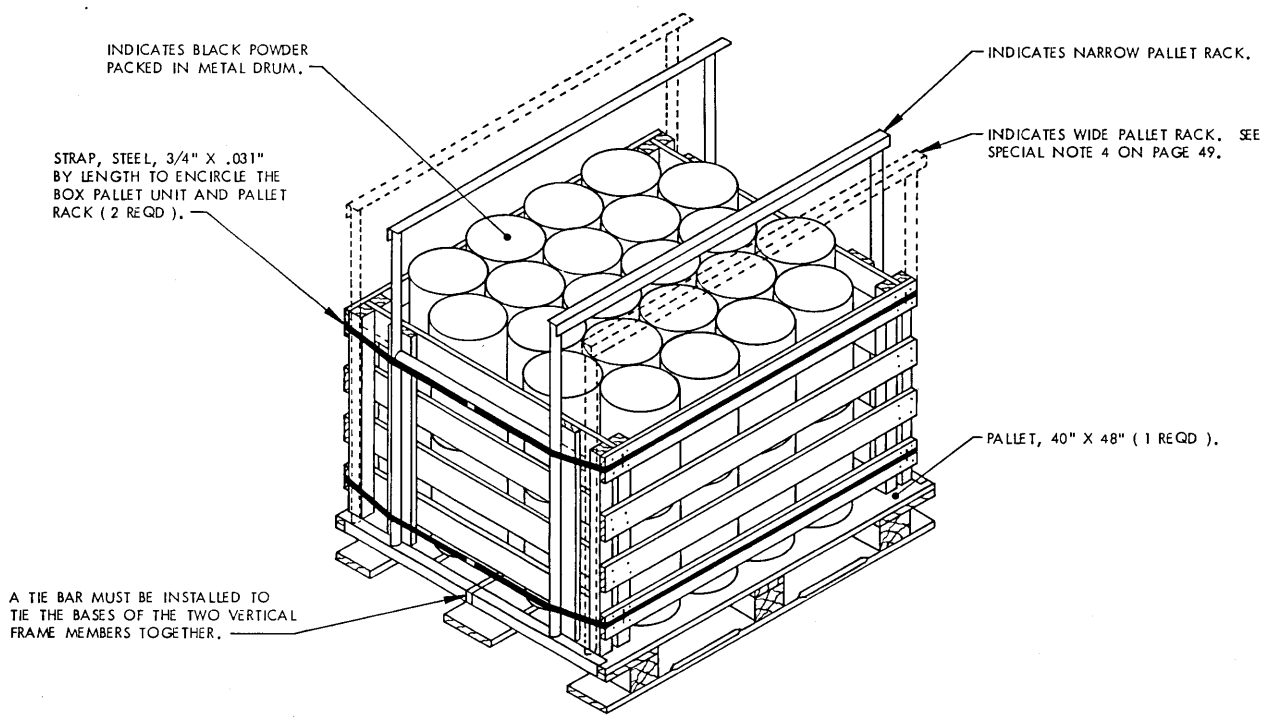


BOX PALLET UNIT

44 DRUMS 8-1/4" D X 13-3/4" H (2 LAYERS)

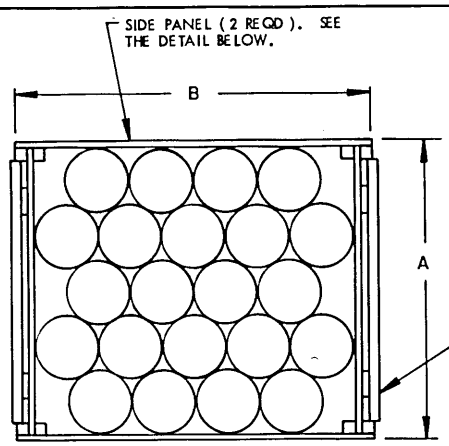
BOX PALLET UNIT OF METAL DRUMS DIMENSIONAL CHART

DRUM SIZE	DIMENSION		
	A	B	C
8-1/4" D X 13-3/4" H	39"	46-1/2"	26"
8" D X 16" H	38"	45-1/4"	30-1/2"
6" D X 14" H	39-1/2"	45-3/4"	27"
6" D X 7-1/2" H	39-1/2"	45-3/4"	28"



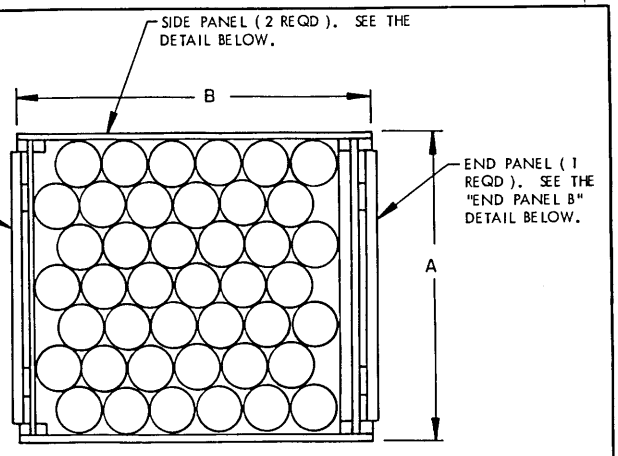
APPLICATION OF PALLET RACK

A NARROW PALLET RACK IS SHOWN. THE DOTTED LINES INDICATE A WIDE PALLET RACK. SEE THE SPECIAL NOTES ON PAGE 49 FOR GUIDANCE IN THE USE OF PALLET RACKS.



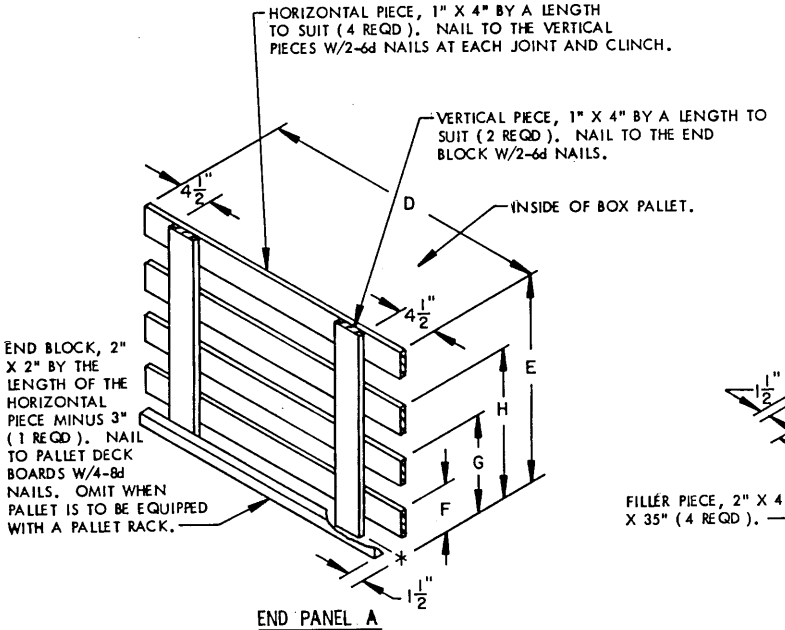
PLAN VIEW A

44 DRUMS 8" D X 16" H (2 LAYERS)



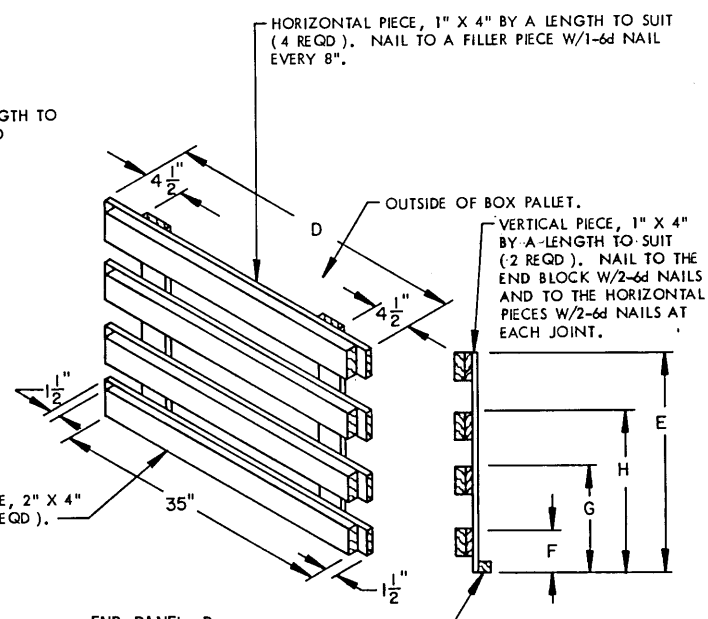
PLAN VIEW B

168 DRUMS 6" D X 7-1/2" H (4 LAYERS)
OR
84 DRUMS 6" D X 14" H (2 LAYERS)



END PANEL A

REFER TO THE "PANEL DIMENSION CHART" AT RIGHT FOR THE DIMENSIONS REPRESENTED BY LETTERS.

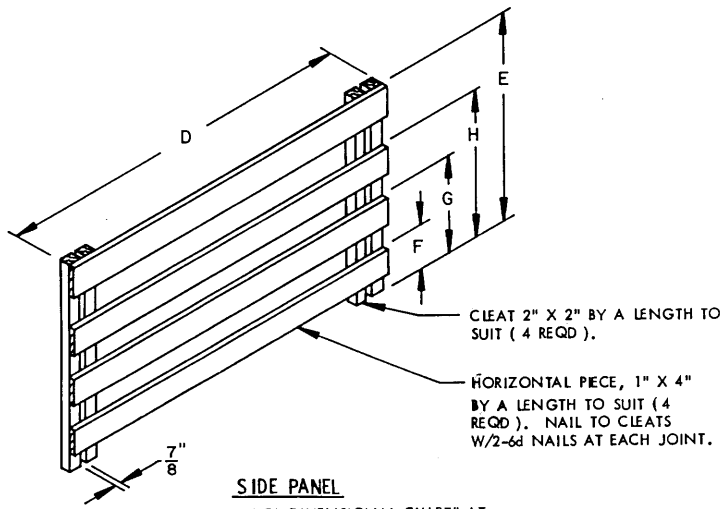


END PANEL B

ONLY 1 REQUIRED FOR THE BOX PALLET UNIT IN PLAN VIEW B.

END VIEW

END BLOCK, 2" X 2" BY THE LENGTH OF THE HORIZONTAL PIECE MINUS 3" (1 REQD). OMIT WHEN PALLET IS TO BE EQUIPPED WITH A PALLET RACK. NAIL TO PALLET DECK BOARDS W/4-8d NAILS.



SIDE PANEL

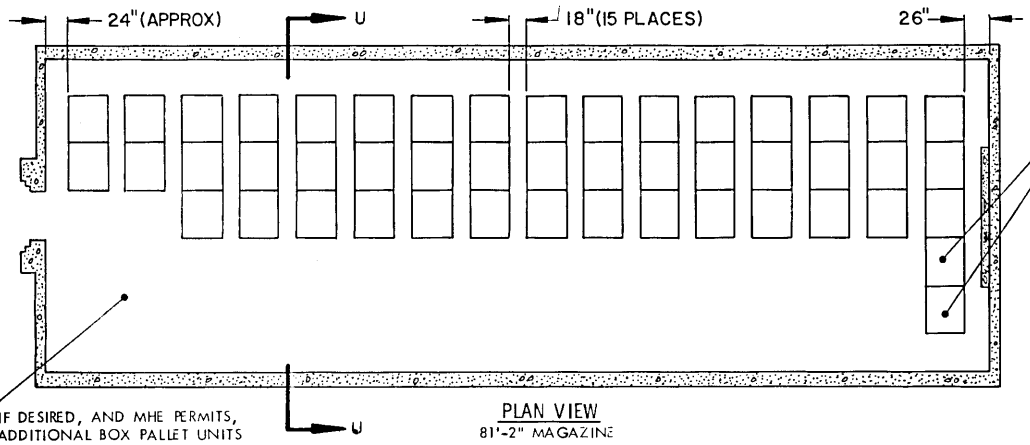
REFER TO THE "PANEL DIMENSIONAL CHART" AT RIGHT FOR THE DIMENSIONS REPRESENTED BY LETTERS.

PANEL DIMENSION CHART

DRUM SIZE	END PANEL DIMENSION				
	D	E	F	G	H
8-1/4" D X 13-3/4" H	37-1/2"	26"	5-3/4"	12-1/4"	18-3/4"
8" D X 16" H	36-1/2"	30-1/2"	5-3/4"	14-1/2"	21"
6" D X 14" H	38"	26-1/2"	5-1/2"	12-1/2"	20-1/2"
6" D X 7-1/2" H	38"	28"	5-1/2"	13"	20-1/2"

DRUM SIZE	SIDE PANEL DIMENSION				
	D	E	F	G	H
8-1/4" D X 13-3/4" H	46-1/2"	26"	5-3/4"	12-1/4"	18-3/4"
8" D X 16" H	45-1/4"	30-1/2"	5-3/4"	14-1/2"	21"
6" D X 14" H	45-3/4"	26-1/2"	5-1/2"	12-1/2"	20-1/2"
6" D X 7-1/2" H	45-3/4"	28"	5-1/2"	13"	20-1/2"

BLACK POWDER (PACKED IN METAL DRUM) (PALLETIZED)

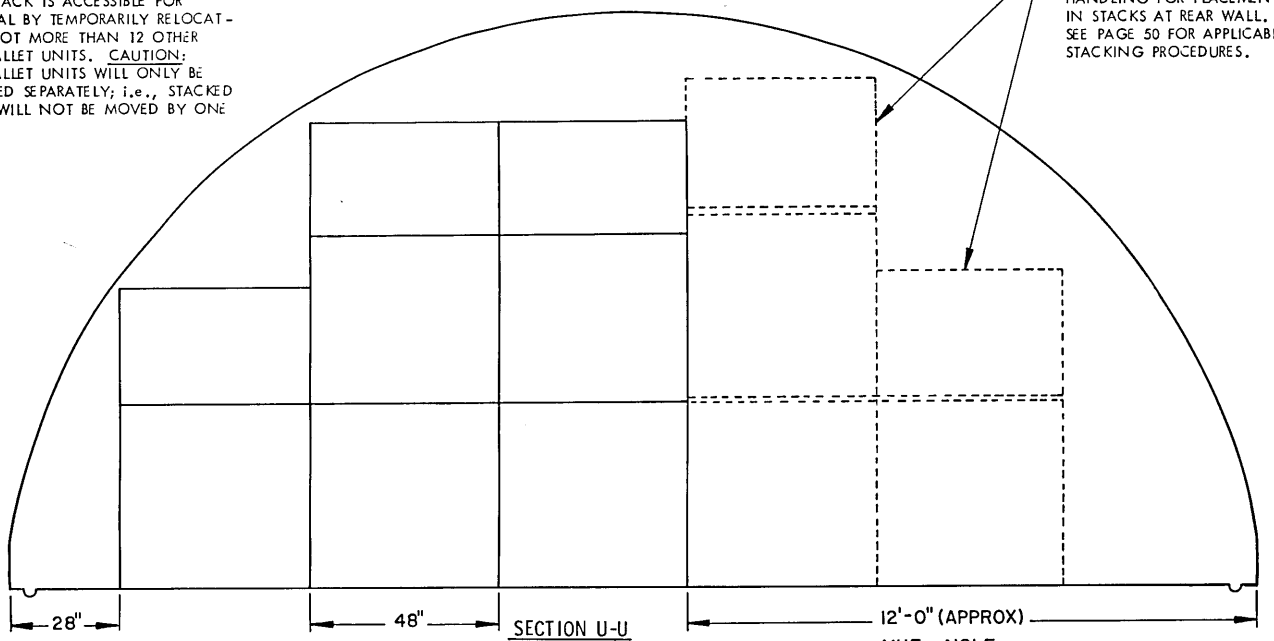


THESE 5 PALLET UNITS MUST BE SIDE-HANDLED FOR PLACEMENT IN THE STACK. SEE THE STACKING DETAIL ON PAGE 50. FOR APPLICABLE PROCEDURES.

IF DESIRED, AND MHE PERMITS, ADDITIONAL BOX PALLET UNITS MAY BE STORED IN THE MHE AISLE, PROVIDING THAT ANY UNIT WITHIN ANY STACK IS ACCESSIBLE FOR REMOVAL BY TEMPORARILY RELOCATING NOT MORE THAN 12 OTHER BOX PALLET UNITS. CAUTION: BOX PALLET UNITS WILL ONLY BE HANDLED SEPARATELY; i.e., STACKED UNITS WILL NOT BE MOVED BY ONE LIFT.

PLAN VIEW
81'-2" MAGAZINE

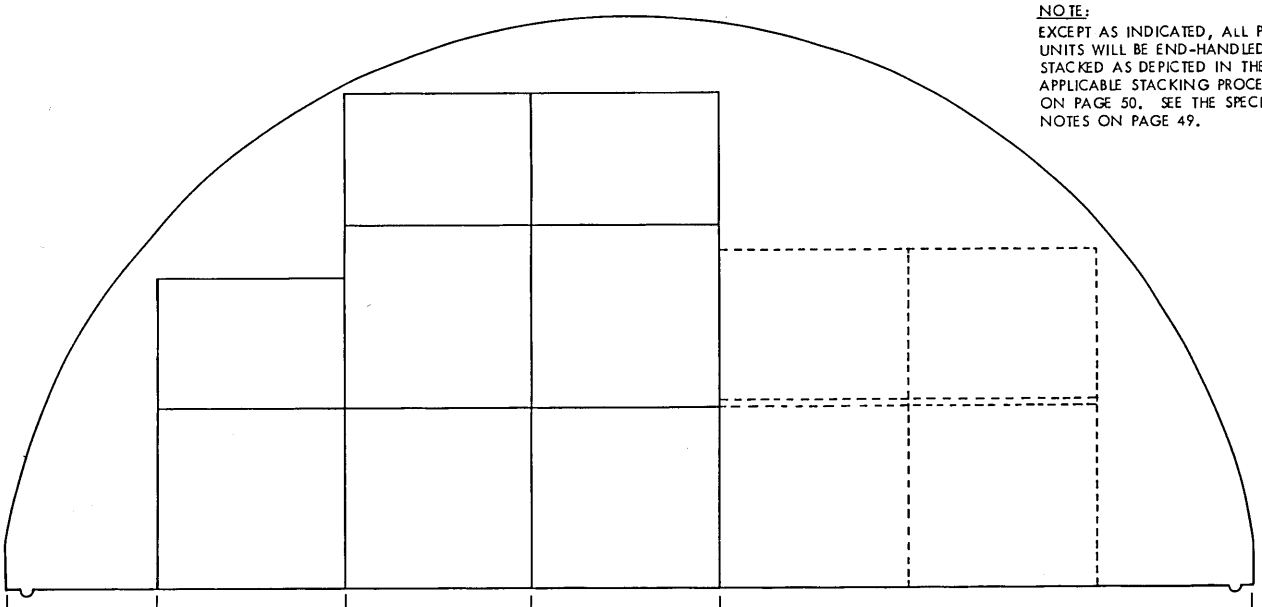
DOTTED LINES INDICATE FIVE PALLET UNITS REQUIRING SIDE-HANDLING FOR PLACEMENT IN STACKS AT REAR WALL. SEE PAGE 50 FOR APPLICABLE STACKING PROCEDURES.



SECTION U-U

BOX PALLET UNIT CONTAINS 8-1/4" D X 13-3/4" H DRUMS.

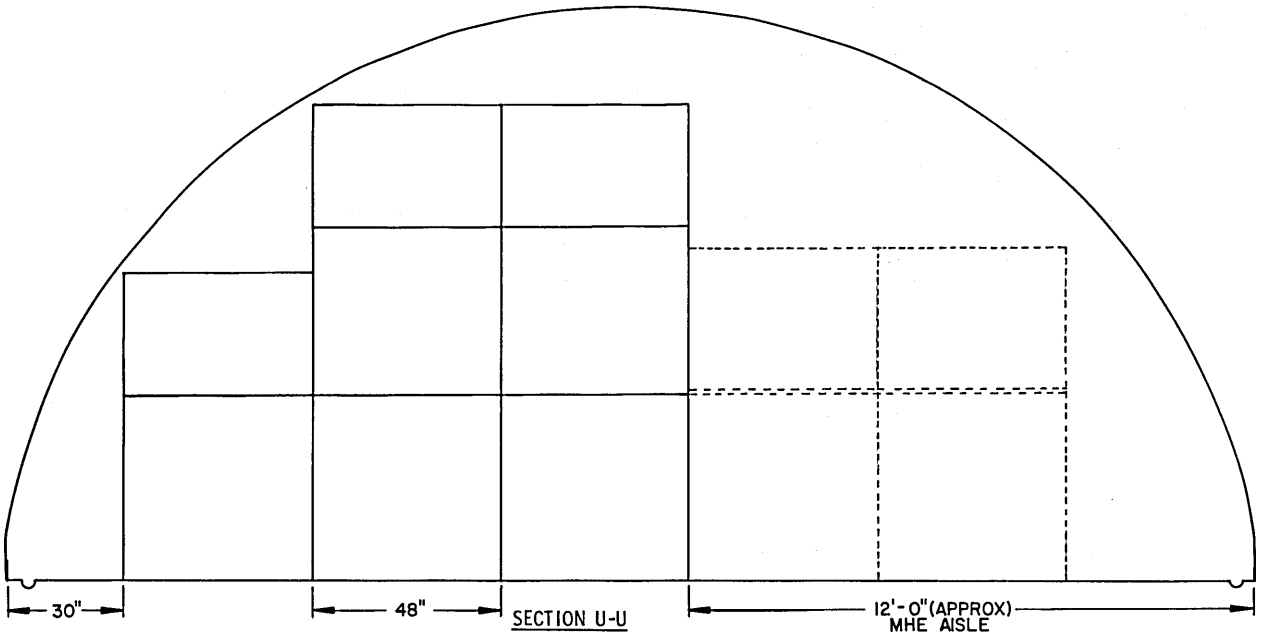
NOTE:
EXCEPT AS INDICATED, ALL PALLET UNITS WILL BE END-HANDLED AND STACKED AS DEPICTED IN THE APPLICABLE STACKING PROCEDURES ON PAGE 50. SEE THE SPECIAL NOTES ON PAGE 49.



SECTION U-U

BOX PALLET UNIT CONTAINS 8" D X 16" H DRUMS.

BLACK POWDER (PACKED IN METAL DRUM) (PALLETIZED)

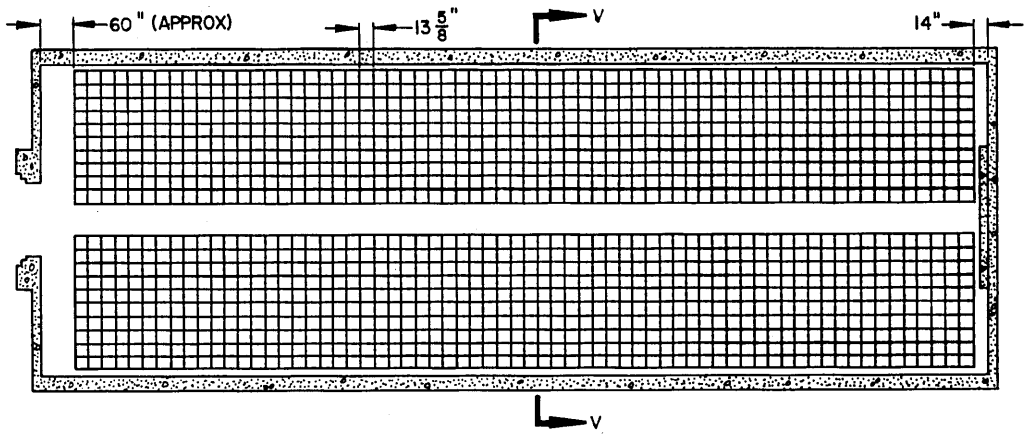


SECTION U-U

BOX PALLET UNIT CONTAINS 6" D X 7-1/2" H DRUMS

SPECIAL NOTES:

1. THE PROCEDURES DEPICTED ON PAGES 62 THROUGH 65 SPECIFICALLY APPLY TO STORAGE OF BLACK POWDER (PACKED IN METAL DRUM) (PALLETIZED) AND USING NARROW-TYPE PALLET RACKS FOR STACKING PALLET UNITS. SEE GENERAL NOTE "R" ON PAGE 2.
2. REFER TO THE SPECIAL NOTES ON PAGE 49 FOR GUIDANCE IN THE USE OF PALLET RACKS.
3. PALLETIZATION OF DRUMS IS SOLELY FOR THE CONVENIENCE OF STORAGE AND WILL NOT BE USED FOR SHIPPING DRUMS.
4. STORAGE AS SHOWN IS BASED ON THE USE OF FRONT LOADING FORKLIFT TRUCKS (MHE). IF A FORKLIFT TRUCK WITH FRONT/SIDE LOADER IS AVAILABLE, ADDITIONAL UNITS MAY BE STORED, PROVIDING THE STORAGE PATTERN IS REVERSED FROM WHAT IS SHOWN.



PLAN VIEW
81'-2" MAGAZINE
(66 STACKS)

SPECIAL NOTES:

1. STORAGE AS SHOWN IS FOR A WOODEN BOX.

   BOX DIMENSIONS --- 13-5/8" LONG BY 13-5/8" WIDE BY 13-5/8" HIGH.
   EXPLOSIVE WEIGHT----50 POUNDS.

2. THE NUMBERS SHOWN IN SECTION V-V INDICATE THE QUANTITY OF BOXES PER LAYER IN A STACK.

3. INTERMEDIATE DUNNAGE MUST BE USED ON EVERY SECOND, FOURTH, SIXTH AND EIGHTH LAYER.

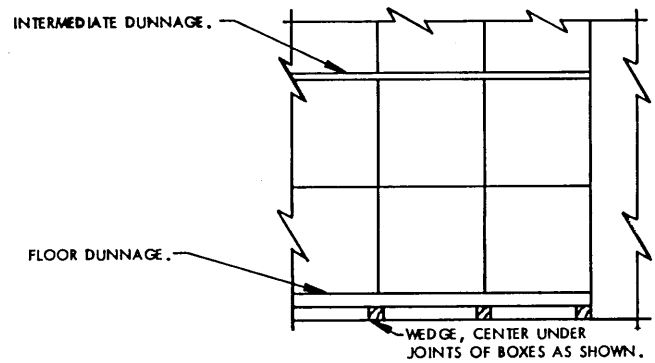
4. BLACK POWDER PACKED IN OTHER SIZE WOODEN BOXES OR IN METAL BOXES MAY BE STORED IN A MANNER SIMILAR TO THAT SHOWN.

STORAGE IN 81'-2" MAGAZINE

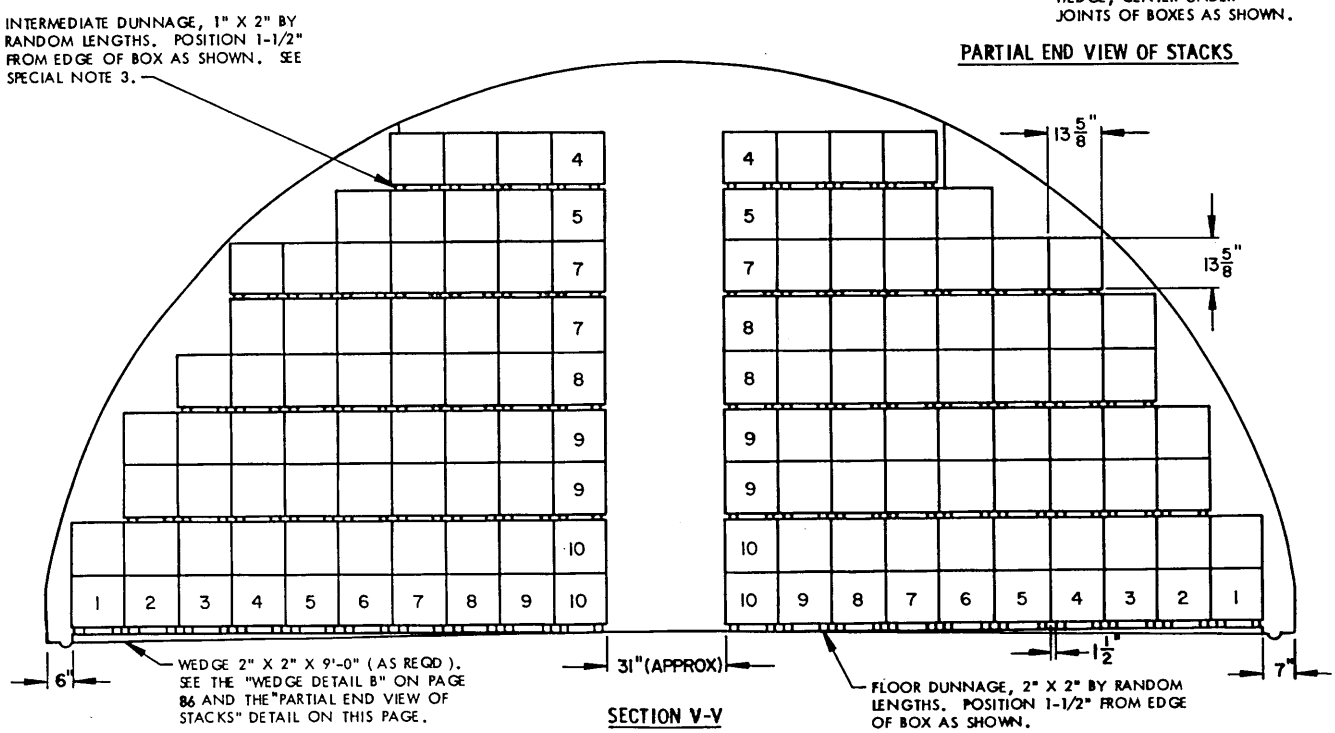
ITEM	QUANTITY	EXPLOSIVE WEIGHT
WOODEN BOXES	9,174	458,700 LBS

SEE GENERAL NOTE "E" ON PAGE 2.

BILL OF MATERIAL (PER STACK)		
LUMBER	LINEAR FEET	BOARD FEET
1" X 2"	128	22
2" X 2"	46	16
WEDGES PER STACK		
LUMBER	LENGTH	NO. REQD
2" X 2"	9'-0"	2

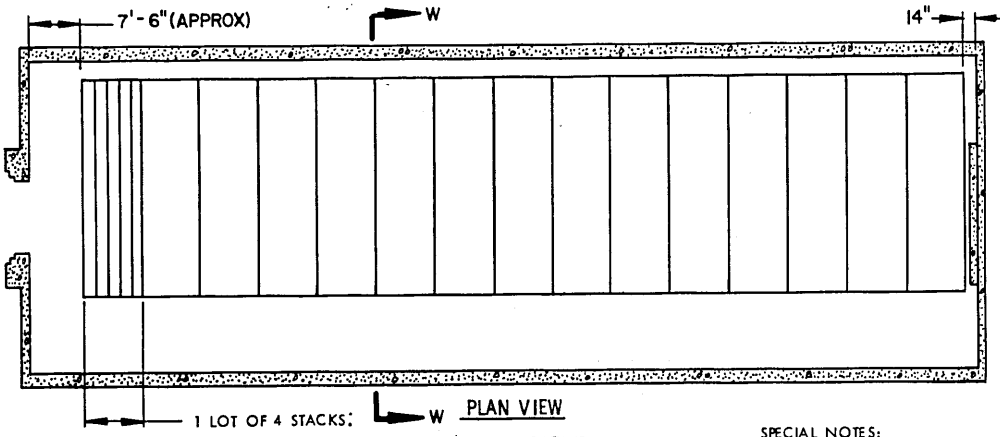


PARTIAL END VIEW OF STACKS



SECTION V-V

139 BOXES PER STACK.



PLAN VIEW

81'-2" MAGAZINE
(60 STACKS)

STORAGE IN 81'-2' MAGAZINE

ITEM	QUANTITY	EXPLOSIVE WEIGHT
DRUM	3,000	150,000 LBS.

SEE GENERAL NOTE "E" ON PAGE 2.

BILL OF MATERIAL (PER STACK)		
LUMBER	LINEAR FEET	BOARD FEET
1" X 4"	86	29
2" X 4"	37	25
WEDGES		
LUMBER	LENGTH	NO. REQD
2" X 4"	6'-0"	2
2" X 4"	9'-0"	2

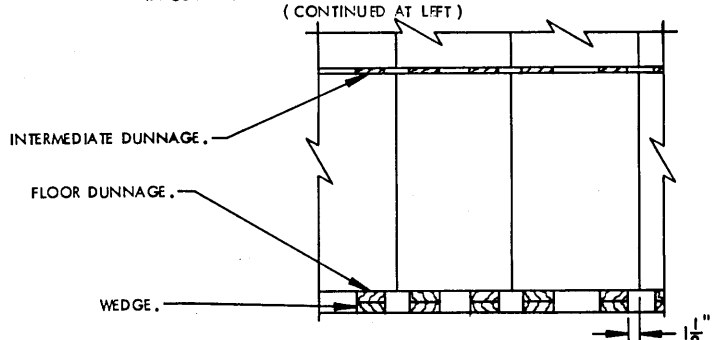
SPECIAL NOTES:

1. STORAGE AS SHOWN IS FOR A FIBERBOARD DRUM.
   DRUM DIAMENSIONS -- 27-1/2" HIGH BY 14-1/2" DIAMETER.
   EXPLOSIVE WEIGHT----50 POUNDS.
2. THE NUMBERS SHOWN IN SECTION"W-W"INDICATE THE QUANTITY OF DRUMS PER LAYER IN A STACK.
3. RANDOM LENGTH MATERIAL, OF NOT LESS THAN 48" LENGTHS MAY BE USED FOR THE 1" X 4" INTERMEDIATE DUNNAGE.
   NOTE: JOINTS IN INTERMEDIATE DUNNAGE MUST BE STAGGERED BOTH HORIZONTALLY AND VERTICALLY.
4. EACH LOT CONSISTS OF 10,000 LBS. (200 DRUMS) FOUR (4) STACKS OF 50 DRUMS.
5. NITROGUANIDINE PACKED IN A 14.5" DIAMETER BY 17.04" HIGH DRUM AND PALLETIZED IN ACCORDANCE WITH NAVAL SEA SYSTEMS COMMAND DRAWING WR-53/827 WILL BE STORED BY USING THE PROCEDURES SHOWN IN US ARMY DARCOM DRAWING 19-48-4118-1-2-3-4-14-22PA1002.

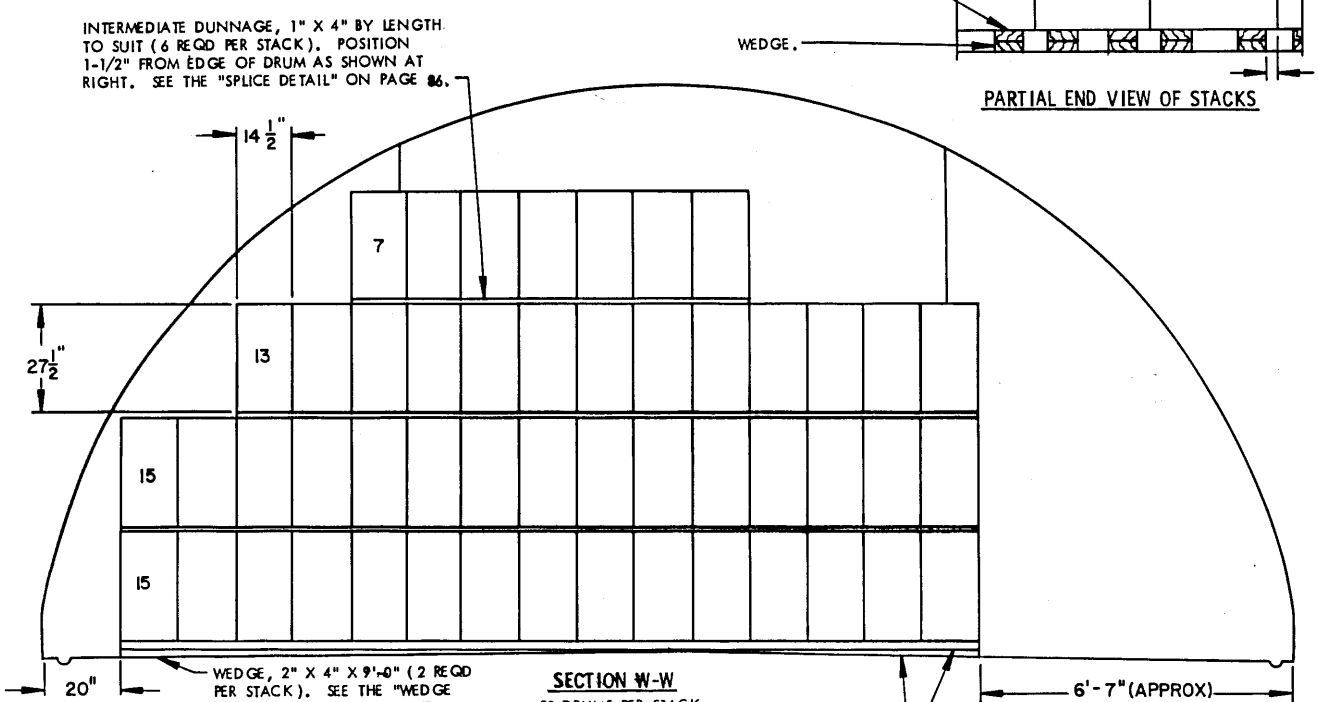
(CONTINUED AT LEFT)

(SPECIAL NOTES CONTINUED)

6. THESE STORAGE PROCEDURES SHOULD ONLY BE USED IN GEOGRAPHICAL AREAS WHICH HAVE LOW HUMIDITY LEVELS. FOR PROCEDURES APPLICABLE TO THE STORAGE OF NITROGUANIDINE IN GEOGRAPHICAL AREAS HAVING HIGH HUMIDITY, REFER TO THE PROCEDURES ON PAGE 84.



PARTIAL END VIEW OF STACKS



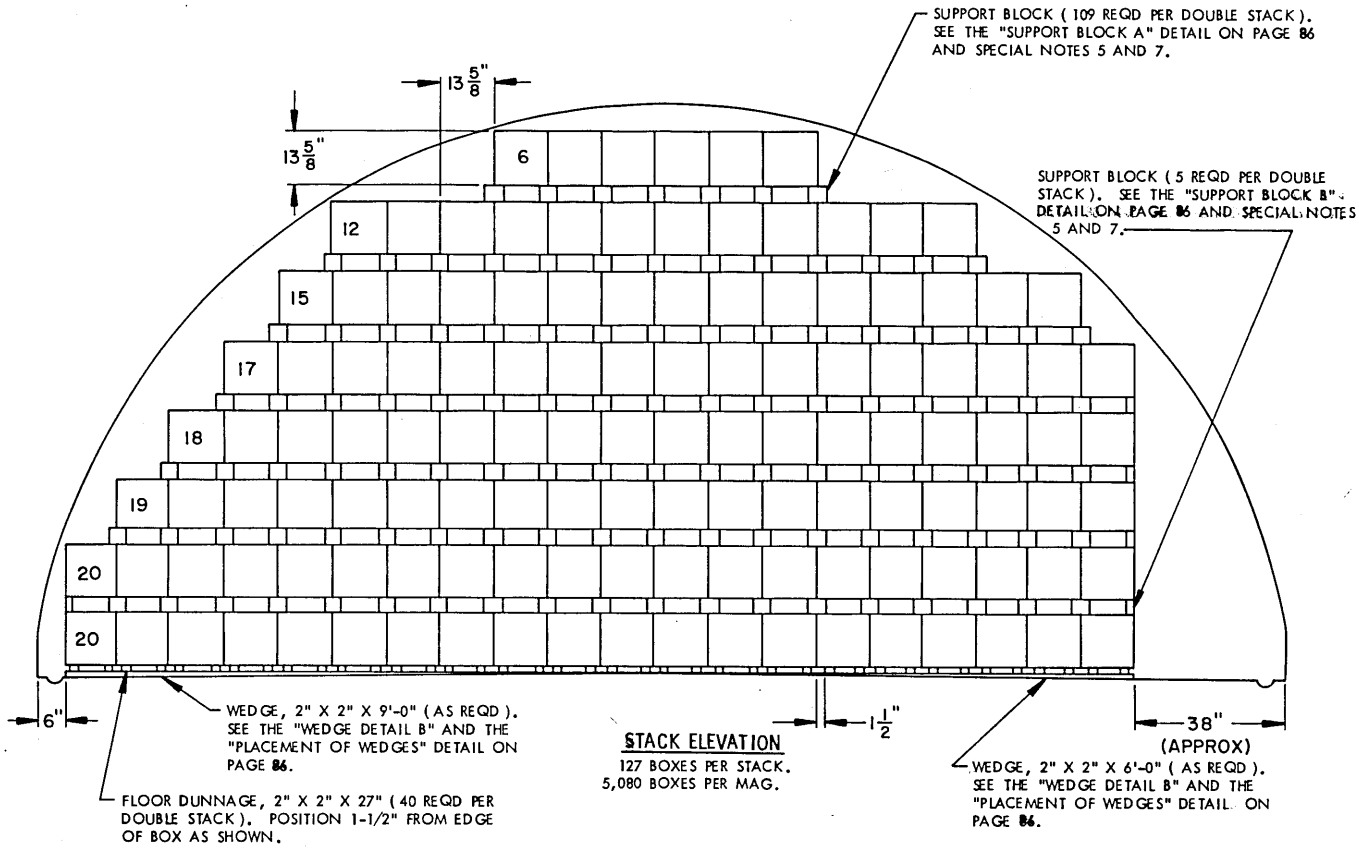
SECTION W-W

50 DRUMS PER STACK.
SEE SPECIAL NOTE 4.

WEDGE, 2" X 4" X 6'-0" (2 REQD PER STACK). SEE THE "WEDGE DETAIL A" ON PAGE 86 AND THE "PARTIAL END VIEW OF STACK" DETAIL ABOVE.

STORAGE METHOD A

NITROGUANIDINE (PACKED IN FIBERBOARD DRUMS)



STACK ELEVATION

127 BOXES PER STACK.
5,080 BOXES PER MAG.

BILL OF MATERIAL (PER DOUBLE STACK)		
LUMBER	LINEAR FEET	BOARD FEET
2" X 2"	90	30
2" X 4"	12	8
4" X 4"	246	328
WEDGES PER DOUBLE STACK		
LUMBER	LENGTH	NO. REQD
2" X 2"	6'-0"	3
2" X 2"	9'-0"	3

SPECIAL NOTES:

1. STORAGE AS SHOWN IS FOR THE M18 WOODEN BOX.

   BOX DIMENSIONS ---13-5/8" LONG BY 13-5/8" WIDE BY 13-5/8" HIGH.

2. SEE THE "TYPICAL PLAN VIEW B" ON PAGE 4.

3. THE NUMBERS SHOWN IN THE STACK ELEVATION INDICATE THE QUANTITY OF BOXES PER LAYER IN A STACK.

4. STORE IN DOUBLE STACKS FOR BETTER STABILITY. SEE THE "PARTIAL PLAN VIEW OF DOUBLE STACK" ON THIS PAGE.

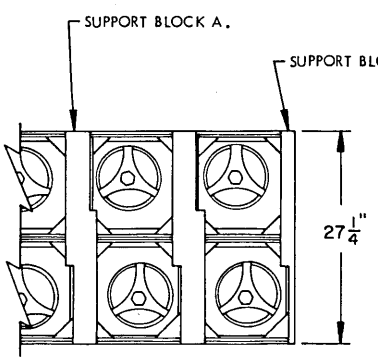
5. SUPPORT BLOCK A AND SUPPORT BLOCK B MAY BE FABRICATED FROM 1" X 4" AND 2" X 4" MATERIAL.

6. THE BOXES MUST BE POSITIONED WITH THE LIDS NEAREST TO THE LATERAL AISLES.

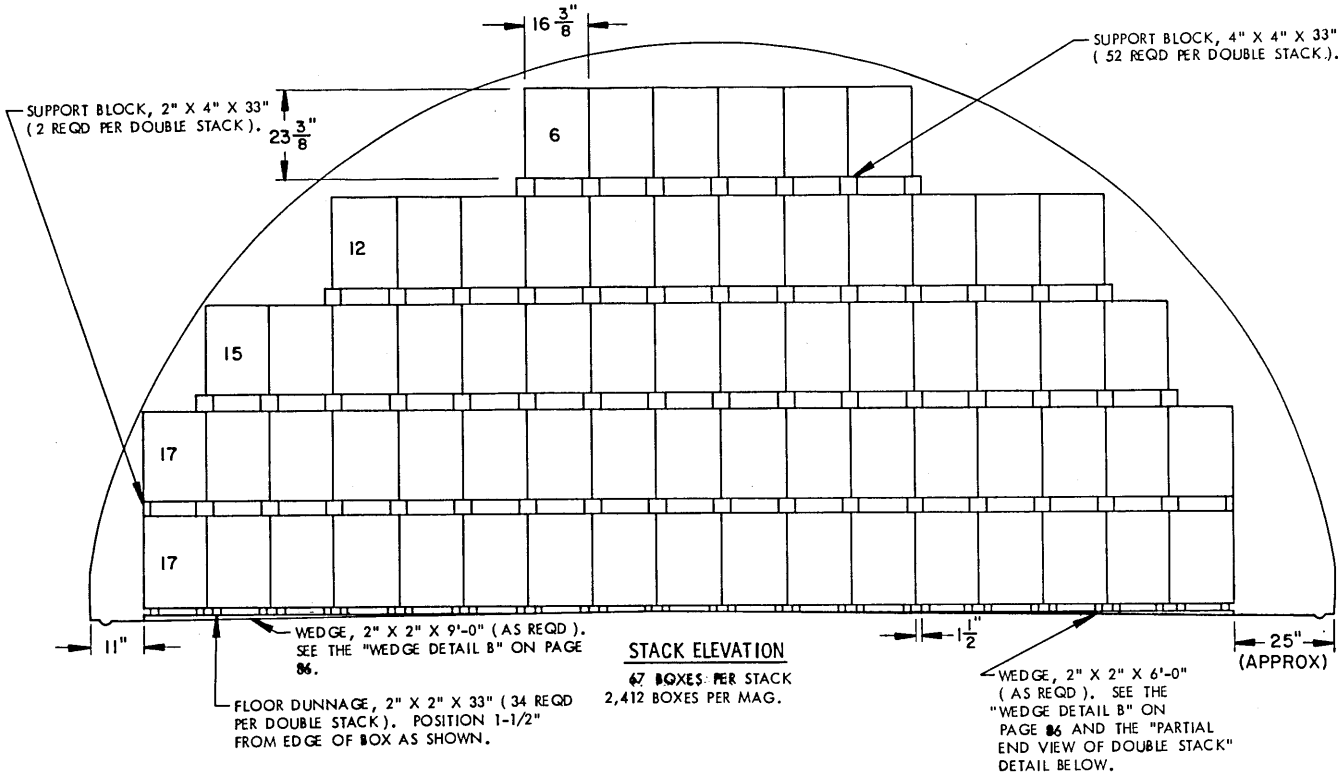
7. SUPPORT BLOCK A AND SUPPORT BLOCK B MUST BE POSITIONED AS SHOWN IN THE "PLAN VIEW OF PARTIAL STACK" TO PERMIT REMOVAL OF LID.

8. THE METHOD OF STORAGE SHOWN PERMITS INSPECTION OF INDIVIDUAL BOXES.

9. THE EXPLOSIVE WEIGHT FOR THE M18 WOODEN BOX IS 50 POUNDS: THE EXPLOSIVE WEIGHT FOR THE STACK ELEVATION SHOWN ABOVE WILL BE 6,350 POUNDS. THE EXPLOSIVE WEIGHT FOR THE MAGAZINE WILL BE 254,000 POUNDS. THERE WILL BE APPROXIMATELY 68" OF SPACE AT THE FRONT OF THE MAGAZINE. NOTE THAT ONE ADDITIONAL DOUBLE STACK MAY BE STORED PROVIDED THERE IS AT LEAST 64" FROM THE TWENTIETH DOUBLE STACK TO THE FRONT WALL. THIS WILL ALLOW FOR AN 18" INSPECTION AISLE AT THE FRONT OF THE MAGAZINE. THE EXPLOSIVE WEIGHT FOR THE MAGAZINE WILL THEN BE 260,350 POUNDS. SEE GENERAL NOTE "E" ON PAGE 2.



PARTIAL PLAN VIEW OF DOUBLE STACK



STACK ELEVATION

67 BOXES PER STACK
2,412 BOXES PER MAG.

BILL OF MATERIAL (PER DOUBLE STACK)		
LUMBER	LINEAR FEET	BOARD FEET
2" X 2"	94	32
2" X 4"	6	4
4" X 4"	143	191
WEDGES PER DOUBLE STACK		
LUMBER	LENGTH	NO. REQD
2" X 2"	6'-0"	3
2" X 2"	9'-0"	3

SPECIAL NOTES:

1. STORAGE AS SHOWN IS FOR THE M17 WOODEN BOX.

   BOX DIMENSIONS --- 16-3/8" LONG BY 16-3/8" WIDE BY 23-3/8" HIGH.

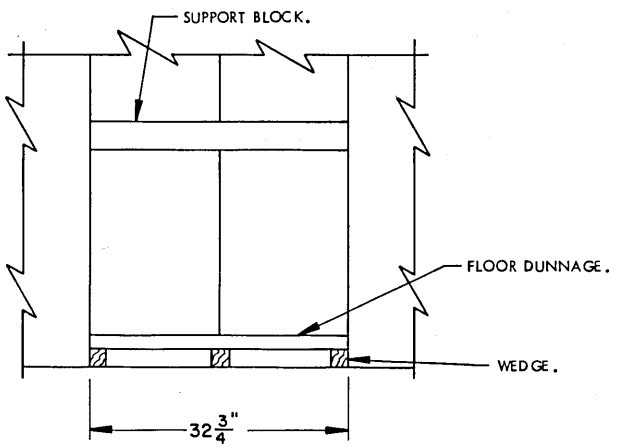
2. SEE THE "TYPICAL PLAN VIEW B" ON PAGE 4.

3. THE NUMBERS SHOWN IN THE STACK ELEVATION INDICATE THE QUANTITY OF BOXES PER LAYER IN A STACK.

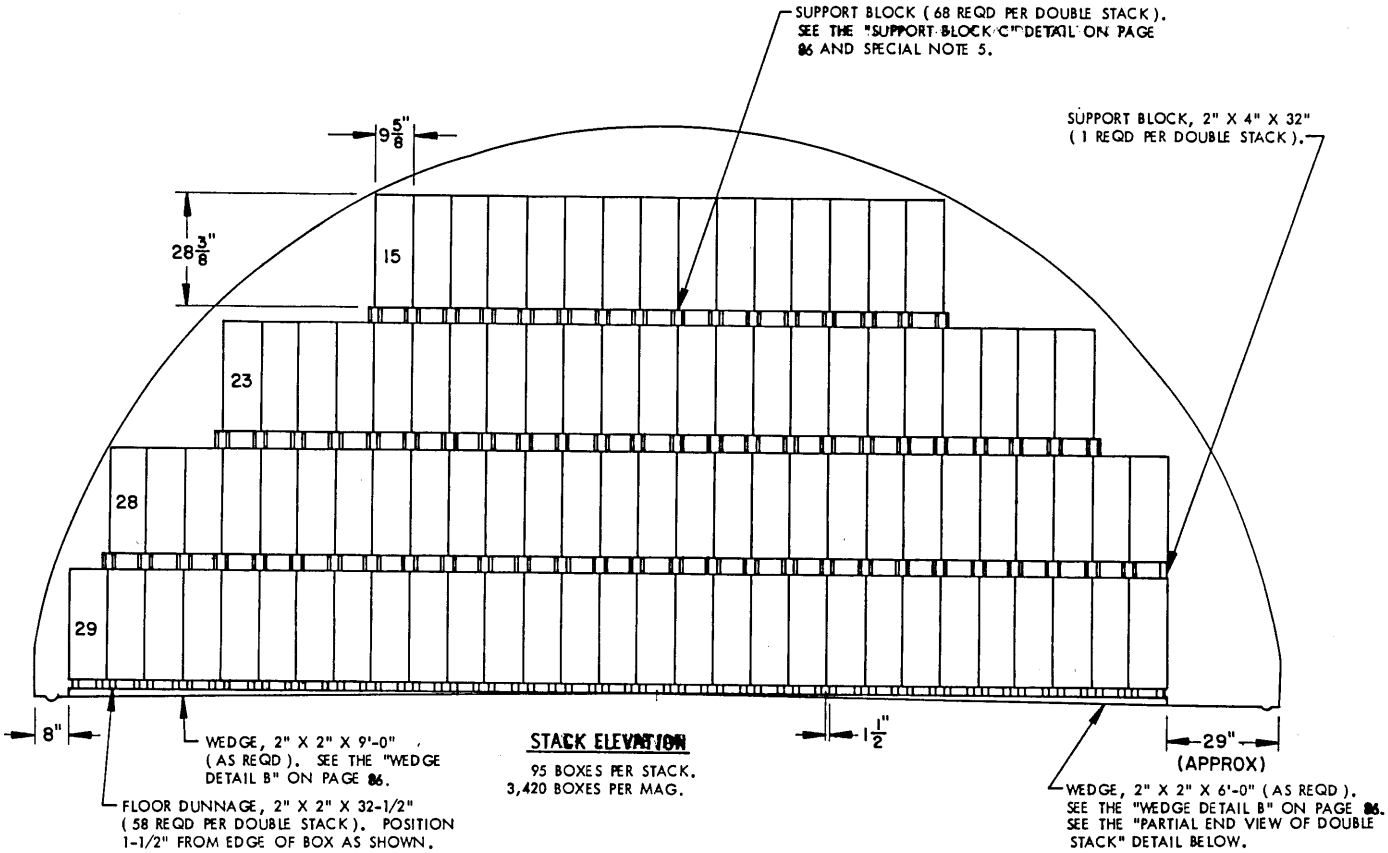
4. STORE IN DOUBLE STACKS FOR BETTER STABILITY. SEE THE "PARTIAL END VIEW OF DOUBLE STACK" ON THIS PAGE.

5. THE METHOD OF STORAGE SHOWN PERMITS INSPECTION OF INDIVIDUAL BOXES.

6. THE EXPLOSIVE WEIGHT FOR THE M17 WOODEN BOX IS 100 POUNDS. THE EXPLOSIVE WEIGHT FOR THE STACK ELEVATION SHOWN ABOVE WILL BE 6,700 POUNDS. THE EXPLOSIVE WEIGHT FOR THE MAGAZINE WILL BE 241,200 POUNDS. THERE WILL BE APPROXIMATELY 59" OF SPACE AT THE FRONT OF THE MAGAZINE. SEE GENERAL NOTE "E" ON PAGE 2.



PARTIAL END VIEW OF DOUBLE STACK



STACK ELEVATION

95 BOXES PER STACK.
3,420 BOXES PER MAG.

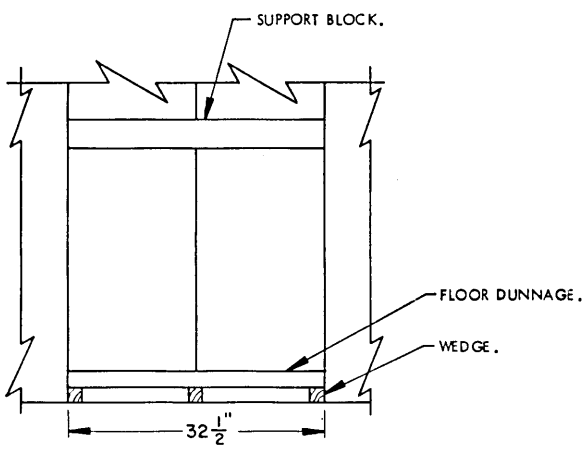
BILL OF MATERIAL (PER DOUBLE STACK)		
LUMBER	LINEAR FEET	BOARD FEET
2" X 2"	158	53
2" X 4"	3	2
4" X 4"	182	243
WEDGES PER DOUBLE STACK		
LUMBER	LENGTH	NO. REQD
2" X 2"	6'-0"	3
2" X 2"	9'-0"	3

SPECIAL NOTES:

1. STORAGE AS SHOWN IS FOR THE M2 AND MK VII STEEL BOX.

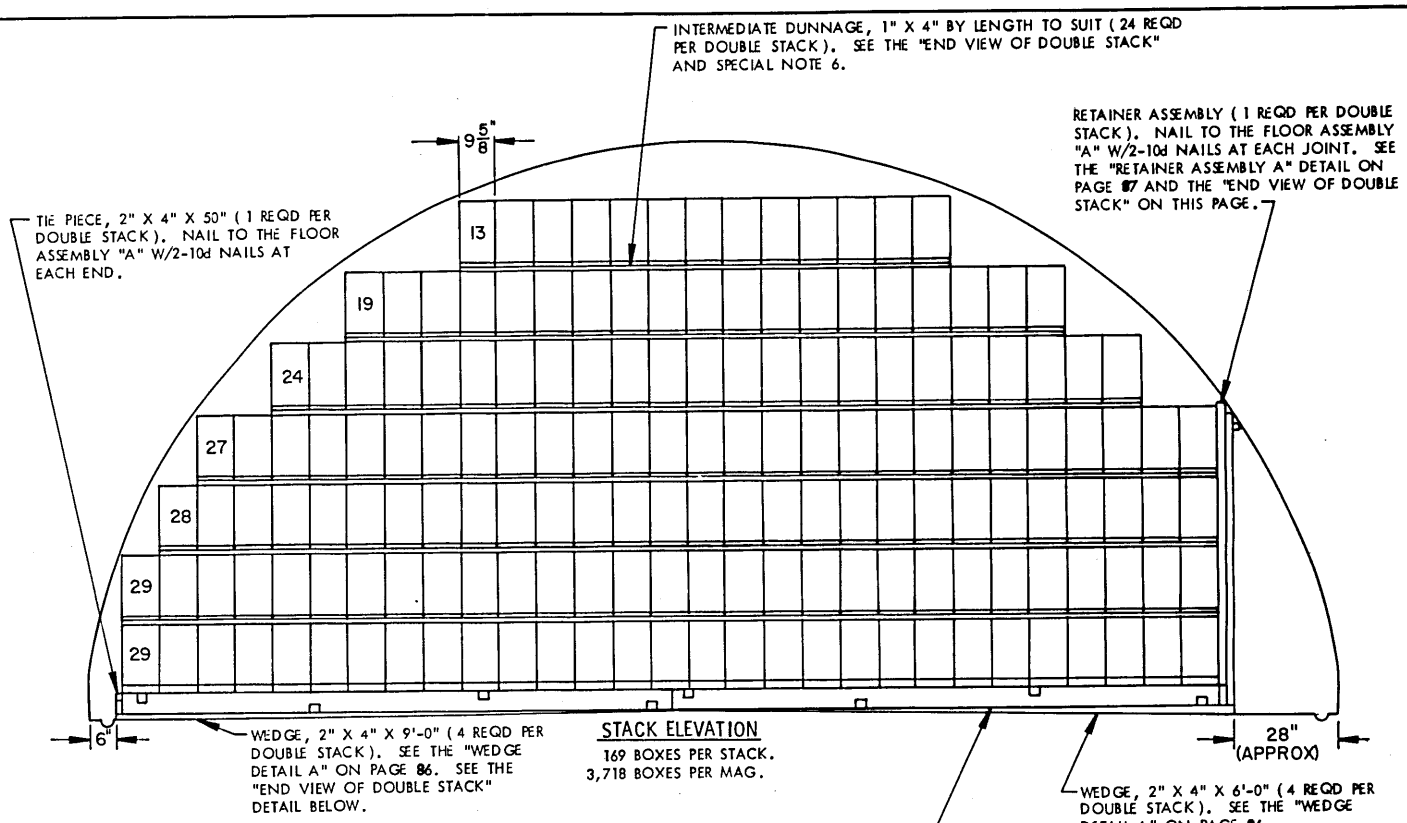
   BOX DIMENSIONS ---16-1/4" LONG BY 9-5/8" WIDE BY 28-3/8" HIGH.

2. SEE THE "TYPICAL PLAN VIEW B" ON PAGE 4.
3. THE NUMBERS SHOWN IN THE STACK ELEVATION INDICATE THE QUANTITY OF BOXES PER LAYER IN A STACK.
4. STORE IN DOUBLE STACKS FOR BETTER STABILITY. SEE THE "PARTIAL END VIEW OF DOUBLE STACK" ON THIS PAGE.
5. SUPPORT BLOCK C MAY BE FABRICATED FROM 1" X 4" AND 2" X 4" MATERIAL.
6. THE METHOD OF STORAGE SHOWN PERMITS INSPECTION OF INDIVIDUAL BOXES.
7. THE EXPLOSIVE WEIGHT FOR THE M2 AND MK VII STEEL BOX IS 110 POUNDS. THE EXPLOSIVE WEIGHT FOR THE STACK ELEVATION SHOWN ABOVE WILL BE 10,450 POUNDS. THE EXPLOSIVE WEIGHT FOR THE MAGAZINE WILL BE 376,200 POUNDS. THERE WILL BE APPROXIMATELY 64" OF SPACE AT THE FRONT OF THE MAGAZINE. SEE GENERAL NOTE "E" ON PAGE 2.
8. BOXES MAY BE STACKED TO ALLOW EASE OF ACCESS FOR INSPECTION BASED ON OPERATIONAL AND STORAGE CONDITIONS. THE SELECTION OF A STORAGE PROCEDURE FROM THAT DEPICTED ON THIS PAGE, ON PAGE 71 OR ON PAGE 89 IS THE OPTION OF THE STORING ACTIVITY.

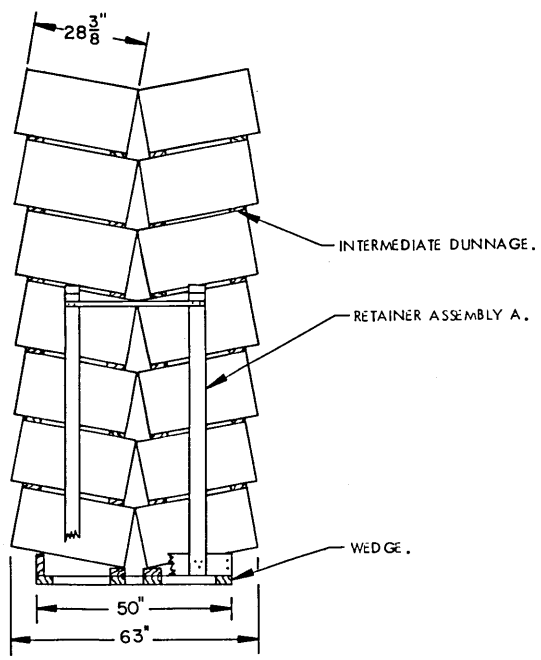


PARTIAL END VIEW OF DOUBLE STACK

STORAGE METHOD A
POWDER, PROPELLANT (PACKED IN STEEL BOX, M2 AND MK VII)



BILL OF MATERIAL (PER DOUBLE STACK)		
LUMBER	LINEAR FEET	BOARD FEET
1" X 4"	450	150
2" X 2"	3	1
2" X 4"	73	49
2" X 6"	78	78
NAILS	NO. REQD	POUNDS
10d (3")	66	1-1/4
WEDGES PER DOUBLE STACK		
LUMBER	LENGTH	NO. REQD
2" X 4"	6'-0"	4
2" X 4"	9'-0"	4



END VIEW OF DOUBLE STACK

SPECIAL NOTES:

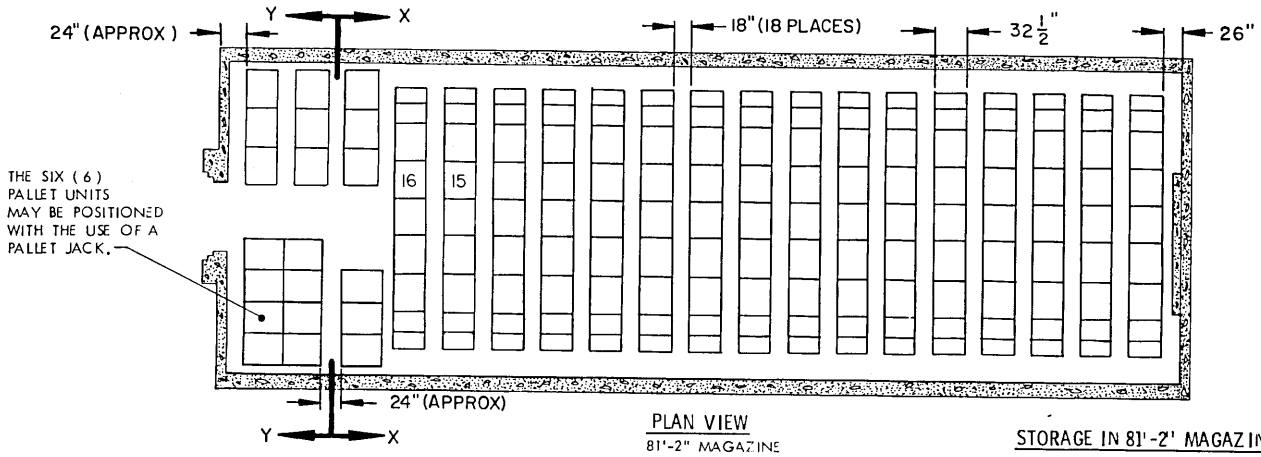
1. STORAGE AS SHOWN IS FOR THE M2 AND MK VII STEEL BOX.

   BOX DIMENSIONS ---- 16-1/4" LONG BY 9-5/8" WIDE BY 28-3/8" HIGH.

2. SEE THE "TYPICAL PLAN VIEW B" ON PAGE 4.
3. THE NUMBERS SHOWN IN THE STACK ELEVATION INDICATE THE QUANTITY OF BOXES PER LAYER IN A STACK.
4. BOXES MUST BE STORED IN DOUBLE STACKS AS SHOWN.
5. PRIOR TO PLACING BULK PROPELLANT IN ANGULAR STORAGE AS SHOWN, TRIAL BOXES SHOULD BE PLACED IN TYPICAL ANGLE STORAGE AND THE COVER REMOVED TO ACTUALLY DETERMINE THAT THE ANGLE OF FLOW OF THE CONTAINED PROPELLANT IS ENOUGH TO PREVENT LEAKAGE WHEN FUTURE TEST PAPERS ARE INSERTED.
6. NOTE: JOINTS IN THE INTERMEDIATE DUNNAGE MUST BE STAGGERED BOTH HORIZONTALLY AND VERTICALLY.
7. NOTE: THE RETAINER ASSEMBLY MUST CONTACT THE MAGAZINE WALL FOR SUPPORT.
8. THE METHOD OF STORAGE SHOWN PERMITS INSPECTION OF INDIVIDUAL BOXES.
9. THE EXPLOSIVE WEIGHT FOR THE M2 AND MK VII STEEL BOX IS 110 POUNDS. THE EXPLOSIVE WEIGHT FOR THE STACK ELEVATION SHOWN ABOVE WILL BE 18,590 POUNDS. THE EXPLOSIVE WEIGHT FOR THE MAGAZINE WILL BE 408,980 POUNDS. THERE WILL BE APPROXIMATELY 6'-10" OF SPACE AT THE FRONT OF THE MAGAZINE. SEE GENERAL NOTE "E" ON PAGE 2.
10. BOXES MAY BE STACKED TO ALLOW EASE OF ACCESS FOR INSPECTION BASED ON OPERATIONAL AND STORAGE CONDITIONS. THE SELECTION OF A STORAGE PROCEDURE FROM THAT DEPICTED ON PAGE 70, ON THIS PAGE, OR ON PAGE 89 IS THE OPTION OF THE STORING ACTIVITY.

STORAGE METHOD B

POWDER, PROPELLANT (PACKED IN STEEL BOX, M2 AND MK VII)

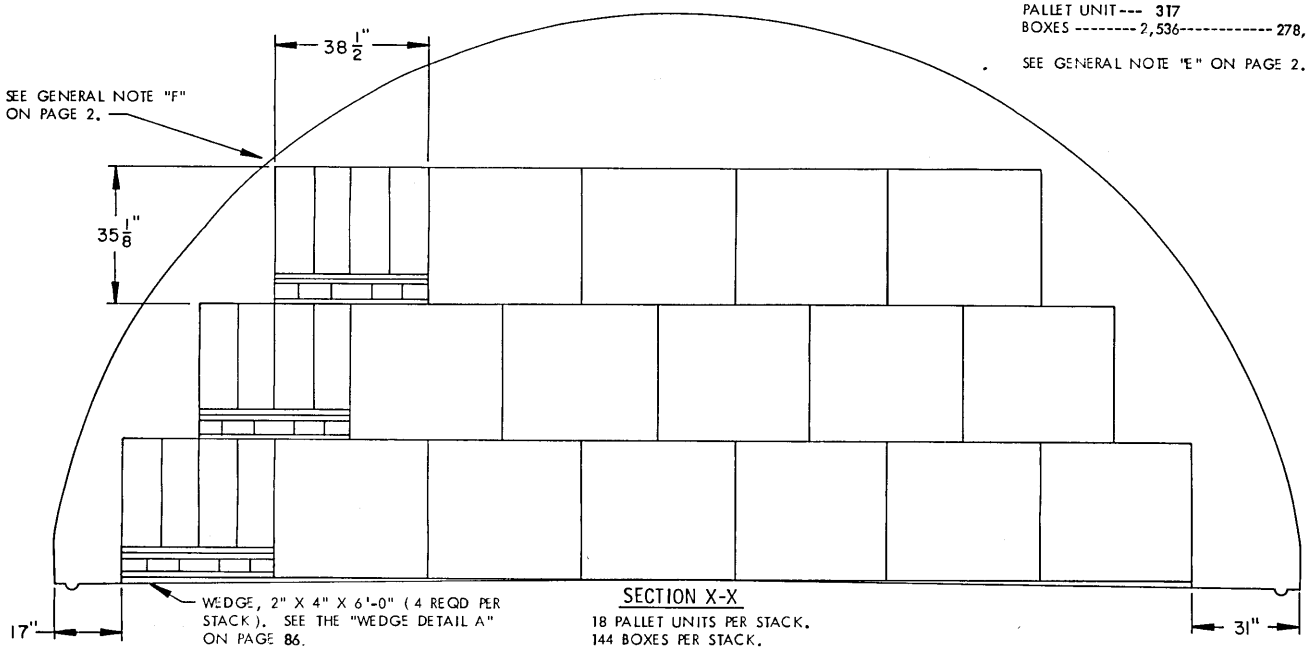


PLAN VIEW
81'-2" MAGAZINE

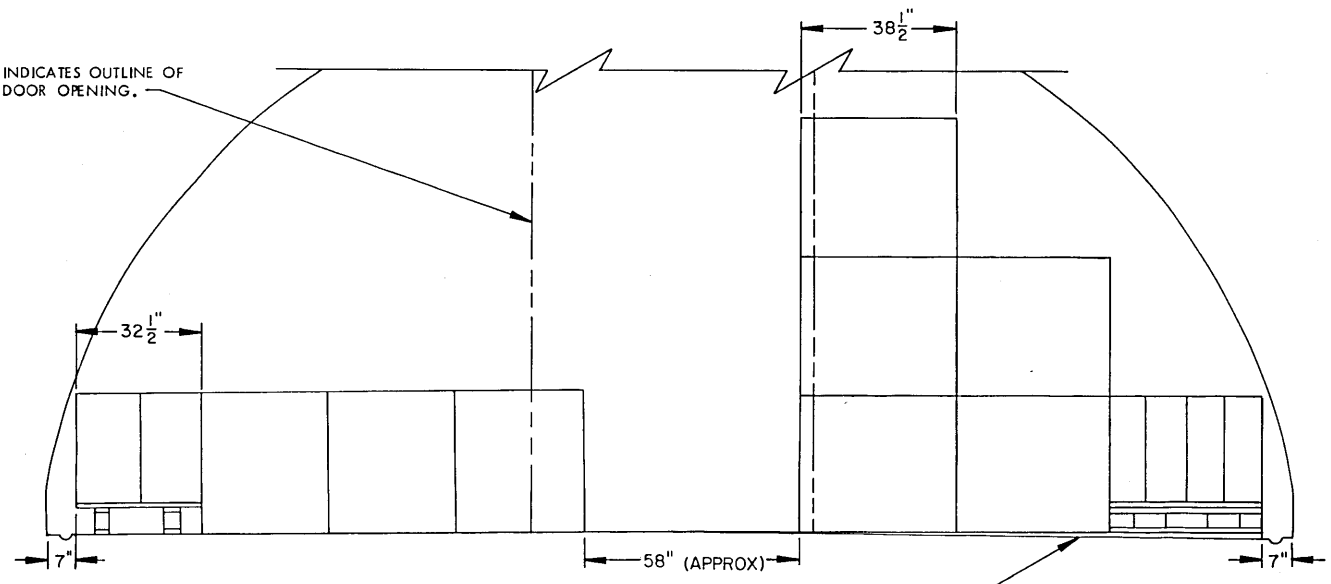
STORAGE IN 81'-2' MAGAZINE

ITEM	QUANTITY	EXPLOSIVE WEIGHT
PALLET UNIT---	317	
BOXES --------	2,536	---------- 278,960 LBS.

SEE GENERAL NOTE "E" ON PAGE 2.



SECTION X-X
18 PALLET UNITS PER STACK.
144 BOXES PER STACK.



SECTION Y-Y

POWDER PROPELLANT (PACKED IN STEEL BOX, M2 AND MK VII) (PALLETIZED)

SPECIAL NOTES:

1. STORAGE AS SHOWN IS FOR THE M2 AND MK VII STEEL BOX (PALLETIZED).

   PALLET UNIT DIMENSIONS --- 38-1/2" LONG BY 32-1/2" WIDE BY 35-1/8" HIGH.

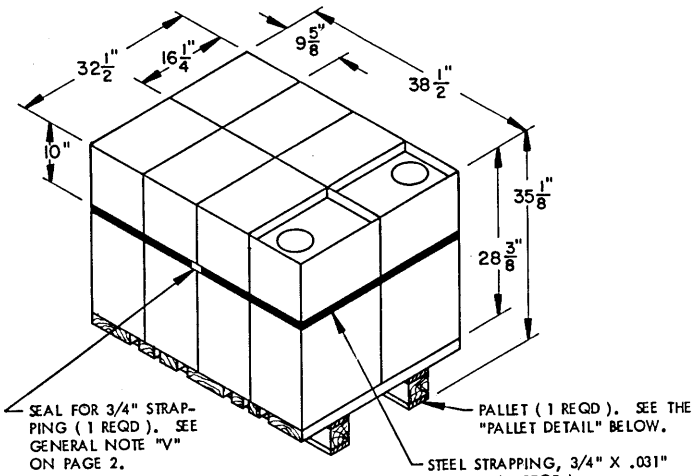
   EXPLOSIVE WEIGHT ---------- 110 POUNDS PER BOX.

2. THE METHOD OF STORAGE SHOWN PERMITS INSPECTION OF INDIVIDUAL BOXES.

3. SMOKELESS POWDER IN PACKING BOX MK 7 AND MODS, PALLETIZED IN ACCORDANCE WITH NAVAL SEA SYSTEMS COMMAND DRAWING WR-53/724 WILL BE STORED BY USING THE PROCEDURES SHOWN IN US ARMY DARCOM DRAWING 19-48-4118-1-2-3-4-14-22PA1002.

4. PROPELLANT GRAIN MK43 MOD O IN PALLET CRATE MK2 MOD O UNITIZED IN ACCORDANCE WITH WR-53/709, PROPELLANT GRAIN MK49 AND MODS IN PALLET CRATE MK4 MOD O (WR-53/505) AND PROPELLANT GRAIN MK88 MOD O (WR-53/845) WILL BE STORED BY USING THE PROCEDURES SHOWN IN US ARMY DARCOM DRAWING 19-48-4125-1-2-3-4-14-22PA1003.

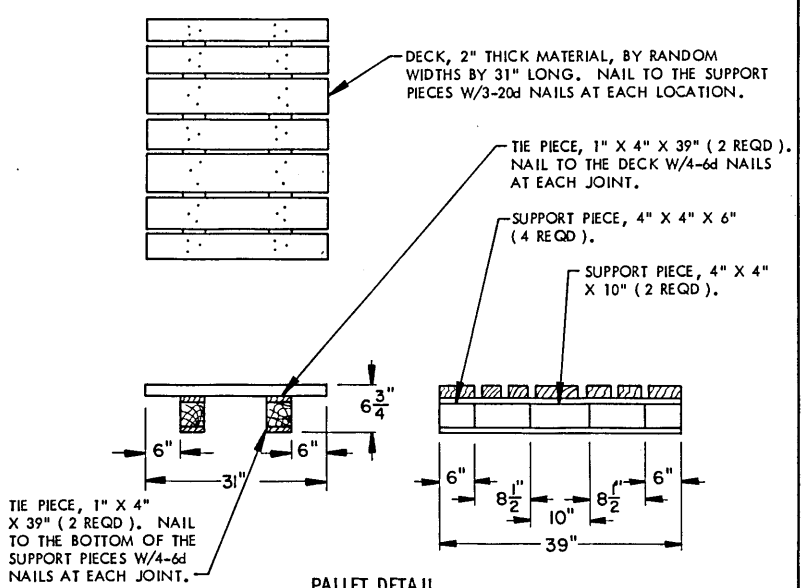
5. PALLETIZATION OF BOXES IS SOLELY FOR THE CONVENIENCE OF STORAGE AND WILL NOT BE USED FOR SHIPPING BOXES.



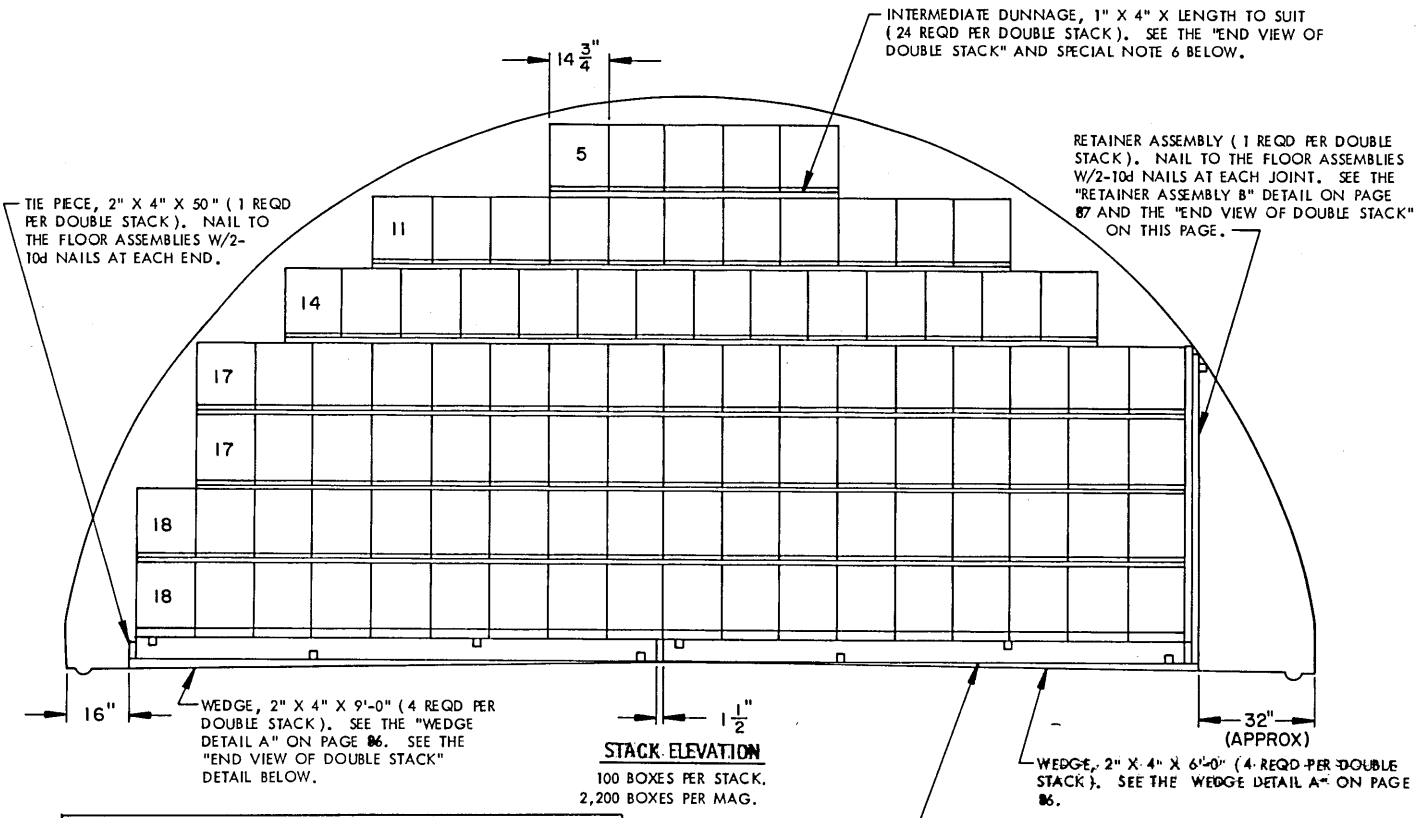
PALLETIZED BOXES

EIGHT (8) BOXES PER PALLET.

BILL OF MATERIAL (PER PALLET)		
LUMBER	LINEAR FEET	BOARD FEET
1" X 4" 2" X 4" 2" X 6" 4" X 4"	13 13 6 4	5 9 6 6
NAILS	NO. REQD	POUNDS
6d (2") 20d (4")	48 18	1/2 3/4
STEEL STRAPPING, 3/4" X .028" ------ 13' REQD --------1 LB SEAL FOR 3/4" STRAPPING ---------- 1 REQD --------NIL		



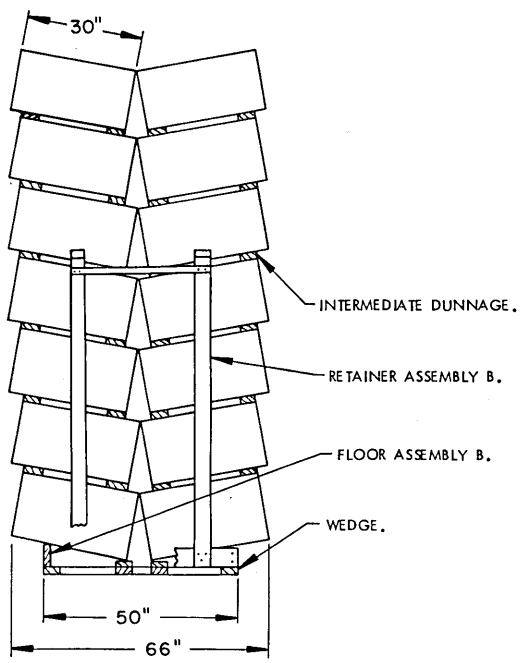
PALLET DETAIL



STACK ELEVATION

100 BOXES PER STACK.
2,200 BOXES PER MAG.

BILL OF MATERIAL (PER DOUBLE STACK)		
LUMBER	LINEAR FEET	BOARD FEET
1" X 4"	404	135
2" X 2"	3	1
2" X 4"	77	52
2" X 6"	76	76
NAILS	NO. REQD	POUNDS
10d (3")	62	1
WEDGES PER DOUBLE STACK		
LUMBER	LENGTH	NO. REQD
2" X 4"	6'-0"	4
2" X 4"	9'-0"	4



END VIEW OF DOUBLE STACK

SPECIAL NOTES:

1. STORAGE AS SHOWN IS FOR THE METAL-LINED WOODEN BOX.

   BOX DIMENSIONS ---- 17-3/4" LONG BY 14-3/4" WIDE BY 30" HIGH.

2. SEE "TYPICAL PLAN VIEW B" ON PAGE 4.

3. THE NUMBERS SHOWN ON THE STACK ELEVATION INDICATE THE QUANTITY OF BOXES PER LAYER IN A STACK.

4. BOXES MUST BE STORED IN DOUBLE STACKS AS SHOWN.

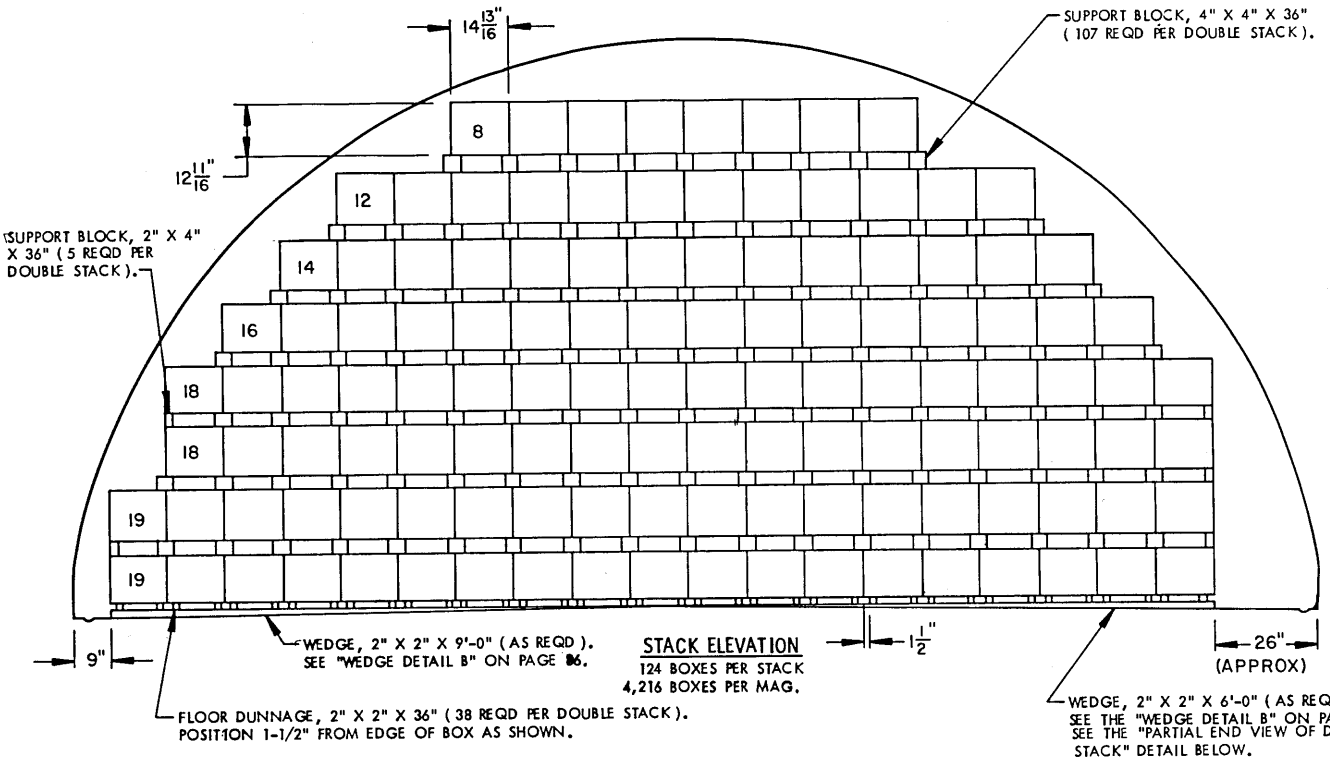
5. PRIOR TO PLACING BULK PROPELLANT IN ANGULAR STORAGE AS SHOWN, TRIAL BOXES SHOULD BE PLACED IN TYPICAL ANGLE STORAGE AND THE COVER REMOVED TO ACTUALLY DETERMINE THAT THE ANGLE OF FLOW OF THE CONTAINED PROPELLANT IS ENOUGH TO PREVENT LEAKAGE WHEN FUTURE TEST PAPERS ARE INSERTED.

6. NOTE: JOINTS IN THE INTERMEDIATE DUNNAGE MUST BE STAGGERED BOTH HORIZONTALLY AND VERTICALLY.

7. NOTE: THE RETAINER ASSEMBLY MUST CONTACT THE MAGAZINE WALL FOR SUPPORT.

8. THE METHOD OF STORAGE SHOWN PERMITS INSPECTION OF INDIVIDUAL BOXES.

9. THE EXPLOSIVE WEIGHT FOR THE METAL-LINED WOODEN BOX IS 150 POUNDS. THE EXPLOSIVE WEIGHT FOR THE STACK ELEVATION SHOWN ABOVE WILL BE 15,000 POUNDS. THE EXPLOSIVE WEIGHT FOR THE MAGAZINE WILL BE 330,000 POUNDS. THERE WILL BE APPROXIMATELY 49" OF SPACE AT THE FRONT OF THE MAGAZINE. SEE GENERAL NOTE "E" ON PAGE 2.



BILL OF MATERIAL (PER DOUBLE STACK)		
LUMBER	LINEAR FEET	BOARD FEET
2" X 2"	114	38
2" X 4"	15	10
4" X 4"	321	428
WEDGES PER DOUBLE STACK		
LUMBER	LENGTH	NO. REQD
2" X 2"	6'-0"	3
2" X 2"	9'-0"	3

SPECIAL NOTES:

1. STORAGE AS SHOWN IS FOR A WOODEN BOX.

   BOX DIMENSIONS ---- 17-13/16" LONG BY 14-13/16" WIDE BY 12-11/16" HIGH.

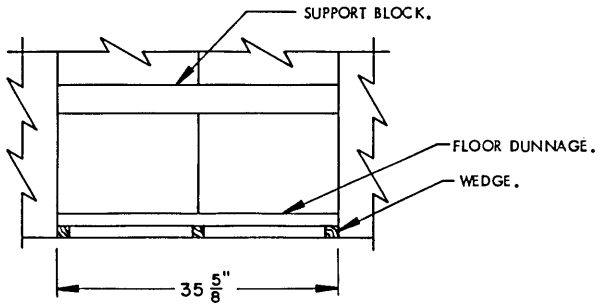
2. SEE "TYPICAL PLAN VIEW B" ON PAGE 4.

3. THE NUMBERS SHOWN IN THE STACK ELEVATION INDICATE THE QUANTITY OF BOXES PER LAYER IN A STACK.

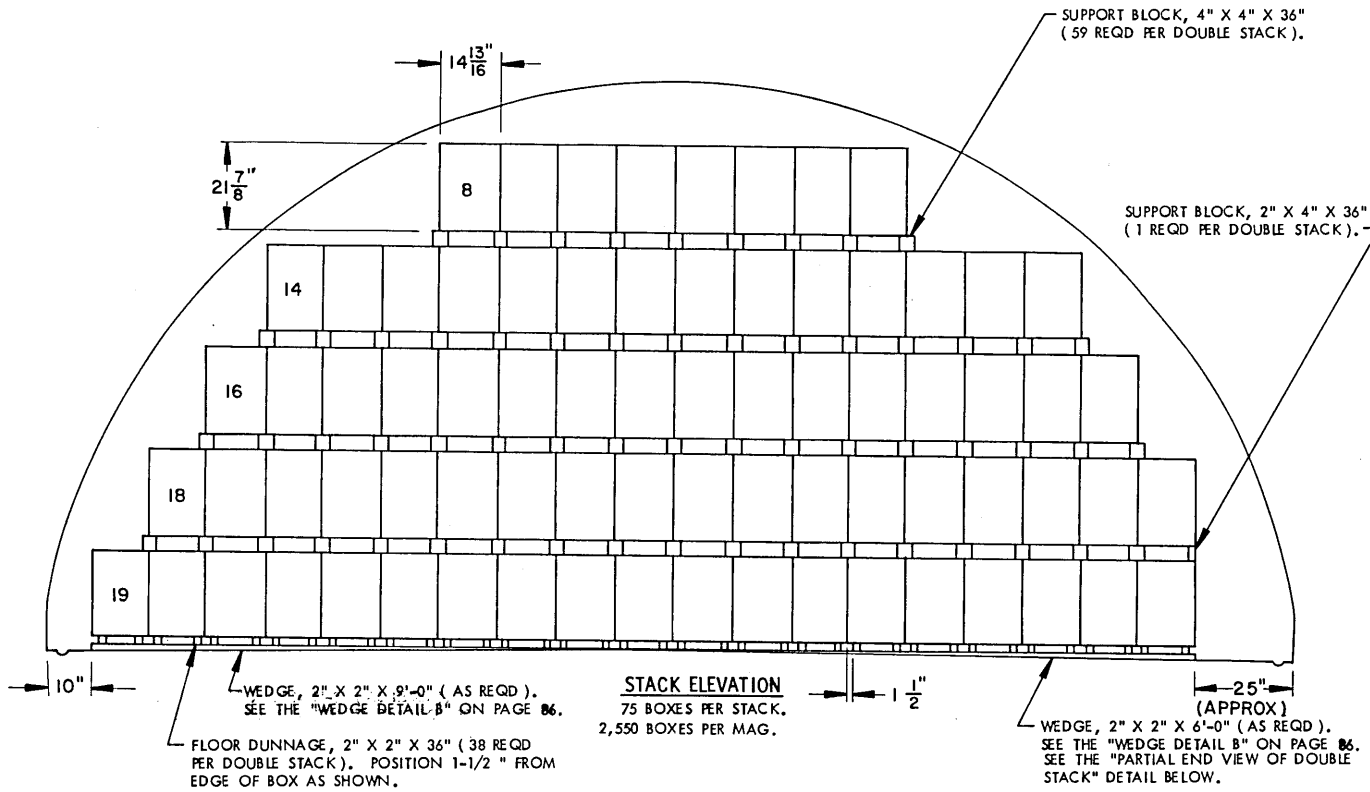
4. STORE IN DOUBLE STACKS FOR BETTER STABILITY. SEE "PARTIAL END VIEW OF DOUBLE STACK" ON THIS PAGE.

5. THE METHOD OF STORAGE SHOWN PERMITS INSPECTION OF INDIVIDUAL BOXES.

6. THE EXPLOSIVE WEIGHT FOR A WOODEN BOX IS 50 POUNDS. THE EXPLOSIVE WEIGHT FOR THE STACK ELEVATION SHOWN ABOVE WILL BE 6,200 POUNDS. THE EXPLOSIVE WEIGHT FOR THE MAGAZINE WILL BE 210,300 POUNDS. THERE WILL BE APPROXIMATELY 61" OF SPACE AT THE FRONT OF THE MAGAZINE. SEE GENERAL NOTE "E" ON PAGE 2.



PARTIAL END VIEW OF DOUBLE STACK



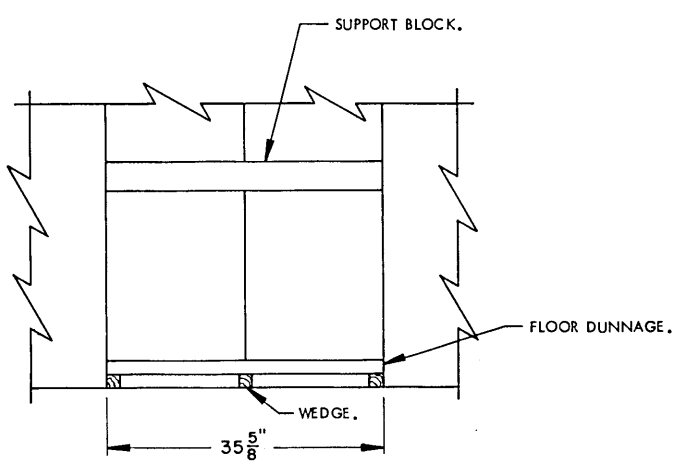
BILL OF MATERIAL (PER DOUBLE STACK)		
LUMBER	LINEAR FEET	BOARD FEET
2" X 2"	114	38
2" X 4"	3	2
4" X 4"	177	236
WEDGES PER DOUBLE STACK		
LUMBER	LENGTH	NO. REQD
2" X 2"	6'-0"	3
2" X 2"	9'-0"	3

SPECIAL NOTES:

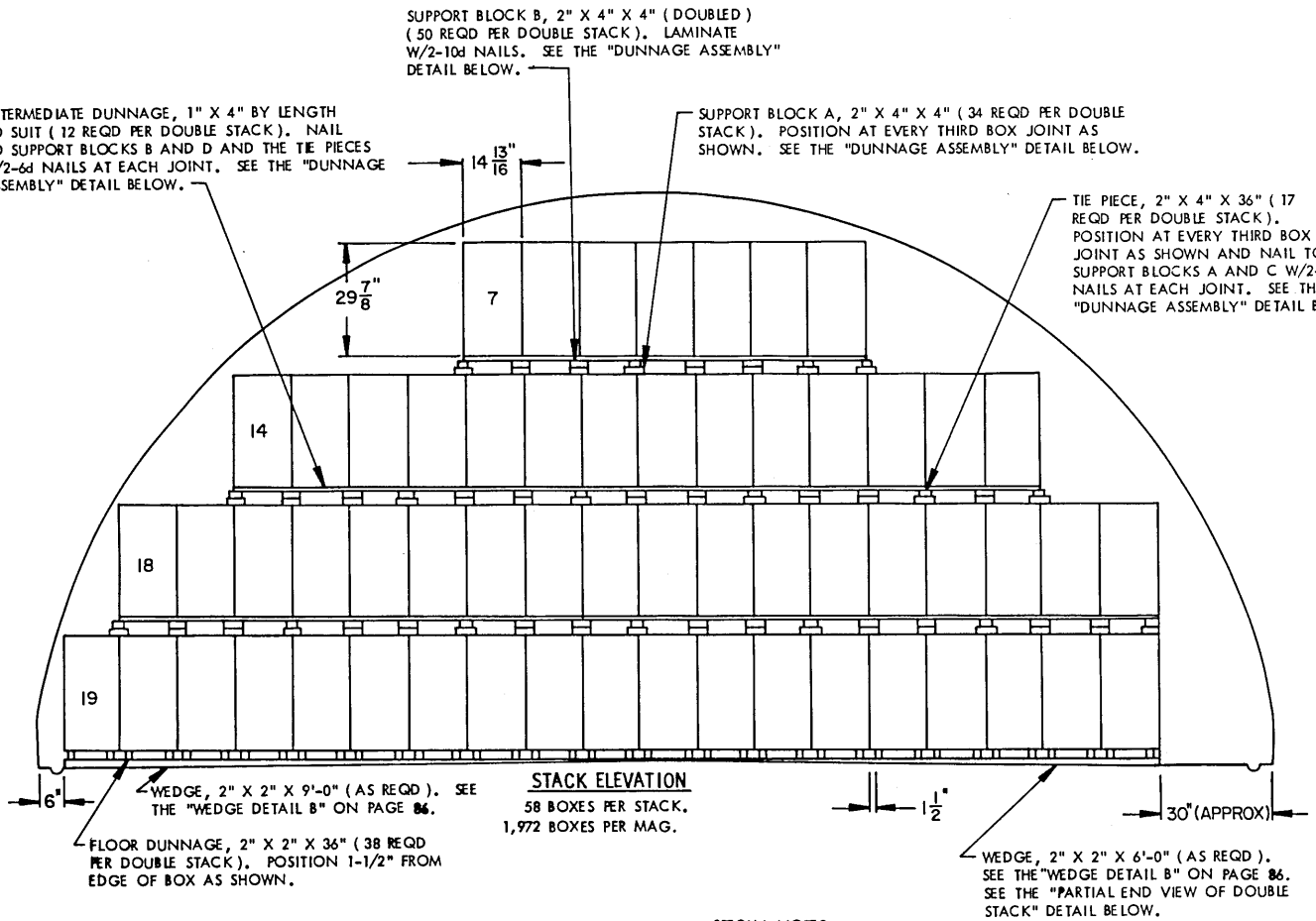
1. STORAGE AS SHOWN IS FOR A WOODEN BOX.

   BOX DIMENSIONS -----17-13/16" LONG BY 14-13/16" WIDE BY 21-7/8" HIGH.

2. SEE "TYPICAL PLAN VIEW B" ON PAGE 4.
3. THE NUMBERS SHOWN IN THE STACK ELEVATION INDICATE THE QUANTITY OF BOXES PER LAYER IN A STACK.
4. STORE IN DOUBLE STACKS FOR BETTER STABILITY. SEE "PARTIAL END VIEW OF DOUBLE STACK" ON THIS PAGE.
5. THE METHOD OF STORAGE SHOWN PERMITS INSPECTION OF INDIVIDUAL BOXES.
6. THE EXPLOSIVE WEIGHT FOR A WOODEN BOX IS 100 POUNDS. THE EXPLOSIVE WEIGHT FOR THE STACK ELEVATION SHOWN ABOVE WILL BE 7,500 POUNDS. THE EXPLOSIVE WEIGHT FOR THE MAGAZINE WILL BE 255,000 POUNDS. THERE WILL BE APPROXIMATELY 61" OF SPACE AT THE FRONT OF THE MAGAZINE. SEE GENERAL NOTE "E" ON PAGE 2.



PARTIAL END VIEW OF DOUBLE STACK



STACK ELEVATION

58 BOXES PER STACK.
1,972 BOXES PER MAG.

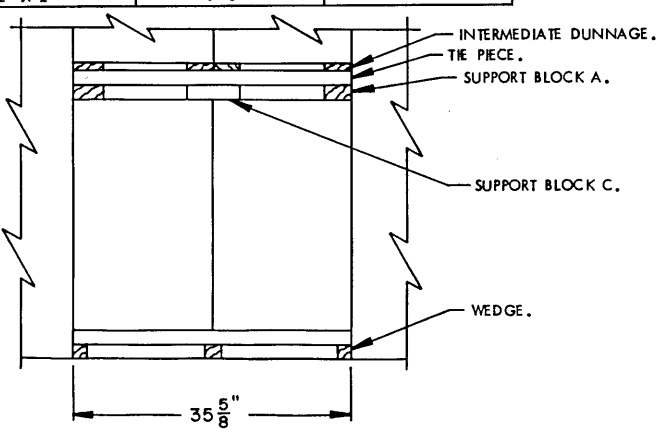
BILL OF MATERIAL (PER DOUBLE STACK)		
LUMBER	LINEAR FEET	BOARD FEET
1" X 4" 2" X 2" 2" X 4"	193 114 104	65 38 70
NAILS	NO. REQD	POUNDS
6d (2") 10d (3")	336 252	2 4
WEDGES PER DOUBLE STACK		
LUMBER	LENGTH	NO. REQD
2" X 2" 2" X 2"	6'-0" 9'-0"	3 3

SPECIAL NOTES:

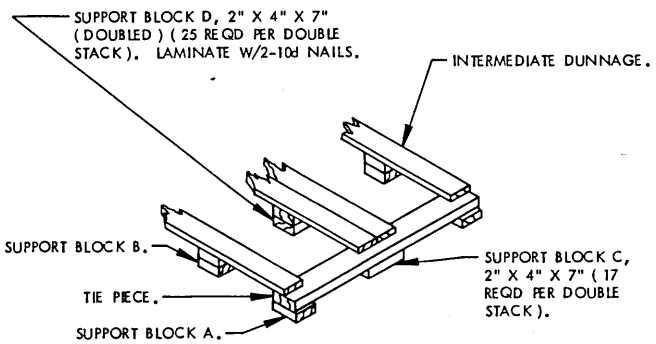
1. STORAGE AS SHOWN IS FOR A WOODEN BOX.

   BOX DIMENSIONS ----- 17-13/16" LONG BY 14-13/16" WIDE BY 29-7/8" HIGH.

2. SEE THE "TYPICAL PLAN VIEW B" ON PAGE 4.
3. THE NUMBERS SHOWN IN THE STACK ELEVATION INDICATE THE QUANTITY OF BOXES PER LAYER IN A STACK.
4. STORE IN DOUBLE STACKS FOR BETTER STABILITY. SEE "PARTIAL END VIEW OF DOUBLE STACK" ON THIS PAGE.
5. THE METHOD OF STORAGE SHOWN PERMITS INSPECTION OF INDIVIDUAL BOXES.
6. THE EXPLOSIVE WEIGHT FOR A WOODEN BOX IS 150 POUNDS. THE EXPLOSIVE WEIGHT FOR THE STACK ELEVATION SHOWN ABOVE WILL BE 8,700 POUNDS. THE EXPLOSIVE WEIGHT FOR THE MAGAZINE WILL BE 295,800 POUNDS. THERE WILL BE APPROXIMATELY 61" OF SPACE AT THE FRONT OF THE MAGAZINE. SEE GENERAL NOTE "E" ON PAGE 2.

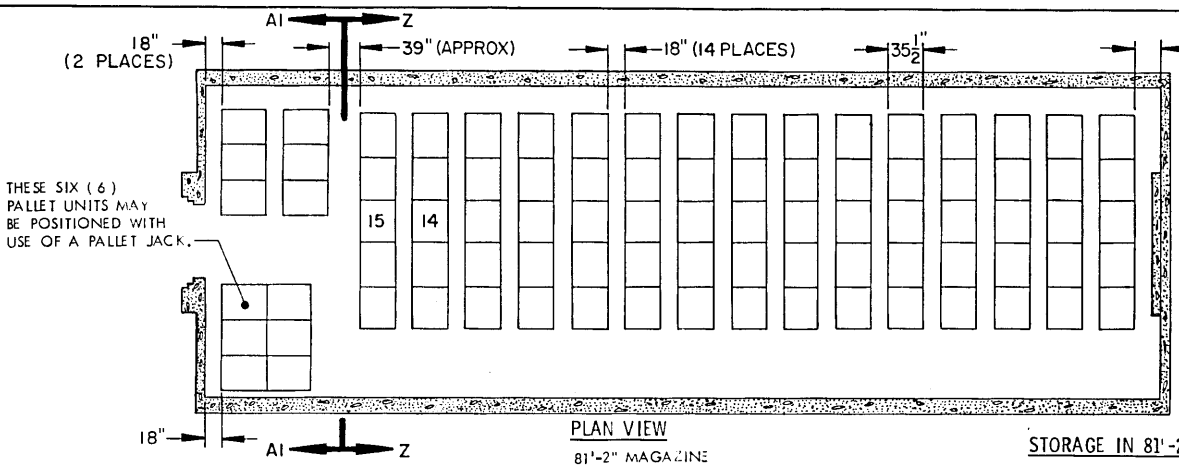


PARTIAL END VIEW OF DOUBLE STACK



DUNNAGE ASSEMBLY

POWDER, PROPELLANT (PACKED IN WOODEN BOX)



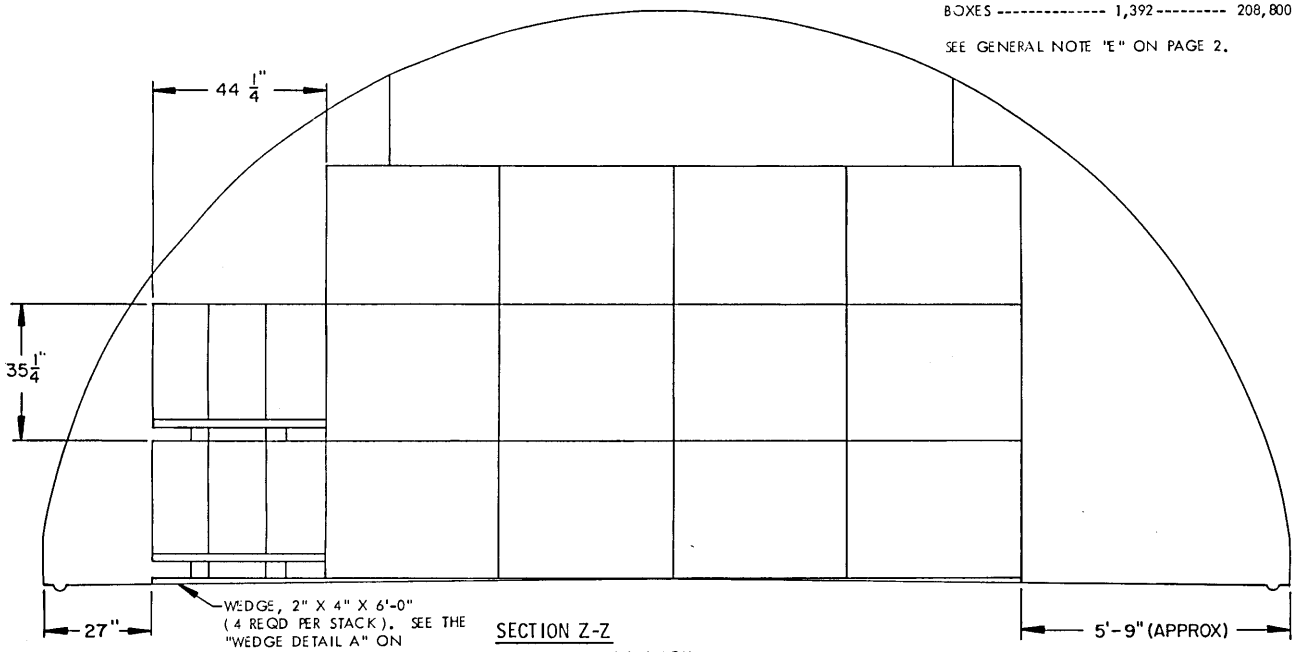
PLAN VIEW

81'-2" MAGAZINE

STORAGE IN 81'-2' MAGAZINE

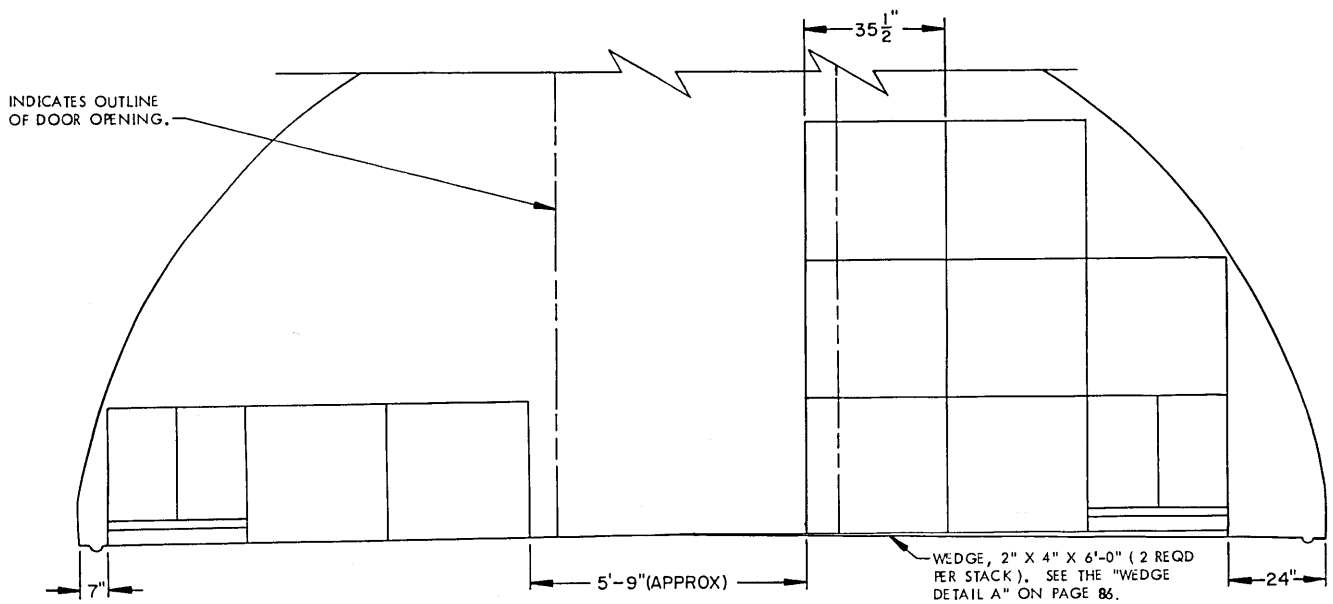
ITEM	QUANTITY	EXPLOSIVE WEIGHT
PALLET UNITS	232	
BOXES	1,392	208,800 LBS

SEE GENERAL NOTE "E" ON PAGE 2.



SECTION Z-Z

14 PALLET UNITS PER STACK.
84 BOXES PER STACK.



SECTION A1-A1

POWDER PROPELLANT (PACKED IN METAL-LINED WOODEN BOX) PALLETIZED

SPECIAL NOTES:

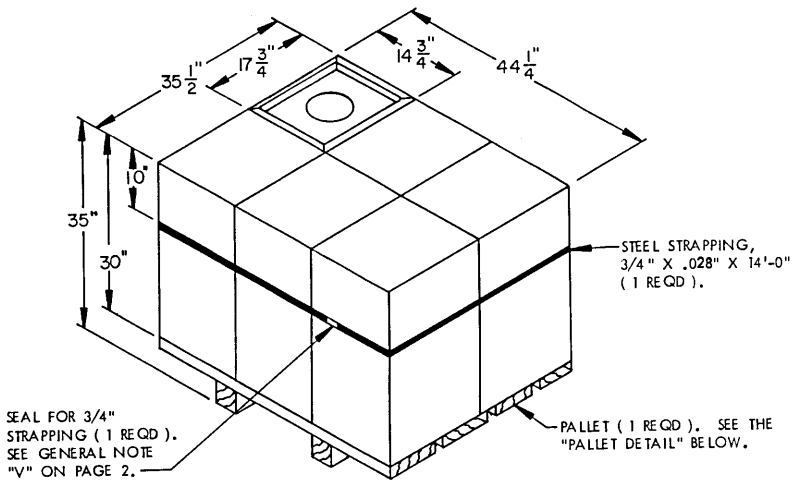
1. STORAGE AS SHOWN IS FOR THE METAL-LINED WOODEN BOX (PALLETIZED).

   PALLET UNIT DIMENSIONS ---- 35-1/2" LONG BY 44-1/4" WIDE BY 35" HIGH.

   EXPLOSIVE WEIGHT -------150 POUNDS PER BOX.

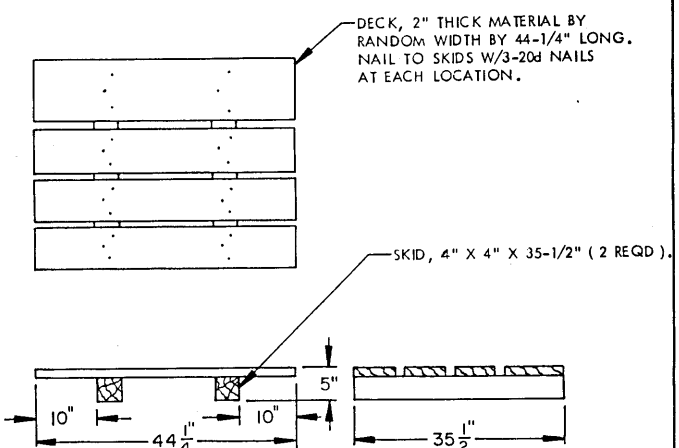
2. THE METHOD OF STORAGE SHOWN PERMITS INSPECTION OF INDIVIDUAL BOXES.

3 PALLETIZATION OF BOXES IS SOLELY FOR THE CONVENIENCE OF STORAGE AND WILL NOT BE USED FOR SHIPPING BOXES.



PALLETIZED BOXES

SIX (6) BOXES PER PALLET



PALLET DETAIL

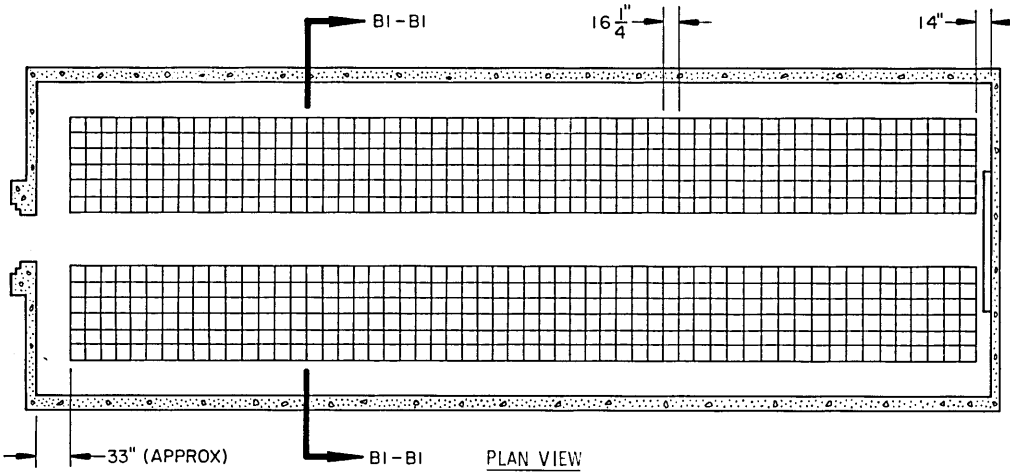
BILL OF MATERIAL (PER PALLET)		
LUMBER	LINEAR FEET	BOARD FEET
2" X 8" 2" X 12" 4" X 4"	12 4 6	16 8 8
NAILS	NO. REQD	POUNDS
20d (4")	24	1
STEEL STRAPPING, 3/4" X .028" ---- 14' REQD---------- 1LB SEAL FOR 3/4" STRAPPING ----------1 REQD ----------NIL		

POWDER, PROPELLANT (PACKED IN METAL-LINED WOODEN BOX) PALLETIZED

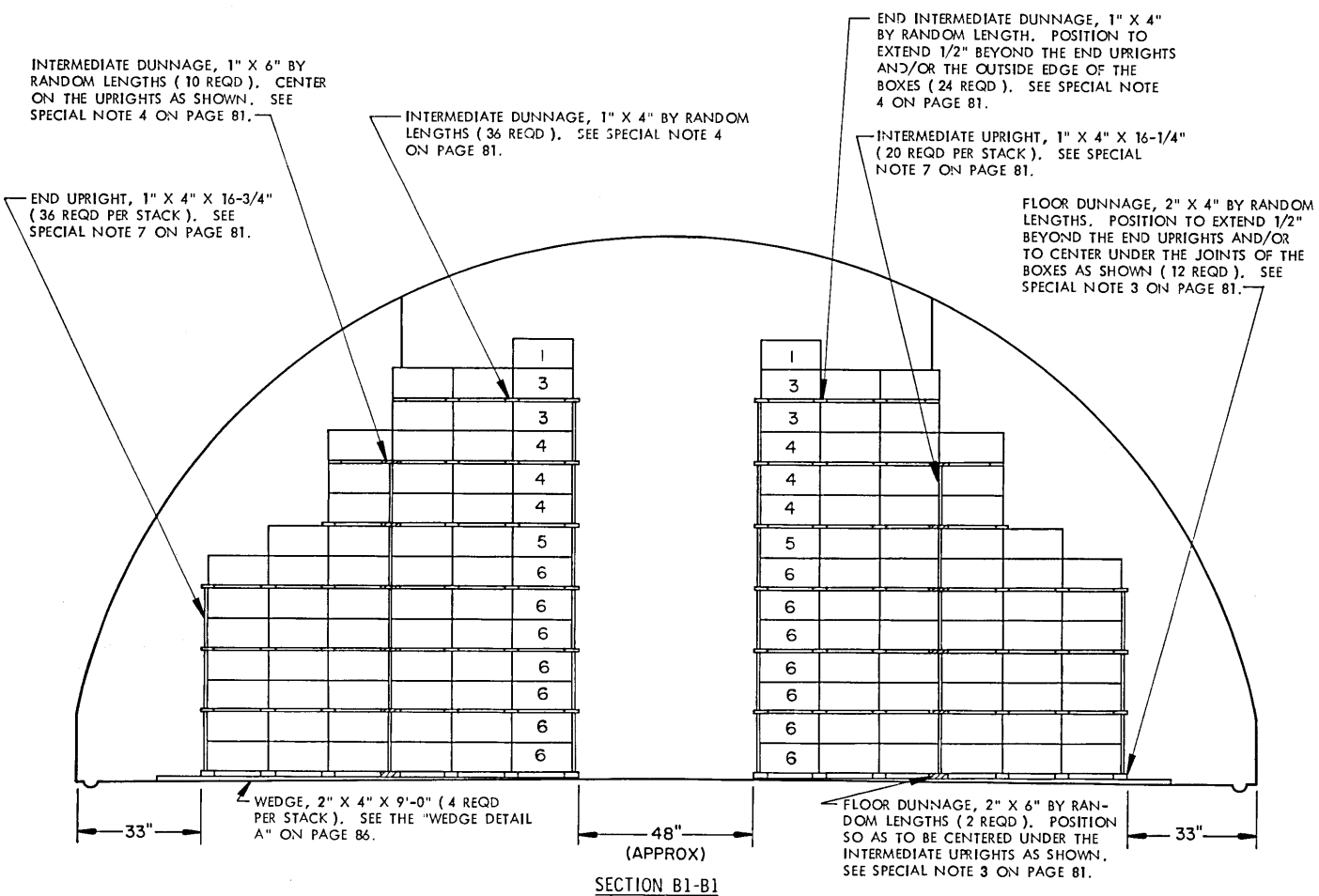
STORAGE IN 81'-2" MAGAZINE

ITEM	QUANTITY	EXPLOSIVE WEIGHT
BOXED TNC	--- 7,524	------- 300,960 LBS

SEE GENERAL NOTE "E" ON PAGE 2 AND SPECIAL NOTE 2 AND "TABLE 4" ON PAGE 81.

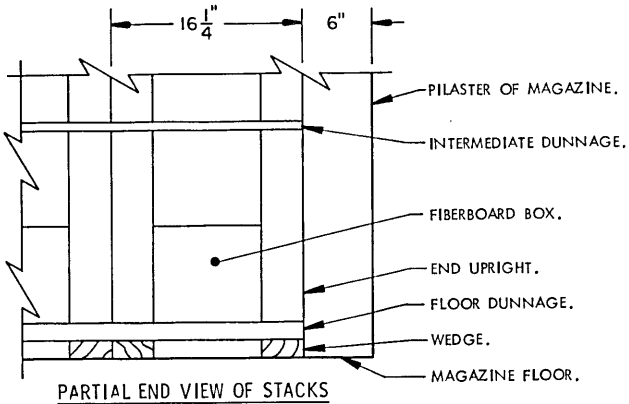


PLAN VIEW
81'-2" MAGAZINE
(57 STACKS)



SECTION B1-B1
132 BOXES PER STACK

STORAGE METHOD B
TNC, PENTOLITE, POTASSIUM PICRATE, COMP D-2, MAX 2, AND MOX 2B (PACKED IN FIBERBOARD BOX)



PARTIAL END VIEW OF STACKS

SPECIAL NOTES:

1. STORAGE AS SHOWN IS FOR TNC AND SIMILAR BULK EXPLOSIVES PACKED IN FIBERBOARD BOX NO. 2. FOR DETAILS OF BOX SEE DRAWING NO. 7548645. SEE SPECIAL NOTE 8.

   DIMENSIONS----------16-1/4" LONG BY 16-1/4" WIDE BY 8-1/8" HIGH. EXPLOSIVE WEIGHT FOR TNC-----40 POUNDS.

2. STORAGE AS SHOWN IS FOR FIBERBOARD BOXES CONTAINING TNC. THE PROCEDURES ARE APPLICABLE FOR ALL THE ITEMS LISTED IN TABLE 4. FULL STACKS ARE SHOWN IN THE PLAN VIEW ON PAGE 80.

3. RANDOM LENGTH MATERIAL MAY BE USED FOR THE 2" X 4" AND 2" X 6" FLOOR DUNNAGE PIECES. JOINTS IN THE RANDOM LENGTH MATERIAL MUST BE CENTERED ON THE WEDGES AS NEAR AS POSSIBLE. JOINTS IN LATERALLY ADJACENT FLOOR DUNNAGE PIECES NEED NOT BE STAGGERED.

4. RANDOM LENGTH MATERIAL, OF NOT LESS THAN 48" LENGTHS, MAY BE USED FOR THE 1" X 4" END INTERMEDIATE DUNNAGE AND/OR THE 1" X 4" AND 1" X 6" INTERMEDIATE DUNNAGE PIECES. THE JOINTS IN THE INTERMEDIATE DUNNAGE PIECES MUST BE LOCATED APPROXIMATELY CENTERED BETWEEN THE INTERMEDIATE AND/OR END UPRIGHT PIECES. THE JOINTS OF ADJACENT INTERMEDIATE DUNNAGE PIECES IN A LAYER WILL BE STAGGERED AT LEAST 16" FROM EACH OTHER AND/OR FROM A JOINT IN AN END INTERMEDIATE DUNNAGE PIECE. ALSO, THE JOINTS OF END INTERMEDIATE AND/OR THE INTERMEDIATE DUNNAGE PIECES IN AN UPPER LAYER WILL BE STAGGERED AT LEAST 16" FROM THE JOINTS IN THE NEXT LOWER LAYER.

5. CAUTION: TNC PACKED IN FIBERBOARD BOXES OF THE SIZE SHOWN AND SIMILAR BULK EXPLOSIVES PACKED IN FIBERBOARD BOXES WHICH ARE APPROXIMATELY THE SAME HEIGHT MUST NOT BE STACKED MORE THAN FIFTEEN (15) BOXES HIGH.

6. THE NUMBERS SHOWN IN SECTION B1-B1 INDICATE THE QUANTITY OF BOXES PER LAYER IN A STACK.

7. WHEN STORING BOXES OF A HEIGHT OTHER THAN 8-1/8", THE LENGTH OF THE UPRIGHT PIECES MUST BE ADJUSTED TO COMPLY WITH THE FOLLOWING CRITERIA:

   A. INTERMEDIATE UPRIGHT PIECES MUST BE OF A LENGTH EQUAL TO THE HEIGHT OF TWO BOXES.

   B. END UPRIGHT PIECES MUST BE 1/2" LONGER THAN INTERMEDIATE UPRIGHT PIECES.

8. THE STORAGE PROCEDURES ON PAGES 80 AND 81 SHOULD ONLY BE USED WHEN STORING FIBERBOARD BOXES SUCH AS THESE IN GEOGRAPHICAL AREAS IN WHICH THERE IS A HIGH HUMIDITY LEVEL. FOR PROCEDURES APPLICABLE TO STORAGE OF THESE ITEMS IN GEOGRAPHICAL AREAS HAVING LOW HUMIDITY LEVELS, REFER TO THE STORAGE PROCEDURES ON PAGES 42 AND 43.

TABLE 4

ITEM	EXPL WT/BX	MAX QUANTITY	MAX EXPLOSIVE
TNC	40 LBS	7,524	300,960
PENTOLITE	35 LBS	7,524	263,340
POTASSIUM PICRATE	35 LBS	7,524	263,340
COMPOSITION D-2	30 LBS	7,524	225,720
MAX 2	50 LBS	7,524	376,200
MOX 2B	50 LBS	7,524	376,200

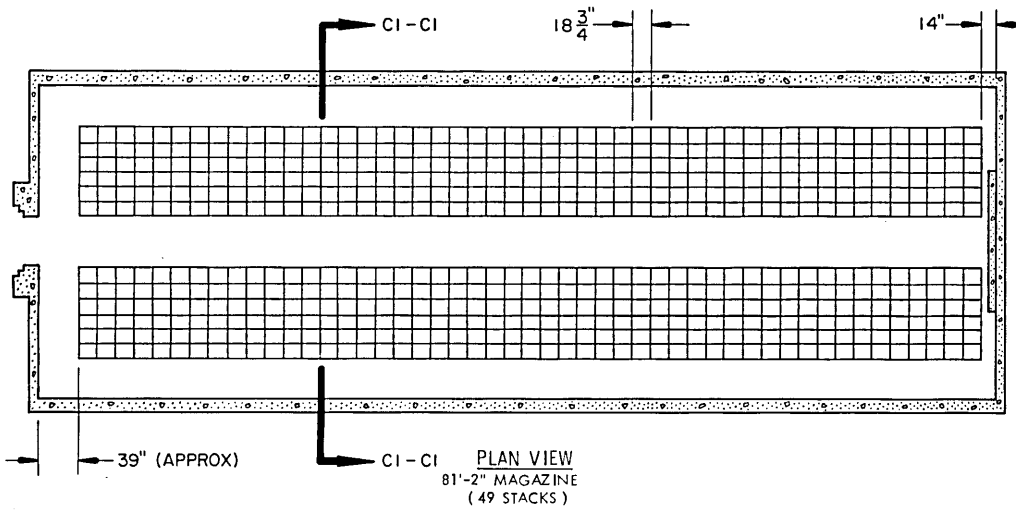
BILL OF MATERIAL (PER STACK)

LUMBER	LINEAR FEET	BOARD FEET
1" X 4"	158.59	52.86
1" X 6"	13.54	6.77
2" X 4"	16.25	10.84
2" X 6"	2.71	2.71

WEDGES PER STACK

LUMBER	LENGTH	NO. REQD
2" X 4"	9'-0"	4

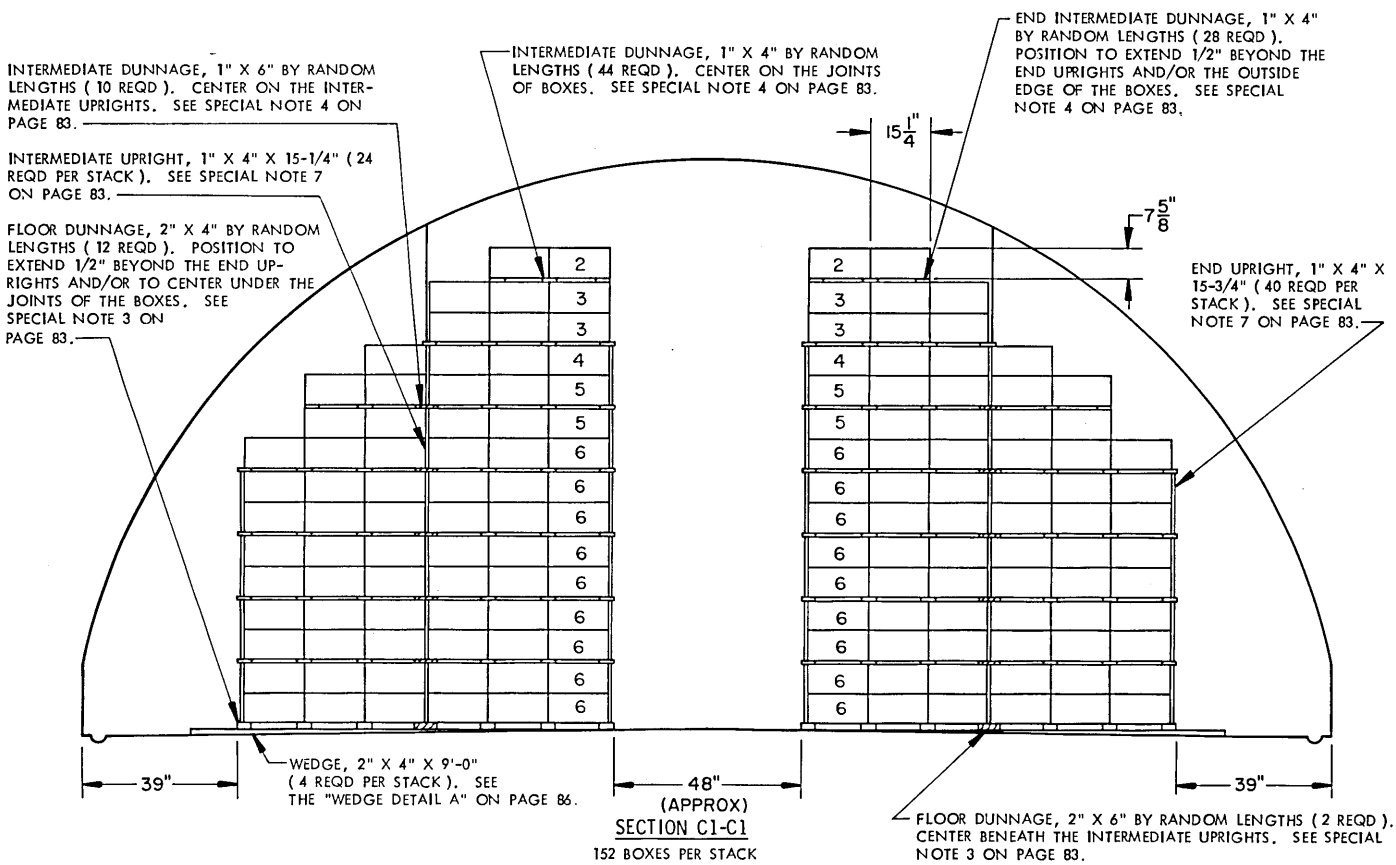
STORAGE METHOD B
TNC, PENTOLITE, POTASSIUM PICRATE, COMP D-2,
MAX 2, AND MOX 2B (PACKED IN FIBERBOARD BOX)



STORAGE IN 81'-2" MAGAZINE

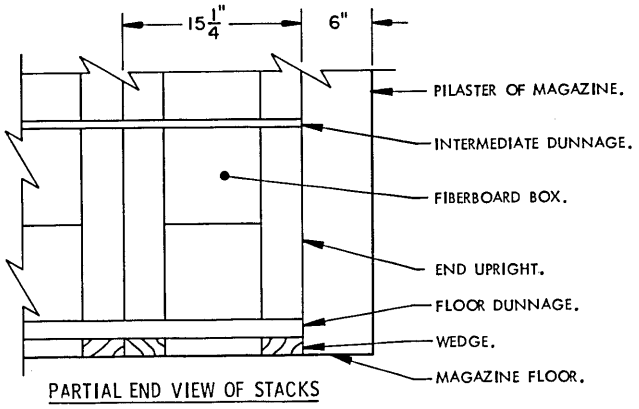
ITEM	QUANTITY	EXPLOSIVE WEIGHT
TNT (50 LB BOX)	7,448	372,400 LBS

SEE GENERAL NOTE "E" ON PAGE 2 AND SPECIAL NOTE 8 AND "TABLE 5" ON PAGE 83.



SECTION C1-C1
152 BOXES PER STACK

STORAGE METHOD B
TNT, ALL COMP A, ALL COMP B, COMP C-3 & C-4, EXPLOSIVE D, CYCLOTOL, OCTOL, PBX, TETRYL, TOVEX AND PBXN 6 (PACKED IN FIBERBOARD BOX)



PARTIAL END VIEW OF STACKS

(SPECIAL NOTES CONTINUED)

8. THE STORAGE PROCEDURES ON PAGES 82 AND 83 SHOULD ONLY BE USED WHEN STORING FIBERBOARD BOXES SUCH AS THESE IN GEOGRAPHICAL AREAS IN WHICH THERE IS A HIGH HUMIDITY LEVEL. FOR PROCEDURES APPLICABLE TO THE STORAGE OF THESE ITEMS IN GEOGRAPHICAL AREAS HAVING LOW HUMIDITY LEVELS, REFER TO THE STORAGE PROCEDURES ON PAGES 44 AND 45.

SPECIAL NOTES:

1. STORAGE AS SHOWN IS FOR TNT AND SIMILAR BULK EXPLOSIVES PACKED IN FIBERBOARD BOX NO. 4. FOR DETAILS OF THE BOX SEE DRAWING NO. 7548645. SEE SPECIAL NOTE 8.

   DIMENSIONS -------- 18-3/4" LONG BY 15-1/4" WIDE BY 7-5/8" HIGH.
   EXPLOSIVE WEIGHT--- 50 OR 55 POUNDS.

2. STORAGE AS SHOWN IS FOR FIBERBOARD BOXES CONTAINING 50 POUNDS OF TNT. THE PROCEDURES ARE ALSO APPLICABLE FOR 55-POUND BOXES OF TNT AND FOR ALL THE ITEMS LISTED IN TABLE 5 BELOW.

3. RANDOM LENGTH MATERIAL MAY BE USED FOR THE 2" X 4" AND 2" X 8" FLOOR DUNNAGE PIECES. JOINTS IN THE RANDOM LENGTH MATERIAL MUST BE CENTERED ON THE WEDGES AS NEAR AS POSSIBLE. JOINTS IN LATERALLY ADJACENT FLOOR DUNNAGE PIECES NEED NOT BE STAGGERED.

4. RANDOM LENGTH MATERIAL, OF NOT LESS THAN 48" LENGTHS, MAY BE USED FOR THE 1" X 4" END INTERMEDIATE DUNNAGE AND/OR THE 1" X 4" AND 1" X 6" INTERMEDIATE DUNNAGE PIECES. THE JOINTS IN THE INTERMEDIATE DUNNAGE PIECES MUST BE LOCATED APPROXIMATELY CENTERED BETWEEN THE INTERMEDIATE AND/OR END UPRIGHT PIECES. JOINTS OF ADJACENT INTERMEDIATE DUNNAGE PIECES IN A LAYER WILL BE STAGGERED AT LEAST 18" FROM EACH OTHER AND/OR FROM A JOINT IN AN END INTERMEDIATE DUNNAGE PIECE. ALSO, THE JOINTS OF END INTERMEDIATE AND/OR THE INTERMEDIATE DUNNAGE PIECES IN AN UPPER LAYER WILL BE STAGGERED AT LEAST 18" FROM THE JOINTS IN THE NEXT LOWER LAYER.

5. CAUTION: TNT PACKED IN FIBERBOARD BOXES OF THE SIZE SHOWN AND SIMILAR BULK EXPLOSIVES PACKED IN FIBERBOARD BOXES WHICH ARE APPROXIMATELY THE SAME HEIGHT MUST NOT BE STACKED MORE THAN FIFTEEN (15) BOXES HIGH.

6. THE NUMBERS SHOWN IN SECTION C1-C1 INDICATE THE QUANTITY OF BOXES PER LAYER IN A STACK.

7. WHEN STORING BOXES OF A HEIGHT OTHER THAN 7-5/8", THE LENGTH OF THE UPRIGHT PIECES MUST BE ADJUSTED TO COMPLY WITH THE FOLLOWING CRITERIA.

   A. INTERMEDIATE UPRIGHT PIECES MUST BE OF A LENGTH EQUAL TO THE HEIGHT OF TWO BOXES.

   B. END UPRIGHT PIECES MUST BE 1/2" LONGER THAN INTERMEDIATE UPRIGHT PIECES.

(CONTINUED AT LEFT)

TABLE 5

ITEM	EXPL WT/BX	MAX QUANTITY	MAX EXPLOSIVE
TNT	50 LBS	7,448	372,400
TNT	55 LBS	7,448	409,640
ALL COMPOSITION A	60 LBS	7,448	446,880
ALL COMPOSITION B	60 LBS	7,448	446,880
COMPOSITION C-3 AND C-4	60 LBS	7,448	446,880
EXPLOSIVE D	50 LBS	7,448	372,400
CYCLOTOL	60 LBS	7,448	446,880
OCTOL	60 LBS	7,448	446,880
PBX	60 LBS	7,448	446,880
TETRYL	60 LBS	7,448	446,880
TOVEX	50 LBS	7,448	372,400
PBXN 6	50 LBS	7,448	372,400

BILL OF MATERIAL (PER STACK)

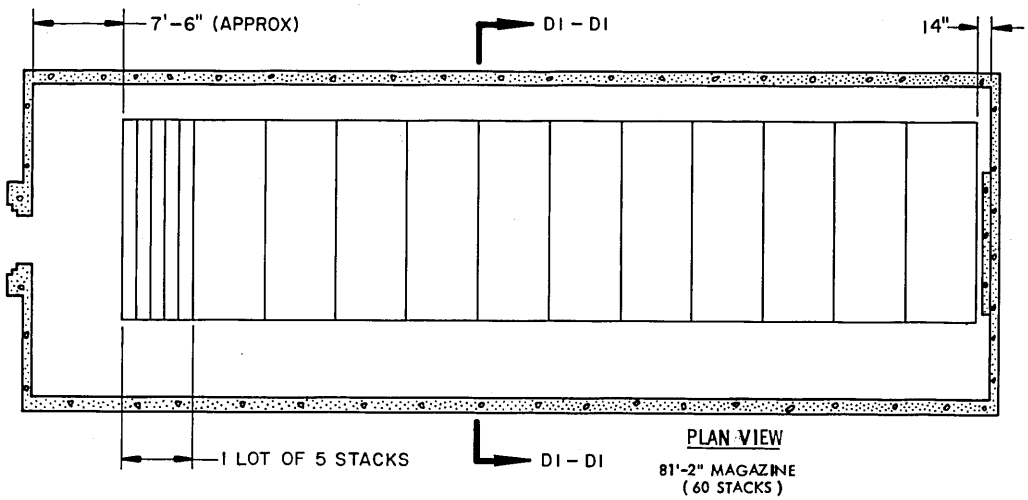
LUMBER	LINEAR FEET	BOARD FEET
1" X 4"	195.50	65.17
1" X 6"	15.63	7.82
2" X 4"	18.75	12.50
2" X 6"	3.13	3.13

WEDGES PER STACK

LUMBER	LENGTH	NO. REQD
2" X 4"	9'-0"	4

STORAGE METHOD B

TNT, ALL COMP A, ALL COMP B, COMP C-3 & C-4, EXPLOSIVE D, CYCLOTOL, OCTOL, PBX, TETRYL, TOVEX AND PBXN 6 (PACKED IN FIBERBOARD BOX)



PLAN VIEW
81'-2" MAGAZINE
(60 STACKS)

STORAGE IN 81'-2' MAGAZINE

ITEM	QUANTITY	EXPLOSIVE WEIGHT
DRUM	2,400	120,000 LBS

SEE GENERAL NOTE "E" ON PAGE 2.

BILL OF MATERIAL (PER LOT)		
LUMBER	LINEAR FEET	BOARD FEET
1" X 4"	312	104
2" X 4"	168	112
WEDGES		
LUMBER	LENGTH	NO. REQD
2" X 4"	6'-0"	10
2" X 4"	9'-0"	10

SPECIAL NOTES:

1. STORAGE AS SHOWN IS FOR A FIBERBOARD DRUM.

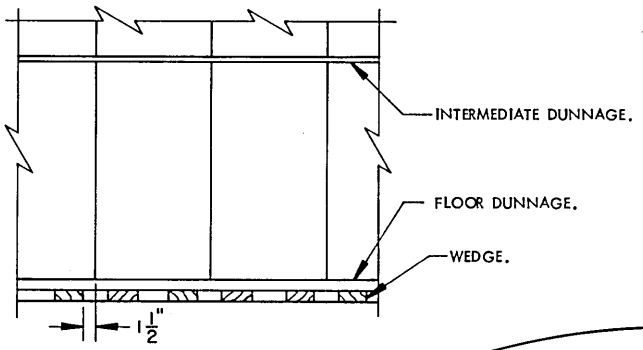
   DRUM DIMENSIONS--27-1/2" HIGH BY 14-1/2" DIAMETER.
   EXPLOSIVE WEIGHT --50 POUNDS.

2. THE NUMBERS SHOWN IN SECTION "D1-D1" INDICATE THE QUANTITY OF DRUMS PER LAYER IN A STACK.

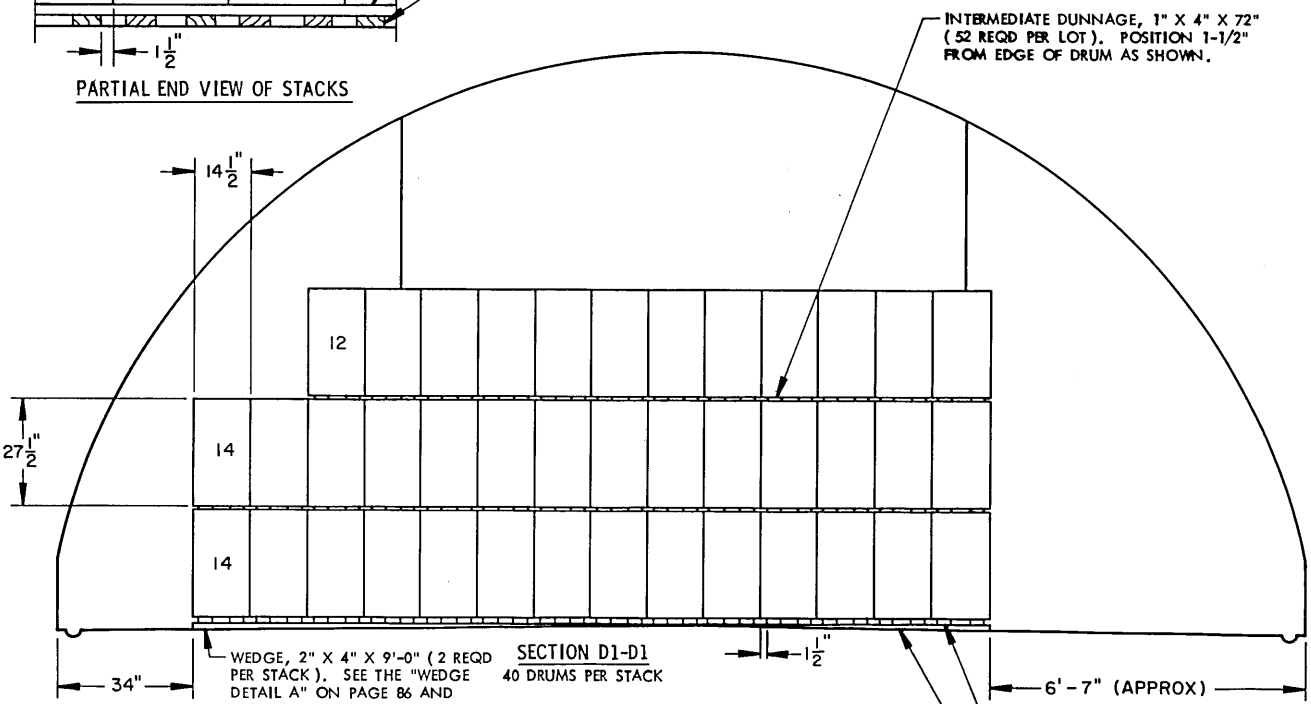
3. EACH LOT CONSISTS OF 10,000 LBS. (200 DRUMS) FIVE (5) STACKS OF 40 DRUMS.

4. THE STORAGE PROCEDURES AS SHOWN ARE INTENDED FOR USE IN AREAS WHERE HIGH HUMIDITY CONDITIONS COULD CAUSE DAMAGE TO THE FIBERBOARD DRUMS. IF HUMIDITY IS NOT A PROBLEM, THE STORAGE PROCEDURES DEPICTED ON PAGE 67 SHOULD BE USED.

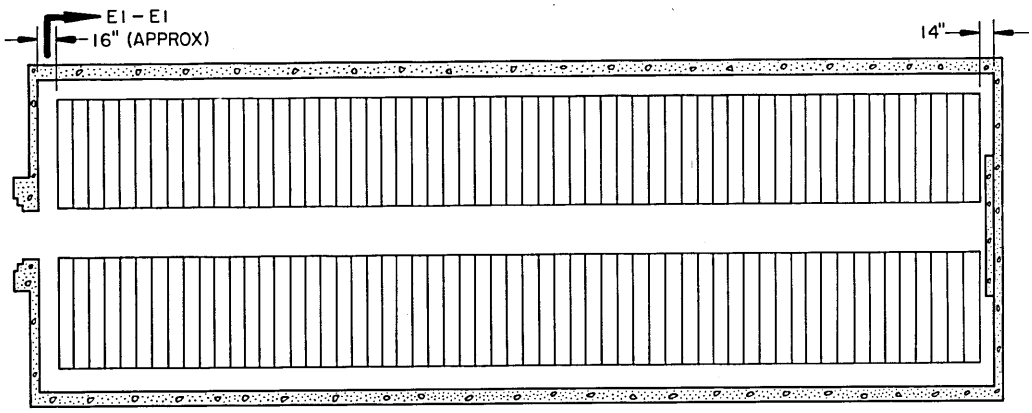
5. NITROGUANIDINE PACKED IN A 14.5" DIAMETER BY 17.04" HIGH DRUM AND PALLETIZED IN ACCORDANCE WITH NAVAL SEA SYSTEMS COMMAND DRAWING WR-53/827 WILL BE STORED BY USING THE PROCEDURES SHOWN IN U.S. ARMY DARCOM DRAWING 19-48-4118-1-2-3-4-14-22PA1002.



PARTIAL END VIEW OF STACKS



STORAGE METHOD B
NITROGUANIDINE (PACKED IN FIBERBOARD DRUMS)

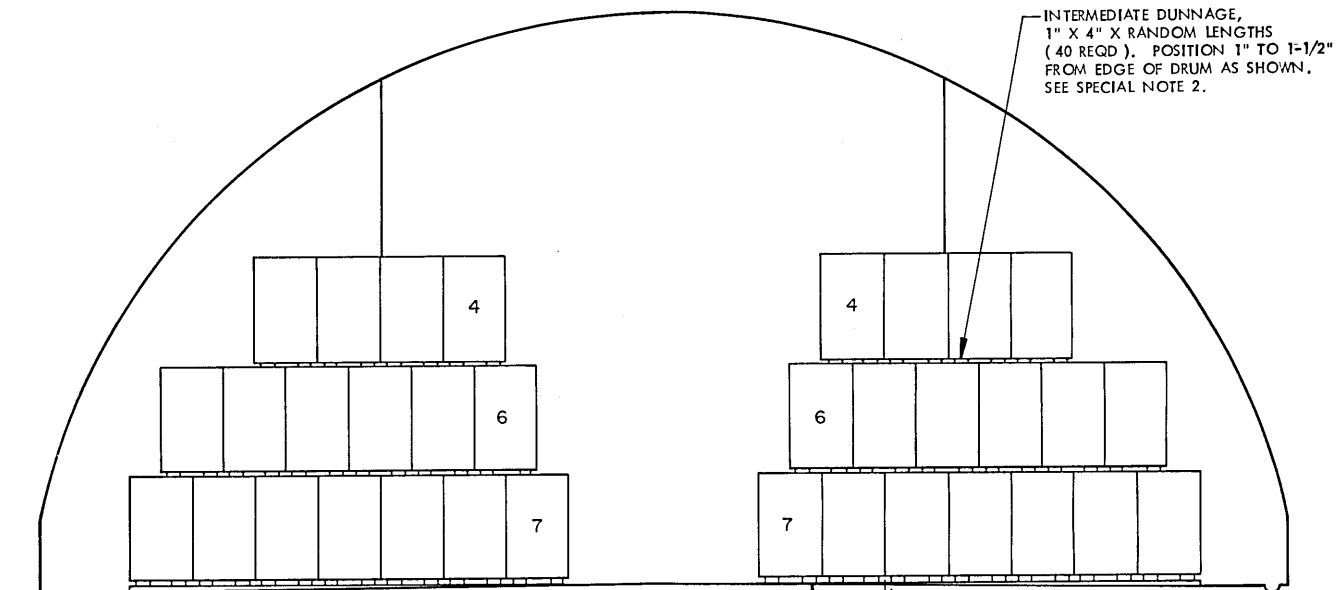


PLAN VIEW
81'-2" MAGAZINE
(59 STACKS)

STORAGE IN 81'-2" MAGAZINE

ITEM	QUANTITY	EXPLOSIVE WEIGHT
FIBERBOARD DRUM	2,006	280,840 LBS

SEE GENERAL NOTE "E" ON PAGE 2.



SECTION E1-E1
34 DRUMS PER STACK

BILL OF MATERIAL (PER STACK)		
LUMBER	LINEAR FEET	BOARD FEET
1" X 4"	53.34	17.78
2" X 4"	37.34	24.89
WEDGES PER STACK		
LUMBER	LENGTH	NO. REQD
2" X 4"	9'-0"	4

SPECIAL NOTES:

1. STORAGE AS SHOWN IS FOR A FIBERBOARD DRUM.

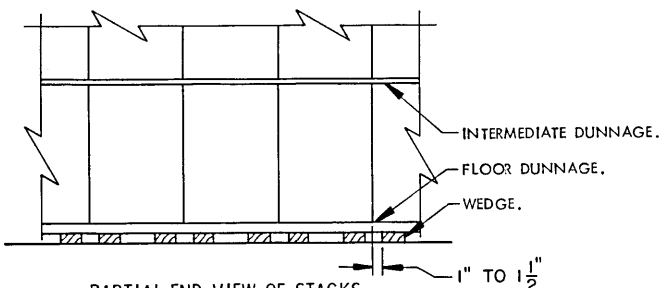
   DRUM DIMENSIONS ------- 27" HIGH BY 16 " DIAMETER
   EXPLOSIVE WEIGHT ------- 140 POUNDS

2. RANDOM LENGTHS OF DUNNAGE MAY BE USED FOR THE INTERMEDIATE AND FLOOR DUNNAGE.

3. FIBERBOARD DRUMS, EXCEPT FOR NITROGUANIDINE AS SHOWN ON PAGE 67, WILL NOT BE STACKED MORE THAN THREE LAYERS HIGH.

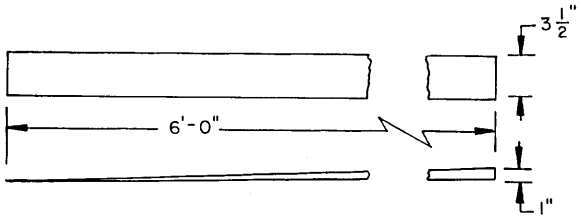
4. THE DRUMS IN EACH LAYER WILL BE STAGGERED ABOVE THE DRUMS IN THE LAYER BENEATH, AS SHOWN.

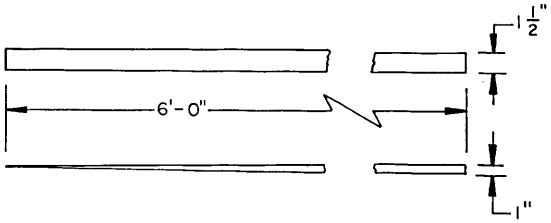
5. THE STORAGE PROCEDURES AS SHOWN ARE INTENDED FOR USE IN AREAS WHERE HIGH HUMIDITY CONDITIONS COULD CAUSE DAMAGE TO THE FIBERBOARD DRUMS. IF HUMIDITY IS NOT A PROBLEM, THE STORAGE PROCEDURES ON PAGE 53 SHOULD BE USED.

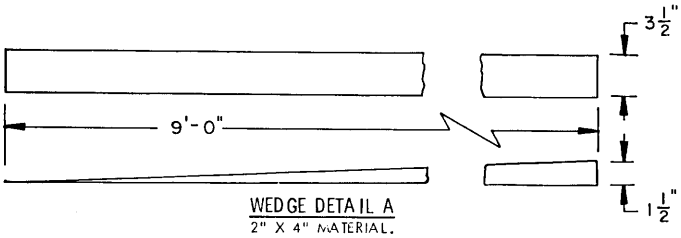


PARTIAL END VIEW OF STACKS

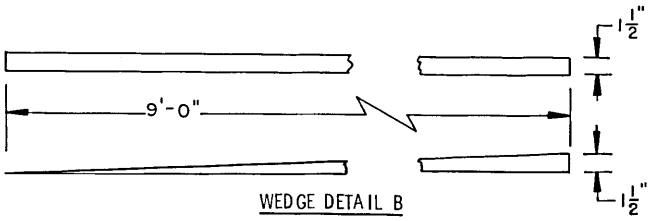
STORAGE METHOD B
FIBERBOARD DRUM STORAGE, UNPALLETIZED



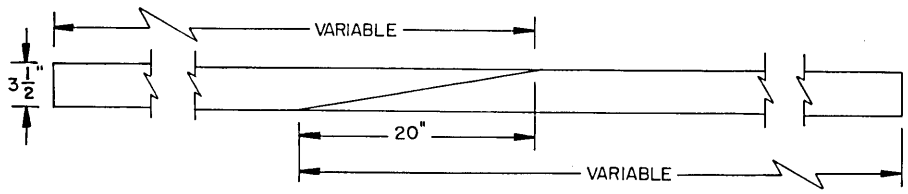




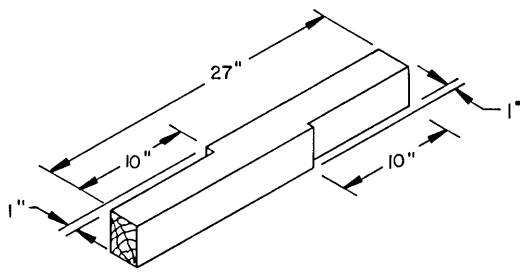
WEDGE DETAIL A
2" X 4" MATERIAL.



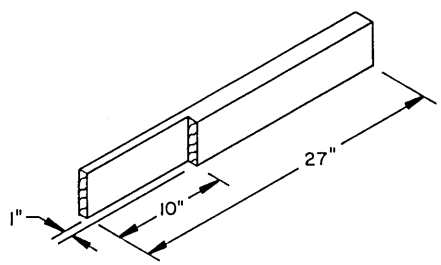
WEDGE DETAIL B
2" X 2" MATERIAL.



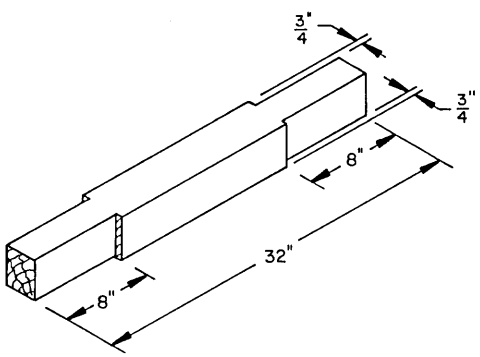
SPLICE DETAIL
1" X 4" OR 2" X 4" MATERIAL.



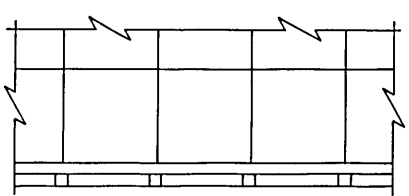
SUPPORT BLOCK A
4" X 4" MATERIAL. SEE SPECIAL NOTE 5 ON PAGE 68



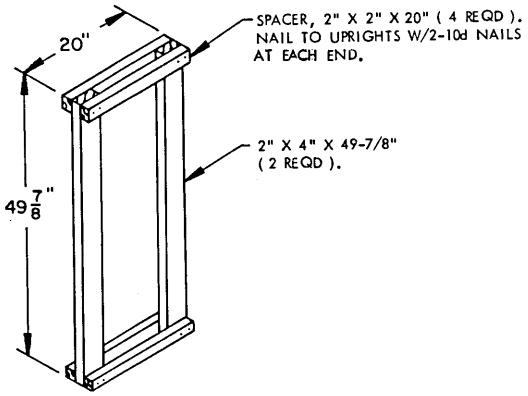
SUPPORT BLOCK B
2" X 4" MATERIAL. SEE SPECIAL NOTE 5 ON PAGE 68.



SUPPORT BLOCK C
4" X 4" MATERIAL. SEE SPECIAL NOTE 5 ON PAGE 70.

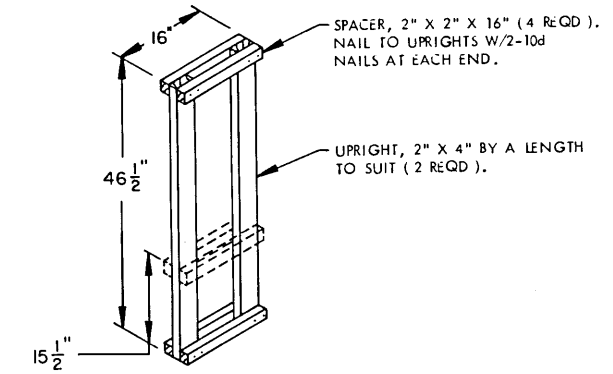


PLACEMENT OF WEDGES
NOTE: WEDGES ARE CENTERED UNDER THE JOINTS BETWEEN STACKS.



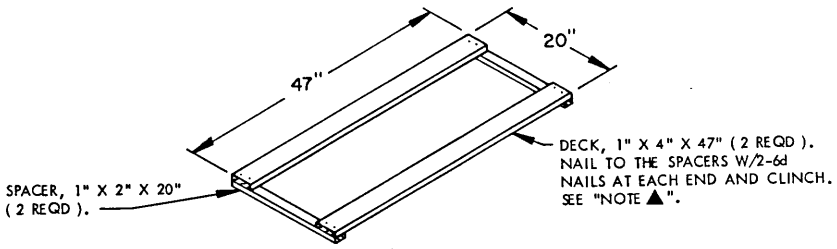
SEPARATOR ASSEMBLY A

FOR USE IN THE STORAGE SHOWN ON PAGE 34.



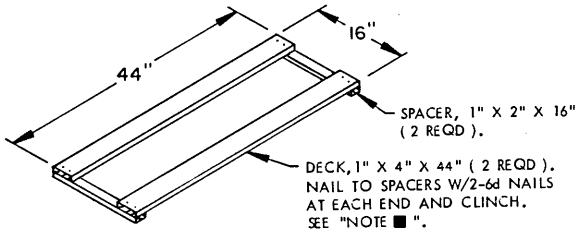
SEPARATOR ASSEMBLY B

FOR USE IN THE STORAGE SHOWN ON PAGE 35.



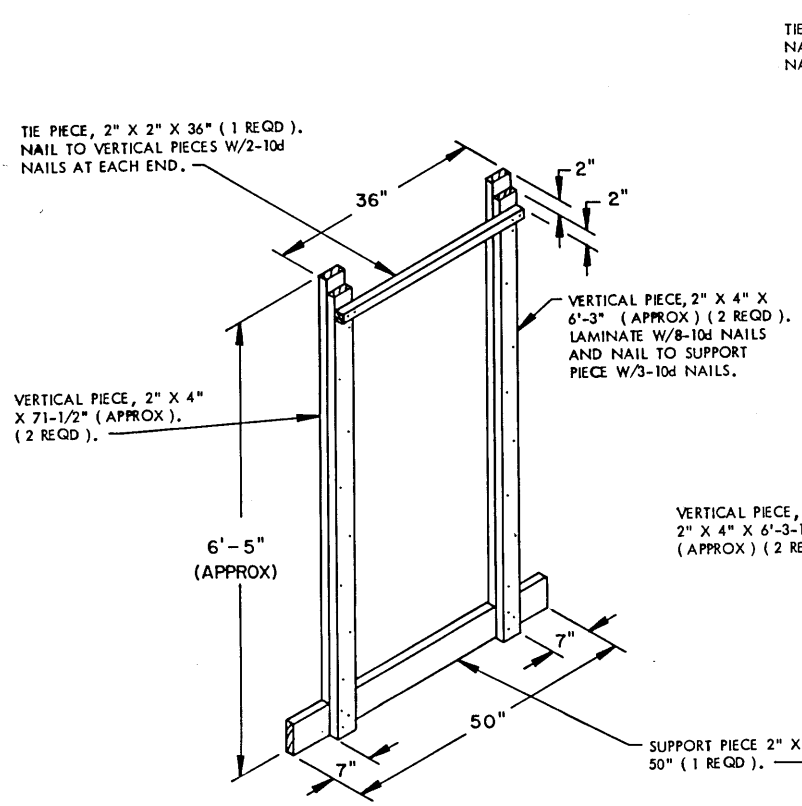
DECK ASSEMBLY A

NOTE ▲: 18 DECK ASSEMBLIES OF THE SIZE SHOWN ABOVE AND ONE DECK ASSEMBLY 32" LONG AND 3 DECK ASSEMBLIES 16" LONG ARE REQUIRED FOR THE STORAGE ON PAGE 34.



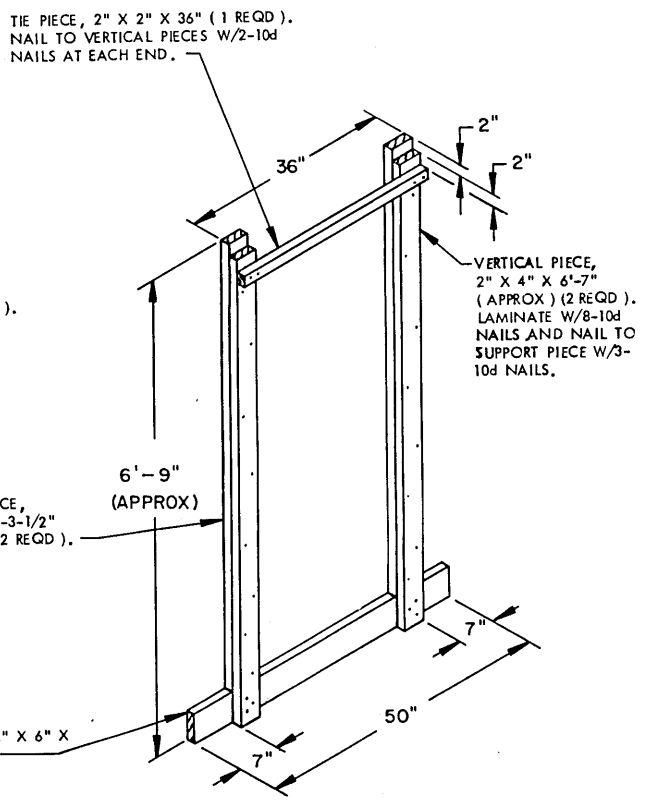
DECK ASSEMBLY B

NOTE ■: 22 DECK ASSEMBLIES OF THE SIZE SHOWN ABOVE AND 2 DECK ASSEMBLIES 30" LONG ARE REQUIRED FOR THE STORAGE SHOWN ON PAGE 35.



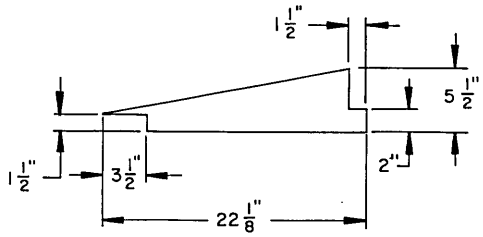
RETAINER ASSEMBLY A

SEE SPECIAL NOTE 7 ON PAGE 71.

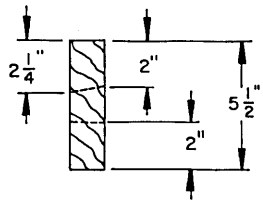


RETAINER ASSEMBLY B

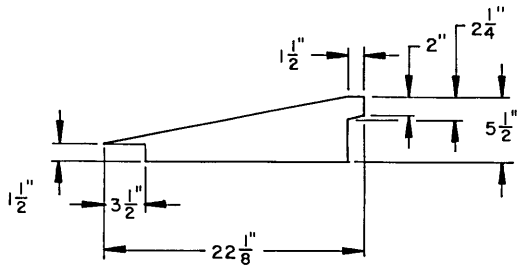
SEE SPECIAL NOTE 7 ON PAGE 74.



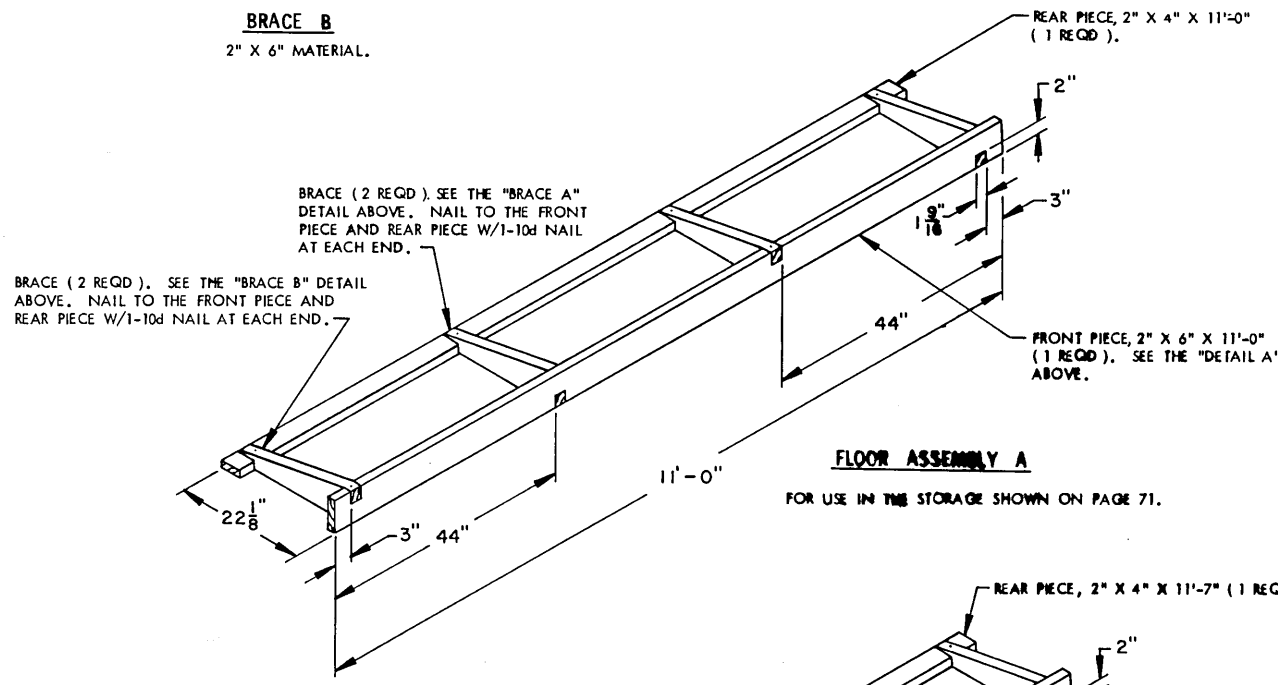
BRACE A
2" X 6" MATERIAL.



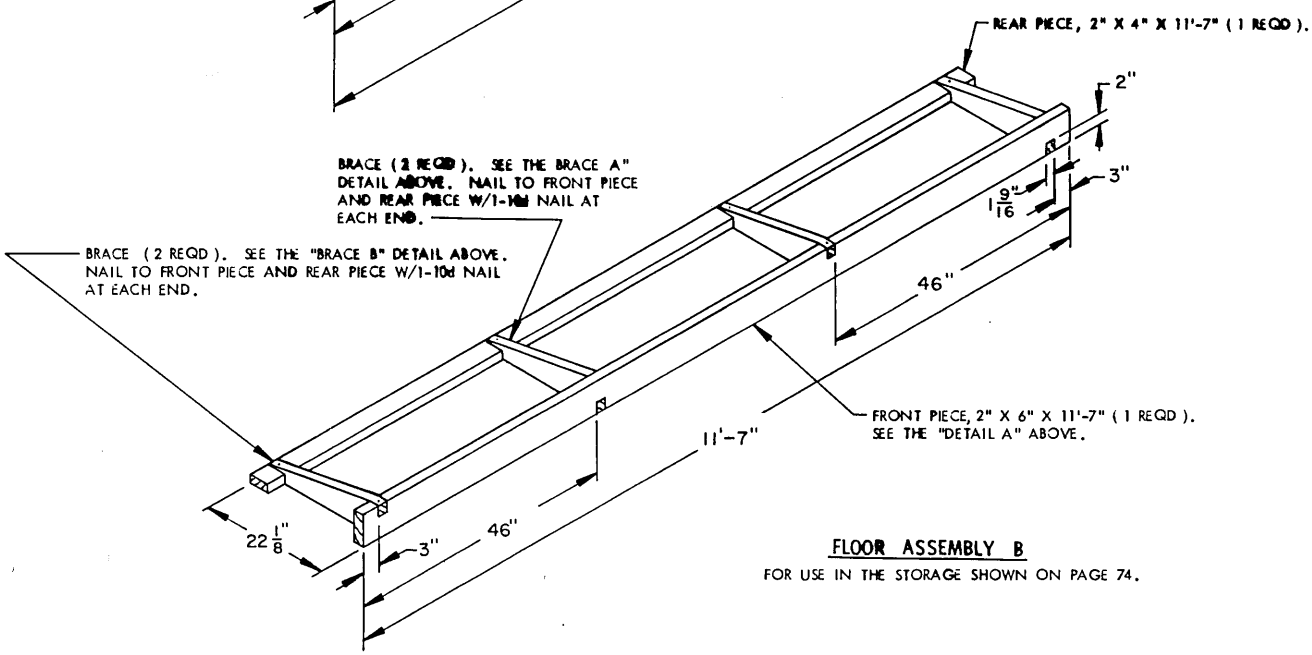
DETAIL A
THE END VIEW OF THE FRONT PIECE DEPICTED ABOVE SHOWS DIMENSIONS OF THE NOTCHES.



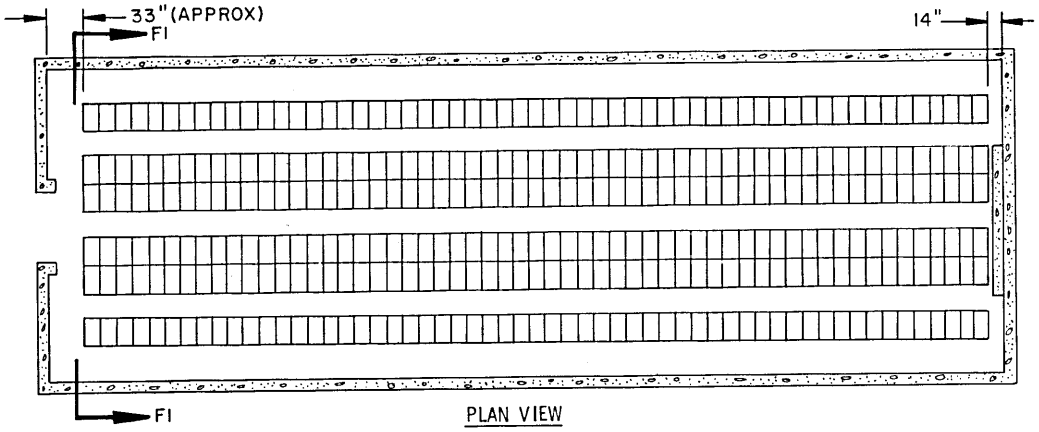
BRACE B
2" X 6" MATERIAL.



FLOOR ASSEMBLY A
FOR USE IN THE STORAGE SHOWN ON PAGE 71.



FLOOR ASSEMBLY B
FOR USE IN THE STORAGE SHOWN ON PAGE 74.

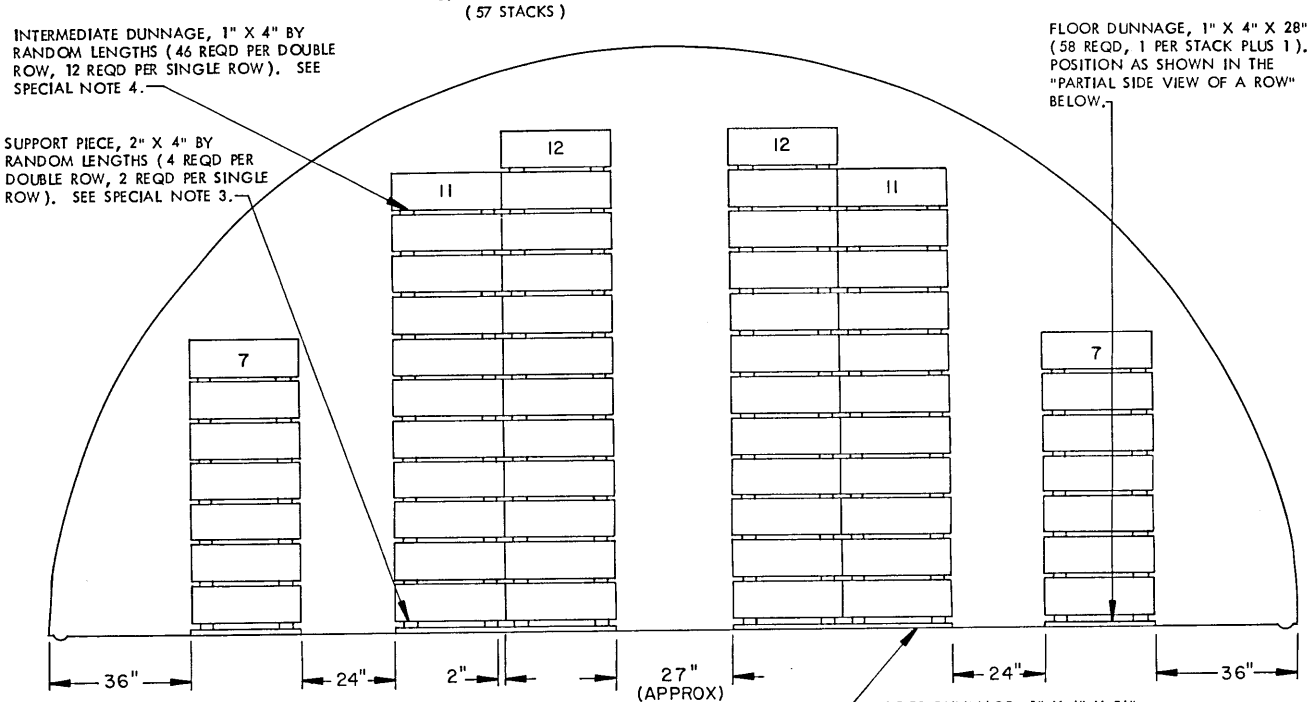


PLAN VIEW
81'-2" MAGAZINE
(57 STACKS)

STORAGE IN 81'-2" MAGAZINE

ITEM	QUANTITY	EXPLOSIVE WEIGHT
BOXES ---------	3,420	376,200 LBS

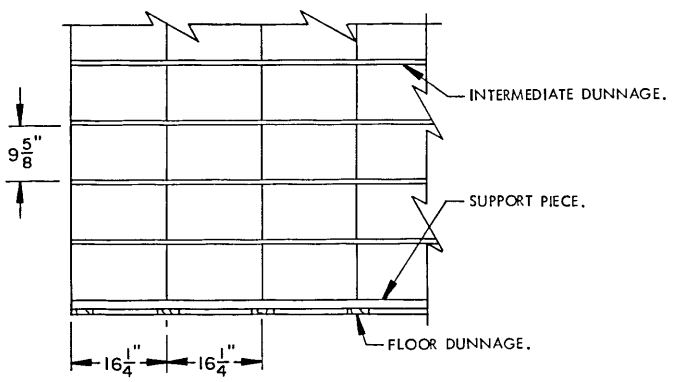
SEE GENERAL NOTE "E" ON PAGE 2.



SECTION F1-F1
60 BOXES PER STACK

BILL OF MATERIAL (PER DOUBLE ROW) ●		
LUMBER	LINEAR FEET	BOARD FEET
1" X 4"	3,812	1,271
2" X 4"	309	206
(PER SINGLE ROW) ●●		
LUMBER	LINEAR FEET	BOARD FEET
1" X 4"	1,062	354
2" X 4"	155	52

●ONE DOUBLE ROW STACK REQUIRES 62.30 LINEAR FEET OF 1" X 4" PLUS 2 PIECES 54" LONG AND 5.42 LINEAR FEET OF 2" X 4".
●●ONE SINGLE ROW STACK REQUIRES 16.25 LINEAR FEET OF 1" X 4" PLUS 2 PIECES 28" LONG AND 2.71 LINEAR FEET OF 2" X 4".



PARTIAL SIDE VIEW OF A ROW

SPECIAL NOTES:

1. STORAGE AS SHOWN IS FOR THE M2 AND MK VII STEEL BOX.

   BOX DIMENSIONS --- 16-1/4" LONG BY 9-5/8" WIDE BY 28-3/8" HIGH. EXPLOSIVE WEIGHT -- 110 POUNDS PER BOX.

2. THE NUMBERS SHOWN IN THE SECTION VIEW INDICATE THE QUANTITY OF BOXES HIGH IN A STACK.

3. JOINTS IN THE SUPPORT PIECES MUST BE CENTERED ON THE FLOOR DUNNAGE PIECES AS NEAR AS POSSIBLE. JOINTS IN LATERALLY ADJACENT SUPPORT PIECES NEED NOT BE STAGGERED.

4. RANDOM LENGTH MATERIAL, OF NOT LESS THAN 48", MAY BE USED FOR THE 1" X 4" INTERMEDIATE DUNNAGE PIECES. THE JOINTS IN THE INTERMEDIATE DUNNAGE SHOULD BE CENTERED UNDER THE LENGTH OF THE BOX, AND LATERALLY ADJACENT JOINTS MUST BE STAGGERED AT LEAST 16" FROM EACH OTHER. ALSO, THE JOINTS IN AN UPPER LAYER OF A ROW MUST BE STAGGERED AT LEAST 16" FROM THE JOINTS IN THE NEXT LOWER LAYER.

5. CONTAINERS MAY BE STACKED TO ALLOW EASE OF ACCESS FOR INSPECTION BASED ON OPERATIONAL AND STORAGE CONDITIONS. THE SELECTION OF A STORAGE PROCEDURE FROM THOSE DEPICTED ON PAGES 70 AND 71 OR ON THIS PAGE IS THE OPTION OF THE STORING ACTIVITY.

☆ U.S. GOVERNMENT PRINTING OFFICE: 1988—643-514