

STORAGE IN 80'-0" AND 40'-0" L X 25'-0" 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				DRAFTSMAN <i>dh</i>	PROJ ENG <i>WFE</i>
				CHECKER	LOG ENGRG OFFICE
1	MAY 86	<i>WFE</i>	<i>William F Ernst</i>	<i>dh</i>	<i>WFE</i>
2	APR 89	<i>WFE</i>	<i>William F Ernst</i>		
				APPROVED, U.S. ARMY ARMAMENT, MUNITIONS AND CHEMICAL COMMAND <i>William F Ernst</i>	
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				U.S. ARMY AMC DRAWING	
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				CLASS	DIVISION
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DO NOT SCALE

GENERAL NOTES

(GENERAL NOTES CONTINUED)

- A. THIS DOCUMENT HAS BEEN PREPARED AND ISSUED IN ACCORDANCE WITH AR 740-1, AND AUGMENTS TM 743-200-1 (CHAPTER 5).
- B. THE STORAGE PROCEDURES DEPICTED WITHIN THIS DOCUMENT ARE APPLICABLE FOR STORAGE OF PROPELLANTS, COMPLETE ROUNDS, BULK POWDER, ETC., IN 80'-0" LONG BY 25'-0" 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 APPLIANCE 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 AMC R 385-103 CHAPTER 34.
- E. NOTICE: EXPLOSIVES MAY BE STORED IN MAGAZINES TO 500,000 POUNDS PROVIDING COMPLIANCE WITH AMC R 385-103 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. SEE GENERAL NOTE "X".
- 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.
- 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 PAGES 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.
- X. MIXED-LOT PALLET UNITS ARE ACCEPTABLE. A MIXED-LOT PALLET UNIT MAY HAVE FROM TWO LOTS PER PALLET UNIT UPWARDS TO AS MANY DIFFERENT LOTS AS THERE ARE CONTAINERS/BOXES WITHIN THAT UNIT. HOWEVER, ALL ITEMS WITHIN THE PALLET UNIT MUST HAVE THE SAME NATIONAL STOCK NUMBER AND CONDITION CODE.
- Y. THE PRINCIPLES OF THE STORAGE PROCEDURES DEPICTED HEREIN MAY BE APPLIED FOR THE STORAGE OF CONTAINERS/BOXES WHICH ARE OF SIMILAR SIZE AND CONFIGURATION.

(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 I, TYPE I OR IV, HEAVY DUTY, FINISH B (GRADE 2), FED SPEC QQ-5-781.
- SEAL, STRAP----- : TYPE D, STYLE I, II, OR IV, CLASS H, FINISH B (GRADE 2), FED SPEC QQ-5-781.

REVISIONS

REVISION NO. 1, DATED MAY 1986, CONSISTS OF:

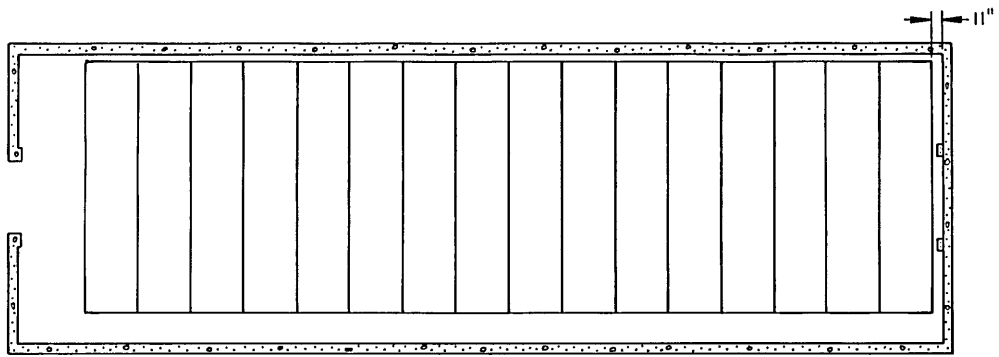
1. ADDING SPECIAL PROCEDURES FOR STORAGE OF FIBERBOARD BOXES AND FIBERBOARD DRUMS IN GEOGRAPHICAL AREAS WHERE THE HUMIDITY IS HIGH.
2. CHANGING THE TITLE BLOCK FROM U.S. ARMY DARCOM DRAWING TO U.S. ARMY AMC DRAWING.
3. ADDING ALTERNATIVE PROCEDURES FOR STORAGE OF POWDER PROPELLANT, PACKED IN STEEL BOX, M2 AND MKVII.

REVISION NO. 2, DATED APRIL-1989, CONSISTS OF

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

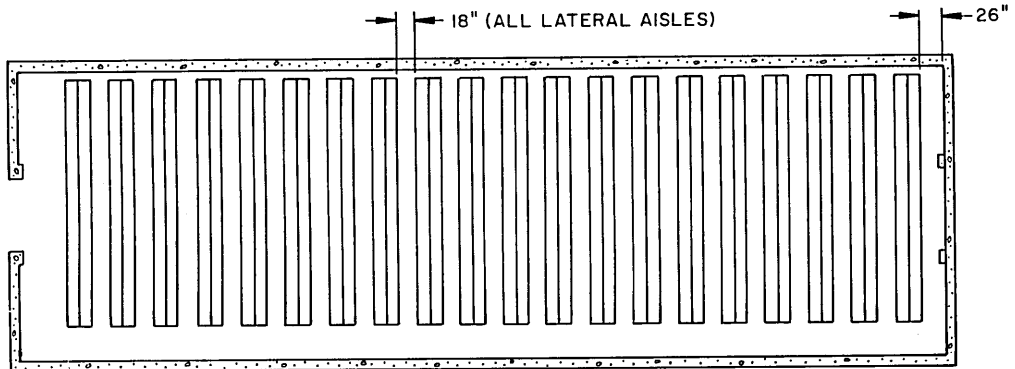
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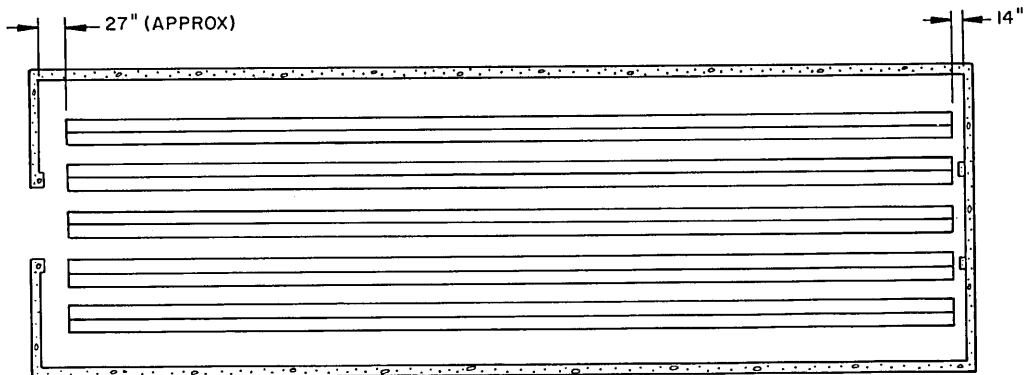
TYPICAL PLAN VIEW A

FOR USE WITH STORAGE METHODS SHOWN ON PAGES 5
THRU 40, AND PAGE 67. 80'-0" MAGAZINE SHOWN.
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. 80'-0" MAGAZINE SHOWN.
QUANTITY OF STACKS SHOWN ABOVE IS TYPICAL.



TYPICAL PLAN VIEW C

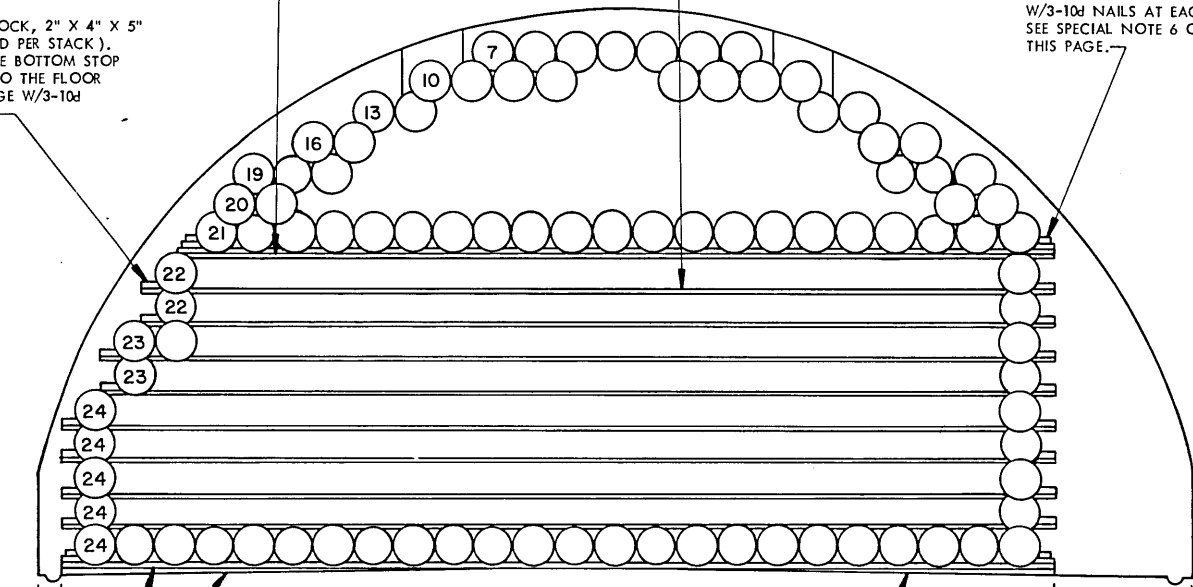
FOR USE WITH STORAGE METHOD SHOWN ON PAGE 61.
80'-0" MAGAZINE SHOWN. QUANTITY OF ROWS SHOWN
ABOVE IS ACCURATE.

INTERMEDIATE DUNNAGE, 1" X 4" BY LENGTH TO SUIT (DOUBLED) (2 REQD PER STACK). NAIL THE FIRST PIECE TO THE STOP BLOCKS W/3-6d NAILS AT EACH END. LAMINATE THE SECOND PIECE TO THE FIRST W/1-6d NAIL EVERY 12" AND CLINCH. SEE THE "SPLICE DETAIL" ON PAGE 86.

INTERMEDIATE DUNNAGE, 1" X 4" BY LENGTH TO SUIT (16 REQD PER STACK). NAIL TO THE STOP BLOCKS W/3-6d NAILS AT EACH END. SEE THE "SPLICE DETAIL" ON PAGE 86.

TIE PIECE, 2" X 4" X 9'-2-3/4" (4 REQD PER STACK). POSITION AGAINST THE END CONTAINERS AND NAIL TO THE STOP BLOCKS W/3-10d NAILS AT EACH JOINT. SEE SPECIAL NOTE 6 ON THIS PAGE.

STOP BLOCK, 2" X 4" X 5" (40 REQD PER STACK). NAIL THE BOTTOM STOP BLOCK TO THE FLOOR DUNNAGE W/3-10d NAILS.



STACK ELEVATION

316 CONTAINERS PER STACK.
4,424 CONTAINERS PER 80' MAG.
1,896 CONTAINERS PER 40' MAG.

FLOOR DUNNAGE, 2" X 4" BY A LENGTH TO SUIT (2 REQD PER STACK). SEE THE "SPLICE DETAIL" ON PAGE 86.

WEDGE, 2" X 4" X 9'-0" (2 REQD PER STACK). SEE THE "WEDGE DETAIL A" ON PAGE 86.

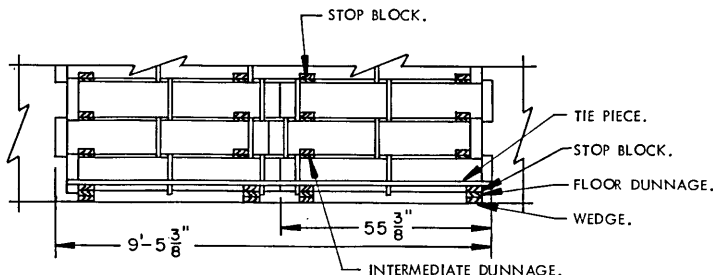
WEDGE, 2" X 4" X 6'-0" (2 REQD PER STACK). SEE THE "WEDGE DETAIL A" ON PAGE 86.

SPECIAL NOTES:

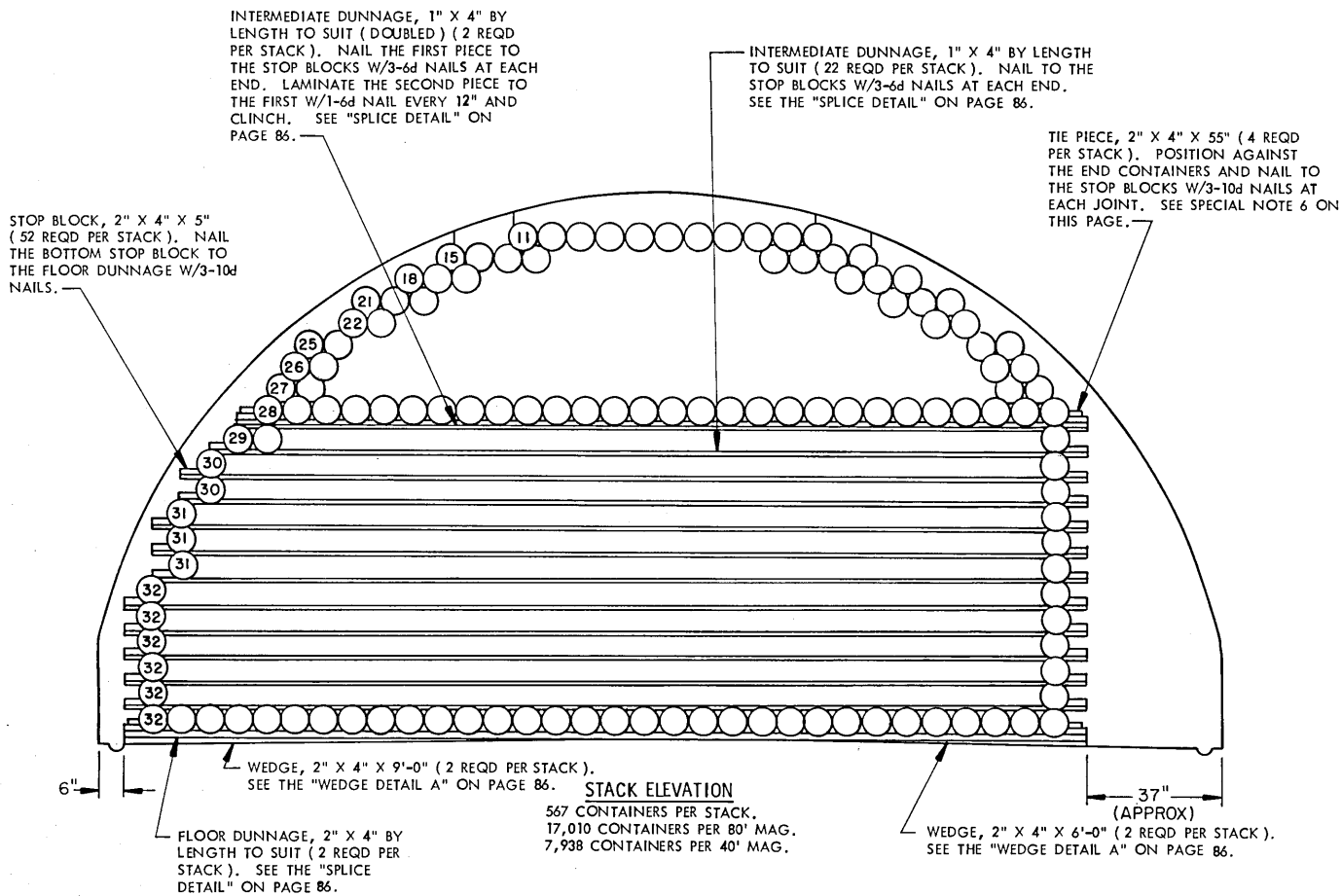
- STORAGE AS SHOWN IS FOR THE M10A4 CONTAINER. USE THIS SAME STORAGE FORMAT FOR ALL M10 SERIES CONTAINERS.
CONTAINER DIMENSIONS -----55-3/8" LONG BY 10-15/32" DIAMETER.
- WHEN STORING THE M10A2 CONTAINER IT MAY BE NECESSARY TO ELIMINATE ONE (1) CONTAINER FROM EACH LAYER DUE TO SLIGHTLY LARGER DIAMETER OF THE CONTAINER.
- THE NUMBERS SHOWN IN THE STACK ELEVATION INDICATE THE QUANTITY OF CONTAINERS PER LAYER IN A STACK.
- SEE THE "TYPICAL PLAN VIEW A" ON PAGE 4.
- STORE IN DOUBLE STACKS FOR BETTER STABILITY. SEE THE "PARTIAL END VIEW OF DOUBLE STACK" ON THIS PAGE.
- 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.
- NOTE: JOINTS IN INTERMEDIATE DUNNAGE MUST BE STAGGERED BOTH HORIZONTALLY AND VERTICALLY.
- THE INTERMEDIATE DUNNAGE POSITIONED IMMEDIATELY UNDER THE NESTED CONTAINERS AT THE TOP OF THE STACK WILL BE OF DOUBLE THICKNESS 1" X 4" MATERIAL.
- ALL CONTAINERS POSITIONED ABOVE LAYER TEN (10) ARE NESTED.
- THERE WILL BE APPROXIMATELY 12'-7" OF SPACE AT THE FRONT OF AN 80'-0" LONG MAGAZINE. THERE WILL BE APPROXIMATELY 10'-6" OF SPACE AT THE FRONT OF A 40'-0" LONG MAGAZINE.

BILL OF MATERIAL (PER STACK)

LUMBER	LINEAR FEET	BOARD FEET
1" X 4"	443	148
2" X 4"	82	55
NAILS	NO. REQD	POUNDS
6d (2")	142	1
10d (3")	36	3/4
WEDGES PER STACK		
LUMBER	LENGTH	NO. REQD
2" X 4"	6'-0"	2
2" X 4"	9'-0"	2



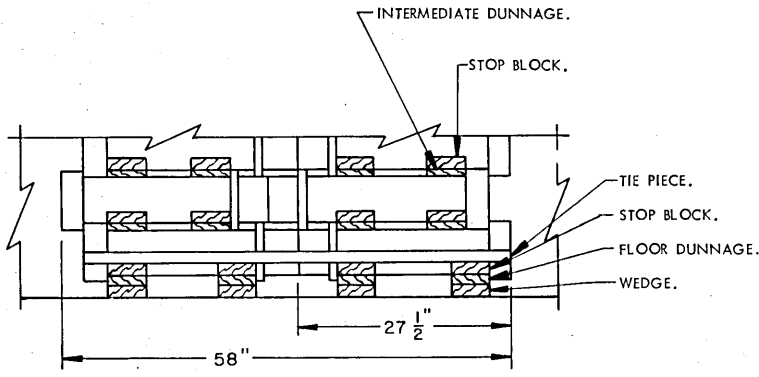
PARTIAL END VIEW OF DOUBLE STACK



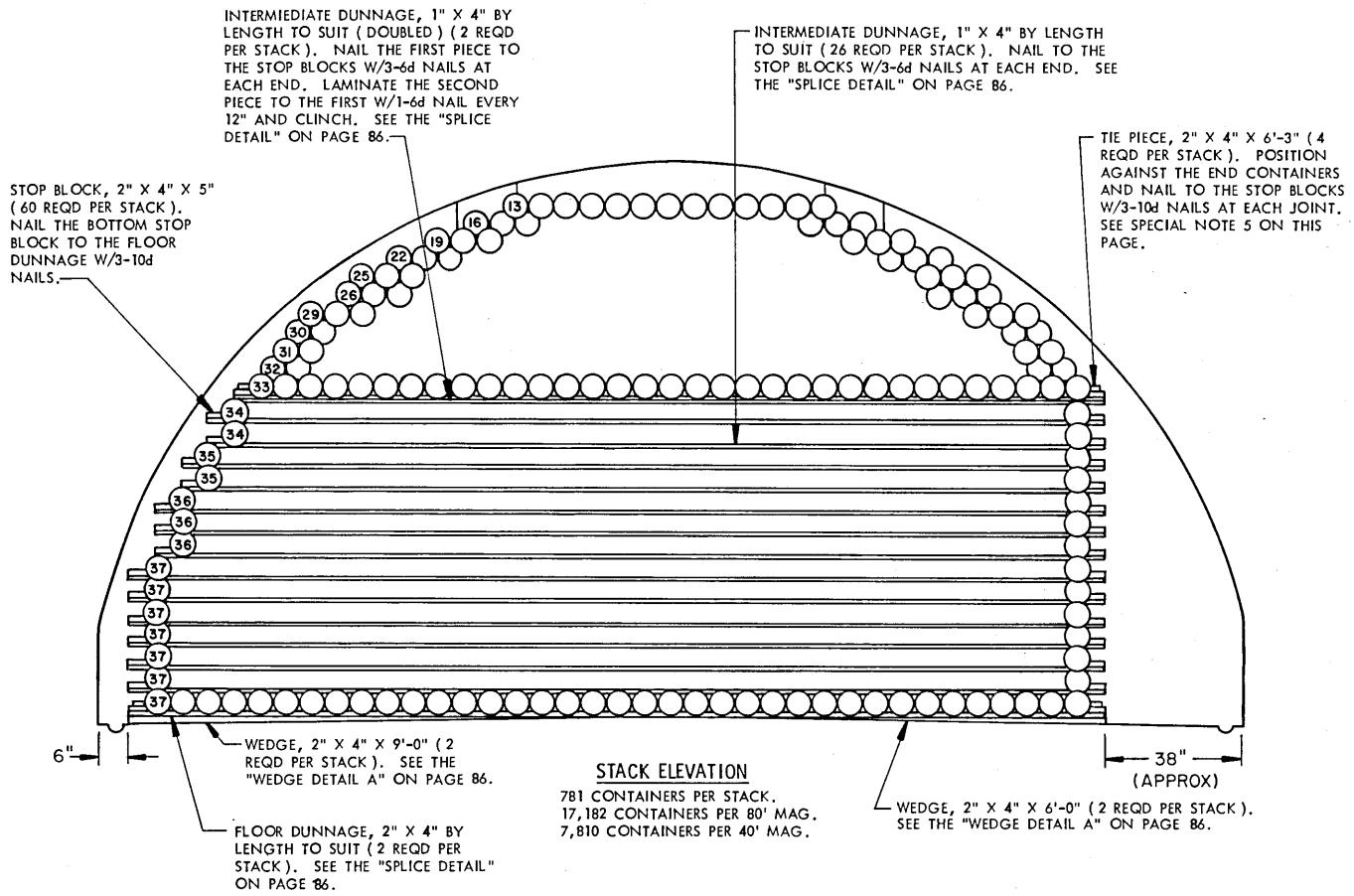
SPECIAL NOTES:

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 6'-4" OF SPACE AT THE FRONT OF AN 80'-0" LONG MAGAZINE. THERE WILL BE APPROXIMATELY 60" OF SPACE AT THE FRONT OF A 40'-0" LONG MAGAZINE.

BILL OF MATERIAL (PER STACK)		
LUMBER	LINEAR FEET	BOARD FEET
1" X 4"	594	198
2" X 4"	77	51
NAILS		POUNDS
6d (2")	182	1-1/4
10d (3")	36	3/4
WEDGES PER STACK		
LUMBER	LENGTH	NO. REQD
2" X 4"	6'-0"	2
2" X 4"	9'-0"	2



PARTIAL END VIEW OF DOUBLE STACK



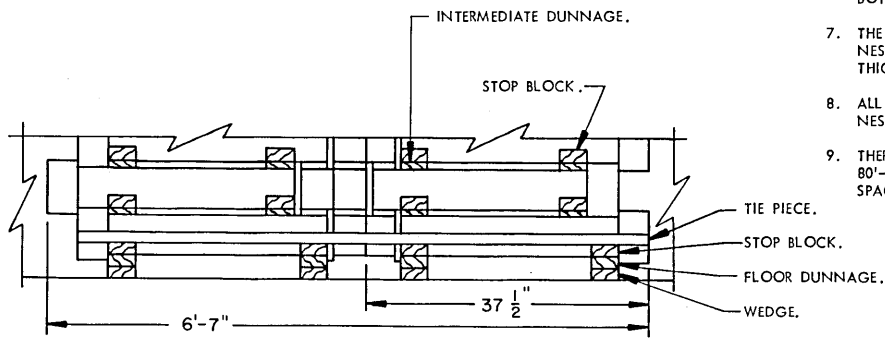
STACK ELEVATION

781 CONTAINERS PER STACK.
 17,182 CONTAINERS PER 80' MAG.
 7,810 CONTAINERS PER 40' MAG.

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 FIFTEEN (15) ARE NESTED.
9. THERE WILL BE APPROXIMATELY 6'-5" OF SPACE AT THE FRONT OF AN 80'-0" LONG MAGAZINE. THERE WILL BE APPROXIMATELY 71" OF SPACE AT THE FRONT OF A 40'-0" LONG MAGAZINE.

BILL OF MATERIAL (PER STACK)		
LUMBER	LINEAR FEET	BOARD FEET
1" X 4"	666	222
2" X 4"	84	56
NAILS		
	NO. REQD	POUNDS
6d (2")	206	1-1/4
10d (3")	36	3/4
WEDGES PER STACK		
LUMBER	LENGTH	NO. REQD
2" X 4"	6'-0"	2
2" X 4"	9'-0"	2



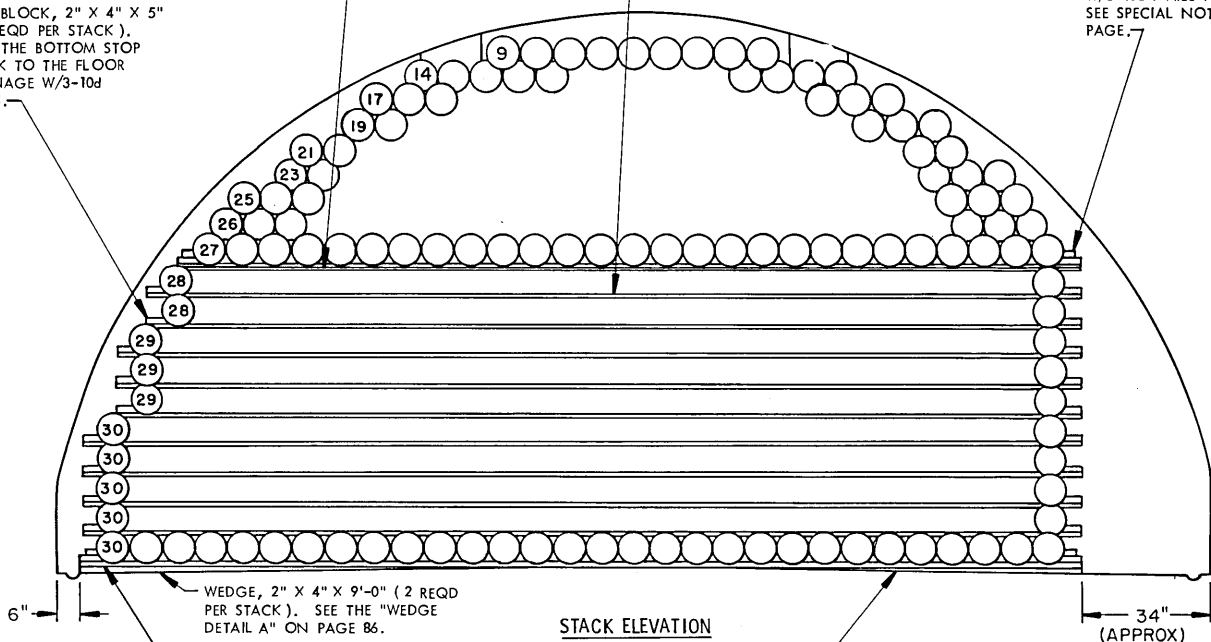
PARTIAL END VIEW OF DOUBLE STACK

INTERMEDIATE DUNNAGE, 1" X 4" BY LENGTH TO SUIT (DOUBLED) (2 REQD PER STACK). NAIL THE FIRST PIECE TO THE STOP BLOCKS W/3-6d NAILS AT EACH END. LAMINATE THE SECOND PIECE TO THE FIRST W/1-6d NAIL EVERY 12" AND CLINCH. SEE THE "SPLICE DETAIL" ON PAGE 86.

INTERMEDIATE DUNNAGE, 1" X 4" BY LENGTH TO SUIT (18 REQD PER STACK). NAIL TO THE STOP BLOCKS W/3-6d NAILS AT EACH END. SEE THE "SPLICE DETAIL" ON PAGE 86.

TIE PIECE, 2" X 4" X 7'-1" (4 REQD PER STACK). POSITION AGAINST THE END CONTAINERS AND NAIL TO THE STOP BLOCKS W/3-10d NAILS AT EACH JOINT. SEE SPECIAL NOTE 5 ON THIS PAGE.

STOP BLOCK, 2" X 4" X 5" (44 REQD PER STACK). NAIL THE BOTTOM STOP BLOCK TO THE FLOOR DUNNAGE W/3-10d NAILS.



STACK ELEVATION

474 CONTAINERS PER STACK.
9,480 CONTAINERS PER 80' MAG.
3,792 CONTAINERS PER 40' MAG.

WEDGE, 2" X 4" X 6'-0" (2 REQD PER STACK). SEE THE "WEDGE DETAIL A" ON PAGE 86.

WEDGE, 2" X 4" X 9'-0" (2 REQD PER STACK). SEE THE "WEDGE DETAIL A" ON PAGE 86.

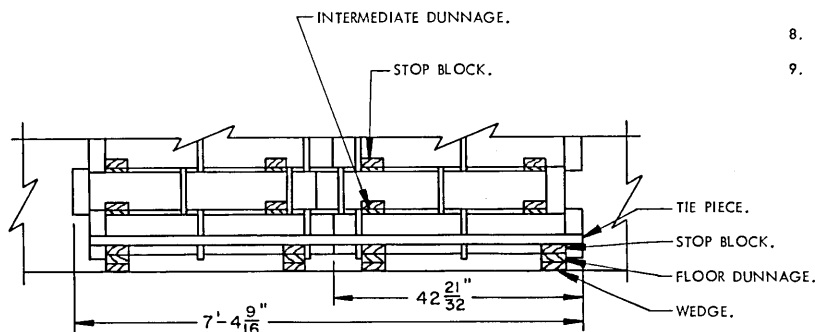
FLOOR DUNNAGE, 2" X 4" BY LENGTH TO SUIT (2 REQD PER STACK). SEE THE "SPLICE DETAIL" ON PAGE 86.

SPECIAL NOTES:

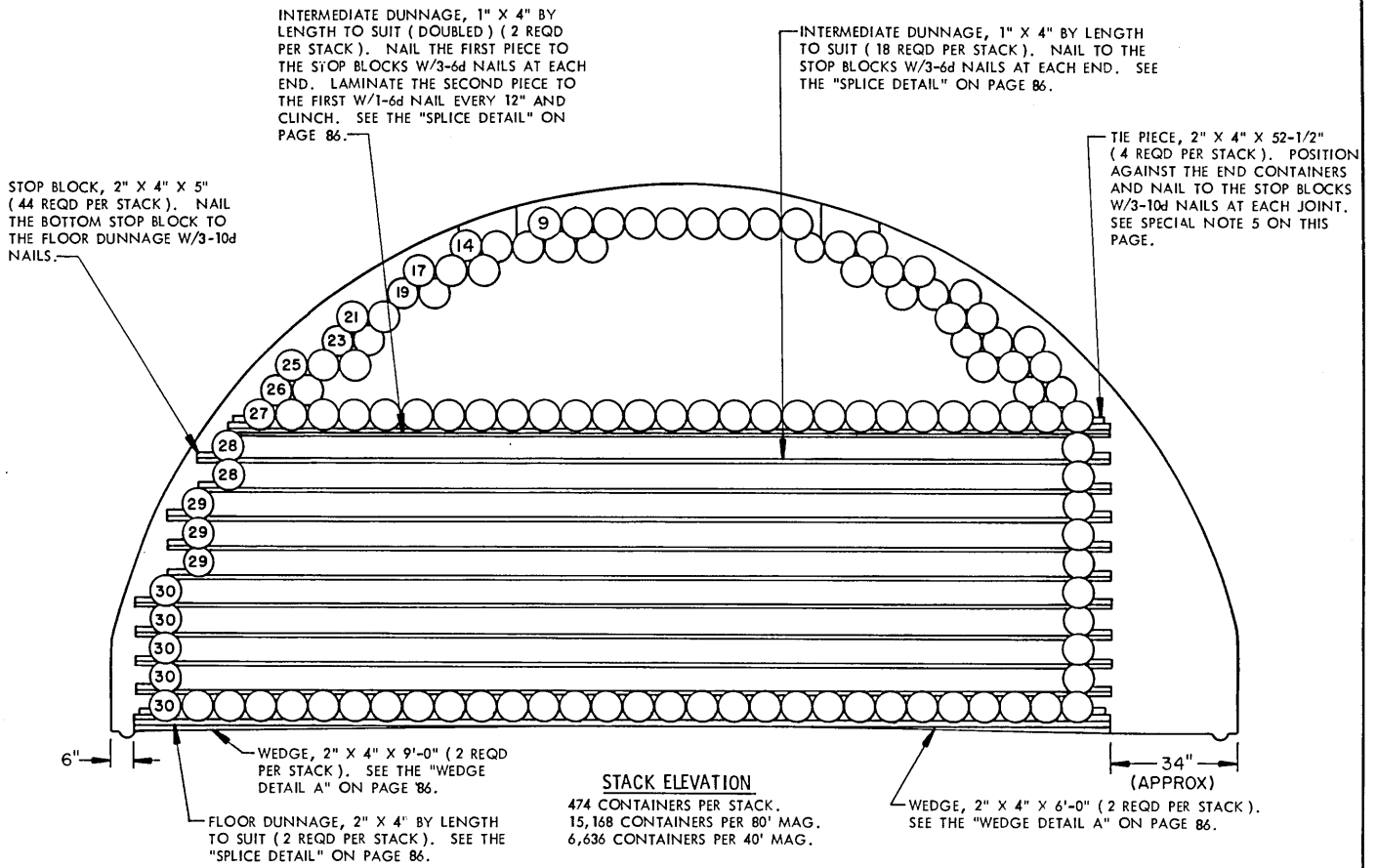
- STORAGE AS SHOWN IS FOR THE M16A3 CONTAINER. USE THIS SAME STORAGE FORMAT FOR ALL M16 SERIES CONTAINERS.
CONTAINER DIMENSIONS---42-21/32" LONG BY 8-13/32" DIAMETER.
- THE NUMBERS SHOWN IN THE STACK ELEVATION INDICATE THE QUANTITY OF CONTAINERS PER LAYER IN A STACK.
- SEE THE "TYPICAL PLAN VIEW A" ON PAGE 4.
- STORE IN DOUBLE STACKS FOR BETTER STABILITY. SEE THE "PARTIAL END VIEW OF DOUBLE STACK" ON THIS PAGE.
- 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.
- NOTE:** JOINTS IN INTERMEDIATE DUNNAGE MUST BE STAGGERED BOTH HORIZONTALLY AND VERTICALLY.
- THE INTERMEDIATE DUNNAGE POSITIONED IMMEDIATELY UNDER THE NESTED CONTAINERS AT THE TOP OF THE STACK WILL BE OF DOUBLE THICKNESS 1" X 4" MATERIAL.
- ALL CONTAINERS POSITIONED ABOVE LAYER ELEVEN (11) ARE NESTED.
- THERE WILL BE APPROXIMATELY 60" OF SPACE AT THE FRONT OF AN 80'-0" LONG MAGAZINE. THERE WILL BE APPROXIMATELY 9'-4" OF SPACE AT THE FRONT OF A 40'-0" LONG MAGAZINE.

BILL OF MATERIAL (PER STACK)

LUMBER	LINEAR FEET	BOARD FEET
1" X 4"	496	166
2" X 4"	80	54
NAILS	NO. REQD	POUNDS
6d (2")	160	1
10d (3")	36	3/4
WEDGES PER STACK		
LUMBER	LENGTH	NO. REQD
2" X 4"	6'-0"	2
2" X 4"	9'-0"	2



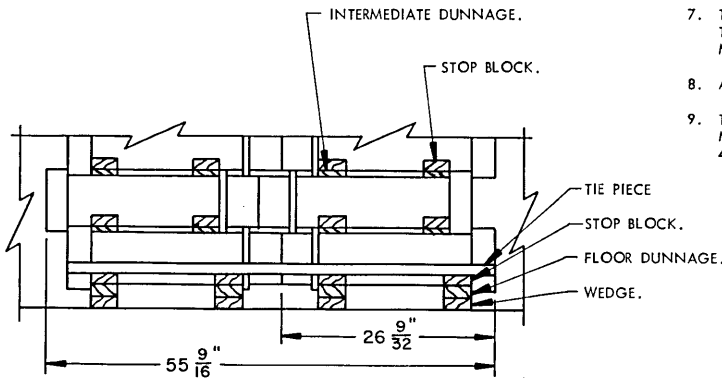
PARTIAL END VIEW OF DOUBLE STACK



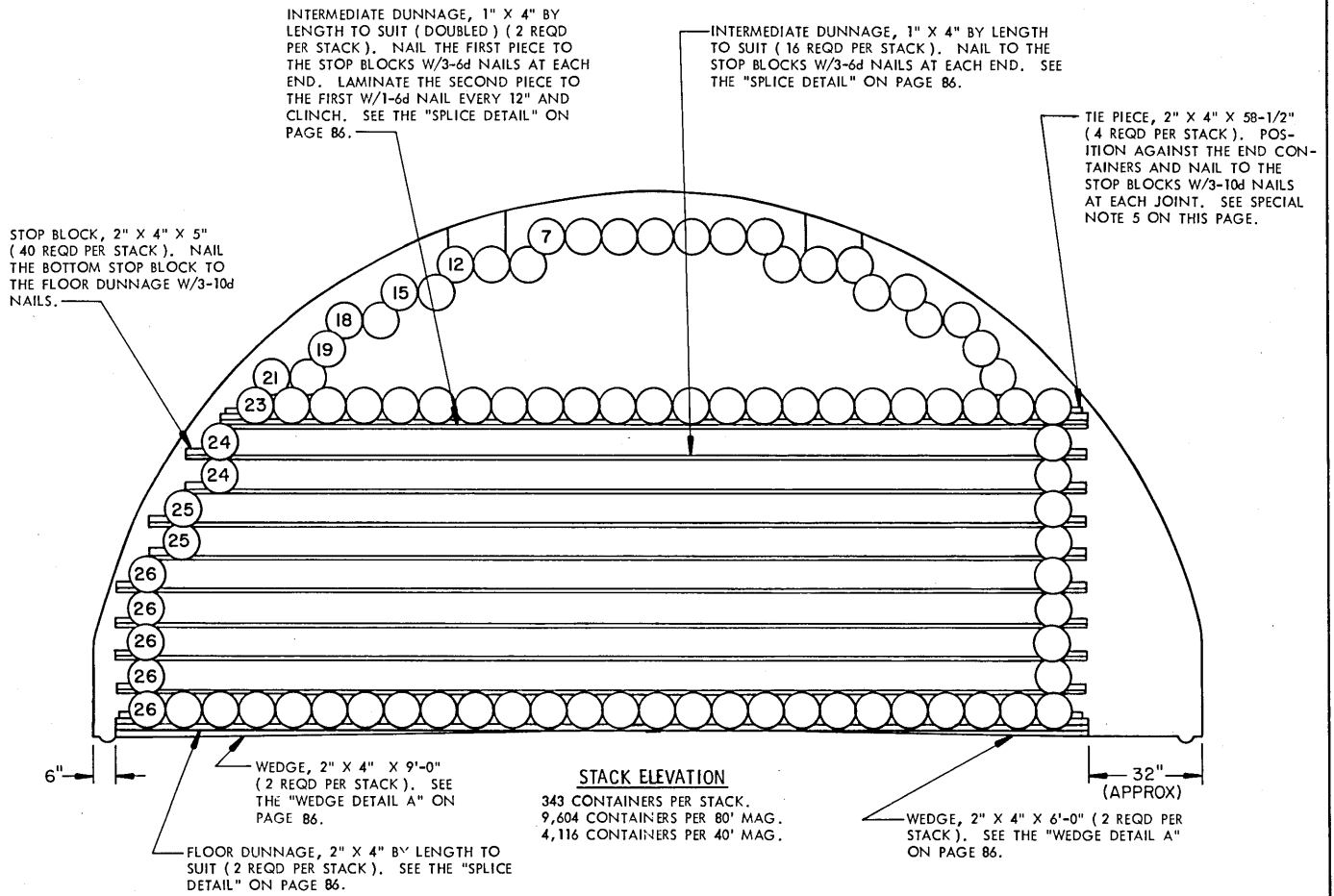
BILL OF MATERIAL (PER STACK)		
LUMBER	LINEAR FEET	BOARD FEET
1" X 4"	496	166
2" X 4"	74	50
NAILS		
	NO. REQD	POUNDS
6d (2")	160	1
10d (3")	36	3/4
WEDGE PER STACK		
LUMBER	LENGTH	NO. REQD
2" X 4"	6'-0"	2
2" X 4"	9'-0"	2

SPECIAL NOTES:

- 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.
- THE NUMBERS SHOWN IN THE STACK ELEVATION INDICATE THE QUANTITY OF CONTAINERS PER LAYER IN A STACK.
- SEE THE "TYPICAL PLAN VIEW A" ON PAGE 4.
- STORE IN DOUBLE STACKS FOR BETTER STABILITY. SEE THE "PARTIAL END VIEW OF DOUBLE STACK" ON THIS PAGE.
- 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.
- NOTE: JOINTS IN INTERMEDIATE DUNNAGE MUST BE STAGGERED BOTH HORIZONTALLY AND VERTICALLY.
- THE INTERMEDIATE DUNNAGE POSITIONED IMMEDIATELY UNDER THE NESTED CONTAINERS AT THE TOP OF THE STACK WILL BE OF DOUBLE THICKNESS 1" X 4" MATERIAL.
- ALL CONTAINERS POSITIONED ABOVE LAYER ELEVEN (11) ARE NESTED.
- THERE WILL BE APPROXIMATELY 57" OF SPACE AT THE FRONT OF AN 80'-0" LONG MAGAZINE. THERE WILL BE APPROXIMATELY 6'-5" OF SPACE AT THE FRONT OF A 40'-0" LONG MAGAZINE.



PARTIAL END VIEW OF DOUBLE STACK

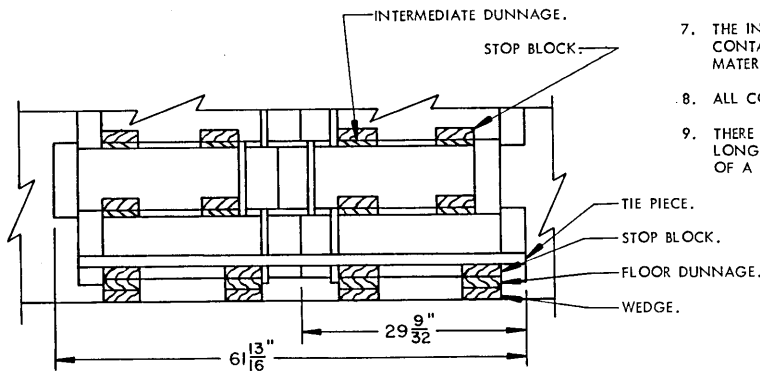


STACK ELEVATION
 343 CONTAINERS PER STACK.
 9,604 CONTAINERS PER 80' MAG.
 4,116 CONTAINERS PER 40' MAG.

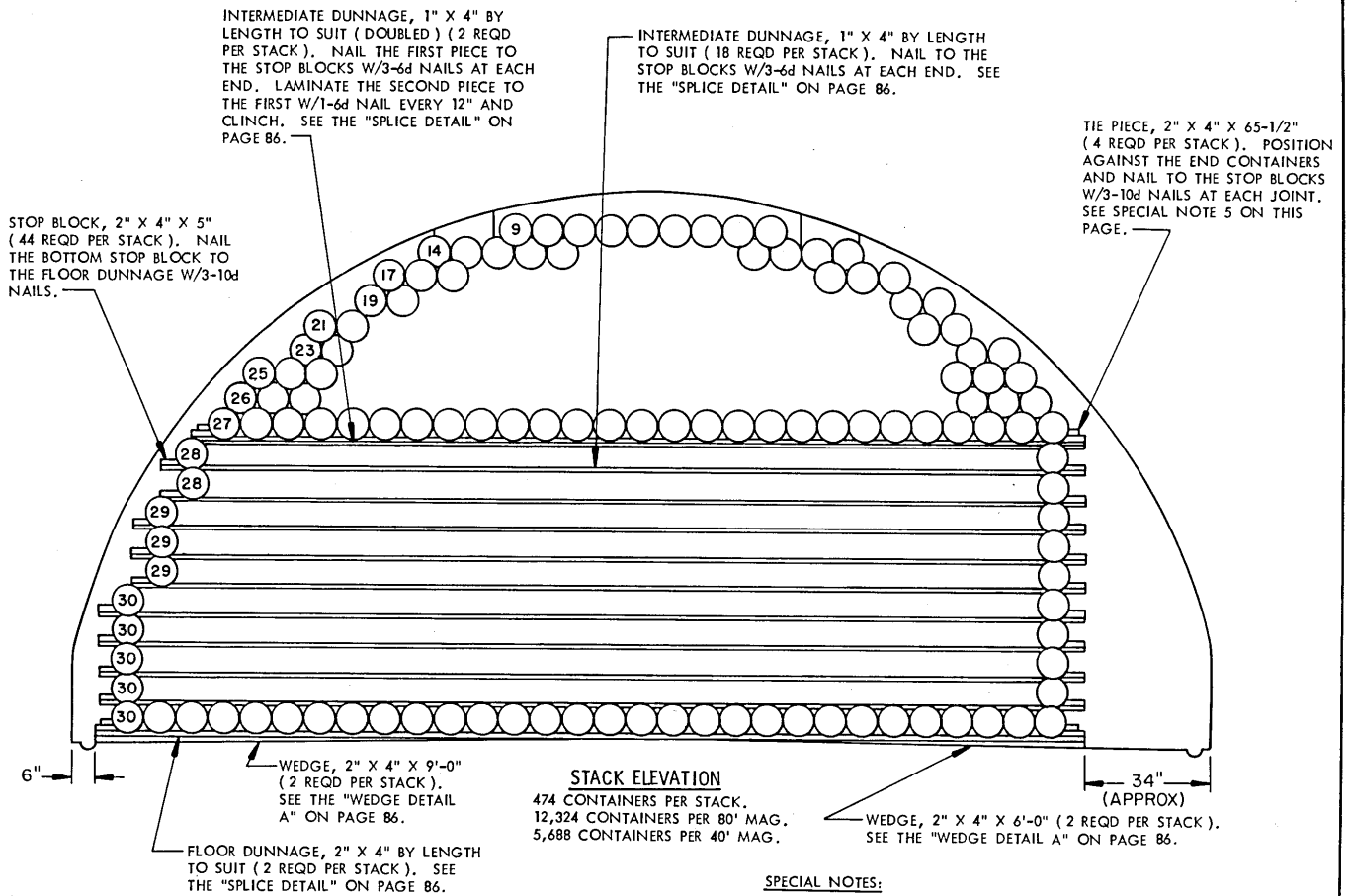
BILL OF MATERIAL (PER STACK)		
LUMBER	LINEAR FEET	BOARD FEET
1" X 4"	451	151
2" X 4"	74	50
NAILS		POUNDS
6d (2")	146	1
10d (3")	36	3/4
WEDGES PER STACK		
LUMBER	LENGTH	NO. REQD
2" X 4"	6'-0"	2
2" X 4"	9'-0"	2

SPECIAL NOTES:

1. STORAGE AS SHOWN IS FOR THE 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 WILL BE APPROXIMATELY 7'-8" OF SPACE AT THE FRONT OF AN 80'-0" LONG MAGAZINE. THERE WILL BE APPROXIMATELY 8'-0" OF SPACE AT THE FRONT OF A 40'-0" LONG MAGAZINE.



PARTIAL END VIEW OF DOUBLE STACK

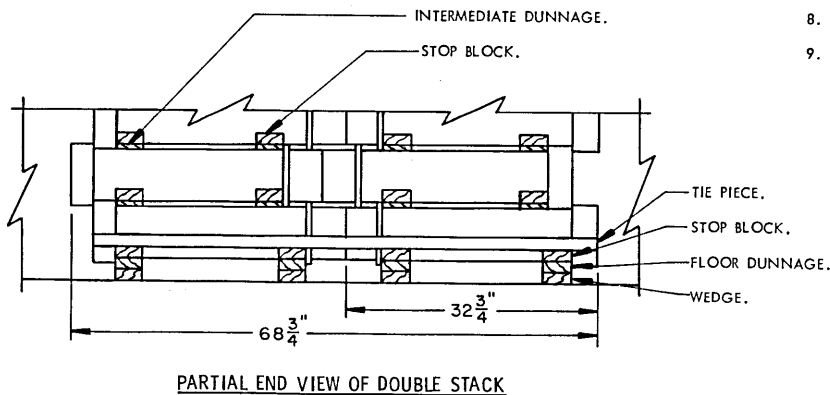


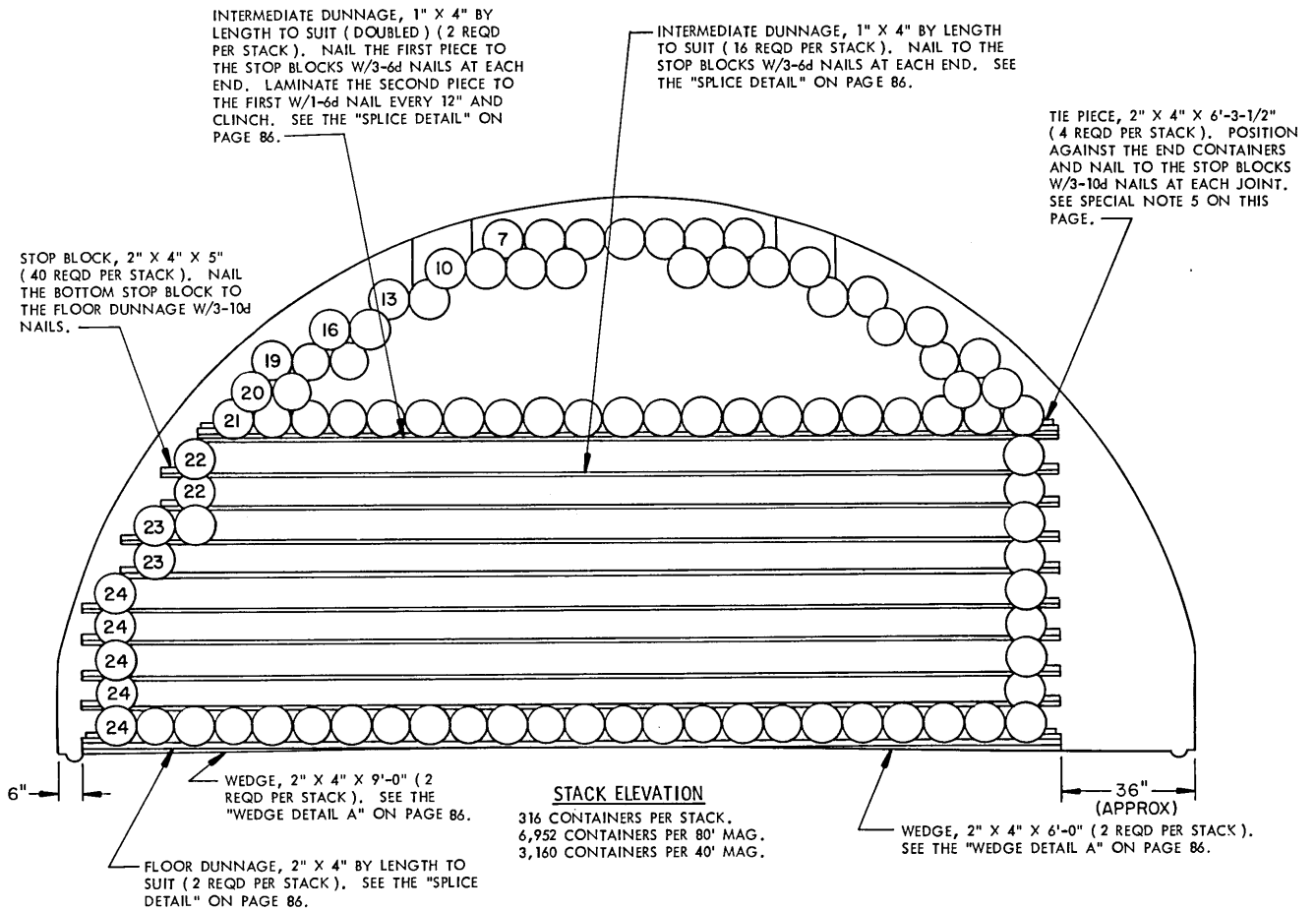
STACK ELEVATION
 474 CONTAINERS PER STACK.
 12,324 CONTAINERS PER 80' MAG.
 5,688 CONTAINERS PER 40' MAG.

SPECIAL NOTES:

1. STORAGE AS SHOWN IS FOR THE PA37 CONTAINER. USE THIS SAME STORAGE FORMAT FOR ALL PA37 SERIES CONTAINERS.
2. THE NUMBERS SHOWN IN THE STACK ELEVATION INDICATE THE QUANTITY OF CONTAINERS PER LAYER IN A STACK.
3. SEE "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 52" OF SPACE AT THE FRONT OF AN 80'-0" LONG MAGAZINE. THERE WILL BE APPROXIMATELY 54" OF SPACE AT THE FRONT OF A 40'-0" LONG MAGAZINE.

BILL OF MATERIAL (PER STACK)		
LUMBER	LINEAR FEET	BOARD FEET
1" X 4"	496	166
2" X 4"	76	51
NAILS		POUNDS
6d (2")	160	1
10d (3")	36	3/4
WEDGES PER STACK		
LUMBER	LENGTH	NO. REQD
2" X 4"	6'-0"	2
2" X 4"	9'-0"	2



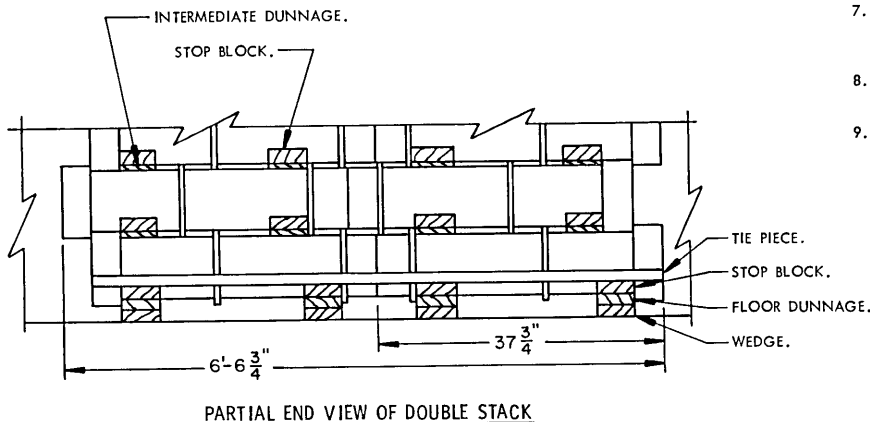


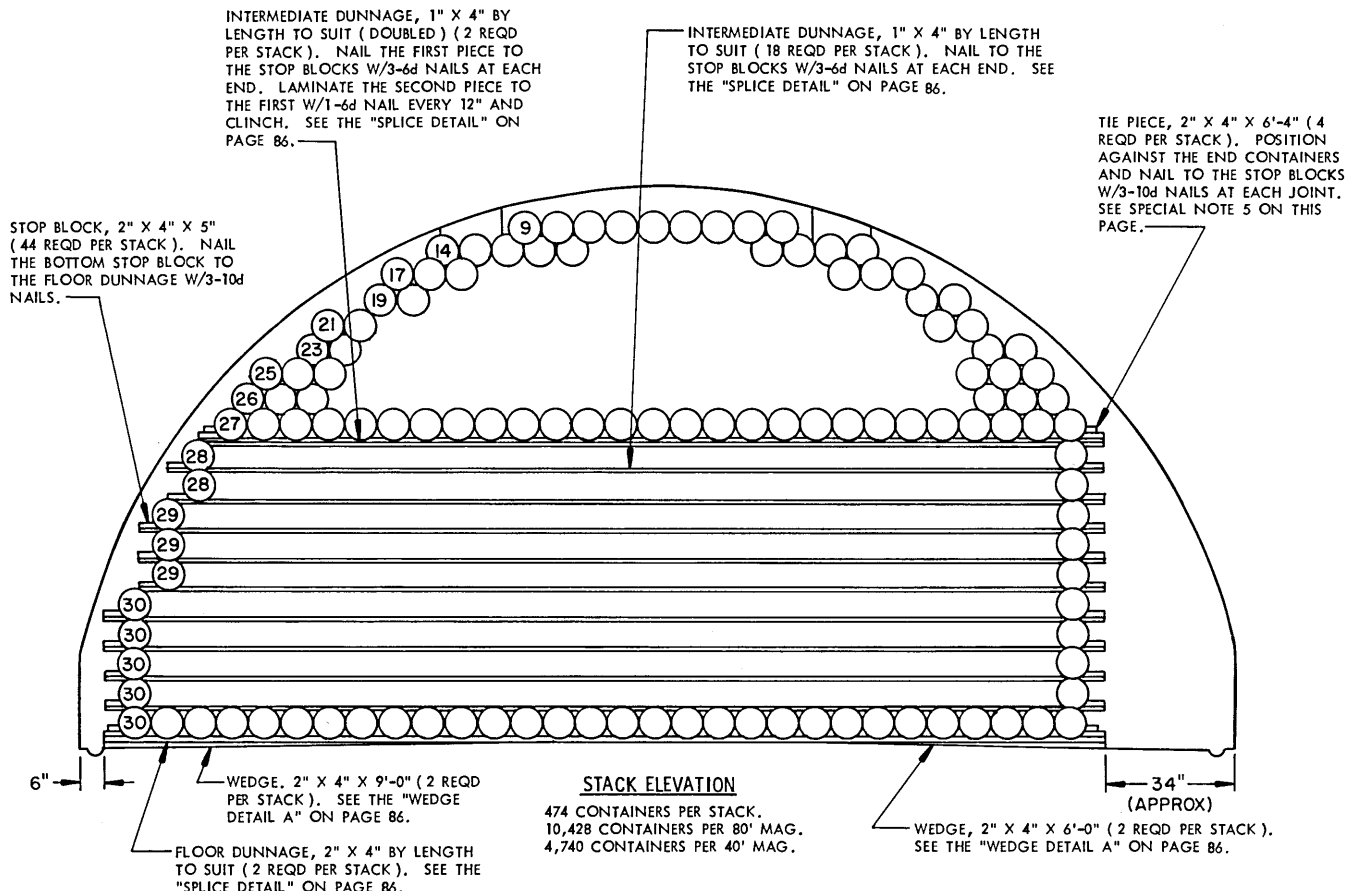
STACK ELEVATION
 316 CONTAINERS PER STACK.
 6,952 CONTAINERS PER 80' MAG.
 3,160 CONTAINERS PER 40' MAG.

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 TEN (10) ARE NESTED.
9. THERE WILL BE APPROXIMATELY 6'-8" OF SPACE AT THE FRONT OF AN 80'-0" LONG MAGAZINE. THERE WILL BE APPROXIMATELY 72" OF SPACE AT THE FRONT OF A 40'-0" LONG MAGAZINE.

BILL OF MATERIAL (PER STACK)		
LUMBER	LINEAR FEET	BOARD FEET
1" X 4"	443	148
2" X 4"	76	51
NAILS	NO. REQD	POUNDS
6d (2")	142	1
10d (3")	36	3/4
WEDGES PER STACK		
LUMBER	LENGTH	NO. REQD
2" X 4"	6'-0"	2
2" X 4"	9'-0"	2





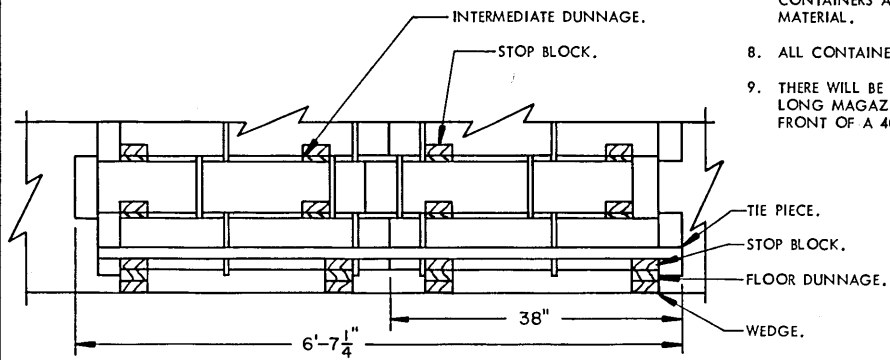
STACK ELEVATION

474 CONTAINERS PER STACK.
 10,428 CONTAINERS PER 80' MAG.
 4,740 CONTAINERS PER 40' MAG.

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 ELEVEN (11) ARE NESTED.
9. THERE WILL BE APPROXIMATELY 6'-2" OF SPACE AT THE FRONT OF AN 80'-0" LONG MAGAZINE. THERE WILL BE APPROXIMATELY 70" OF SPACE AT THE FRONT OF A 40'-0" MAGAZINE.

BILL OF MATERIAL (PER STACK)		
LENGTH	LINEAR FEET	BOARD FEET
1" X 4"	496	166
2" X 4"	78	52
NAILS		NO. REQD
6d (2")	160	1
10d (3")	36	3/4
WEDGES PER STACK		
LUMBER	LENGTH	NO. REQD
2" X 4"	6'-0"	2
2" X 4"	9'-0"	2



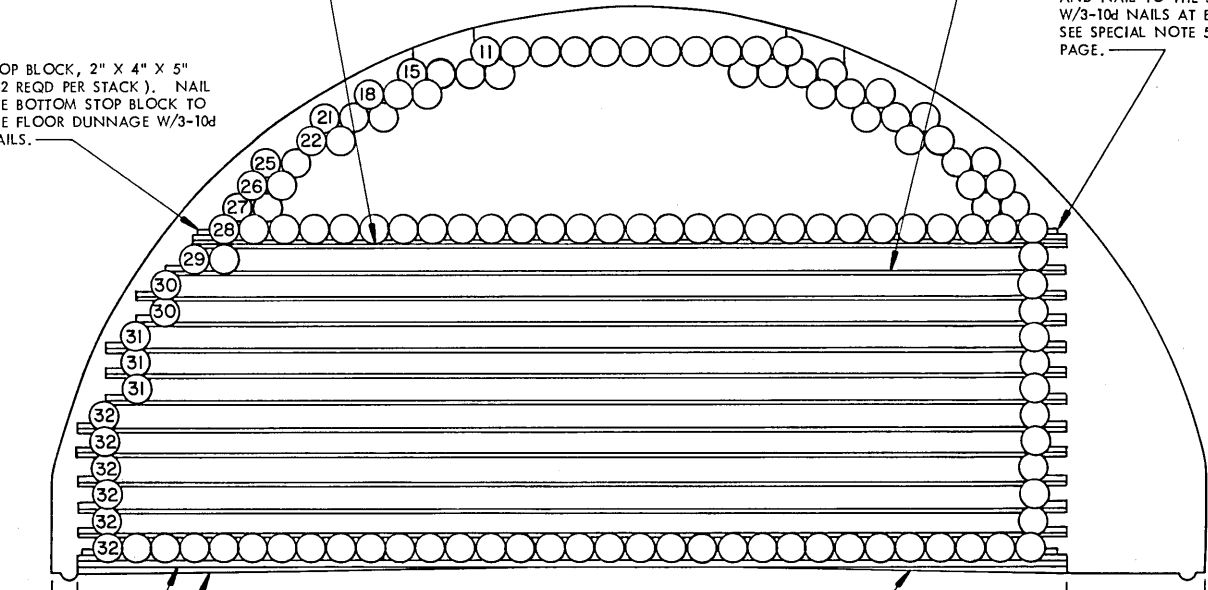
PARTIAL END VIEW OF DOUBLE STACK

INTERMEDIATE DUNNAGE, 1" X 4" BY LENGTH TO SUIT (DOUBLED) (2 REQD PER STACK). NAIL THE FIRST PIECE TO THE STOP BLOCKS W/3-6d NAILS AT EACH END. LAMINATE THE SECOND PIECE TO THE FIRST W/1-6d NAIL EVERY 12" AND CLINCH. SEE THE "SPLICE DETAIL" ON PAGE 86.

INTERMEDIATE DUNNAGE, 1" X 4" BY LENGTH TO SUIT (22 REQD PER STACK). NAIL TO THE STOP BLOCKS W/3-6d NAILS AT EACH END. SEE THE "SPLICE DETAIL" ON PAGE 86.

TIE PIECE, 2" X 4" X 70-1/2" (4 REQD PER STACK). POSITION AGAINST THE END CONTAINERS AND NAIL TO THE STOP BLOCKS W/3-10d NAILS AT EACH JOINT. SEE SPECIAL NOTE 5 ON THIS PAGE.

STOP BLOCK, 2" X 4" X 5" (52 REQD PER STACK). NAIL THE BOTTOM STOP BLOCK TO THE FLOOR DUNNAGE W/3-10d NAILS.



WEDGE, 2" X 4" X 9'-0" (2 REQD PER STACK). SEE THE "WEDGE DETAIL A" ON PAGE 86.

FLOOR DUNNAGE, 2" X 4" BY LENGTH TO SUIT (2 REQD PER STACK). SEE THE "SPLICE DETAIL" ON PAGE 86.

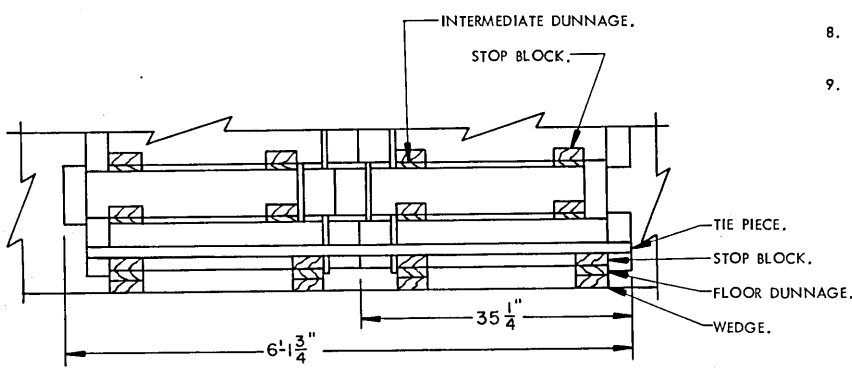
STACK ELEVATION
 567 CONTAINERS PER STACK.
 13,608 CONTAINERS PER 80' MAG.
 5,670 CONTAINERS PER 40' MAG.

WEDGE, 2" X 4" X 6'-0" (2 REQD PER STACK). SEE THE "WEDGE DETAIL A" ON PAGE 86.

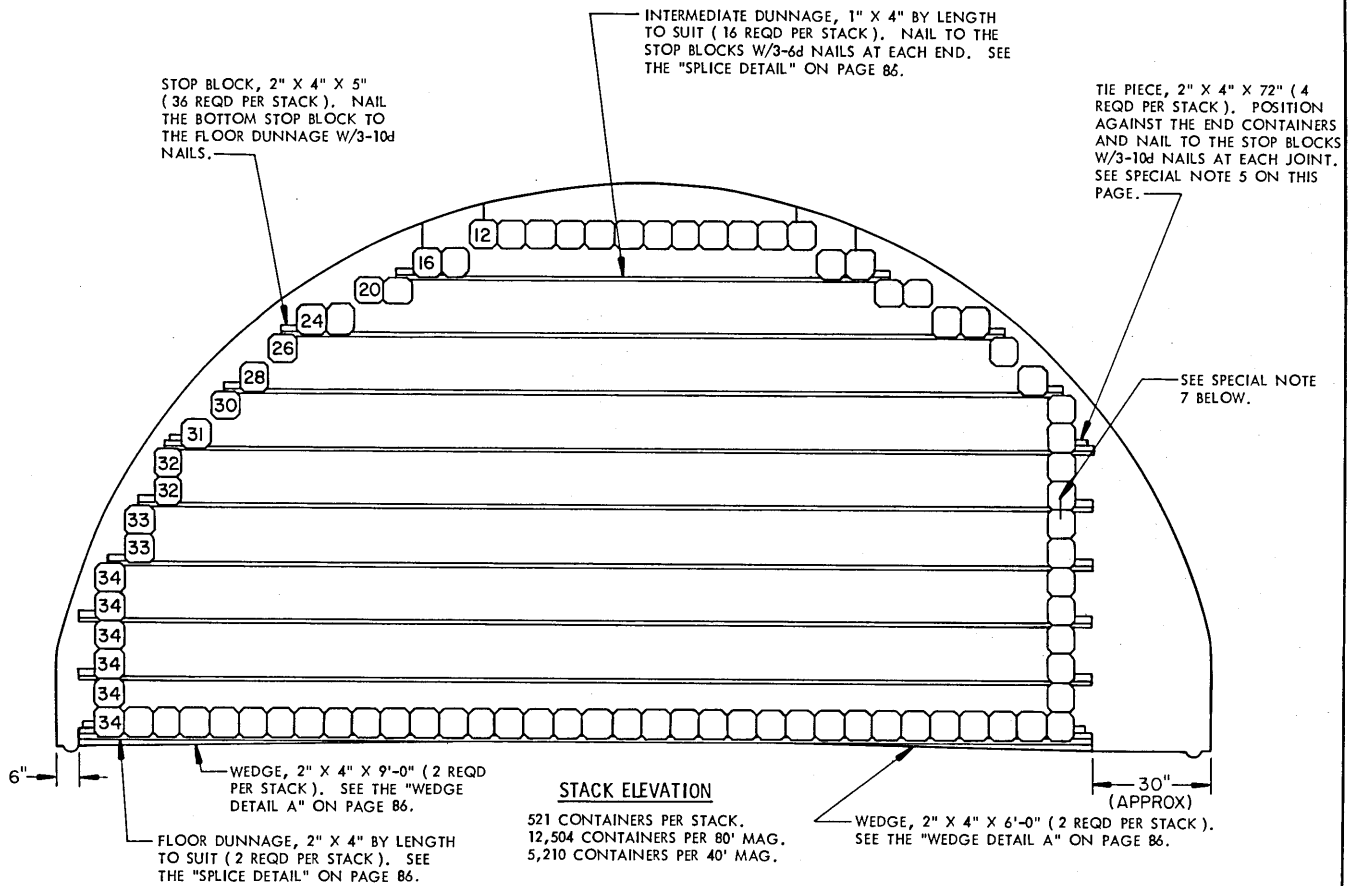
SPECIAL NOTES:

- 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.
- THE NUMBERS SHOWN IN THE STACK ELEVATION INDICATE THE QUANTITY OF CONTAINERS PER LAYER IN A STACK.
- SEE THE "TYPICAL PLAN VIEW A" ON PAGE 4.
- STORE IN DOUBLE STACKS FOR BETTER STABILITY. SEE THE "PARTIAL END VIEW OF DOUBLE STACK" ON THIS PAGE.
- 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.
- NOTE: JOINTS IN INTERMEDIATE DUNNAGE MUST BE STAGGERED BOTH HORIZONTALLY AND VERTICALLY.
- THE INTERMEDIATE DUNNAGE POSITIONED IMMEDIATELY UNDER THE NESTED CONTAINERS AT THE TOP OF THE STACK WILL BE OF DOUBLE THICKNESS 1" X 4" MATERIAL.
- ALL CONTAINERS POSITIONED ABOVE LAYER THIRTEEN (13) ARE NESTED.
- THERE WILL BE APPROXIMATELY 61" OF SPACE AT THE FRONT OF AN 80'-0" LONG MAGAZINE. THERE WILL BE APPROXIMATELY 8'-2" OF SPACE AT THE FRONT OF A 40'-0" LONG MAGAZINE.

BILL OF MATERIAL (PER STACK)		
LUMBER	LINEAR FEET	BOARD FEET
1" X 4"	594	198
2" X 4"	80	54
NAILS		POUNDS
6d (2")	182	1-1/4
10d (3")	36	3/4
WEDGES PER STACK		
LUMBER	LENGTH	NO. REQD
2" X 4"	6'-0"	2
2" X 4"	9'-0"	2



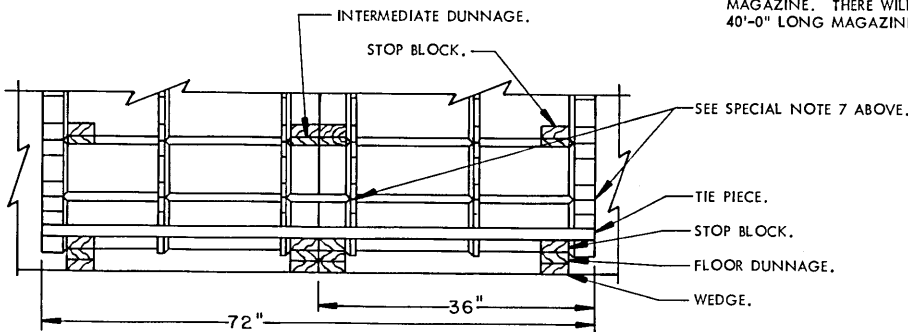
PARTIAL END VIEW OF DOUBLE STACK



SPECIAL NOTES:

- 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.
- THE NUMBERS SHOWN IN THE STACK ELEVATION INDICATE THE QUANTITY OF CONTAINERS PER LAYER IN A STACK.
- SEE THE "TYPICAL PLAN VIEW A" ON PAGE 4.
- STORE IN DOUBLE STACKS FOR BETTER STABILITY. SEE THE "PARTIAL END VIEW OF DOUBLE STACK" ON THIS PAGE.
- 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.
- NOTE:** JOINTS IN INTERMEDIATE DUNNAGE MUST BE STAGGERED BOTH HORIZONTALLY AND VERTICALLY.
- NOTE:** THE INTERLOCKING PINS ON EACH END OF A CONTAINER MUST INTERLOCK VERTICALLY WITH THE CONTAINER IN THE NEXT LAYER.
- THERE WILL BE APPROXIMATELY 6'-10" OF SPACE AT THE FRONT OF AN 80'-0" LONG MAGAZINE. THERE WILL BE APPROXIMATELY 8'-10" OF SPACE AT THE FRONT OF A 40'-0" LONG MAGAZINE.

BILL OF MATERIAL (PER STACK)		
LUMBER	LINEAR FEET	BOARD FEET
1" X 4"	326	109
2" X 4"	75	50
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

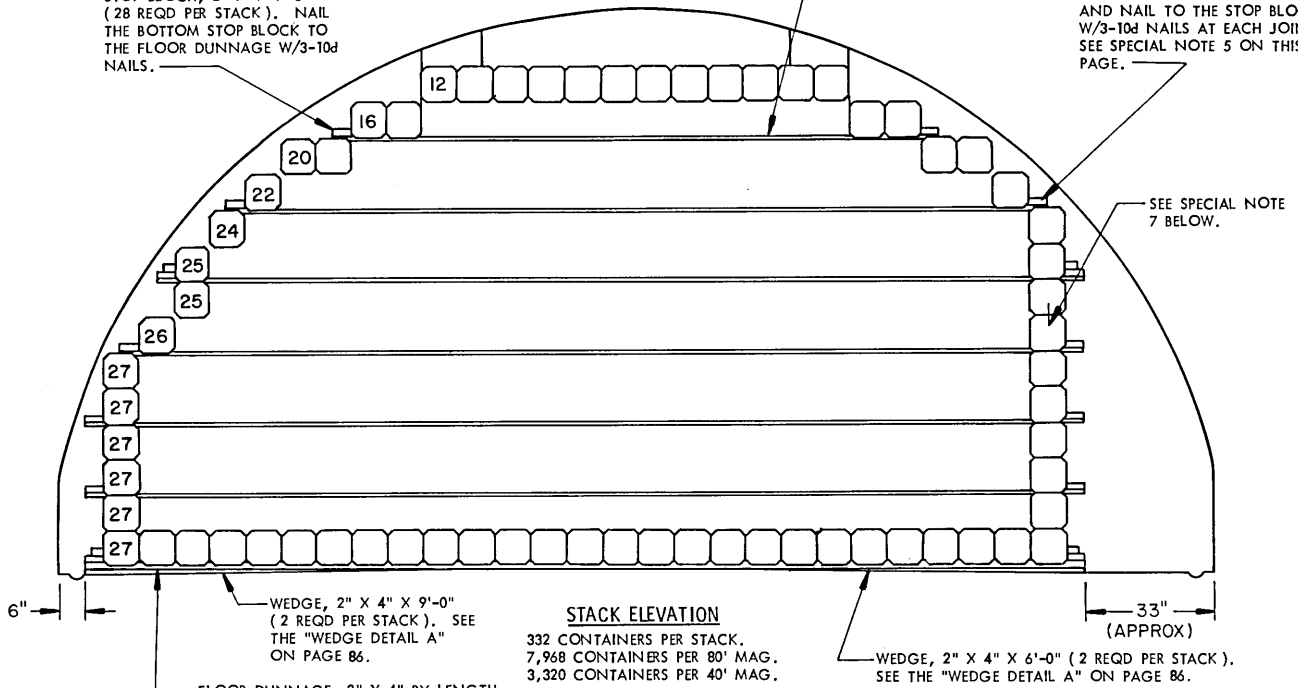


PARTIAL END VIEW OF DOUBLE STACK

INTERMEDIATE DUNNAGE, 1" X 4" BY LENGTH TO SUIT (12 REQD PER STACK), NAIL TO THE STOP BLOCKS W/3-6d NAILS AT EACH END. SEE THE "SPLICE DETAIL" ON PAGE 86.

STOP BLOCK, 2" X 4" X 5" (28 REQD PER STACK). NAIL THE BOTTOM STOP BLOCK TO THE FLOOR DUNNAGE W/3-10d NAILS.

TIE PIECE, 2" X 4" X 72" (4 REQD PER STACK). POSITION AGAINST THE END CONTAINERS AND NAIL TO THE STOP BLOCKS W/3-10d NAILS AT EACH JOINT. SEE SPECIAL NOTE 5 ON THIS PAGE.



STACK ELEVATION

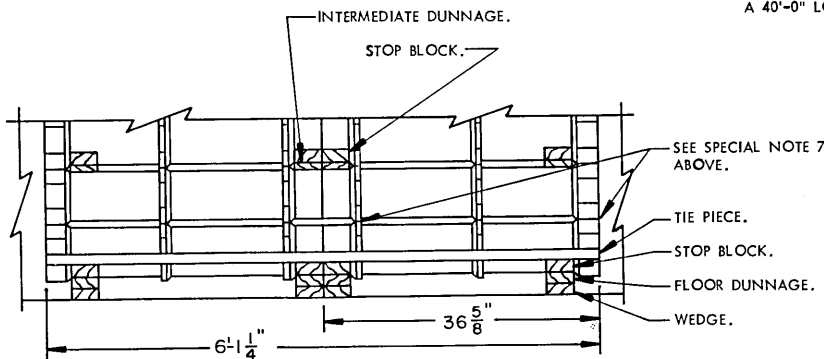
332 CONTAINERS PER STACK.
7,968 CONTAINERS PER 80' MAG.
3,320 CONTAINERS PER 40' MAG.

SPECIAL NOTES:

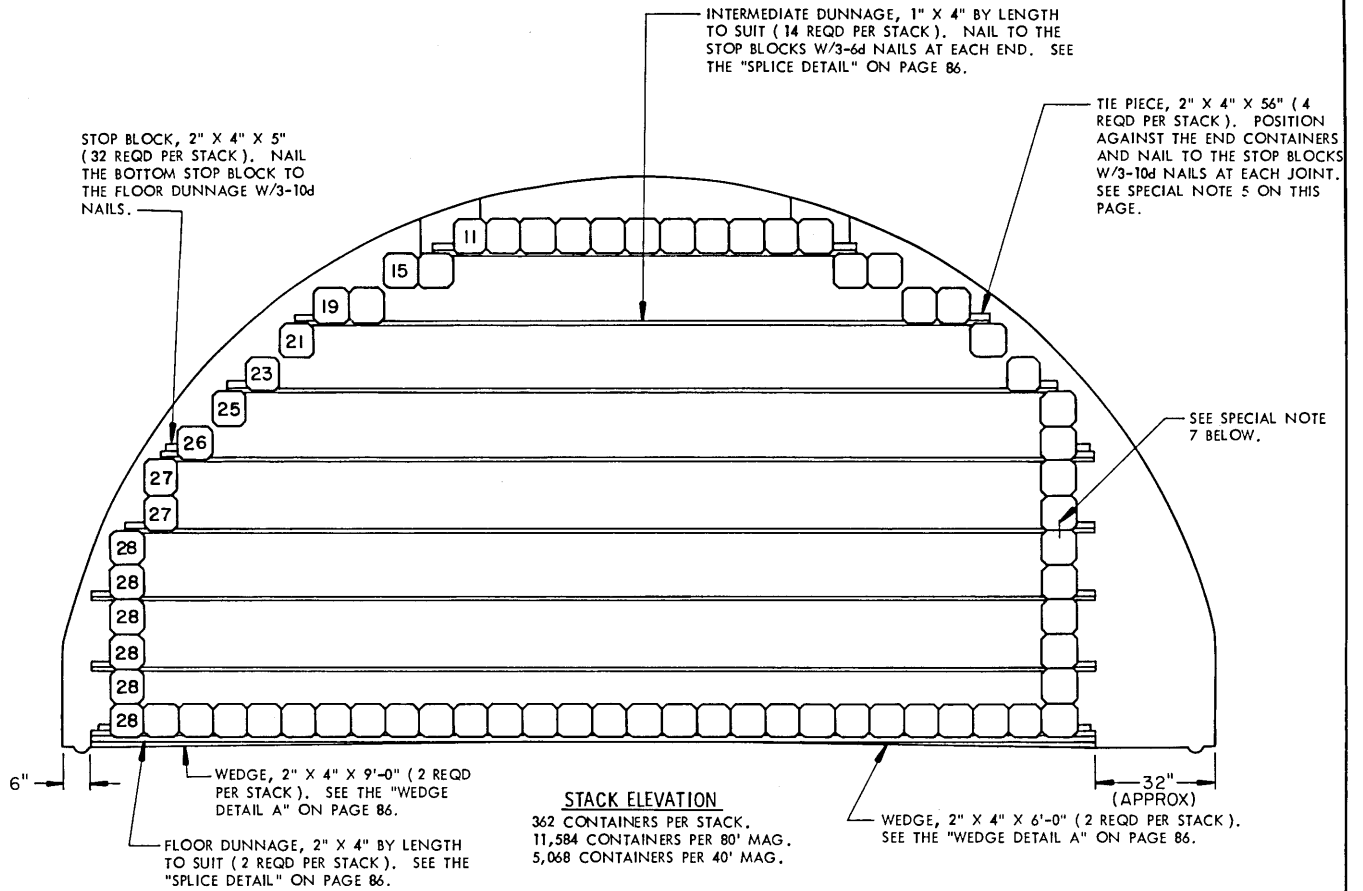
1. STORAGE AS SHOWN IS FOR THE PA92 CONTAINER. USE THIS SAME STORAGE FORMAT FOR ALL PA92 SERIES CONTAINERS.
CONTAINER DIMENSIONS-----36-5/8" LONG BY 9-1/4" WIDE BY 9-1/4" HIGH.
2. THE NUMBERS SHOWN IN THE STACK ELEVATION INDICATE THE QUANTITY OF CONTAINERS PER LAYER IN A STACK.
3. SEE THE "TYPICAL PLAN 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 67" OF SPACE AT THE FRONT OF AN 80'-0" LONG MAGAZINE. THERE WILL BE APPROXIMATELY 8'-3" OF SPACE AT THE FRONT OF A 40'-0" LONG MAGAZINE.

BILL OF MATERIAL (PER STACK)

LUMBER	LINEAR FEET	BOARD FEET
1" X 4"	248	83
2" X 4"	71	48
NAILS		POUNDS
6d (2")	72	1/2
10d (3")	36	3/4
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

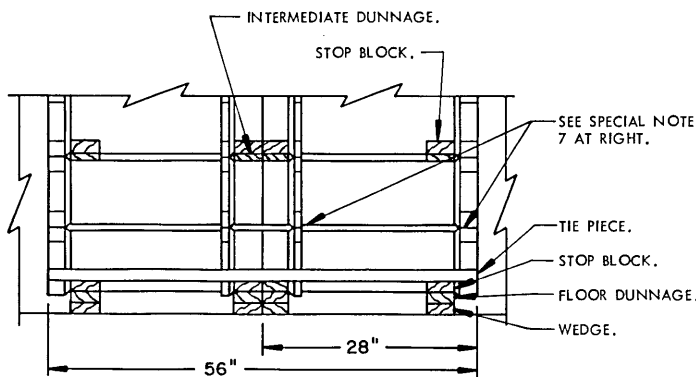


STACK ELEVATION
 362 CONTAINERS PER STACK,
 11,584 CONTAINERS PER 80' MAG.
 5,068 CONTAINERS PER 40' MAG.

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 50" OF SPACE AT THE FRONT OF AN 80'-0" LONG MAGAZINE. THERE WILL BE APPROXIMATELY 6'-2" OF SPACE AT THE FRONT OF A 40'-0" LONG MAGAZINE.

BILL OF MATERIAL (PER STACK)		
LUMBER	LINEAR FEET	BOARD FEET
1" X 4"	276	92
2" X 4"	70	47
NAILS	NO. REQD	POUNDS
6d (2")	84	1/2
10d (3")	36	3/4
WEDGES PER STACK		
LUMBER	LENGTH	NO. REQD
2" X 4"	6'-0"	2
2" X 4"	9'-0"	2

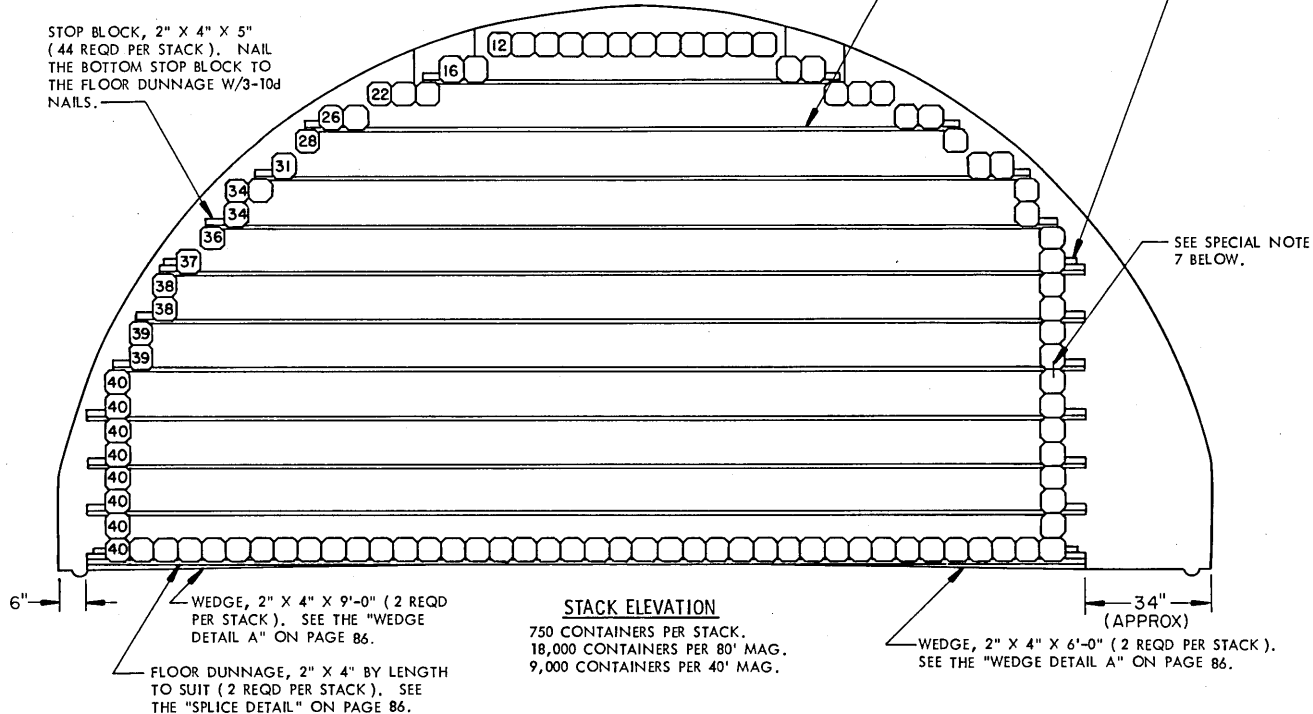


PARTIAL END VIEW OF DOUBLE STACK

INTERMEDIATE DUNNAGE, 1" X 4" BY LENGTH TO SUIT (20 REQD PER STACK). NAIL TO THE STOP BLOCKS W/3-6d NAILS AT EACH END. SEE THE "SPLICE DETAIL" ON PAGE B6.

TIE PIECE, 2" X 4" X 71" (4 REQD PER STACK). POSITION AGAINST THE END CONTAINERS AND NAIL TO THE STOP BLOCKS W/3-10d NAILS AT EACH JOINT. SEE SPECIAL NOTE 5 ON THIS PAGE.

STOP BLOCK, 2" X 4" X 5" (44 REQD PER STACK). NAIL THE BOTTOM STOP BLOCK TO THE FLOOR DUNNAGE W/3-10d NAILS.



STACK ELEVATION

750 CONTAINERS PER STACK.
18,000 CONTAINERS PER 80' MAG.
9,000 CONTAINERS PER 40' MAG.

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 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.

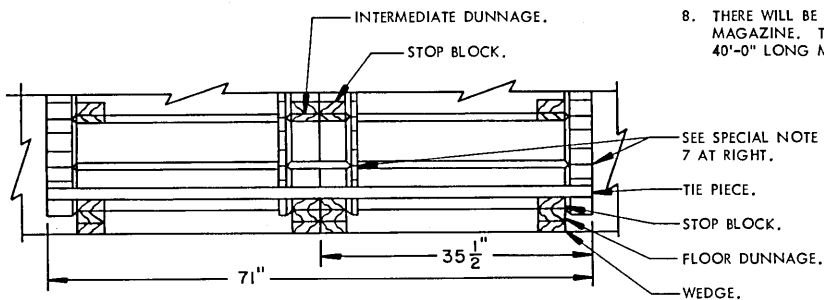
6. NOTE: JOINTS IN INTERMEDIATE DUNNAGE MUST BE STAGGERED BOTH HORIZONTALLY AND VERTICALLY.

7. NOTE: THE INTERLOCKING PINS ON EACH END OF A CONTAINER MUST INTERLOCK VERTICALLY WITH THE CONTAINER IN THE NEXT LAYER.

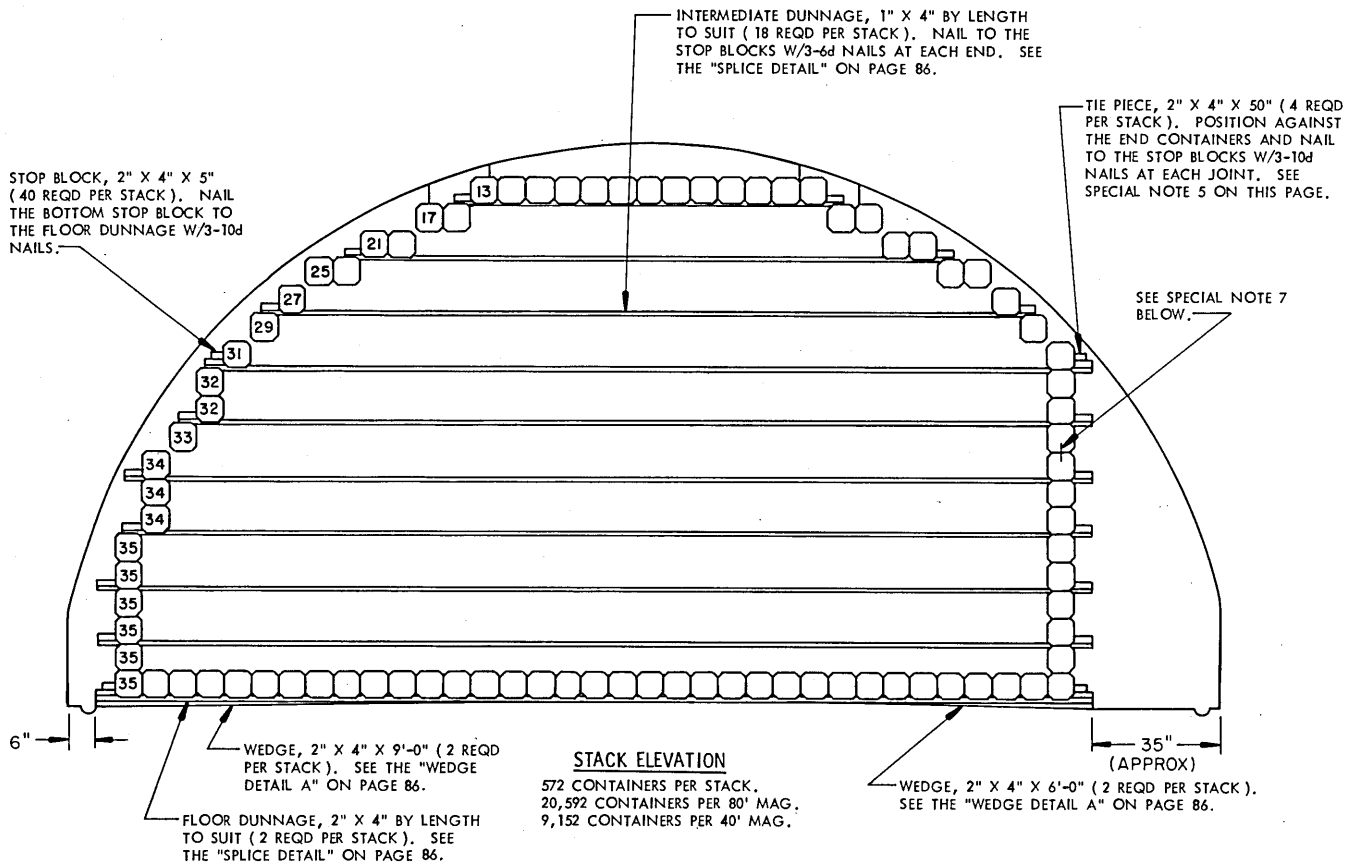
8. THERE WILL BE APPROXIMATELY 7'-10" OF SPACE AT THE FRONT OF AN 80'-0" LONG MAGAZINE. THERE WILL BE APPROXIMATELY 40" OF SPACE AT THE FRONT OF A 40'-0" LONG MAGAZINE.

BILL OF MATERIAL (PER STACK)

LUMBER	LINEAR FEET	BOARD FEET
1" X 4"	407	136
2" X 4"	77	52
NAILS		POUNDS
6d (2")	120	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



PARTIAL END VIEW OF DOUBLE STACK



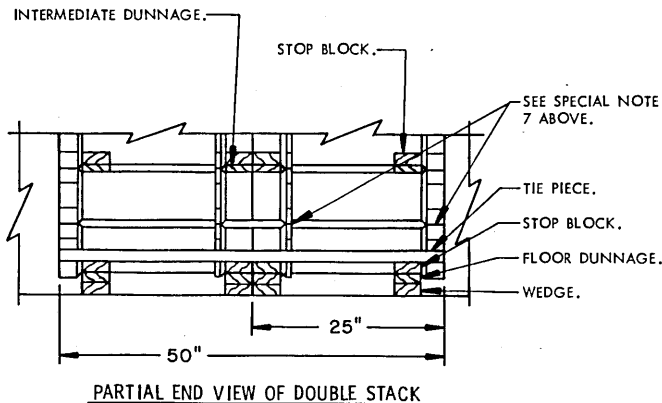
STACK ELEVATION

572 CONTAINERS PER STACK.
 20,592 CONTAINERS PER 80' MAG.
 9,152 CONTAINERS PER 40' MAG.

SPECIAL NOTES:

- 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.
- THE NUMBERS SHOWN IN THE STACK ELEVATION INDICATE THE QUANTITY OF CONTAINERS PER LAYER IN A STACK.
- SEE THE "TYPICAL PLAN VIEW A" ON PAGE 4.
- STORE IN DOUBLE STACKS FOR BETTER STABILITY. SEE THE "PARTIAL END VIEW OF DOUBLE STACK" ON THIS PAGE.
- 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.
- NOTE:** JOINTS IN INTERMEDIATE DUNNAGE MUST BE STAGGERED BOTH HORIZONTALLY AND VERTICALLY.
- NOTE:** THE INTERLOCKING PINS ON EACH END OF A CONTAINER MUST INTERLOCK VERTICALLY WITH THE CONTAINER IN THE NEXT LAYER.
- THERE WILL BE APPROXIMATELY 46" OF SPACE AT THE FRONT OF AN 80'-0" LONG MAGAZINE. THERE WILL BE APPROXIMATELY 66" OF SPACE AT THE FRONT OF A 40'-0" LONG MAGAZINE.

BILL OF MATERIAL (PER STACK)		
LUMBER	LINEAR FEET	BOARD FEET
1" X 4"	350	117
2" X 4"	72	48
NAILS	NO. REQD	POUNDS
6d (2")	108	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

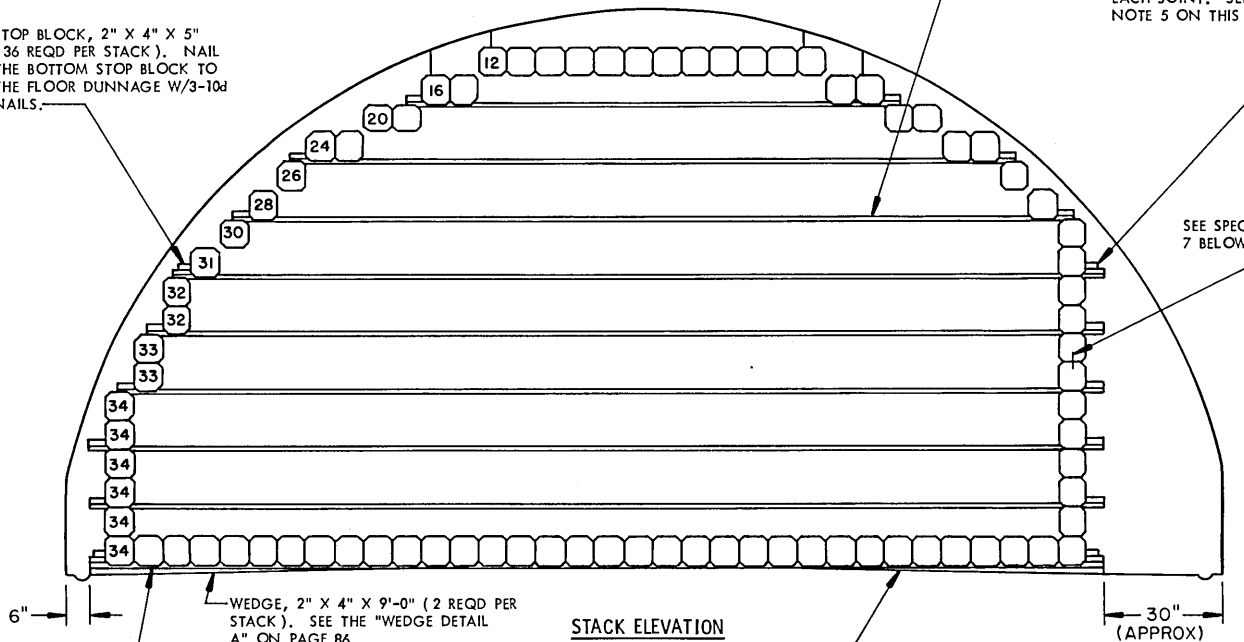


INTERMEDIATE DUNNAGE, 1" X 4" BY LENGTH TO SUIT (16 REQD PER STACK). NAIL TO THE STOP BLOCKS W/3-6d NAILS AT EACH END. SEE THE "SPLICE DETAIL" ON PAGE 86.

TIE PIECE, 2" X 4" X 63" (4 REQD PER STACK). POSITION AGAINST THE END CONTAINERS AND NAIL TO THE STOP BLOCKS W/3-10d NAILS AT EACH JOINT. SEE SPECIAL NOTE 5 ON THIS PAGE.

STOP BLOCK, 2" X 4" X 5" (36 REQD PER STACK). NAIL THE BOTTOM STOP BLOCK TO THE FLOOR DUNNAGE W/3-10d NAILS.

SEE SPECIAL NOTE 7 BELOW.



STACK ELEVATION

521 CONTAINERS PER STACK.
14,588 CONTAINERS PER 80' MAG.
6,252 CONTAINERS PER 40' MAG.

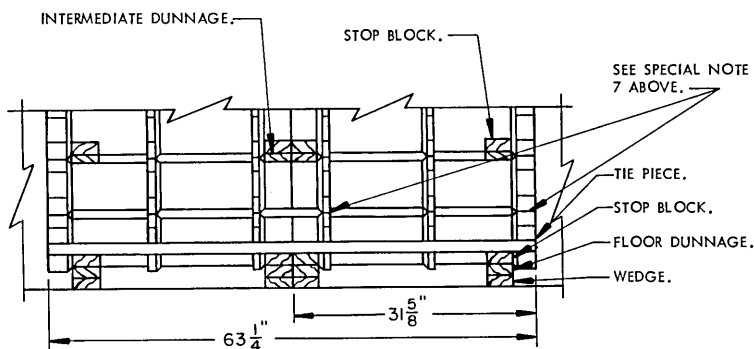
6" — WEDGE, 2" X 4" X 9'-0" (2 REQD PER STACK). SEE THE "WEDGE DETAIL A" ON PAGE 86.
FLOOR DUNNAGE, 2" X 4" BY LENGTH TO SUIT (2 REQD PER STACK). SEE THE "SPLICE DETAIL" ON PAGE 86.

30" (APPROX) — WEDGE, 2" X 4" X 6'-0" (2 REQD PER STACK). SEE THE "WEDGE DETAIL A" ON PAGE 86.

SPECIAL NOTES:

1. STORAGE AS SHOWN IS FOR THE PA96 CONTAINER. USE THIS SAME STORAGE FORMAT FOR ALL PA96 SERIES 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 60" OF SPACE AT THE FRONT OF AN 80'-0" LONG MAGAZINE. THERE WILL BE APPROXIMATELY 7'-2" OF SPACE AT THE FRONT OF A 40'-0" LONG MAGAZINE.

BILL OF MATERIAL (PER STACK)		
LUMBER	LINEAR FEET	BOARD FEET
1" X 4"	326	109
2" X 4"	75	50
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

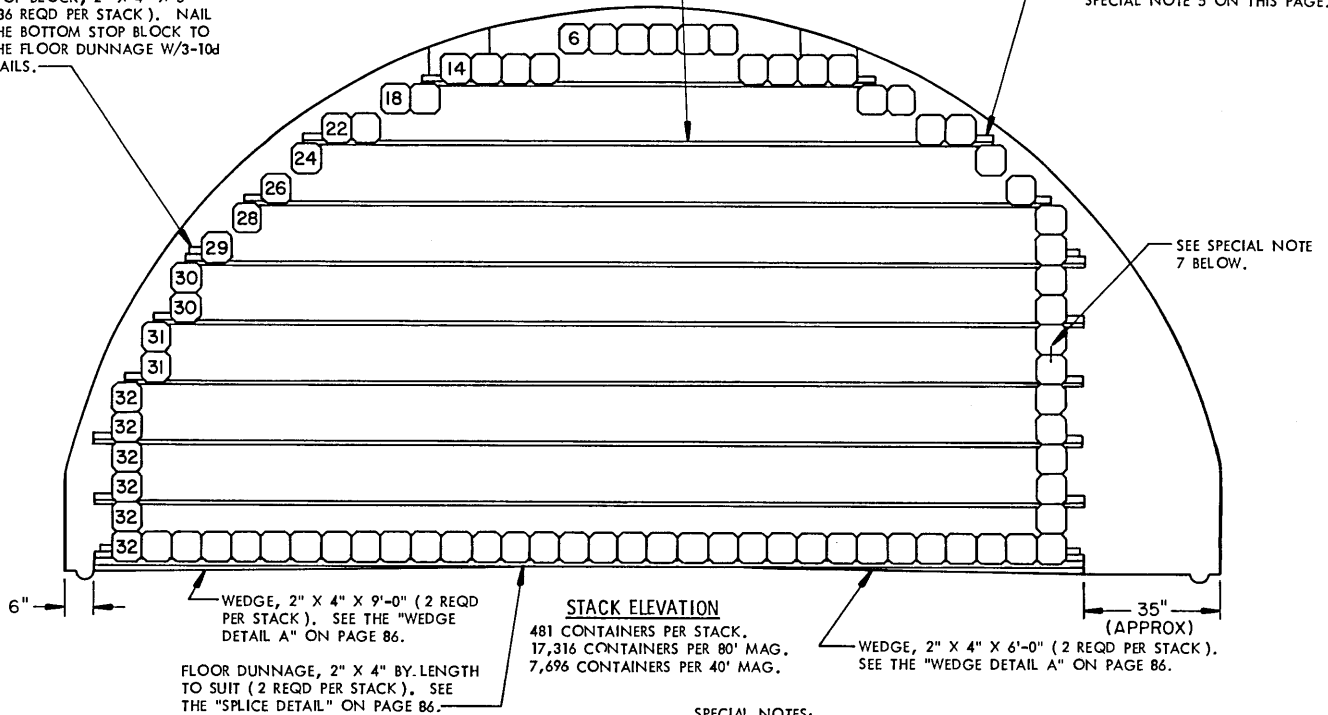


PARTIAL END VIEW OF DOUBLE STACK

STOP BLOCK, 2" X 4" X 5"
(36 REQD PER STACK). NAIL
THE BOTTOM STOP BLOCK TO
THE FLOOR DUNNAGE W/3-10d
NAILS.

INTERMEDIATE DUNNAGE, 1" X 4" BY LENGTH
TO SUIT (16 REQD PER STACK). NAIL TO THE
STOP BLOCKS W/3-6d NAILS AT EACH END. SEE
THE "SPlice DETAIL" ON PAGE 86.

TIE PIECE, 2" X 4" X 50" (4 REQD
PER STACK). POSITION AGAINST
THE END CONTAINERS AND NAIL
TO THE STOP BLOCKS W/3-10d
NAILS AT EACH JOINT. SEE
SPECIAL NOTE 5 ON THIS PAGE.



STACK ELEVATION

481 CONTAINERS PER STACK.
17,316 CONTAINERS PER 80' MAG.
7,696 CONTAINERS PER 40' MAG.

FLOOR DUNNAGE, 2" X 4" BY LENGTH
TO SUIT (2 REQD PER STACK). SEE
THE "SPlice DETAIL" ON PAGE 86.

WEDGE, 2" X 4" X 9'-0" (2 REQD
PER STACK). SEE THE "WEDGE
DETAIL A" ON PAGE 86.

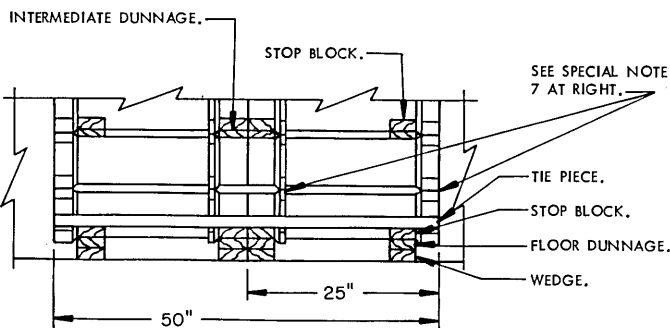
WEDGE, 2" X 4" X 6'-0" (2 REQD PER STACK).
SEE THE "WEDGE DETAIL A" ON PAGE 86.

SPECIAL NOTES:

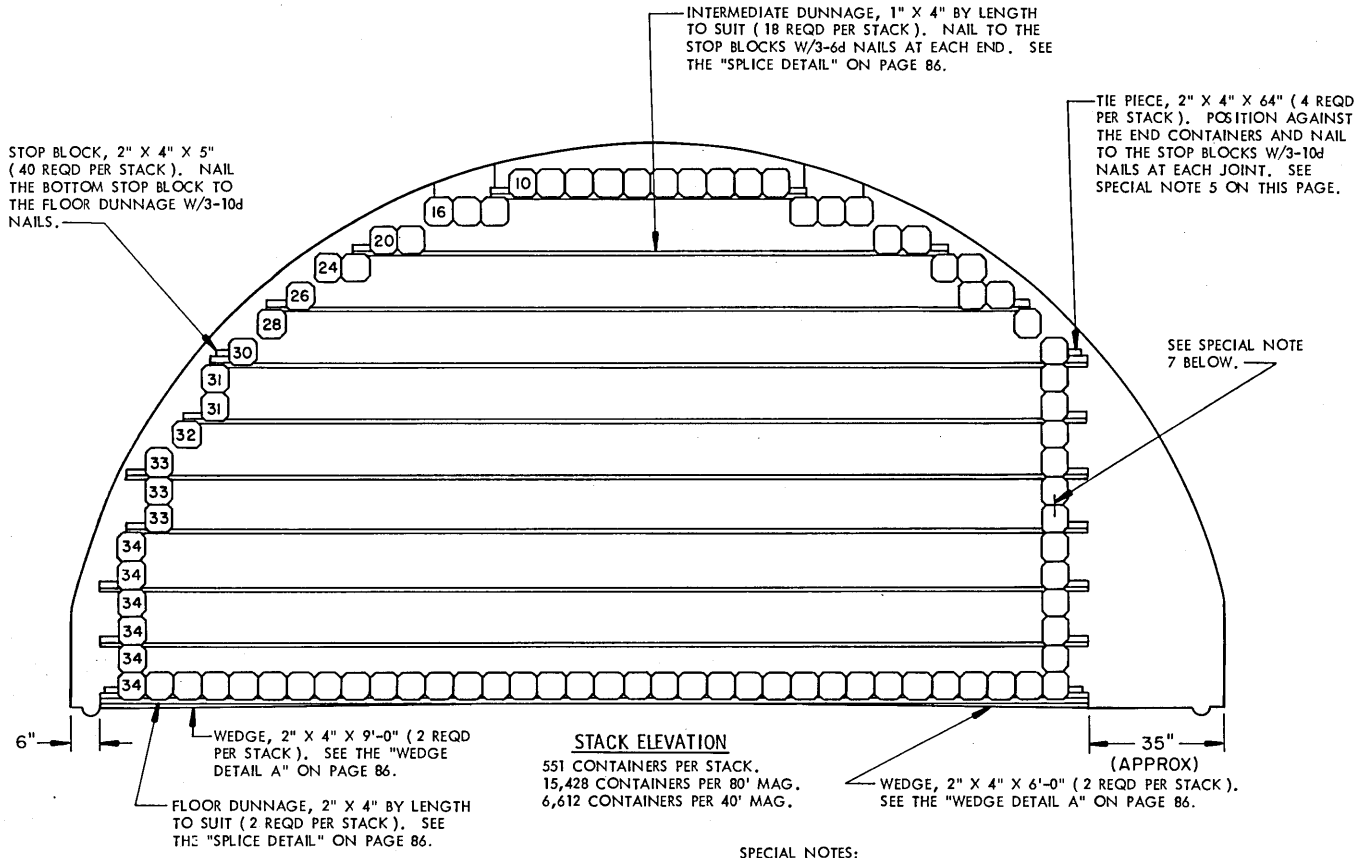
1. STORAGE AS SHOWN IS FOR THE PA97 CONTAINER. USE THIS SAME STORAGE FORMAT FOR ALL PA97 SERIES CONTAINERS.
CONTAINER DIMENSIONS----25" LONG BY 7-3/4" WIDE BY 7-3/4" HIGH.
2. THE NUMBERS SHOWN IN THE STACK ELEVATION INDICATE THE QUANTITY OF CONTAINERS PER LAYER IN A STACK.
3. SEE THE "TYPICAL PLAN VIEW 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 46" OF SPACE AT THE FRONT OF AN 80'-0" LONG MAGAZINE. THERE WILL BE APPROXIMATELY 66" OF SPACE AT THE FRONT OF A 40'-0" LONG MAGAZINE.

BILL OF MATERIAL (PER STACK)

LUMBER	LINEAR FEET	BOARD FEET
1" X 4"	318	106
2" X 4"	70	47
NAILS		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



PARTIAL END VIEW OF DOUBLE STACK

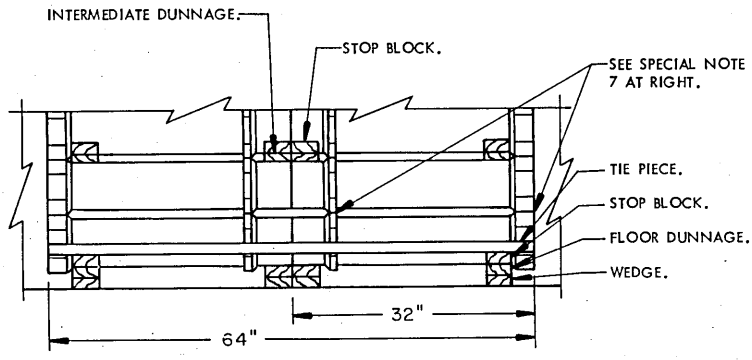


STACK ELEVATION
 551 CONTAINERS PER STACK.
 15,428 CONTAINERS PER 80' MAG.
 6,612 CONTAINERS PER 40' MAG.

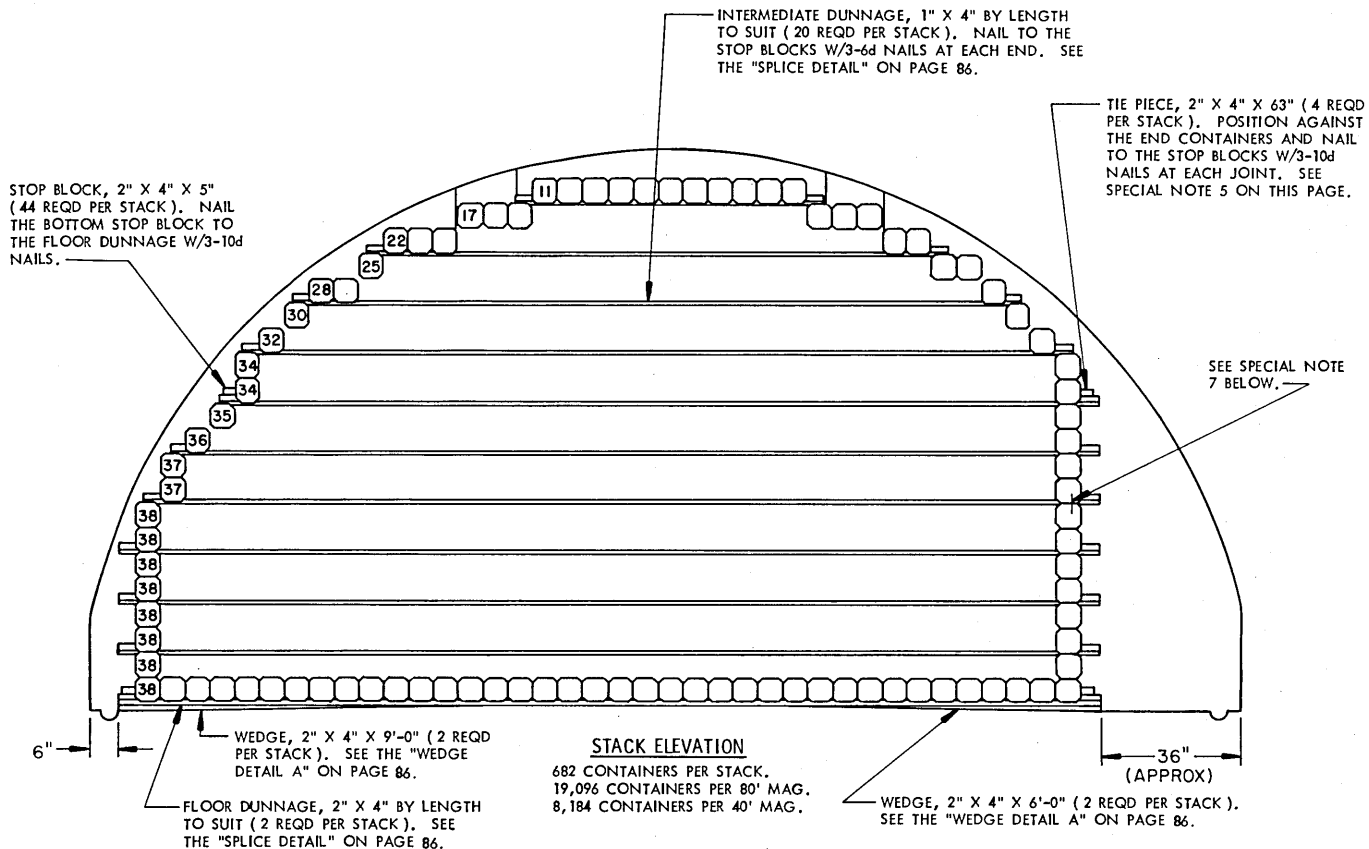
SPECIAL NOTES:

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 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 50" OF SPACE AT THE FRONT OF AN 80'-0" LONG MAGAZINE. THERE WILL BE APPROXIMATELY 6'-10" OF SPACE AT THE FRONT OF A 40'-0" LONG MAGAZINE.

BILL OF MATERIAL (PER STACK)		
LUMBER	LINEAR FEET	BOARD FEET
1" X 4"	346	116
2" X 4"	74	50
NAILS	NO. REQD	POUNDS
6d (2")	108	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



PARTIAL END VIEW OF DOUBLE STACK



STACK ELEVATION

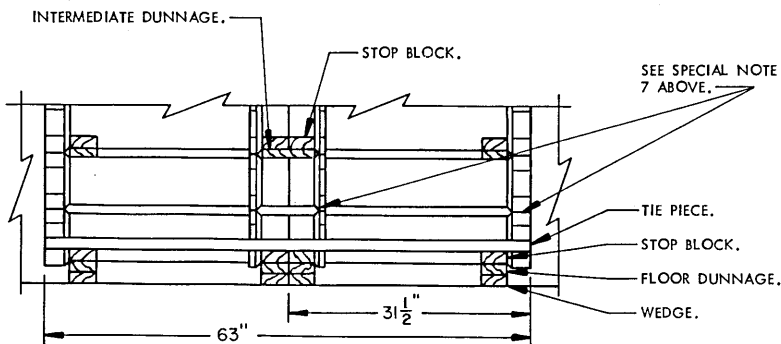
682 CONTAINERS PER STACK.
19,096 CONTAINERS PER 80' MAG.
8,184 CONTAINERS PER 40' MAG.

SPECIAL NOTES:

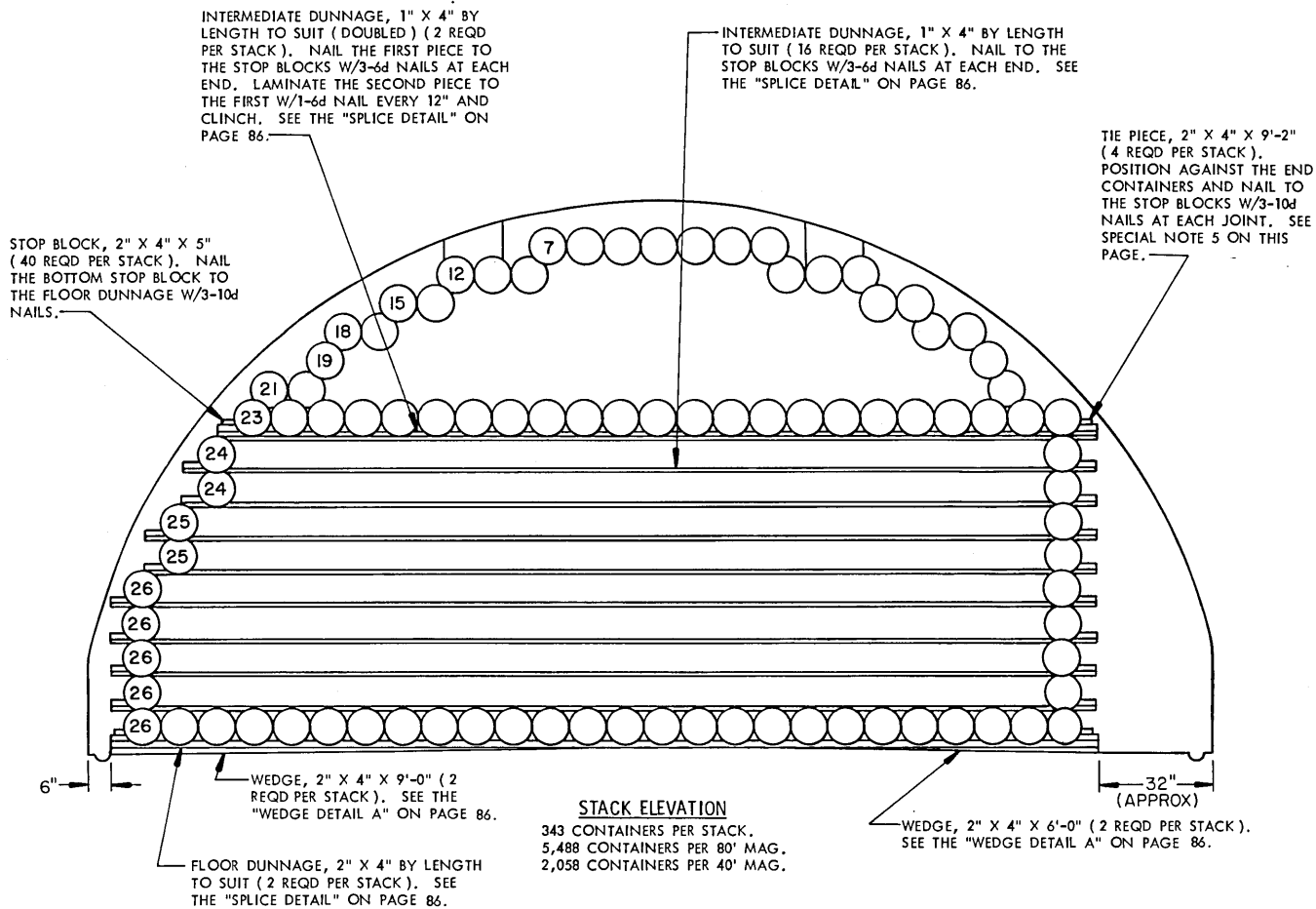
- STORAGE AS SHOWN IS FOR THE PA100 CONTAINER. USE THIS SAME STORAGE FORMAT FOR ALL PA100 SERIES CONTAINERS.
CONTAINER DIMENSIONS---31-1/2" LONG BY 6-1/2" WIDE BY 6-1/2" HIGH.
- THE NUMBERS SHOWN IN THE STACK ELEVATION INDICATE THE QUANTITY OF CONTAINERS PER LAYER IN A STACK.
- SEE THE "TYPICAL PLAN VIEW A" ON PAGE 4.
- STORE IN DOUBLE STACKS FOR BETTER STABILITY. SEE THE "PARTIAL END VIEW OF DOUBLE STACK" ON THIS PAGE.
- 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.
- NOTE:** JOINTS IN INTERMEDIATE DUNNAGE MUST BE STAGGERED BOTH HORIZONTALLY AND VERTICALLY.
- NOTE:** THE INTERLOCKING PINS ON EACH END OF A CONTAINER MUST INTERLOCK VERTICALLY WITH THE CONTAINER IN THE NEXT LAYER.
- THERE WILL BE APPROXIMATELY 64" OF SPACE AT THE FRONT OF AN 80'-0" LONG MAGAZINE. THERE WILL BE APPROXIMATELY 7'-4" OF SPACE AT THE FRONT OF A 40'-0" LONG MAGAZINE.

BILL OF MATERIAL (PER STACK)

LUMBER	LINEAR FEET	BOARD FEET
1" X 4"	385	129
2" X 4"	76	51
NAILS		POUNDS
6d (2")	120	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



PARTIAL END VIEW OF DOUBLE STACK

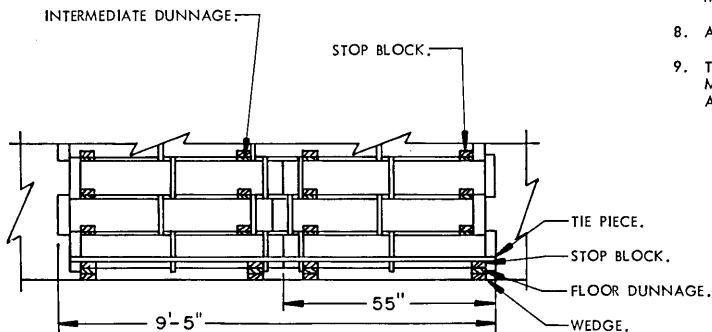


STACK ELEVATION
 343 CONTAINERS PER STACK.
 5,488 CONTAINERS PER 80' MAG.
 2,058 CONTAINERS PER 40' MAG.

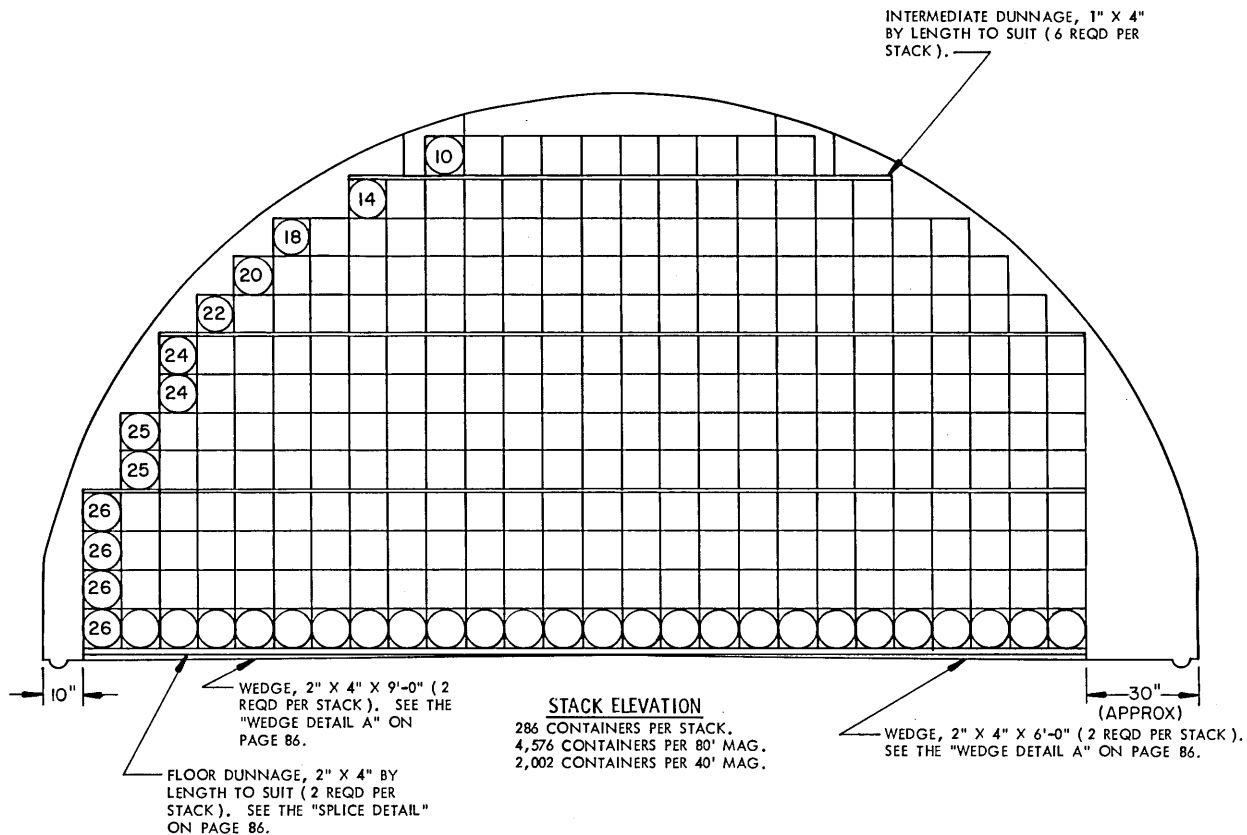
SPECIAL NOTES:

- 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.
- THE NUMBERS SHOWN IN THE STACK ELEVATION INDICATE THE QUANTITY OF CONTAINERS PER LAYER IN A STACK.
- SEE THE "TYPICAL PLAN VIEW A" ON PAGE 4.
- STORE IN DOUBLE STACKS FOR BETTER STABILITY. SEE THE "PARTIAL END VIEW OF DOUBLE STACK" ON THIS PAGE.
- 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.
- NOTE: JOINTS IN INTERMEDIATE DUNNAGE MUST BE STAGGERED BOTH HORIZONTALLY AND VERTICALLY.
- THE INTERMEDIATE DUNNAGE POSITIONED IMMEDIATELY UNDER THE NESTED CONTAINERS AT THE TOP OF THE STACK WILL BE OF DOUBLE THICKNESS 1" X 4" MATERIAL.
- ALL CONTAINERS POSITIONED ABOVE LAYER TEN (10) ARE NESTED.
- THERE WILL BE APPROXIMATELY 42" OF SPACE AT THE FRONT OF AN 80'-0" LONG MAGAZINE. THERE WILL BE APPROXIMATELY 10'-7" OF SPACE AT THE FRONT OF A 40'-0" LONG MAGAZINE.

BILL OF MATERIAL (PER STACK)		
LUMBER	LINEAR FEET	BOARD FEET
1" X 4"	451	151
2" X 4"	82	55
NAILS	NO. REQD	POUNDS
6d (2")	146	1
10d (3")	36	3/4
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

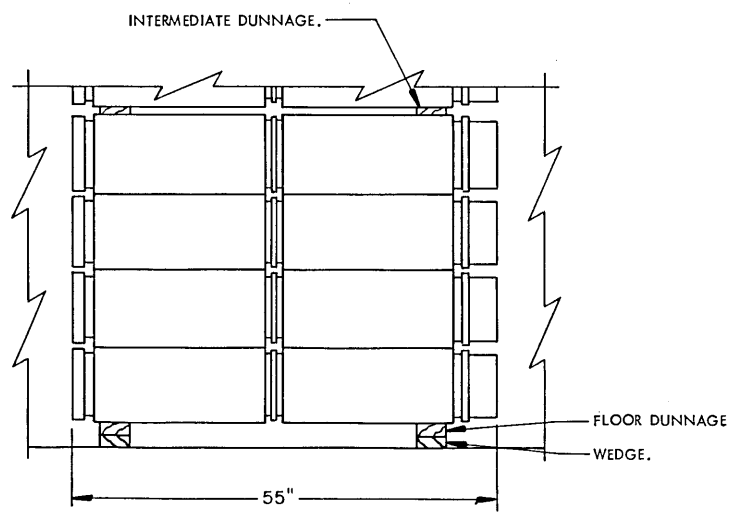


STACK ELEVATION
 286 CONTAINERS PER STACK.
 4,576 CONTAINERS PER 80' MAG.
 2,002 CONTAINERS PER 40' MAG.

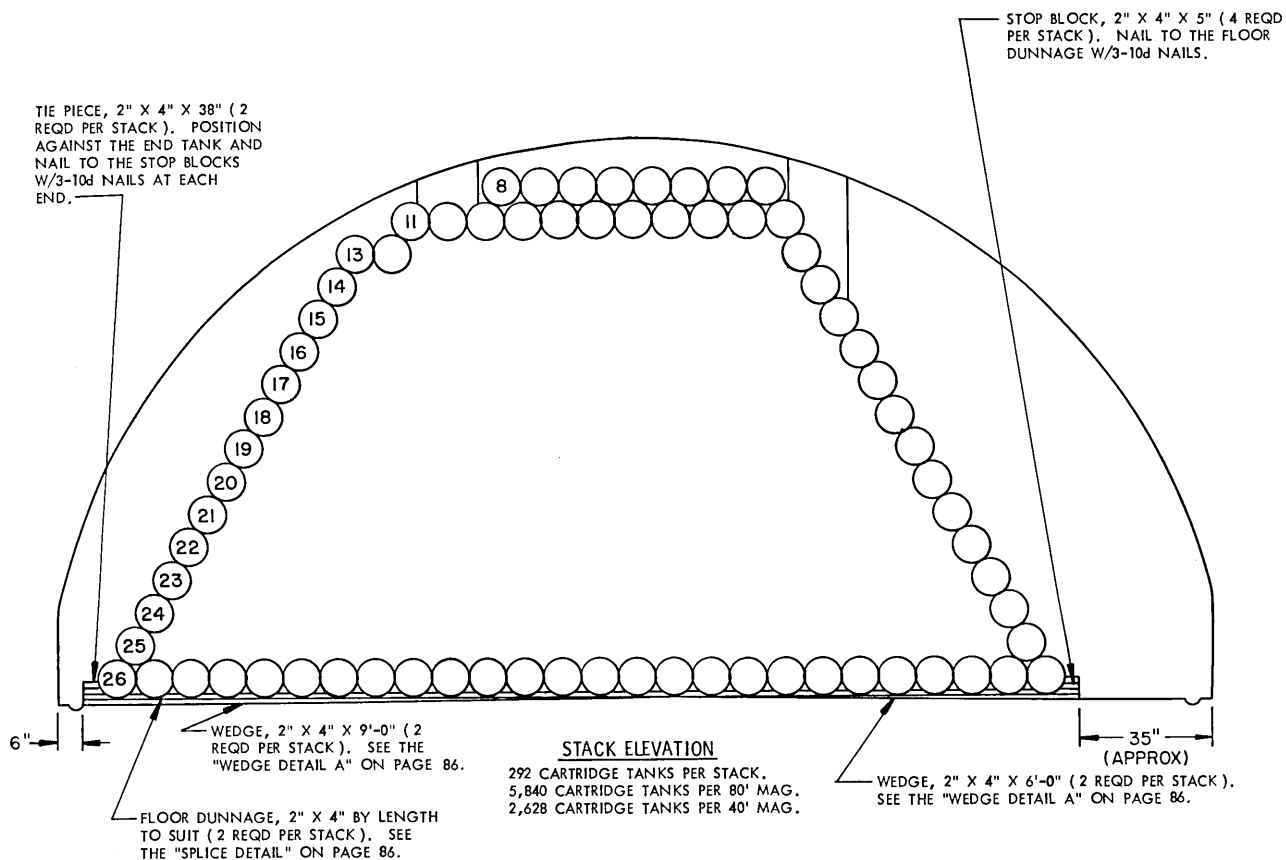
BILL OF MATERIAL (PER STACK)		
LUMBER	LINEAR FEET	BOARD FEET
1" X 4"	107	36
2" X 4"	47	32
WEDGES PER STACK		
LUMBER	LENGTH	NO. REQD
2" X 4"	6'-0"	2
2" X 4"	9'-0"	2

SPECIAL NOTES:

1. STORAGE AS SHOWN IS FOR THE 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 66" OF SPACE AT THE FRONT OF AN 80'-0" LONG MAGAZINE. THERE WILL BE APPROXIMATELY 6'-9" OF SPACE AT THE FRONT OF A 40'-0" LONG MAGAZINE.



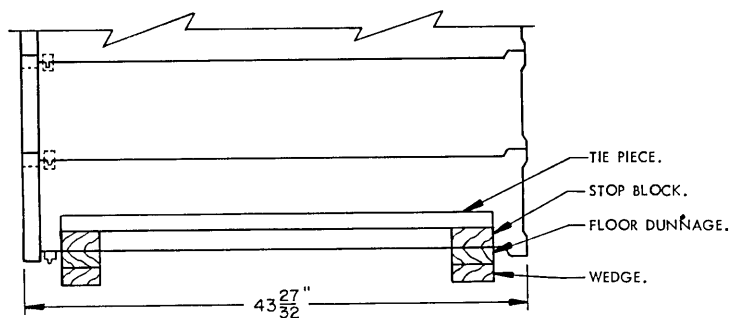
PARTIAL END VIEW OF STACK



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 69" OF SPACE AT THE FRONT OF AN 80'-0" LONG MAGAZINE. THERE WILL BE APPROXIMATELY 49" OF SPACE AT THE FRONT OF A 40'-0" LONG MAGAZINE.

BILL OF MATERIAL (PER STACK)		
LUMBER	LINEAR FEET	BOARD FEET
2" X 4"	55	37
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

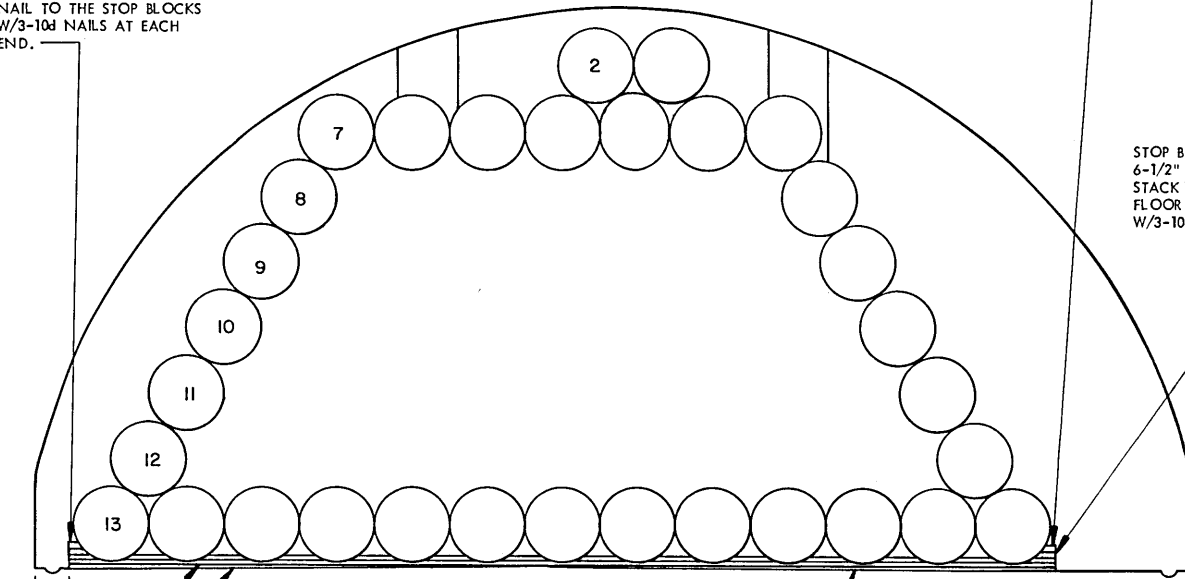


PARTIAL END VIEW OF STACK

TIE PIECE, 2" X 4" X 48" (2 REQD PER STACK). POSITION AGAINST THE END TANK AND NAIL TO THE STOP BLOCKS W/3-10d NAILS AT EACH END.

STOP BLOCK, 2" X 4" X 5" (4 REQD PER STACK). NAIL TO THE 6-1/2" STOP BLOCKS W/3-10d NAILS.

STOP BLOCK, 2" X 4" X 6-1/2" (4 REQD PER STACK). NAIL TO THE FLOOR DUNNAGE W/3-10d NAILS.



STACK ELEVATION

72 POWDER TANKS PER STACK.
1,152 POWDER TANKS PER 80' MAG.
504 POWDER TANKS PER 40' MAG.

FLOOR DUNNAGE, 2" X 4" BY LENGTH TO SUIT (DOUBLED) (2 REQD PER STACK). LAMINATE THE SECOND PIECE TO THE FIRST W/1-10d NAIL EVERY 24". SEE THE "SPlice DETAIL" ON PAGE 86.

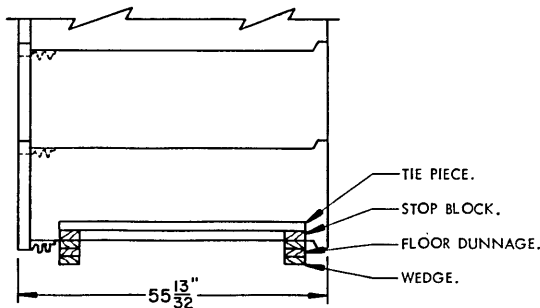
WEDGE, 2" X 4" X 9'-0" (2 REQD PER STACK). SEE THE "WEDGE DETAIL A" ON PAGE 86.

WEDGE, 2" X 4" X 6'-0" (2 REQD PER STACK). SEE THE "WEDGE DETAIL A" ON PAGE 86.

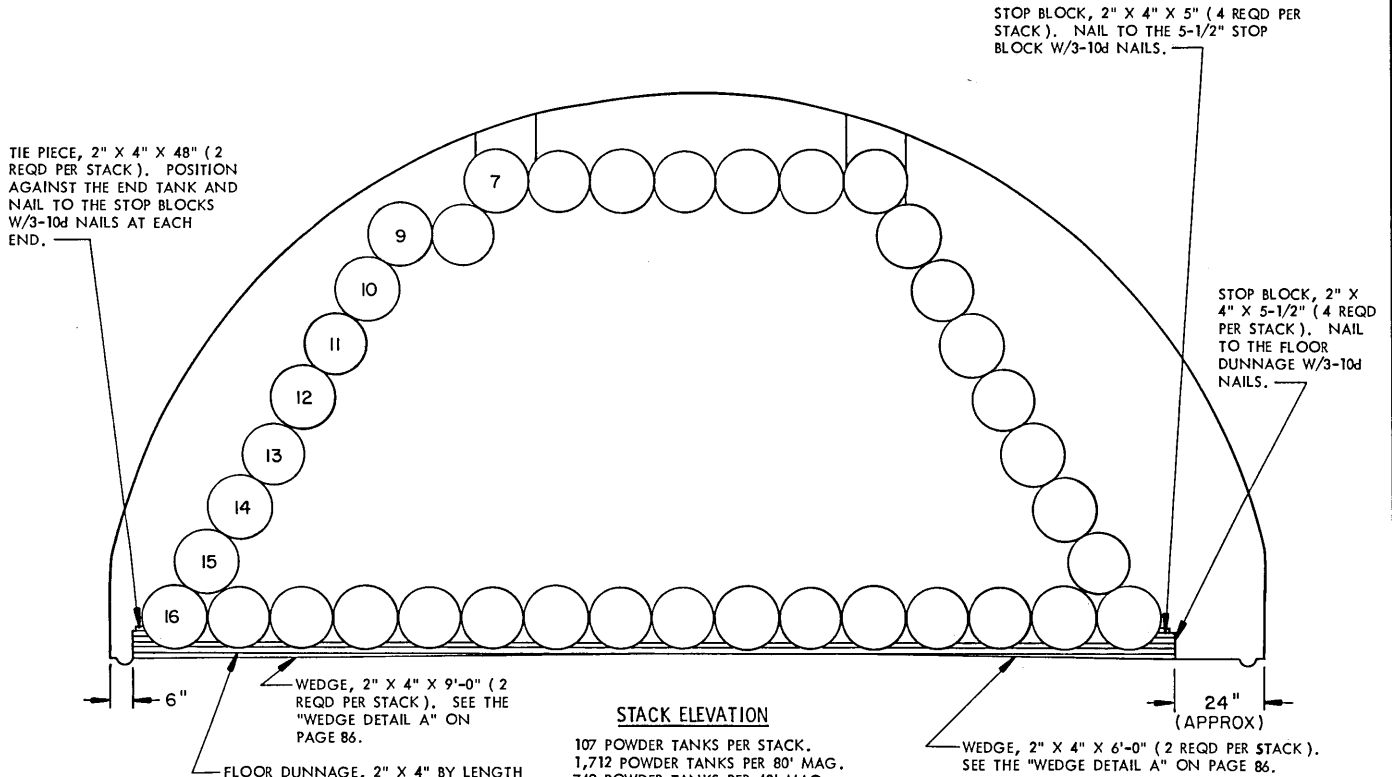
BILL OF MATERIAL (PER STACK)		
LUMBER	LINEAR FEET	BOARD FEET
2" X 4"	105	70
NAILS	NO. REQD	POUNDS
10d (3")	48	3/4
WEDGES PER STACK		
LUMBER	LENGTH	NO. REQD
2" X 4"	6'-0"	2
2" X 4"	9'-0"	2

SPECIAL NOTES:

- STORAGE AS SHOWN IS FOR THE MK4 POWDER TANK FOR 16"/50. USE THIS SAME STORAGE FORMAT FOR ALL MK4 POWDER TANK MODS.
TANK DIMENSIONS-----55-13/32" LONG BY 19-1/2" DIAMETER.
- THE NUMBERS SHOWN IN THE STACK ELEVATION INDICATE THE QUANTITY OF POWDER TANKS PER LAYER IN A STACK.
- SEE THE "TYPICAL PLAN VIEW A" ON PAGE 4.
- STAGGER ALL JOINTS IN FLOOR DUNNAGE.
- THERE WILL BE APPROXIMATELY 60" OF SPACE AT THE FRONT OF AN 80'-0" LONG MAGAZINE. THERE WILL BE APPROXIMATELY 6'-6" OF SPACE AT THE FRONT OF A 40'-0" LONG MAGAZINE.



PARTIAL END VIEW OF STACK



STACK ELEVATION

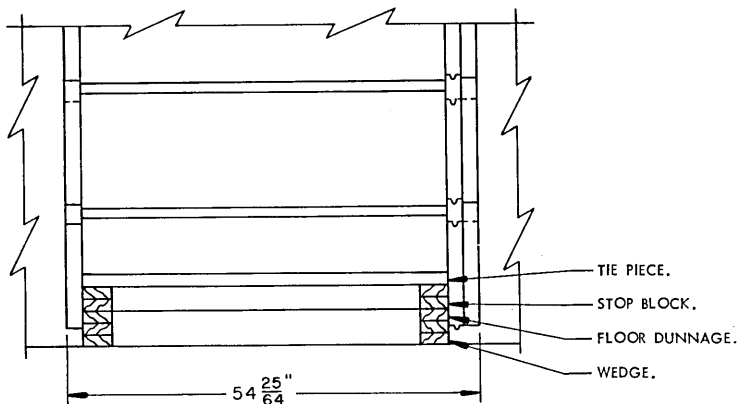
107 POWDER TANKS PER STACK.
 1,712 POWDER TANKS PER 80' MAG.
 749 POWDER TANKS PER 40' MAG.

BILL OF MATERIAL (PER STACK)

LUMBER	LINEAR FEET	BOARD FEET
2" X 4"	111	74
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

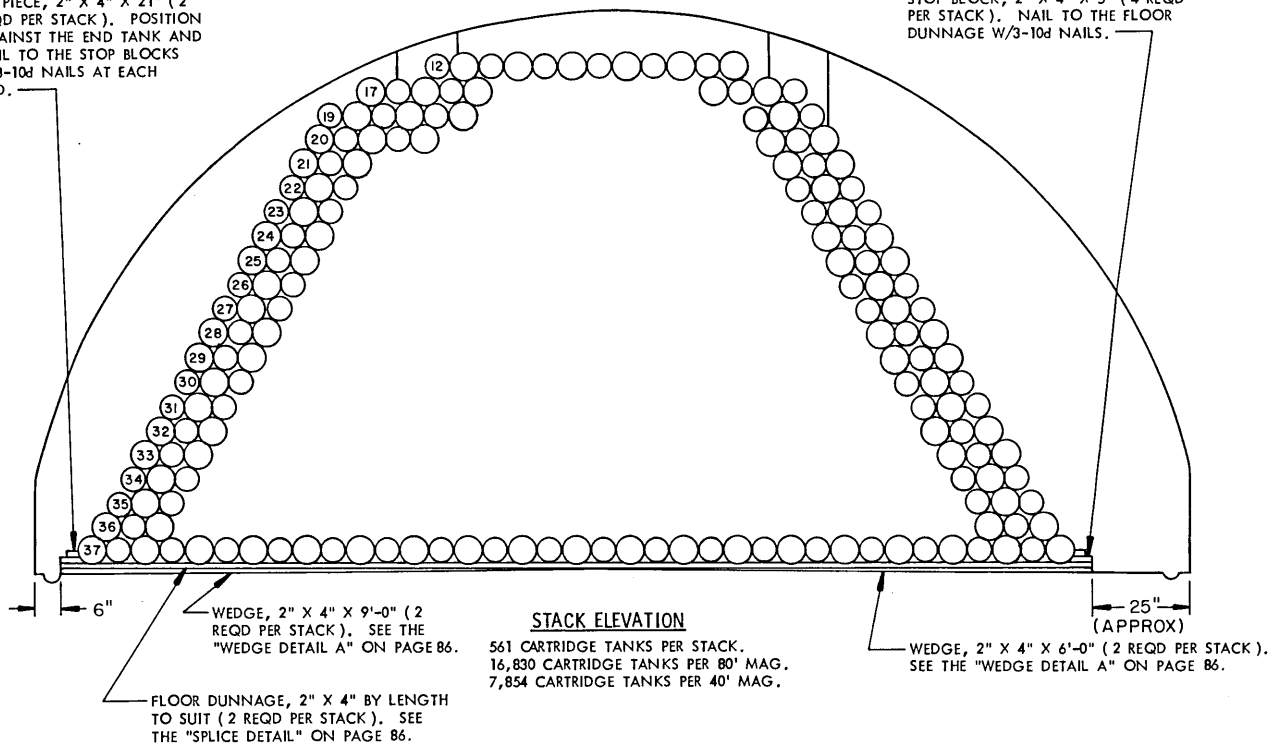
SPECIAL NOTES:

1. STORAGE AS SHOWN IS FOR THE MK8, MOD. 0 POWDER TANK FOR 16". USE THIS 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 6'-4" OF SPACE AT THE FRONT OF AN 80'-0" LONG MAGAZINE. THERE WILL BE APPROXIMATELY 7'-2" OF SPACE AT THE FRONT OF A 40'-0" LONG MAGAZINE.



TIE PIECE, 2" X 4" X 21" (2 REQD PER STACK). POSITION AGAINST THE END TANK AND NAIL TO THE STOP BLOCKS W/3-10d NAILS AT EACH END.

STOP BLOCK, 2" X 4" X 5" (4 REQD PER STACK). NAIL TO THE FLOOR DUNNAGE W/3-10d NAILS.

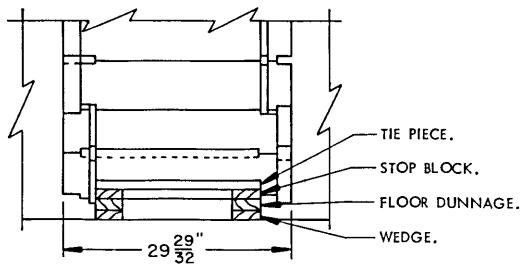


STACK ELEVATION
 561 CARTRIDGE TANKS PER STACK.
 16,830 CARTRIDGE TANKS PER 80' MAG.
 7,854 CARTRIDGE TANKS PER 40' MAG.

BILL OF MATERIAL (PER STACK)		
LUMBER	LINEAR FEET	BOARD FEET
2" X 4"	54	36
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:

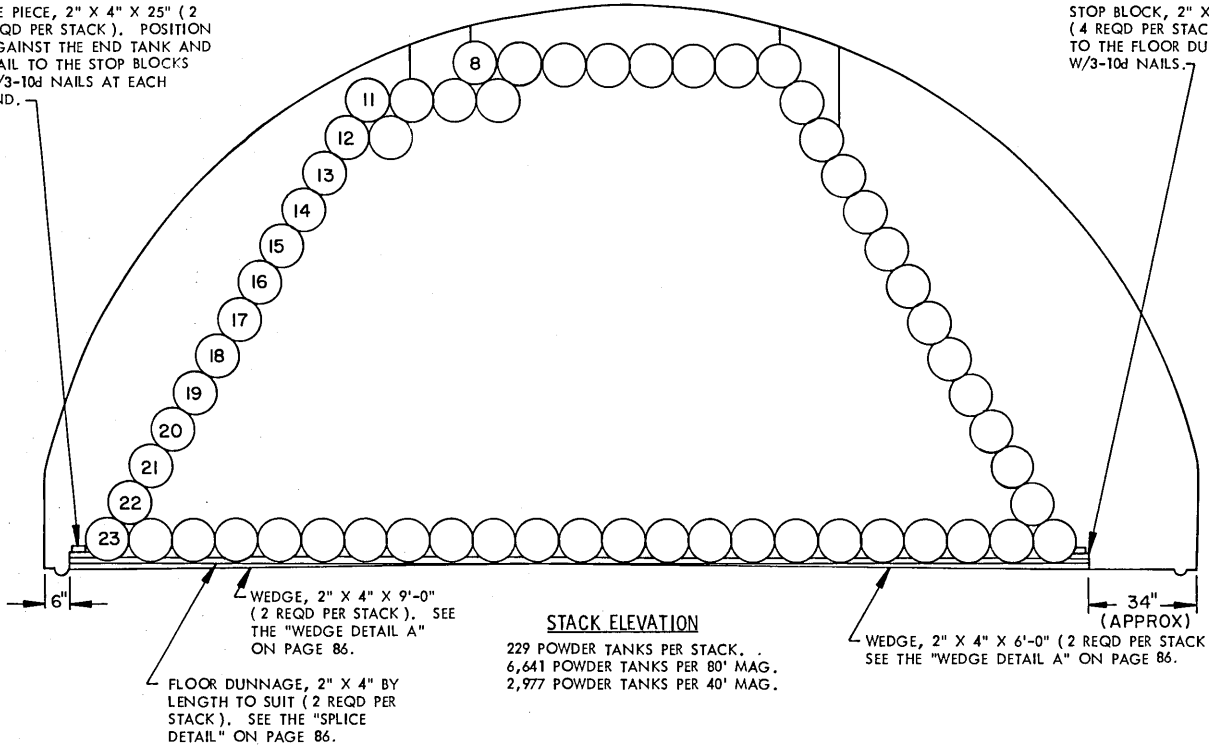
1. STORAGE AS SHOWN IS FOR THE MK9, MOD. 1 AND MK15, MOD. 1 CARTRIDGE TANKS. USE THIS SAME STORAGE FORMAT FOR ALL MK9 AND MK15 CARTRIDGE TANK MODS.
 TANK DIMENSIONS-----29-29/32" LONG BY 7-15/32" DIAMETER.
2. THE NUMBERS SHOWN IN THE STACK ELEVATION INDICATE THE QUANTITY OF CARTRIDGE TANKS PER LAYER 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 49" OF SPACE AT THE FRONT OF AN 80'-0" LONG MAGAZINE. THERE WILL BE APPROXIMATELY 48" OF SPACE AT THE FRONT OF A 40'-0" LONG MAGAZINE.



PARTIAL END VIEW OF STACK

TIE PIECE, 2" X 4" X 25" (2 REQD PER STACK). POSITION AGAINST THE END TANK AND NAIL TO THE STOP BLOCKS W/3-10d NAILS AT EACH END.

STOP BLOCK, 2" X 4" X 5" (4 REQD PER STACK). NAIL TO THE FLOOR DUNNAGE W/3-10d NAILS.



STACK ELEVATION

229 POWDER TANKS PER STACK.
 6,641 POWDER TANKS PER 80' MAG.
 2,977 POWDER TANKS PER 40' MAG.

FLOOR DUNNAGE, 2" X 4" BY LENGTH TO SUIT (2 REQD PER STACK). SEE THE "SPlice DETAIL" ON PAGE 86.

WEDGE, 2" X 4" X 9'-0" (2 REQD PER STACK). SEE THE "WEDGE DETAIL A" ON PAGE 86.

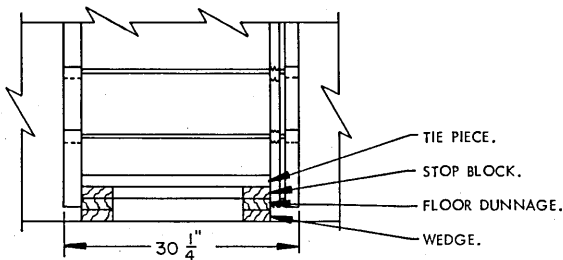
WEDGE, 2" X 4" X 6'-0" (2 REQD PER STACK). SEE THE "WEDGE DETAIL A" ON PAGE 86.

SPECIAL NOTES:

1. STORAGE AS SHOWN IS FOR THE MK10, MOD. 1 POWDER TANK FOR 8"/55. USE THIS 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 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 69" OF SPACE AT THE FRONT OF AN 80'-0" LONG MAGAZINE. THERE WILL BE APPROXIMATELY 6'-1" OF SPACE AT THE FRONT OF A 40'-0" LONG MAGAZINE.

BILL OF MATERIAL (PER STACK)

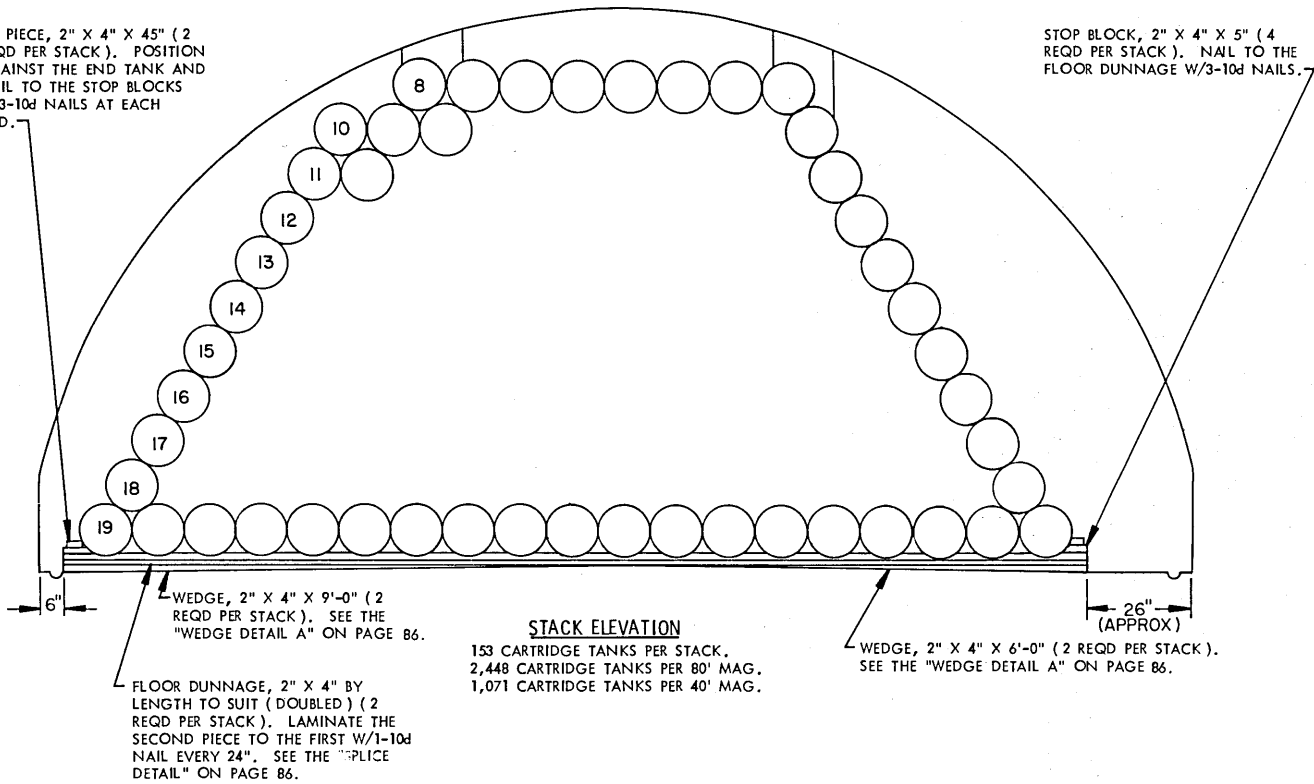
LUMBER	LINEAR FEET	BOARD FEET
2" X 4"	53	36
NAILS	NO. REQD	POUNDS
10d (3")	24	1/2
WEDGES PER STACK		
LUMBER	LENGTH	NO. REQD
2" X 4"	6'-0"	2
2" X 4"	9'-0"	2



PARTIAL END VIEW OF STACK

TIE PIECE, 2" X 4" X 45" (2 REQD PER STACK). POSITION AGAINST THE END TANK AND NAIL TO THE STOP BLOCKS W/3-10d NAILS AT EACH END.

STOP BLOCK, 2" X 4" X 5" (4 REQD PER STACK). NAIL TO THE FLOOR DUNNAGE W/3-10d NAILS.

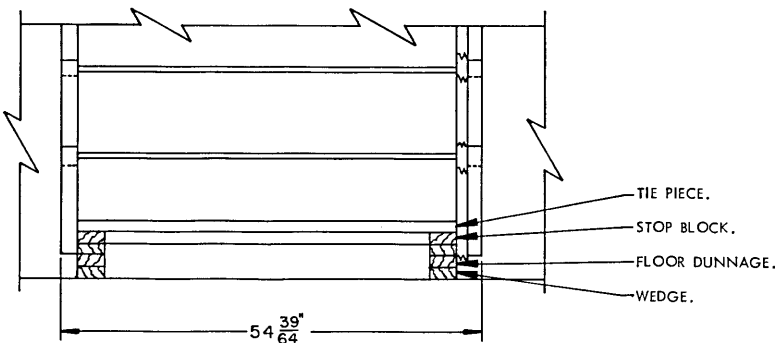


BILL OF MATERIAL (PER STACK)

LUMBER	LINEAR FEET	BOARD FEET
2" X 4"	106	71
NAILS	NO. REQD	POUNDS
10d (3")	48	3/4
WEDGES PER STACK		
LUMBER	LENGTH	NO. REQD
2" X 4"	6'-0"	2
2" X 4"	9'-0"	2

SPECIAL NOTES:

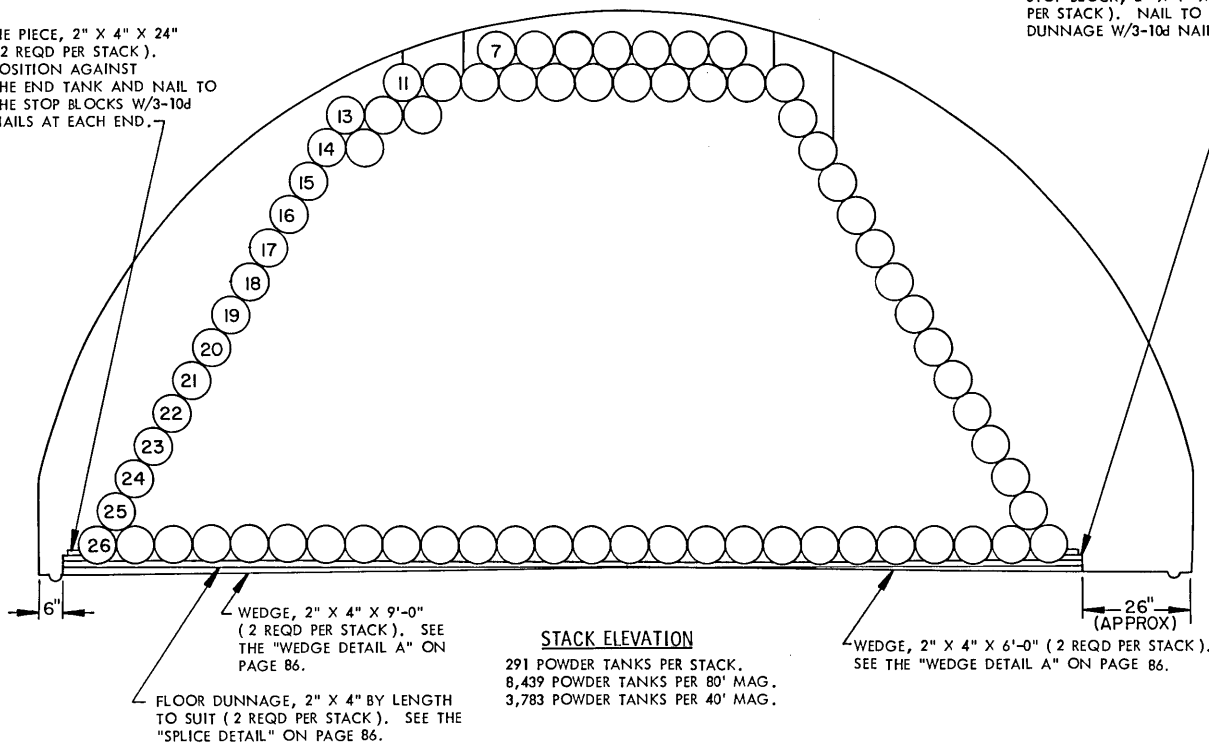
- STORAGE AS SHOWN IS FOR THE MK11, MOD. 0 AND MK13, MOD. 0 CARTRIDGE TANKS FOR 8"/55. USE THIS SAME STORAGE FORMAT FOR ALL MK11 AND MK13 CARTRIDGE TANK MODS.
 TANK DIMENSIONS-----54-39/64" LONG BY 13-5/16" DIAMETER.
- THE NUMBERS SHOWN IN THE STACK ELEVATION INDICATE THE QUANTITY OF CARTRIDGE TANKS PER LAYER IN A STACK.
- SEE THE "TYPICAL PLAN VIEW A" ON PAGE 4.
- STAGGER ALL JOINTS IN FLOOR DUNNAGE.
- THERE WILL BE APPROXIMATELY 6'-0" OF SPACE AT THE FRONT OF AN 80'-0" LONG MAGAZINE. THERE WILL BE APPROXIMATELY 7'-0" OF SPACE AT THE FRONT OF A 40'-0" LONG MAGAZINE.



PARTIAL END VIEW OF STACK

TIE PIECE, 2" X 4" X 24"
(2 REQD PER STACK).
POSITION AGAINST
THE END TANK AND NAIL TO
THE STOP BLOCKS W/3-10d
NAILS AT EACH END.

STOP BLOCK, 2" X 4" X 5" (4 REQD
PER STACK). NAIL TO THE FLOOR
DUNNAGE W/3-10d NAILS.



STACK ELEVATION

291 POWDER TANKS PER STACK.
8,439 POWDER TANKS PER 80' MAG.
3,783 POWDER TANKS PER 40' MAG.

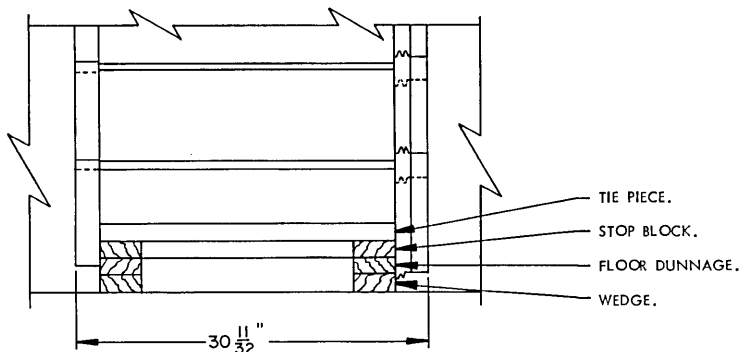
SPECIAL NOTES:

1. STORAGE AS SHOWN IS FOR THE ONE-HALF REDUCED CHARGE IN THE MK13, MOD. 0 POWDER TANK FOR 8"/55. USE THIS 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 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 66" OF SPACE AT THE FRONT OF AN 80'-0" LONG MAGAZINE. THERE WILL BE APPROXIMATELY 6'-0" OF SPACE AT THE FRONT OF A 40'-0" LONG MAGAZINE.

BILL OF MATERIAL (PER STACK)

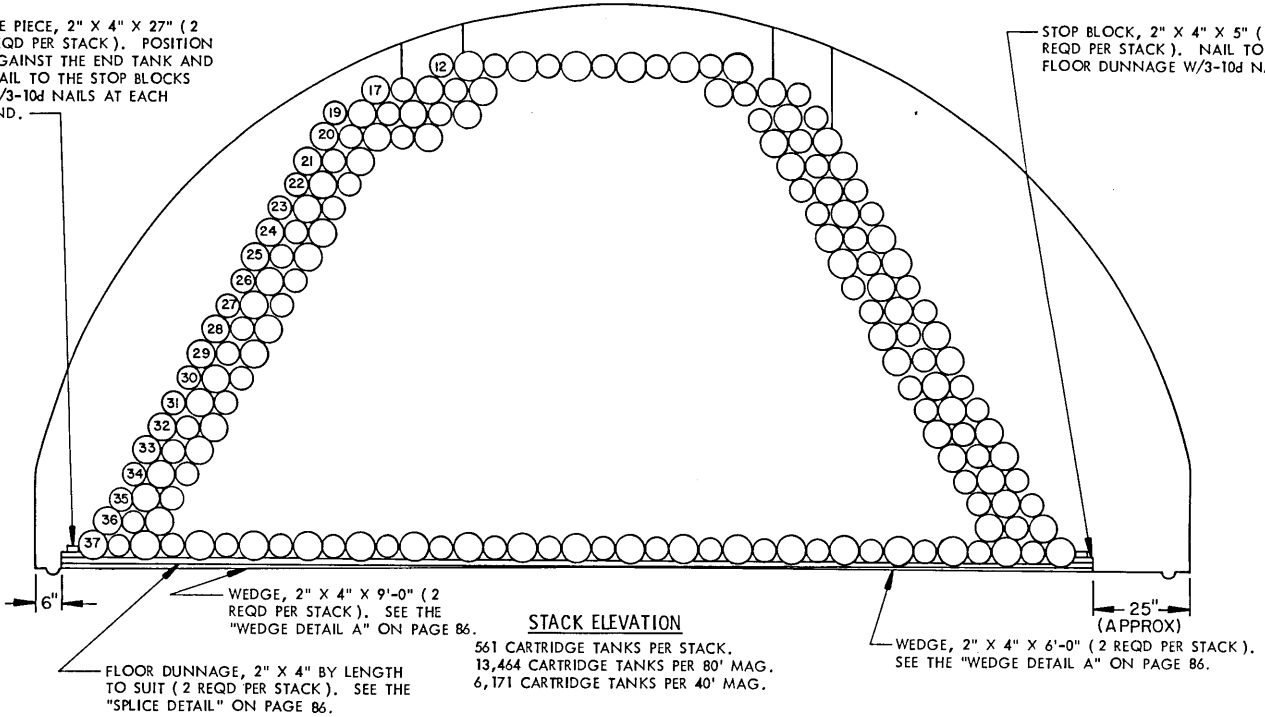
LUMBER	LINEAR FEET	BOARD FEET
2" X 4"	54	36
NAILS	NO. REQD	POUNDS
10d (3")	24	1/2
WEDGES PER STACK		
LUMBER	LENGTH	NO. REQD
2" X 4"	6'-0"	2
2" X 4"	9'-0"	2



PARTIAL END VIEW OF STACK

TIE PIECE, 2" X 4" X 27" (2 REQD PER STACK). POSITION AGAINST THE END TANK AND NAIL TO THE STOP BLOCKS W/3-10d NAILS AT EACH END.

STOP BLOCK, 2" X 4" X 5" (4 REQD PER STACK). NAIL TO THE FLOOR DUNNAGE W/3-10d NAILS.



STACK ELEVATION

561 CARTRIDGE TANKS PER STACK.
13,464 CARTRIDGE TANKS PER 80' MAG.
6,171 CARTRIDGE TANKS PER 40' MAG.

FLOOR DUNNAGE, 2" X 4" BY LENGTH TO SUIT (2 REQD PER STACK). SEE THE "SPLICE DETAIL" ON PAGE B6.

WEDGE, 2" X 4" X 9'-0" (2 REQD PER STACK). SEE THE "WEDGE DETAIL A" ON PAGE B6.

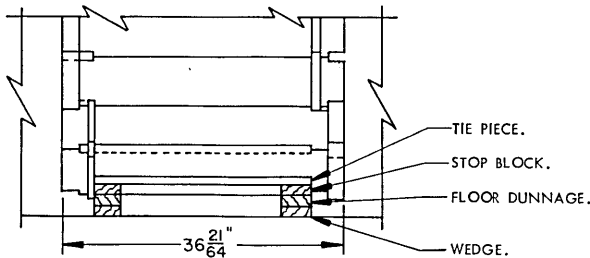
WEDGE, 2" X 4" X 6'-0" (2 REQD PER STACK). SEE THE "WEDGE DETAIL A" ON PAGE B6.

BILL OF MATERIAL (PER STACK)

LUMBER	LINEAR FEET	BOARD FEET
2" X 4"	55	37
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 6'-2" OF SPACE AT THE FRONT OF AN 80'-0" LONG MAGAZINE. THERE WILL BE APPROXIMATELY 67" OF SPACE AT THE FRONT OF A 40'-0" LONG MAGAZINE.



PARTIAL END VIEW OF STACK

TIE PIECE, 2" X 2" X 44" (10 REQD PER DOUBLE STACK). POSITION AS SHOWN AND NAIL TO INTERMEDIATE DUNNAGE, FLOOR DUNNAGE AND/OR END UPRIGHT W/2-10d NAILS AT EACH JOINT (8 LOCATIONS).

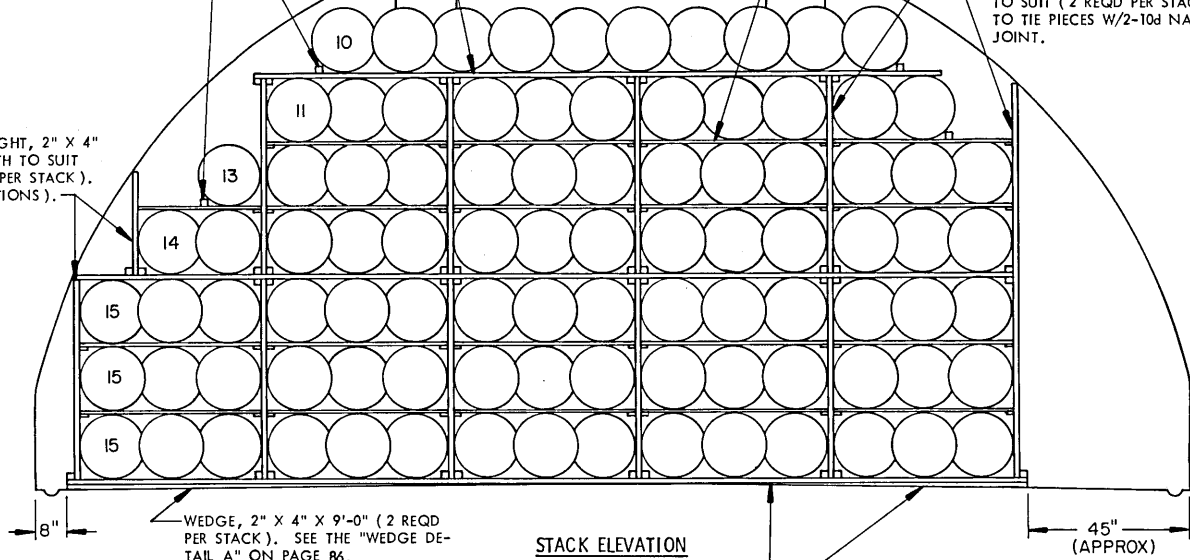
INTERMEDIATE DUNNAGE, 2" X 4" BY LENGTH TO SUIT (4 REQD PER STACK). SEE THE "SPLICE DETAIL" ON PAGE 86.

DECK ASSEMBLY (19 REQD PER STACK). SEE THE "DECK ASSEMBLY A" DETAIL AND "NOTE ▲" ON PAGE 87. NAIL TO THE TIE PIECE W/2-6d NAILS AT EACH JOINT WHERE REQUIRED (2 LOCATIONS).

SEPARATOR ASSEMBLY (8 REQD PER STACK). SEE THE "SEPARATOR ASSEMBLY A" DETAIL ON PAGE 87.

END SUPPORT, 2" X 4" BY LENGTH TO SUIT (2 REQD PER STACK). NAIL TO THE PIECES W/2-10d NAILS AT EACH JOINT.

END UPRIGHT, 2" X 4" BY LENGTH TO SUIT (4 REQD PER STACK). (2 LOCATIONS).



STACK ELEVATION

93 DRUMS PER STACK.
3,162 DRUMS PER 80' MAG.
1,488 DRUMS PER 40' MAG.

WEDGE, 2" X 4" X 6'-0" (2 REQD PER STACK). SEE THE "WEDGE DETAIL A" ON PAGE 86.

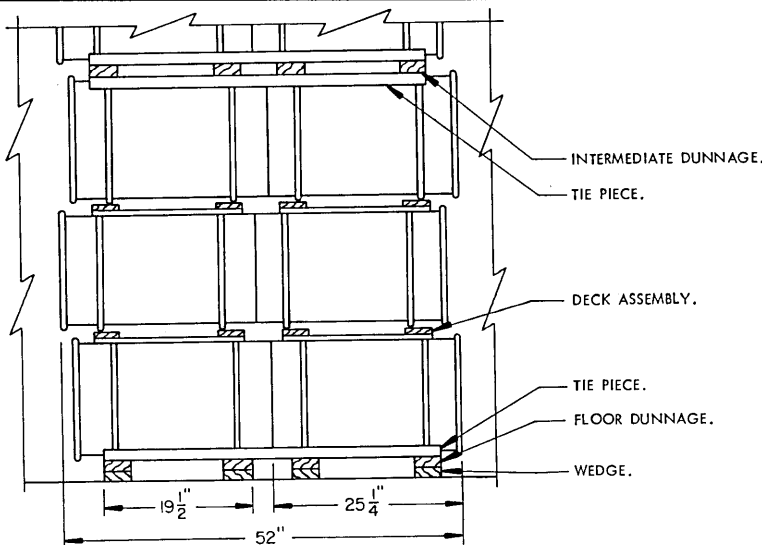
FLOOR DUNNAGE, 2" X 4" BY LENGTH TO SUIT (2 REQD PER STACK). SEE THE "SPLICE DETAIL" ON PAGE 86.

BILL OF MATERIAL (PER STACK)

LUMBER	LINEAR FEET	BOARD FEET
1" X 2"	64	11
1" X 4"	146	49
2" X 2"	90	30
2" X 4"	218	146
NAILS	NO. REQD	POUNDS
6d (2")	152	1
10d (3")	180	2-3/4
WEDGES PER STACK		
LUMBER	LENGTH	NO. REQD
2" X 4"	6'-0"	2
2" X 4"	9'-0"	2

SPECIAL NOTES:

- STORAGE AS SHOWN IS FOR PROPELLING CHARGES FOR THE 105MM HOWITZER PACKED IN METAL DRUM.
DRUM DIMENSIONS----25-1/4" LONG BY 16-7/8" DIAMETER.
- THE NUMBERS SHOWN IN THE STACK ELEVATION INDICATE THE QUANTITY OF DRUMS PER LAYER IN A STACK.
- SEE THE "TYPICAL PLAN VIEW A" ON PAGE 4.
- STORE IN DOUBLE STACKS FOR BETTER STABILITY. SEE THE "PARTIAL END VIEW OF DOUBLE STACK" ON THIS PAGE.
- JOINTS IN INTERMEDIATE DUNNAGE MUST BE STAGGERED BOTH HORIZONTALLY AND VERTICALLY.
- END SUPPORT AND/OR END UPRIGHT PIECES MUST CONTACT THE MAGAZINE WALL FOR SUPPORT.
- THERE WILL BE APPROXIMATELY 62" OF SPACE AT THE FRONT OF AN 80'-0" LONG MAGAZINE. THERE WILL BE APPROXIMATELY 50" OF SPACE AT THE FRONT OF A 40'-0" LONG MAGAZINE.



PARTIAL END VIEW OF DOUBLE STACK

END SUPPORT PIECES HAVE BEEN OMITTED FOR CLARITY.

TIE PIECE, 2" X 2" X 47" (13 REQD PER DOUBLE STACK). POSITION AS SHOWN AND NAIL TO INTERMEDIATE DUNNAGE, FLOOR DUNNAGE AND/OR END UPRIGHT W/2-10d NAILS AT EACH JOINT (10 LOCATIONS).

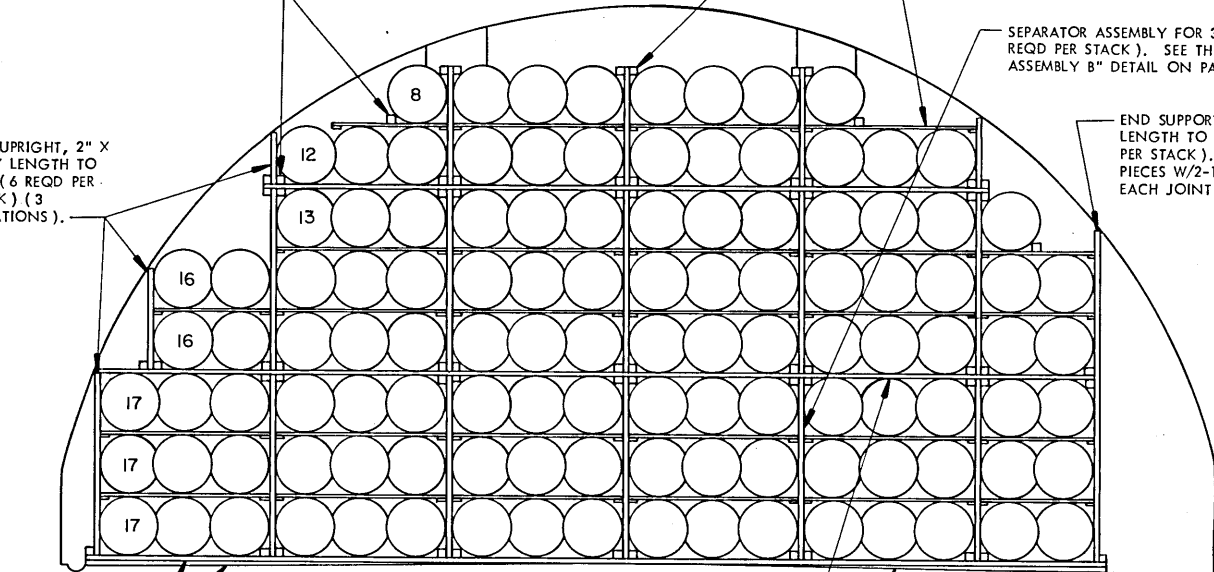
SEPARATOR ASSEMBLY FOR 2 HIGH (3 REQD PER STACK). SEE THE "SEPARATOR ASSEMBLY B" DETAIL ON PAGE 87.

DECK ASSEMBLY (27 REQD PER STACK). SEE THE "DECK ASSEMBLY B" DETAIL AND "NOTE ■ " ON PAGE 87. NAIL TO THE TIE PIECE W/2-6d NAILS AT EACH JOINT WHERE REQUIRED (3 LOCATIONS).

SEPARATOR ASSEMBLY FOR 3 HIGH (10 REQD PER STACK). SEE THE "SEPARATOR ASSEMBLY B" DETAIL ON PAGE 87.

END UPRIGHT, 2" X 4" BY LENGTH TO SUIT (6 REQD PER STACK) (3 LOCATIONS).

END SUPPORT, 2" X 4" BY LENGTH TO SUIT (2 REQD PER STACK). NAIL TO THE TIE PIECES W/2-10d NAILS AT EACH JOINT.



STACK ELEVATION

116 DRUMS PER STACK.
3,248 DRUMS PER 80' MAG.
1,392 DRUMS PER 40' MAG.

6"

WEDGE, 2" X 4" X 9'-0" (2 REQD PER STACK). SEE THE "WEDGE DETAIL A" ON PAGE 86.

FLOOR DUNNAGE, 2" X 4" BY LENGTH TO SUIT (2 REQD PER STACK). SEE THE "SPICE DETAIL" ON PAGE 86.

31" (APPROX)

WEDGE, 2" X 4" X 6'-0" (2 REQD PER STACK). SEE THE "WEDGE DETAIL A" ON PAGE 86.

INTERMEDIATE DUNNAGE, 2" X 4" BY LENGTH TO SUIT (4 REQD PER STACK). SEE THE "SPICE DETAIL" ON PAGE 86.

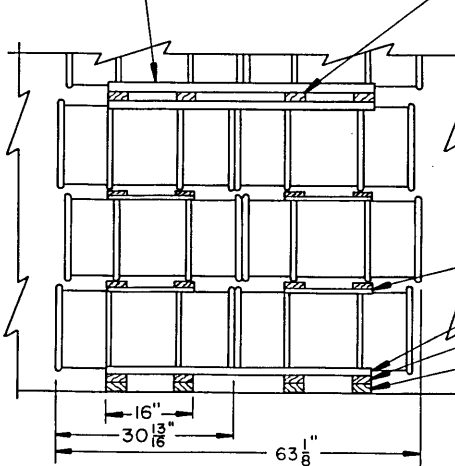
BILL OF MATERIAL (PER STACK)

LUMBER	LINEAR FEET	BOARD FEET
1" X 2"	72	12
1" X 4"	184	62
2" X 2"	95	32
2" X 4"	202	135
NAILS		
	NO. REQD	POUNDS
6d (2")	216	1-1/2
10d (3")	272	4-1/4
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 PROPELLING CHARGES FOR THE 75MM AND 105MM HOWITZER PACKED IN METAL DRUM.
DRUM DIMENSIONS-----30-13/16" HIGH BY 15" DIAMETER.
2. THE NUMBERS SHOWN IN THE STACK ELEVATION INDICATE THE QUANTITY OF DRUMS 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 63" OF SPACE AT THE FRONT OF AN 80'-0" LONG MAGAZINE. THERE WILL BE APPROXIMATELY 7'-3" OF SPACE AT THE FRONT OF A 40'-0" LONG MAGAZINE.

TIE PIECE. INTERMEDIATE DUNNAGE.



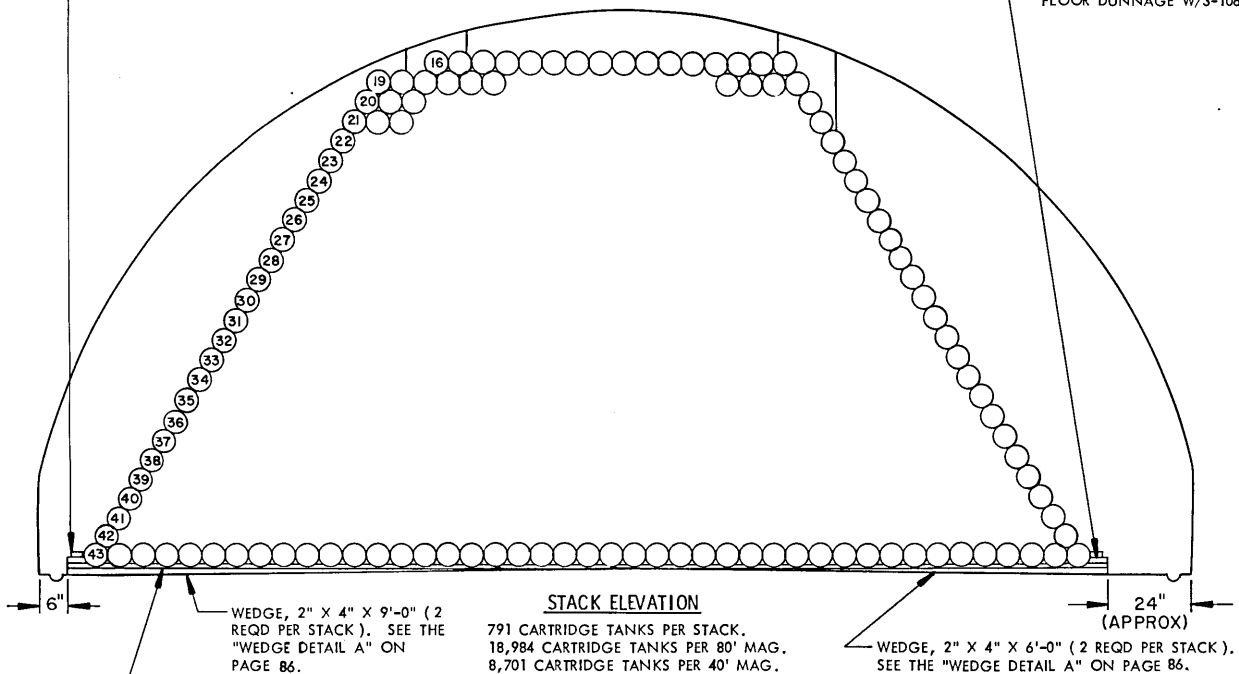
DECK ASSEMBLY.
TIE PIECE.
FLOOR DUNNAGE.
WEDGE.

PARTIAL END VIEW OF DOUBLE STACK

END SUPPORT PIECES HAVE BEEN OMITTED FOR CLARITY

TIE PIECE, 2" X 4" X 29" (2 REQD PER STACK). POSITION AGAINST THE END TANK AND NAIL TO THE STOP BLOCKS W/3-10d NAILS AT EACH END.

STOP BLOCK, 2" X 4" X 5" (4 REQD PER STACK). NAIL TO THE FLOOR DUNNAGE W/3-10d NAILS.



STACK ELEVATION

791 CARTRIDGE TANKS PER STACK.
18,984 CARTRIDGE TANKS PER 80' MAG.
8,701 CARTRIDGE TANKS PER 40' MAG.

WEDGE, 2" X 4" X 9'-0" (2 REQD PER STACK). SEE THE "WEDGE DETAIL A" ON PAGE 86.

WEDGE, 2" X 4" X 6'-0" (2 REQD PER STACK). SEE THE "WEDGE DETAIL A" ON PAGE 86.

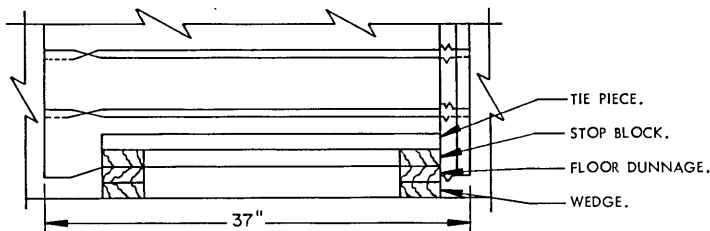
FLOOR DUNNAGE, 2" X 4" BY LENGTH TO SUIT (2 REQD PER STACK). SEE THE "SPlice DETAIL" ON PAGE 86.

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.
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 80'-0" LONG MAGAZINE. THERE WILL BE APPROXIMATELY 59" OF SPACE AT THE FRONT OF A 40'-0" LONG MAGAZINE.

BILL OF MATERIAL (PER STACK)

LUMBER	LINEAR FEET	BOARD FEET
2" X 4"	55	37
NAILS	NO. REQD	POUNDS
10d (3")	24	1/2
LUMBER	LENGTH	NO. REQD
2" X 4"	6'-0"	2
2" X 4"	9'-0"	2

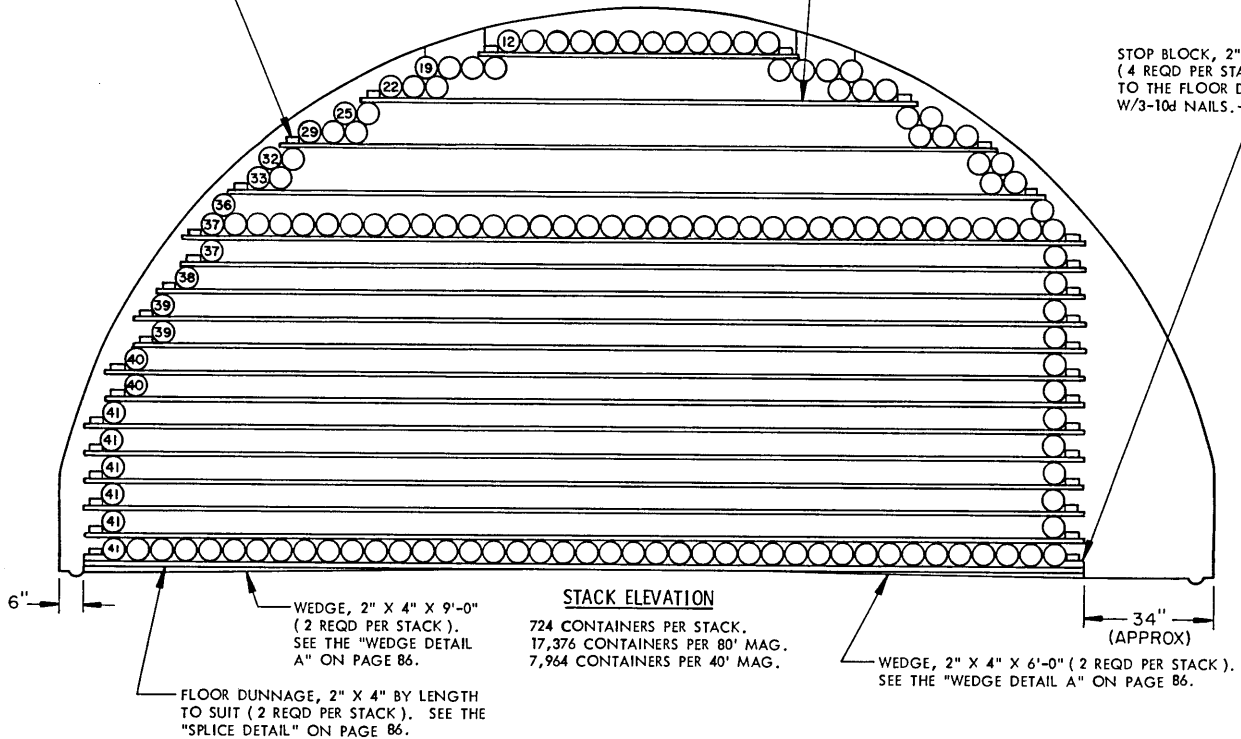


PARTIAL END VIEW OF STACK

TIE PIECE, 2" X 4" X 37" (34 REQD PER STACK). POSITION AGAINST THE END CONTAINERS. NAIL THE TWO TIE PIECES POSITIONED ON THE STOP BLOCKS W/3-10d NAILS AT EACH END. THE INTERMEDIATE DUNNAGE WILL BE NAILED TO THE REMAINING TIE PIECES W/3-6d NAILS AT EACH END.

INTERMEDIATE DUNNAGE, 1" X 4" BY LENGTH TO SUIT (32 REQD PER STACK). SEE THE "SPLICE DETAIL" ON PAGE 86.

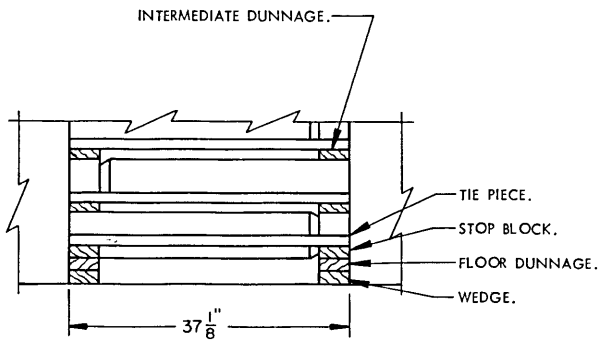
STOP BLOCK, 2" X 4" X 5" (4 REQD PER STACK). NAIL TO THE FLOOR DUNNAGE W/3-10d NAILS.



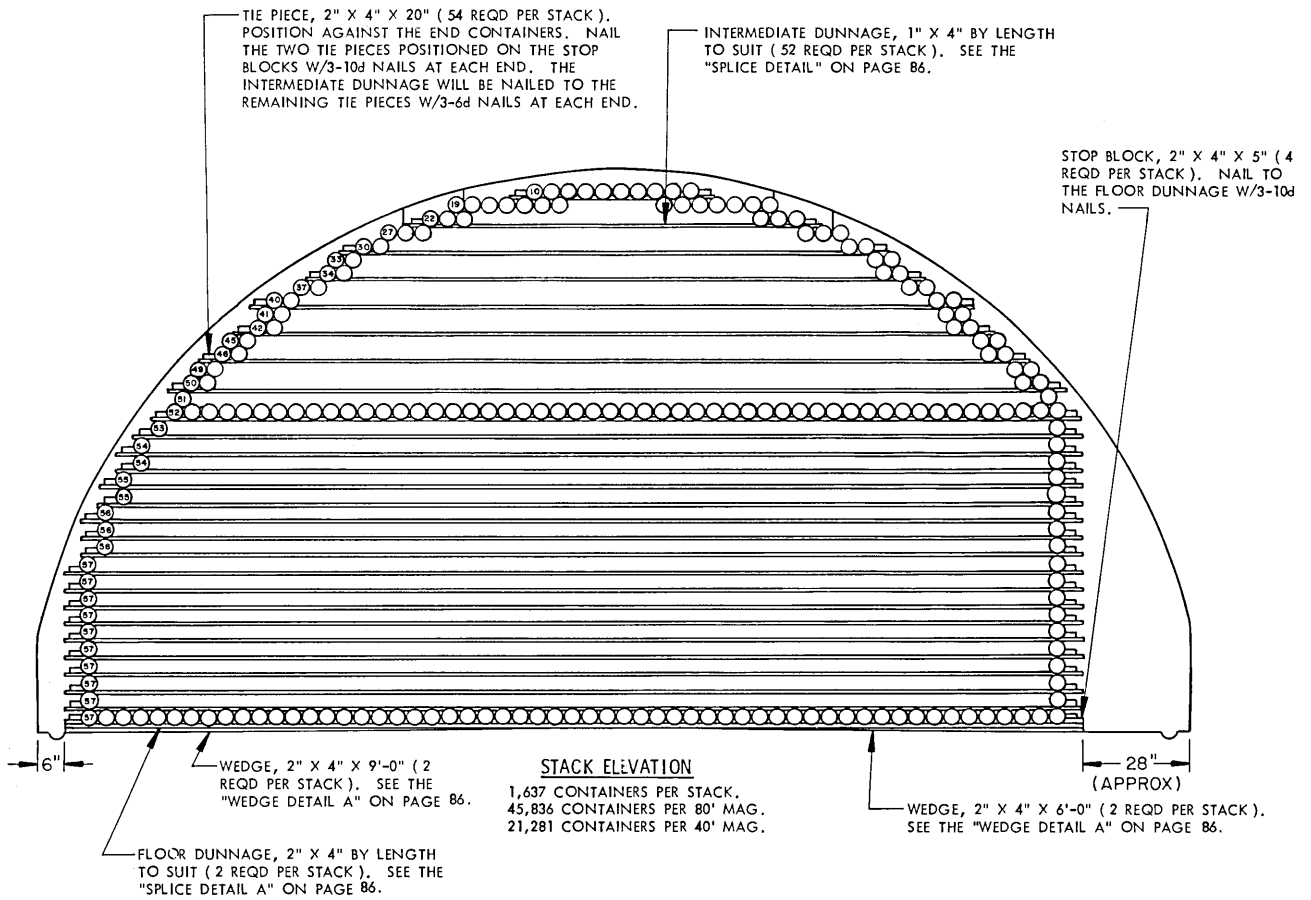
SPECIAL NOTES:

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 55" OF SPACE AT THE FRONT OF AN 80'-0" LONG MAGAZINE. THERE WILL BE APPROXIMATELY 58" OF SPACE AT THE FRONT OF A 40'-0" LONG MAGAZINE.

BILL OF MATERIAL (PER STACK)		
LUMBER	LINEAR FEET	BOARD FEET
1" X 4"	621	207
2" X 4"	154	103
NAILS		POUNDS
6d (2")	192	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

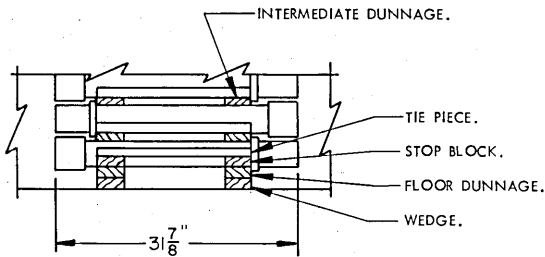


STACK ELEVATION
 1,637 CONTAINERS PER STACK.
 45,836 CONTAINERS PER 80' MAG.
 21,281 CONTAINERS PER 40' MAG.

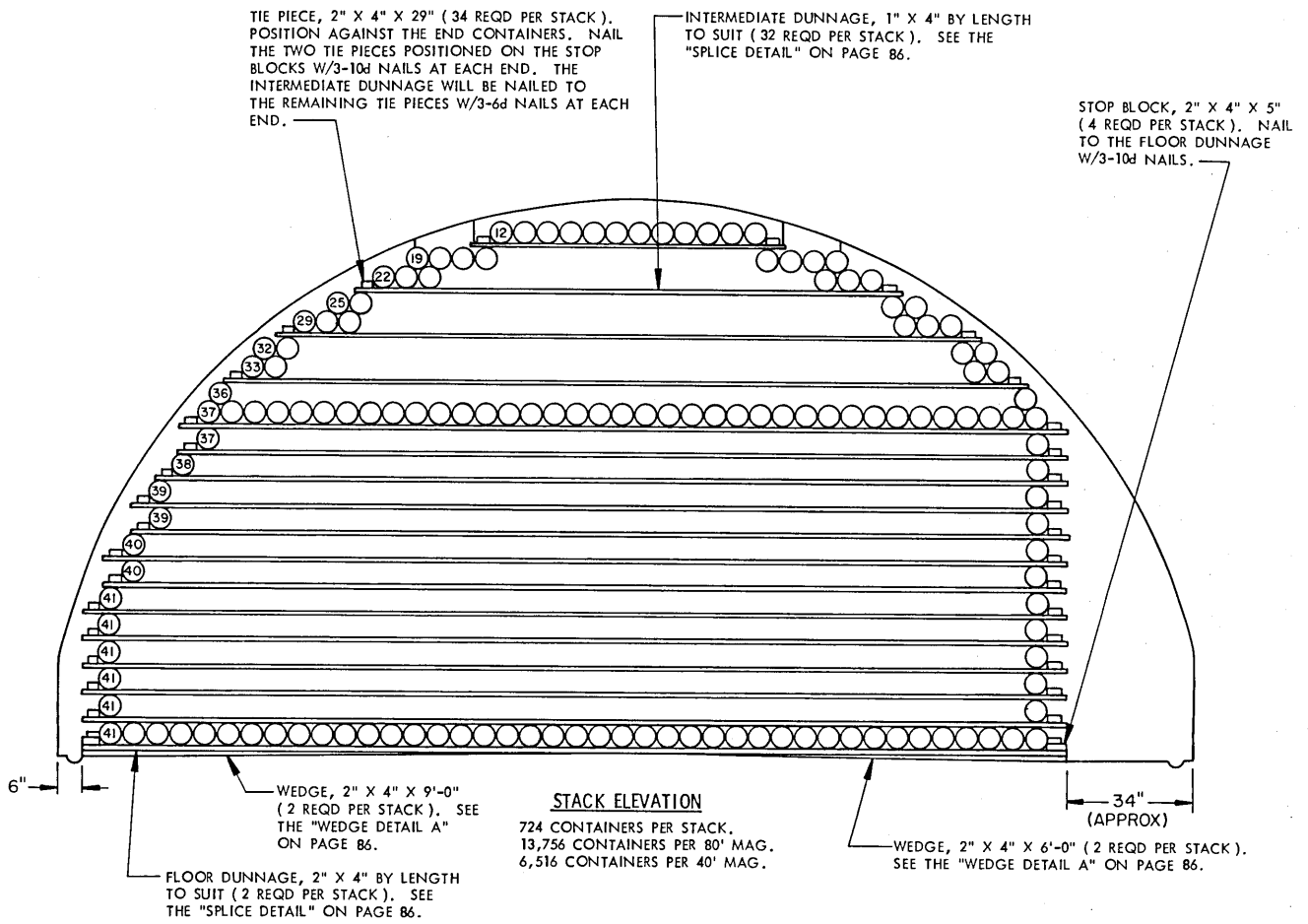
BILL OF MATERIAL (PER STACK)		
LUMBER	LINEAR FEET	BOARD FEET
1" X 4"	1,073	358
2" X 4"	140	94
NAILS	NO. REQD	POUNDS
6d (2")	312	2
10d (3")	24	1/2
WEDGES PER STACK		
LUMBER	LENGTH	NO. REQD
2" X 4"	6'-0"	2
2" X 4"	9'-0"	2

SPECIAL NOTES:

- 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.
- THE NUMBERS SHOWN IN THE STACK ELEVATION INDICATE THE QUANTITY OF CONTAINERS PER LAYER IN A STACK.
- SEE THE "TYPICAL PLAN VIEW A" ON PAGE 4.
- NOTE: JOINTS IN INTERMEDIATE DUNNAGE MUST BE STAGGERED BOTH HORIZONTALLY AND VERTICALLY.
- THERE WILL BE APPROXIMATELY 54" OF SPACE AT THE FRONT OF AN 80'-0" LONG MAGAZINE. THERE WILL BE APPROXIMATELY 52" OF SPACE AT THE FRONT OF A 40'-0" LONG MAGAZINE.



PARTIAL END VIEW OF STACK



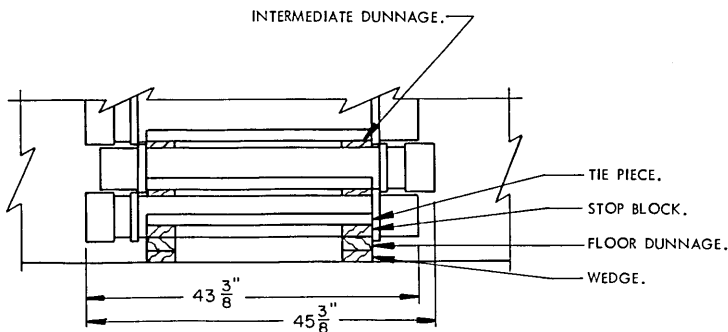
STACK ELEVATION

724 CONTAINERS PER STACK.
 13,756 CONTAINERS PER 80' MAG.
 6,516 CONTAINERS PER 40' MAG.

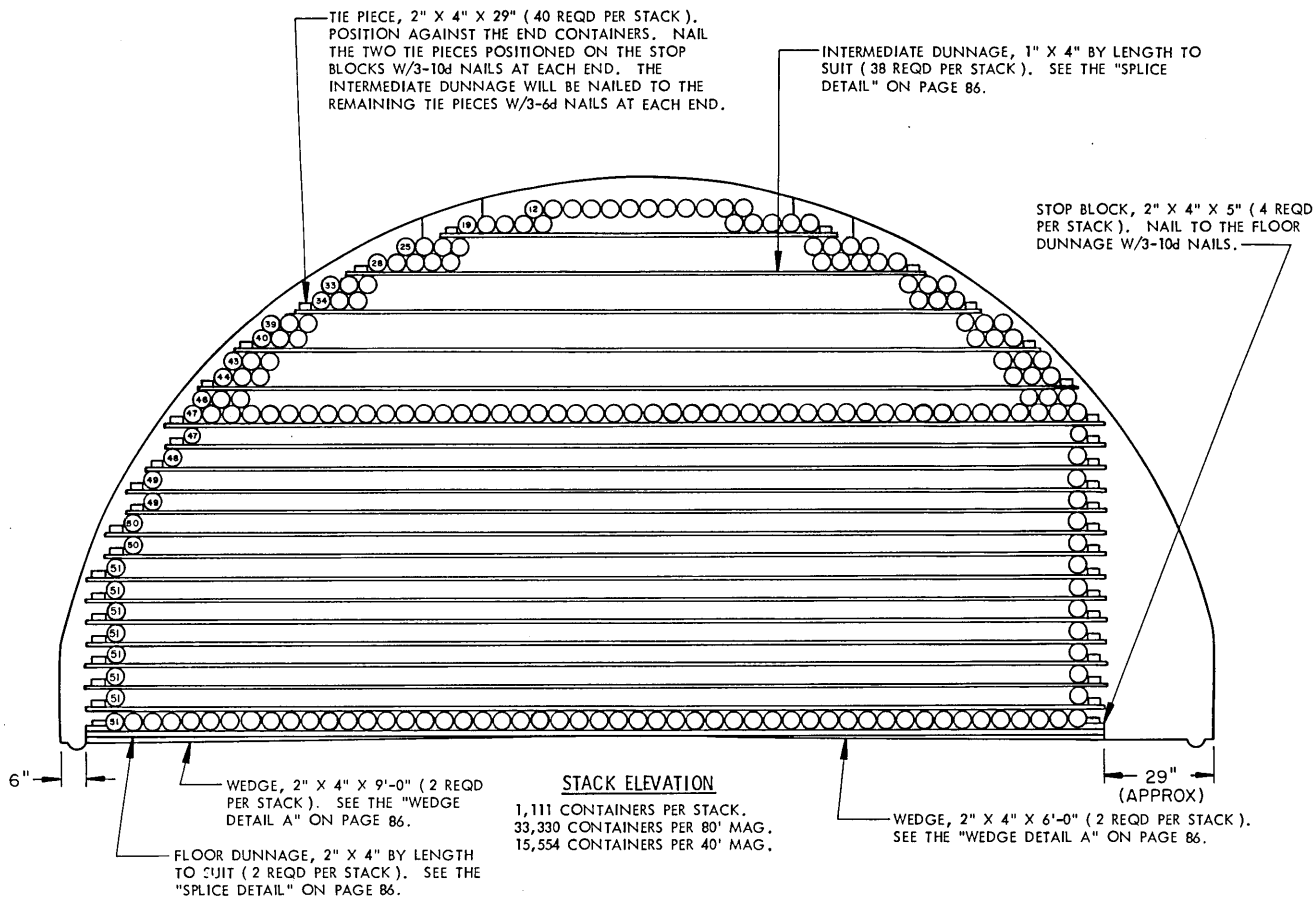
BILL OF MATERIAL (PER STACK)		
LUMBER	LINEAR FEET	BOARD FEET
1" X 4"	654	218
2" X 4"	131	88
NAILS	NO. REQD	POUNDS
6d (2")	192	1-1/4
10d (3")	24	1/2
WEDGES PER STACK		
LUMBER	LENGTH	NO. REQD
2" X 4"	6'-0"	2
2" X 4"	9'-0"	2

SPECIAL NOTES:

- 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.
- THE NUMBERS SHOWN IN THE STACK ELEVATION INDICATE THE QUANTITY OF CONTAINERS PER LAYER IN A STACK.
- SEE THE "TYPICAL PLAN VIEW A" ON PAGE 4.
- NOTE: JOINTS IN INTERMEDIATE DUNNAGE MUST BE STAGGERED BOTH HORIZONTALLY AND VERTICALLY.
- THERE WILL BE APPROXIMATELY 7'-0" OF SPACE AT THE FRONT OF AN 80'-0" LONG MAGAZINE. THERE WILL BE APPROXIMATELY 58" OF SPACE AT THE FRONT OF A 40'-0" LONG MAGAZINE.



PARTIAL END VIEW OF STACK



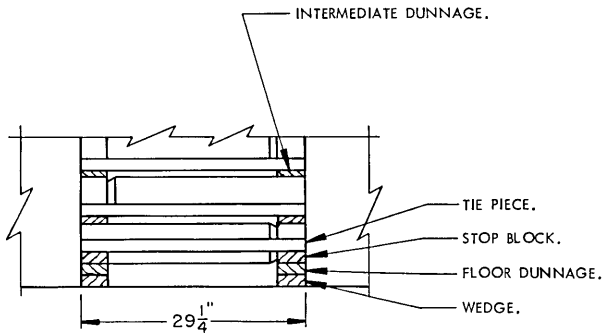
STACK ELEVATION

1,111 CONTAINERS PER STACK.
 33,330 CONTAINERS PER 80' MAG.
 15,554 CONTAINERS PER 40' MAG.

BILL OF MATERIAL (PER STACK)		
LUMBER	LINEAR FEET	BOARD FEET
1" X 4"	804	268
2" X 4"	145	97
NAILS		POUNDS
6d (2")	228	1-1/2
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:

- 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.
- THE NUMBERS SHOWN IN THE STACK ELEVATION INDICATE THE QUANTITY OF CONTAINERS PER LAYER IN A STACK.
- SEE THE "TYPICAL PLAN VIEW A" ON PAGE 4.
- NOTE: JOINTS IN INTERMEDIATE DUNNAGE MUST BE STAGGERED BOTH HORIZONTALLY AND VERTICALLY.
- THERE WILL BE APPROXIMATELY 69" OF SPACE AT THE FRONT OF AN 80'-0" LONG MAGAZINE. THERE WILL BE APPROXIMATELY 57" OF SPACE AT THE FRONT OF A 40'-0" LONG MAGAZINE.



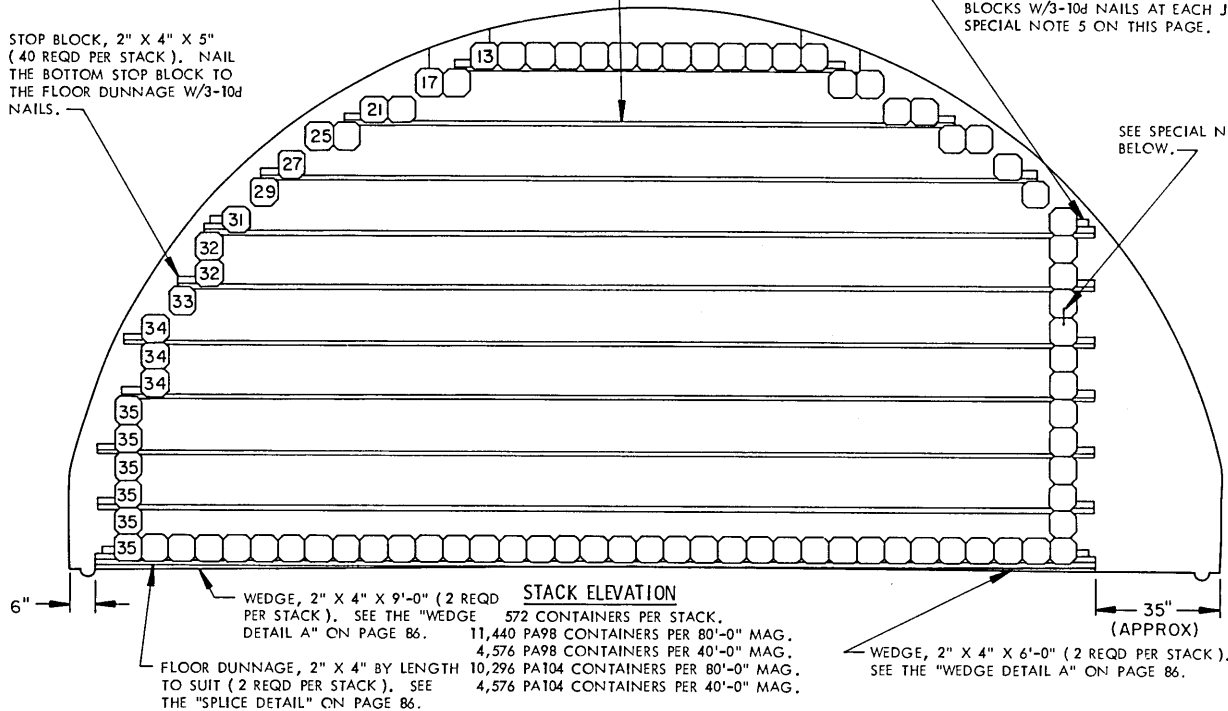
PARTIAL END VIEW OF STACK

STOP BLOCK, 2" X 4" X 5" (40 REQD PER STACK). NAIL THE BOTTOM STOP BLOCK TO THE FLOOR DUNNAGE W/3-10d NAILS.

INTERMEDIATE DUNNAGE, 1" X 4" BY LENGTH TO SUIT (18 REQD PER STACK). NAIL TO THE STOP BLOCKS W/3-6d NAILS AT EACH END. SEE THE "SPLICE DETAIL" ON PAGE B6.

TIE PIECE, 2" X 4" X 7'-3-1/4" FOR THE PA98 CONTAINER, 7'-7-1/4" FOR THE PA104 CONTAINER (4 REQD PER STACK). POSITION AGAINST THE END CONTAINERS AND NAIL TO THE STOP BLOCKS W/3-10d NAILS AT EACH JOINT. SEE SPECIAL NOTE 5 ON THIS PAGE.

SEE SPECIAL NOTE 7 BELOW.



STACK ELEVATION

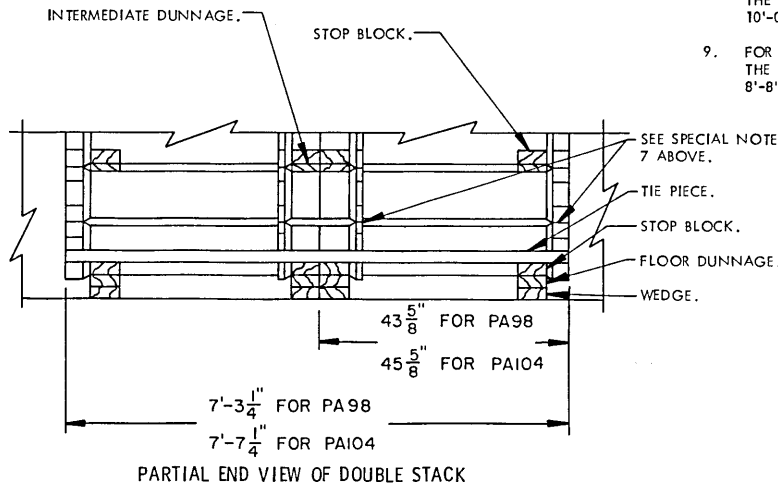
WEDGE, 2" X 4" X 9'-0" (2 REQD PER STACK). SEE THE "WEDGE DETAIL A" ON PAGE B6. 572 CONTAINERS PER STACK.
 11,440 PA98 CONTAINERS PER 80'-0" MAG.
 4,576 PA98 CONTAINERS PER 40'-0" MAG.
 10,296 PA104 CONTAINERS PER 80'-0" MAG.
 4,576 PA104 CONTAINERS PER 40'-0" MAG.

SPECIAL NOTES:

- 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.
- THE NUMBERS SHOWN IN THE STACK ELEVATION INDICATE THE QUANTITY OF CONTAINERS PER LAYER IN A STACK.
- SEE THE "TYPICAL PLAN VIEW A" ON PAGE 4.
- STORE IN DOUBLE STACKS FOR BETTER STABILITY. SEE THE "PARTIAL END VIEW OF DOUBLE STACK" ON THIS PAGE.
- 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.
- NOTE: JOINTS IN INTERMEDIATE DUNNAGE MUST BE STAGGERED BOTH HORIZONTALLY AND VERTICALLY.
- NOTE: THE INTERLOCKING PINS ON EACH END OF A CONTAINER MUST INTERLOCK VERTICALLY WITH THE CONTAINER IN THE NEXT LAYER.
- FOR THE PA98 CONTAINER THERE WILL BE APPROXIMATELY 6'-4" OF SPACE AT THE FRONT OF AN 80'-0" LONG MAGAZINE. THERE WILL BE APPROXIMATELY 10'-0" OF SPACE AT THE FRONT OF A 40'-0" LONG MAGAZINE.
- FOR THE PA104 CONTAINER THERE WILL BE APPROXIMATELY 10'-7" OF SPACE AT THE FRONT OF AN 80'-0" LONG MAGAZINE. THERE WILL BE APPROXIMATELY 8'-8" OF SPACE AT THE FRONT OF A 40'-0" LONG MAGAZINE.

BILL OF MATERIAL (PER STACK)

LUMBER	LINEAR FEET	BOARD FEET
1" X 4"	350	117
2" X 4"	76	51
NAILS	NO. REQD	POUNDS
6d (2")	108	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



PARTIAL END VIEW OF DOUBLE STACK

COMPLETE ROUND, IN PA98 AND PA104 SERIES CONTAINERS

STORAGE IN 80'-0" MAGAZINE

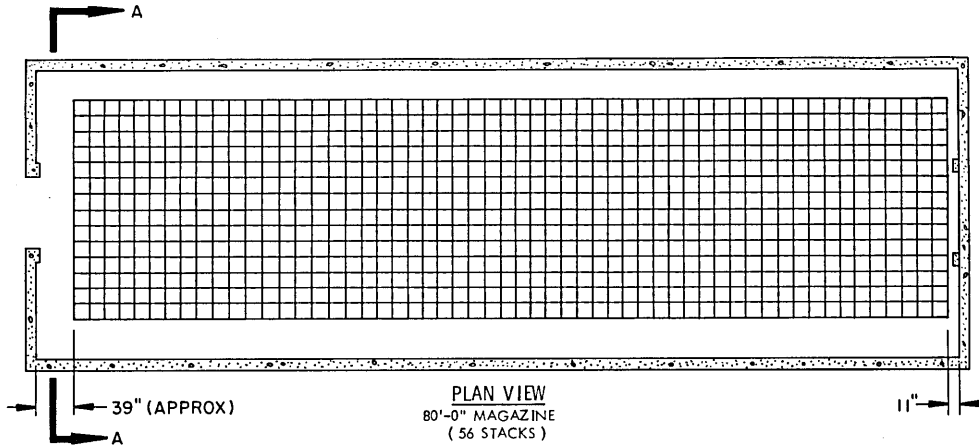
ITEM	QUANTITY	EXPLOSIVE WEIGHT
BOXED TNC -----	9,968 -----	398,720 LBS

* STORAGE IN 40'-0" MAGAZINE

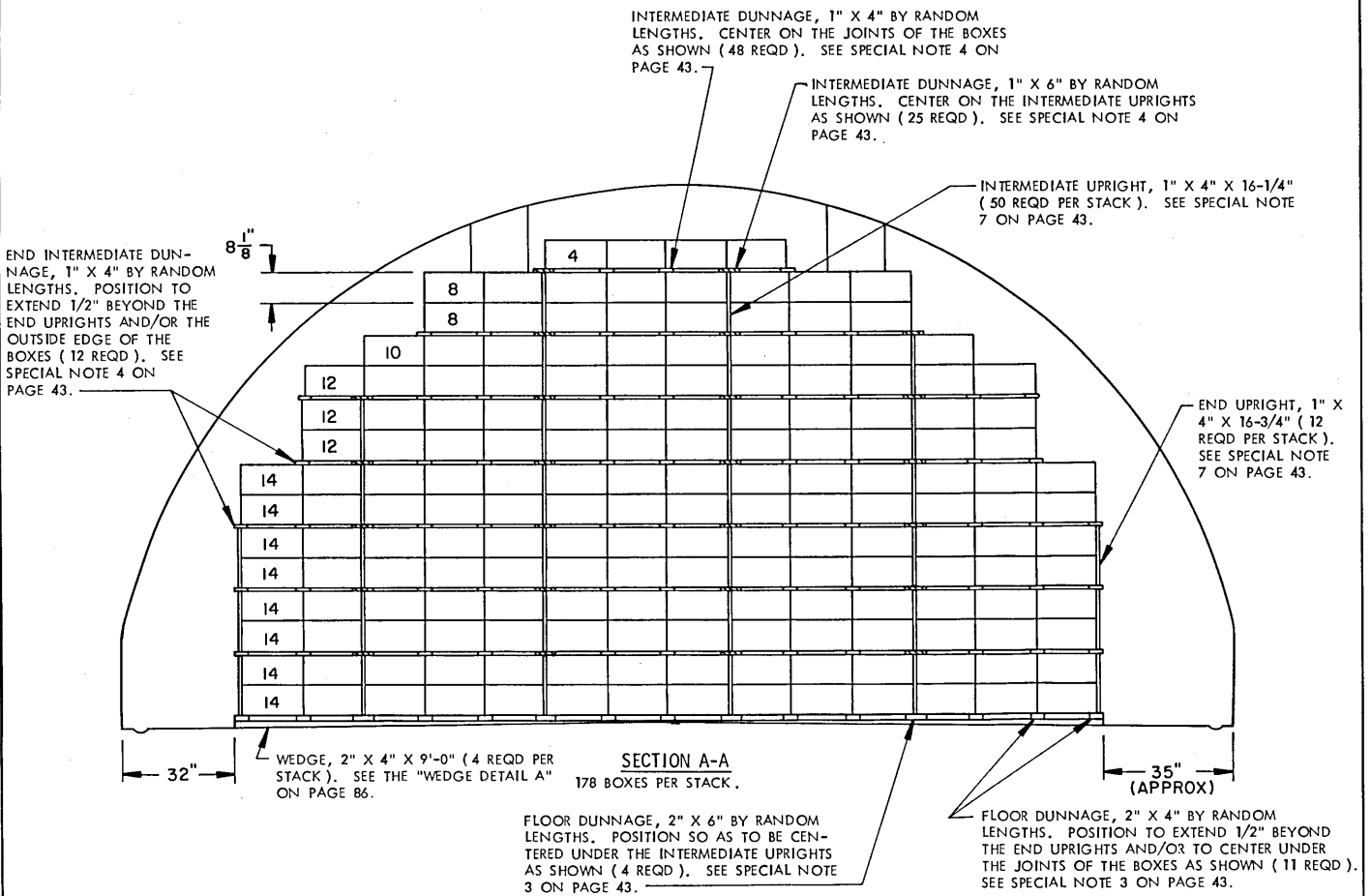
ITEM	QUANTITY	EXPLOSIVE WEIGHT
BOXED TNC -----	4,806 -----	192,240 LBS

SEE GENERAL NOTE "E" ON PAGE 2, AND SPECIAL NOTES 2 AND 8, AND "TABLE 1" ON PAGE 43.

* 27 STACKS WITH 30" (APPROX) SPACE REMAINING AT FRONT.



PLAN VIEW
80'-0" MAGAZINE
(56 STACKS)

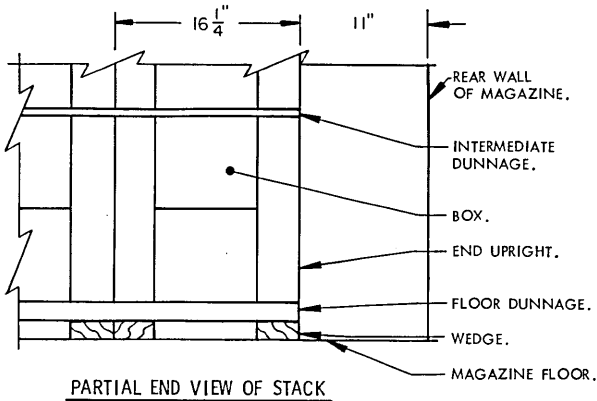


SECTION A-A
178 BOXES PER STACK.

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

SPECIAL NOTES:

- 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 B.
DIMENSIONS ----- 16-1/4" LONG BY 16-1/4" WIDE BY 8-1/8" HIGH. EXPLOSIVE WEIGHT FOR TNC--40 LBS
- STORAGE AS SHOWN IS FOR FIBERBOARD BOXES CONTAINING TNC. THE PROCEDURES ARE ALSO APPLICABLE FOR ALL THE ITEMS LISTED IN TABLE 1. THE EXPLOSIVE WEIGHT PER BOX AND PER 80'-0" AND 40'-0" ARCH TYPE MAGAZINES ARE GIVEN. **CAUTION:** THE EXPLOSIVE LIMIT FOR A MAGAZINE IS NOT TO BE EXCEEDED.
- 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.
- 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.
- 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.
- THE NUMBERS SHOWN IN SECTION A-A INDICATE THE QUANTITY OF BOXES PER LAYER IN A STACK.
- 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:
 - INTERMEDIATE UPRIGHT PIECES MUST BE OF A LENGTH EQUAL TO THE HEIGHT OF TWO BOXES.
 - END UPRIGHT PIECES MUST BE 1/2" LONGER THAN INTERMEDIATE UPRIGHT PIECES.
- 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.
- 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.



PARTIAL END VIEW OF STACK

TABLE 1

80'-0" ARCH TYPE MAGAZINE			
ITEM	EXPL WT/BOX	QUANTITY	EXPLOSIVE WT
TNC	40 LBS	9,968	398,720 LBS
PENTOLITE	35 LBS	9,968	348,880 LBS
POTASSIUM PICRATE	35 LBS	9,968	348,880 LBS
COMPOSITION D-2	30 LBS	9,968	299,040 LBS
MAX 2	50 LBS	9,968	498,400 LBS
MOX 2B	50 LBS	9,968	498,400 LBS

40'-0" ARCH TYPE MAGAZINE			
ITEM	EXPL WT/BOX	QUANTITY	EXPLOSIVE WT
TNC	40 LBS	4,806	192,240 LBS
PENTOLITE	35 LBS	4,806	168,210 LBS
POTASSIUM PICRATE	35 LBS	4,806	168,210 LBS
COMPOSITION D-2	30 LBS	4,806	144,180 LBS
MAX 2	50 LBS	4,806	240,300 LBS
MOX 2B	50 LBS	4,806	240,300 LBS

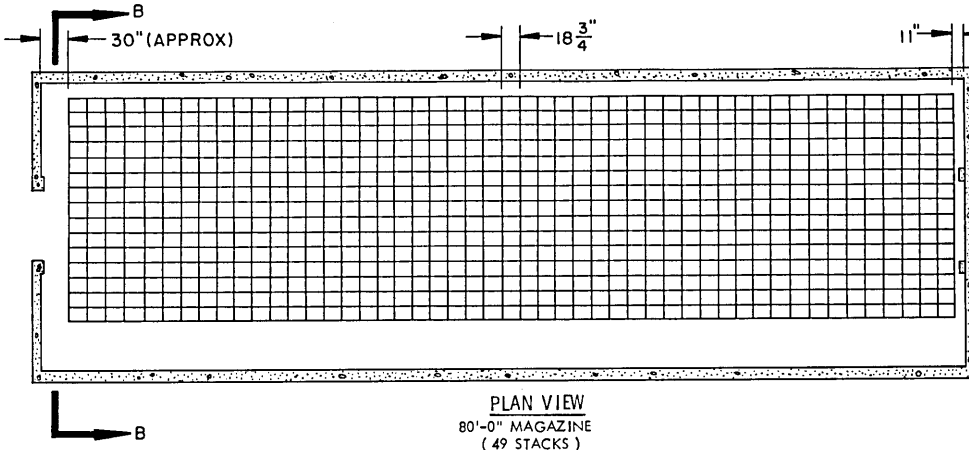
BILL OF MATERIAL (PER STACK)

LUMBER	LINEAR FEET	BOARD FEET
1" X 4"	166	56
1" X 6"	34	17
2" X 4"	15	10
2" X 6"	6	6
WEDGES PER STACK		
LUMBER	LENGTH	NO. REQD
2" X 4"	9'-0"	4

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

STORAGE IN 80'-0" MAGAZINE

ITEM	QUANTITY	EXPLOSIVE WEIGHT
TNT (50-LB BOX)	-9,996	-----499,800 LBS



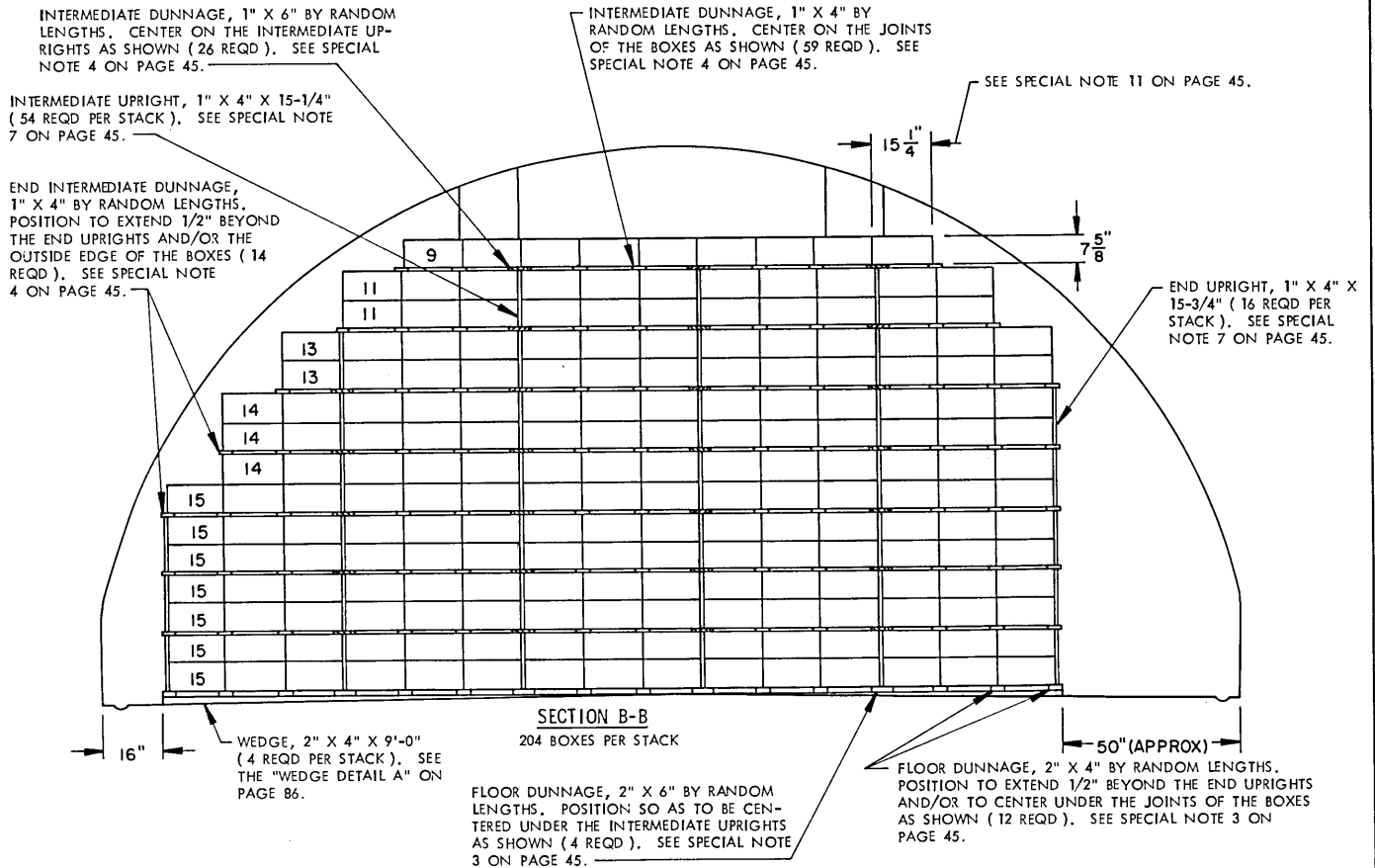
PLAN VIEW
80'-0" MAGAZINE
(49 STACKS)

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

ITEM	QUANTITY	EXPLOSIVE WEIGHT
TNT (50-LB BOX)	-4,692	-----234,600 LBS

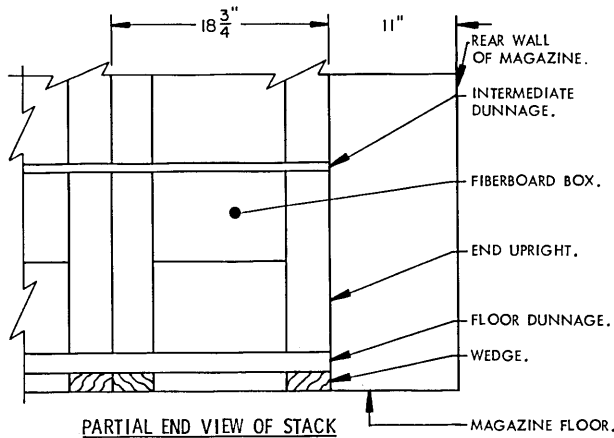
SEE GENERAL NOTE "E" ON PAGE 2, AND SPECIAL NOTES 2 AND 9, AND "TABLE 2" ON PAGE 45.

* 23 STACKS WITH A 37" (APPROX) SPACE REMAINING AT FRONT.



SECTION B-B
204 BOXES PER STACK

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



SPECIAL NOTES:

- 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 9. DIMENSIONS -----18-3/4" LONG BY 15-1/4" WIDE BY 7-5/8" HIGH. EXPLOSIVE WEIGHT -----50 OR 55 POUNDS. SEE SPECIAL NOTE 8.
- STORAGE AS SHOWN IS FOR FIBERBOARD BOXES CONTAINING 50 POUNDS OF TNT. THE PROCEDURES ARE ALSO APPLICABLE FOR THE OTHER ITEMS LISTED IN TABLE 2. NOTE THAT THE NUMBER OF STACKS OF SOME OF THE OTHER ITEMS MUST BE REDUCED FROM THAT SHOWN IN ORDER TO AVOID EXCEEDING THE 500,000 POUND MAXIMUM EXPLOSIVE LIMIT. REFER TO "TABLE 2" FOR GUIDANCE.
- 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.
- 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.
- 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.
- THE NUMBERS SHOWN IN SECTION B-B INDICATE THE QUANTITY OF BOXES PER LAYER IN A STACK.
- 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:
 - INTERMEDIATE UPRIGHT PIECES MUST BE OF A LENGTH EQUAL TO THE HEIGHT OF TWO BOXES.
 - END UPRIGHT PIECES MUST BE 1/2" LONGER THAN INTERMEDIATE UPRIGHT PIECES.
- 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 AT LEFT. NOTE THAT TNT IN 55-POUND BOXES IS LIMITED TO A MAXIMUM OF 9,090 BOXES. 9.9% 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.
- 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.
- 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.
- 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.

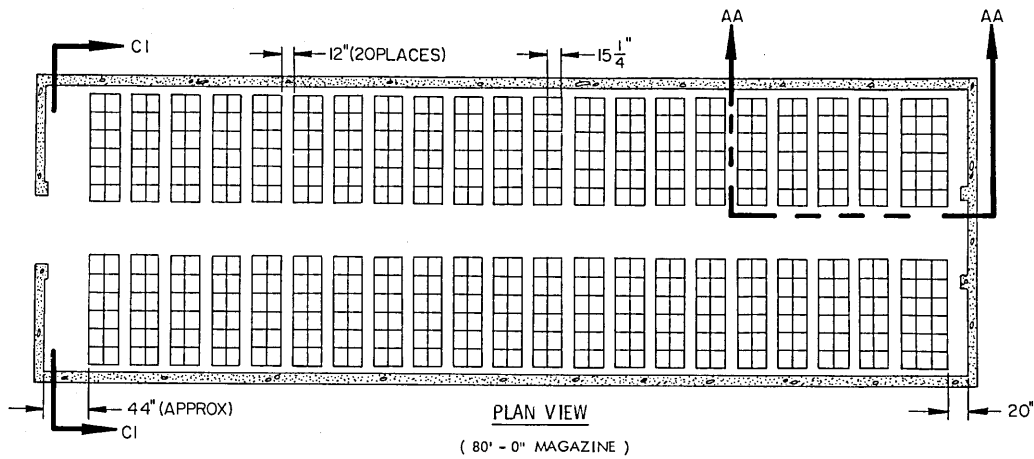
TABLE 2

80'-0" ARCH TYPE MAGAZINE			
ITEM	EXPL WT/BX	QUANTITY	EXPLOSIVE WT
TNT	50 LBS	9,996	499,800 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	9,996	499,800 LBS
CYCLOTOL.	60 LBS	8,333	499,980 LBS
OCTOL.	60 LBS	8,333	499,980 LBS
PBX.	60 LBS (MAX)	8,333	499,980 LBS
TETRYL.	60 LBS	8,333	499,980 LBS
TOVEX.	50 LBS	9,996	499,800 LBS
PBXN 6.	50 LBS	9,996	499,800 LBS
40'-0" ARCH TYPE MAGAZINE			
ITEM	EXPL WT/BX	QUANTITY	EXPLOSIVE WT
TNT	50 LBS	4,692	234,600 LBS
TNT	55 LBS	4,692	258,060 LBS
ALL COMPOSITION A.	60 LBS	4,692	281,520 LBS
ALL COMPOSITION B.	60 LBS	4,692	281,520 LBS
COMPOSITION C-3			
AND C-4	60 LBS	4,692	281,520 LBS
EXPLOSIVE D.	50 LBS	4,692	234,600 LBS
CYCLOTOL.	60 LBS	4,692	281,520 LBS
OCTOL.	60 LBS	4,692	281,520 LBS
PBX.	60 LBS (MAX)	4,692	281,520 LBS
TETRYL.	60 LBS	4,692	281,520 LBS
TOVEX.	50 LBS	4,692	234,600 LBS
PBXN 6.	50 LBS	4,692	234,600 LBS

BILL OF MATERIAL (PER STACK)

LUMBER	LINEAR FEET	BOARD FEET
1" X 4"	204	68
1" X 6"	41	21
2" X 4"	19	13
2" X 6"	7	7
WEDGES PER STACK		
LUMBER	LENGTH	NO. REQD
2" X 4"	9'-0"	4

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

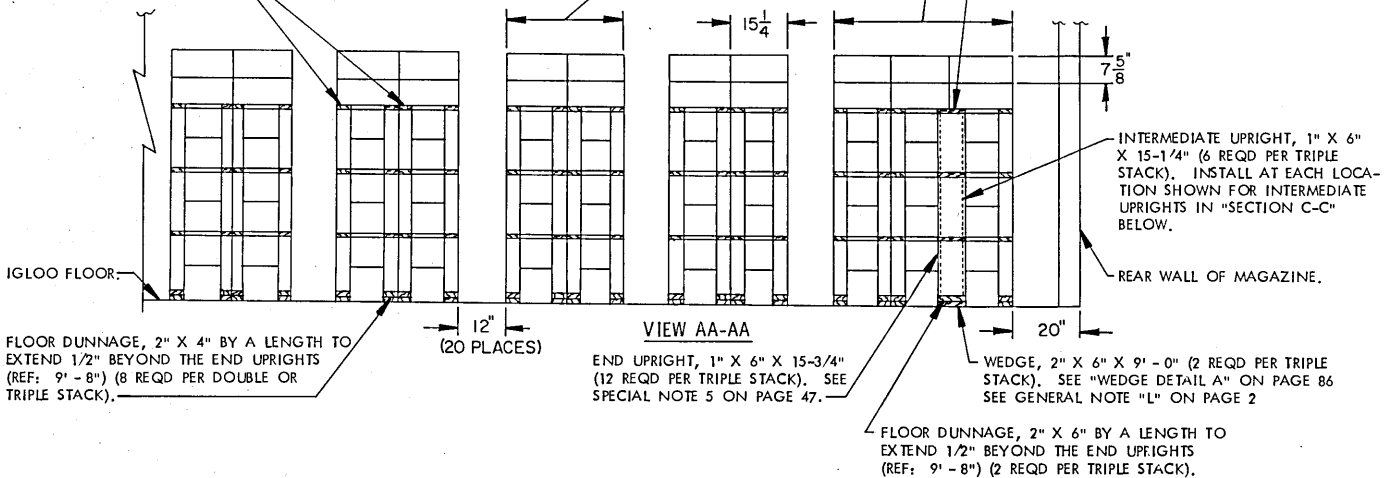


INTERMEDIATE DUNNAGE, 1" X 4" BY A LENGTH TO SUIT (REF: 9' - 8"). POSITION TO EXTEND 1/2" BEYOND THE END UPRIGHTS. (24 REQD PER DOUBLE OR TRIPLE STACK).

INDICATES A DOUBLE STACK. SEE SPECIAL NOTE 8 ON PAGE 47.

INDICATES A TRIPLE STACK. SEE SPECIAL NOTE 7 ON PAGE 47.

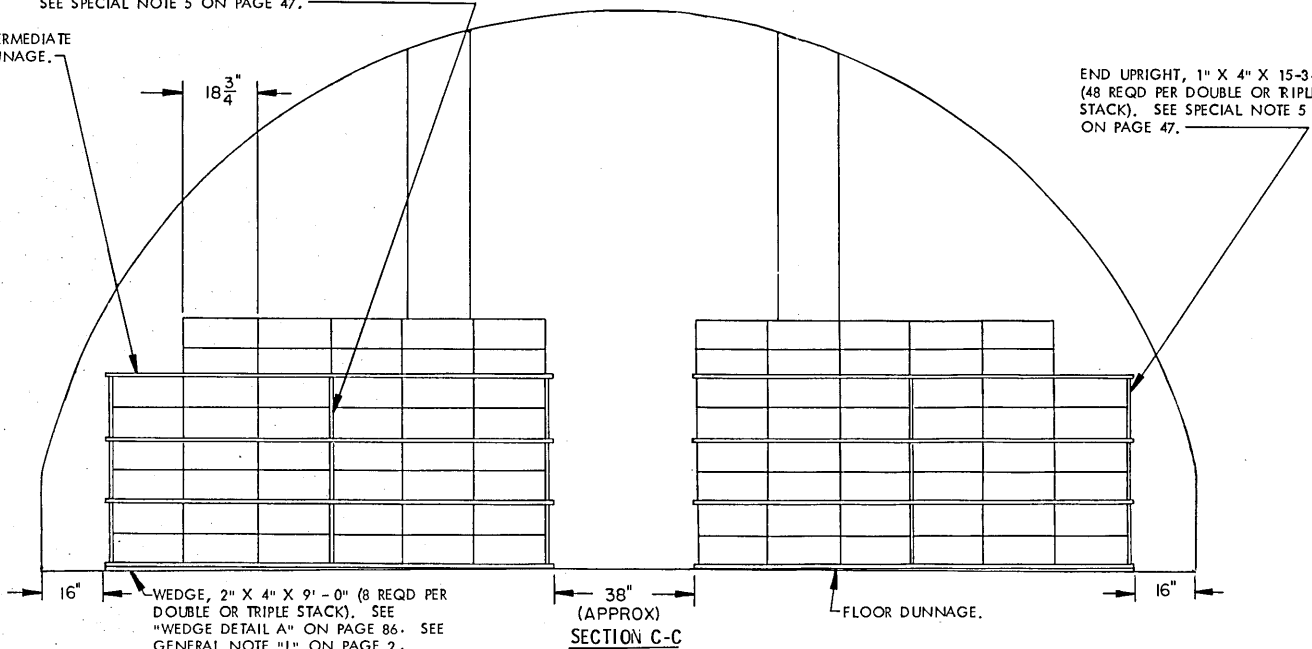
INTERMEDIATE DUNNAGE, 1" X 6" BY A LENGTH TO SUIT (REF: 9' - 8"). POSITION TO EXTEND 1/2" BEYOND THE END UPRIGHTS (6 REQD PER TRIPLE STACK).



INTERMEDIATE UPRIGHT, 1" X 4" X 15-1/4" (24 REQD PER DOUBLE OR TRIPLE STACK). SEE SPECIAL NOTE 5 ON PAGE 47.

INTERMEDIATE DUNNAGE.

END UPRIGHT, 1" X 4" X 15-3/4" (48 REQD PER DOUBLE OR TRIPLE STACK). SEE SPECIAL NOTE 5 ON PAGE 47.



WEDGE, 2" X 4" X 9' - 0" (8 REQD PER DOUBLE OR TRIPLE STACK). SEE "WEDGE DETAIL A" ON PAGE 86. SEE GENERAL NOTE "L" ON PAGE 2.

SECTION C-C

(APPROX)

SMALL LOT STORAGE OF

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

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. | (f) OCTOL. |
| (b) ALL COMPOSITION B. | (g) PBX. |
| (c) COMPOSITION C-3 AND C-4 | (h) TETRYL. |
| (d) EXPLOSIVE D. | (i) TOVEX. |
| (e) CYCLOTOL. | (k) PBX N 6. |
| | (l) TNC. |

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
TNT, ALL COMP A, ALL COMP B, COMP C-3 AND C-4, EXPLOSIVE D,
CYCLOTOL, OCTOL, PBX AND TETRYL (PACKED IN FIBERBOARD CONTAINER.)

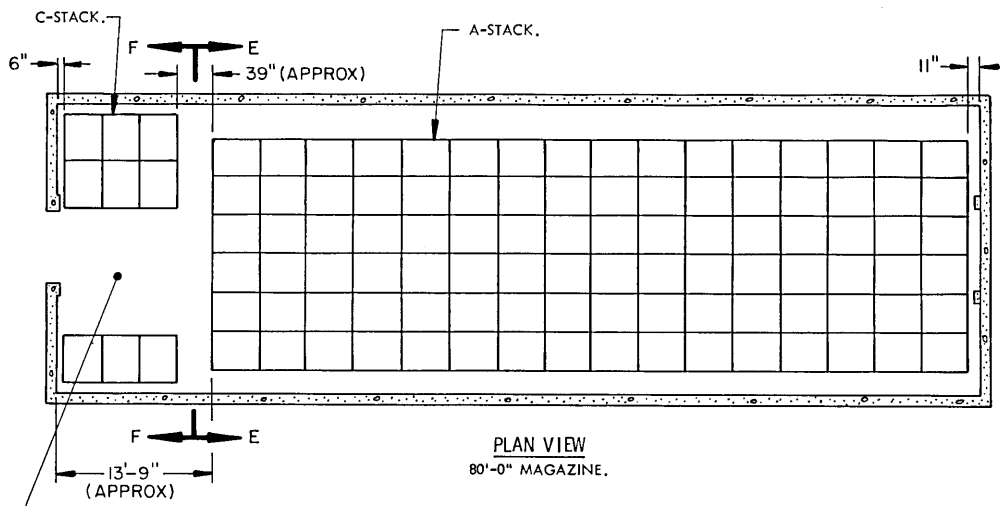
STORAGE IN 80'-0" MAGAZINE

ITEM	QUANTITY
FULL PALLET UNIT -----	220

*STORAGE IN 40'-0" MAGAZINE

ITEM	QUANTITY
FULL PALLET UNIT -----	90

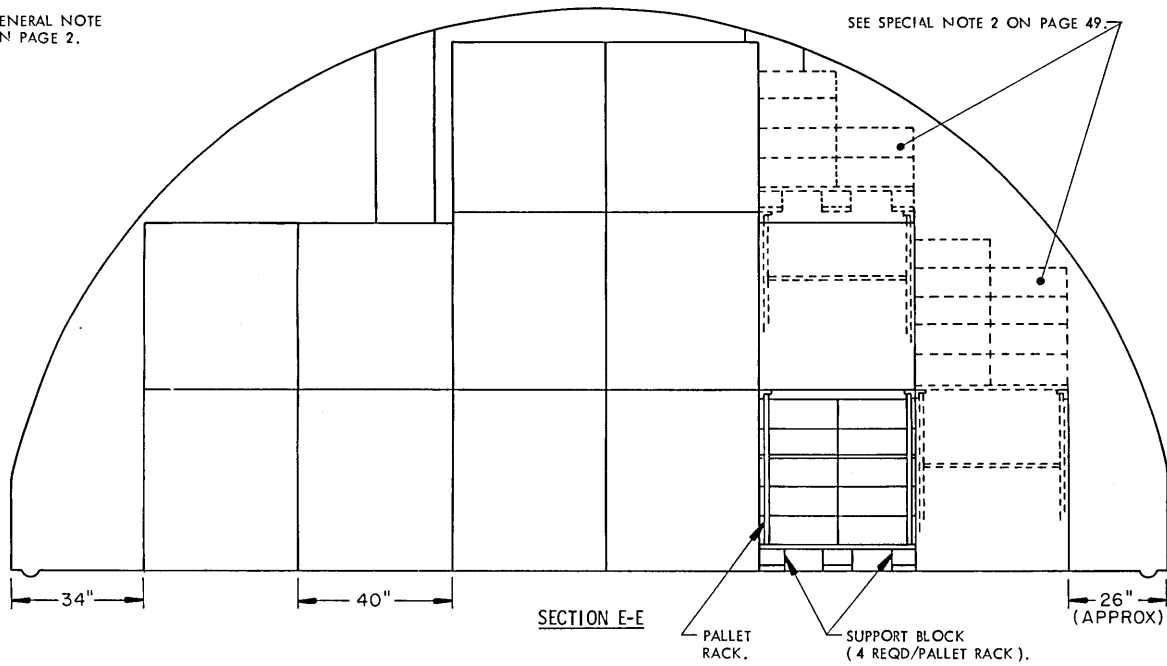
* 6 A-STACKS.
4 C-STACKS.



PLAN VIEW
80'-0" MAGAZINE.

SEE GENERAL NOTE "P" ON PAGE 2.

SEE SPECIAL NOTE 2 ON PAGE 49.

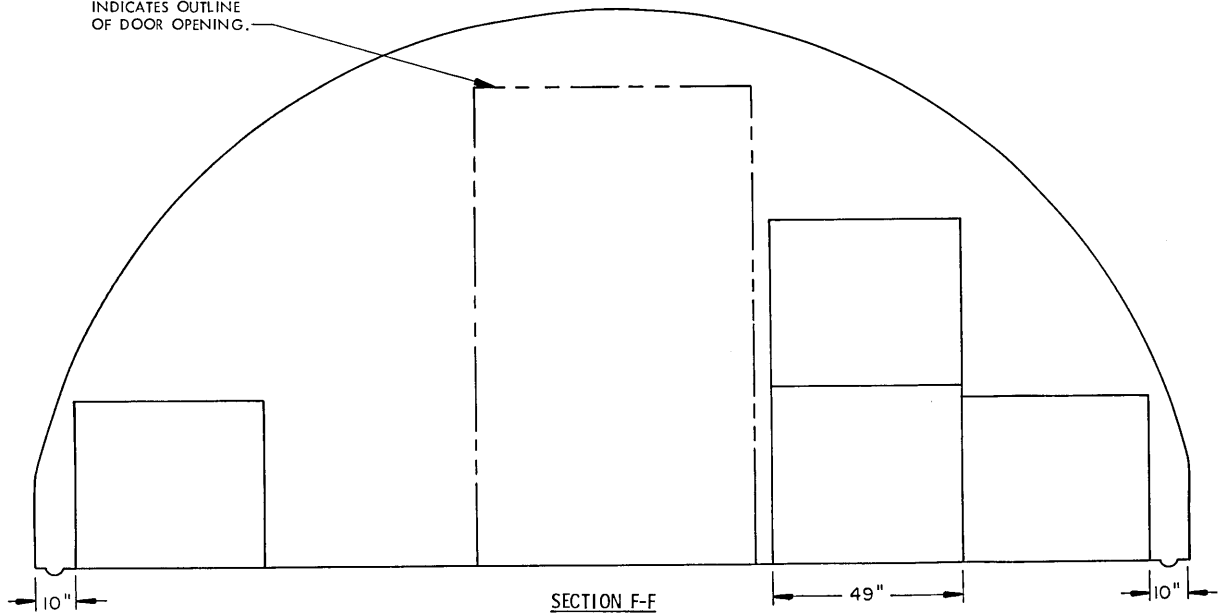


SECTION E-E

PALLET RACK.

SUPPORT BLOCK
(4 REQD/PALLET RACK).

INDICATES OUTLINE
OF DOOR OPENING.



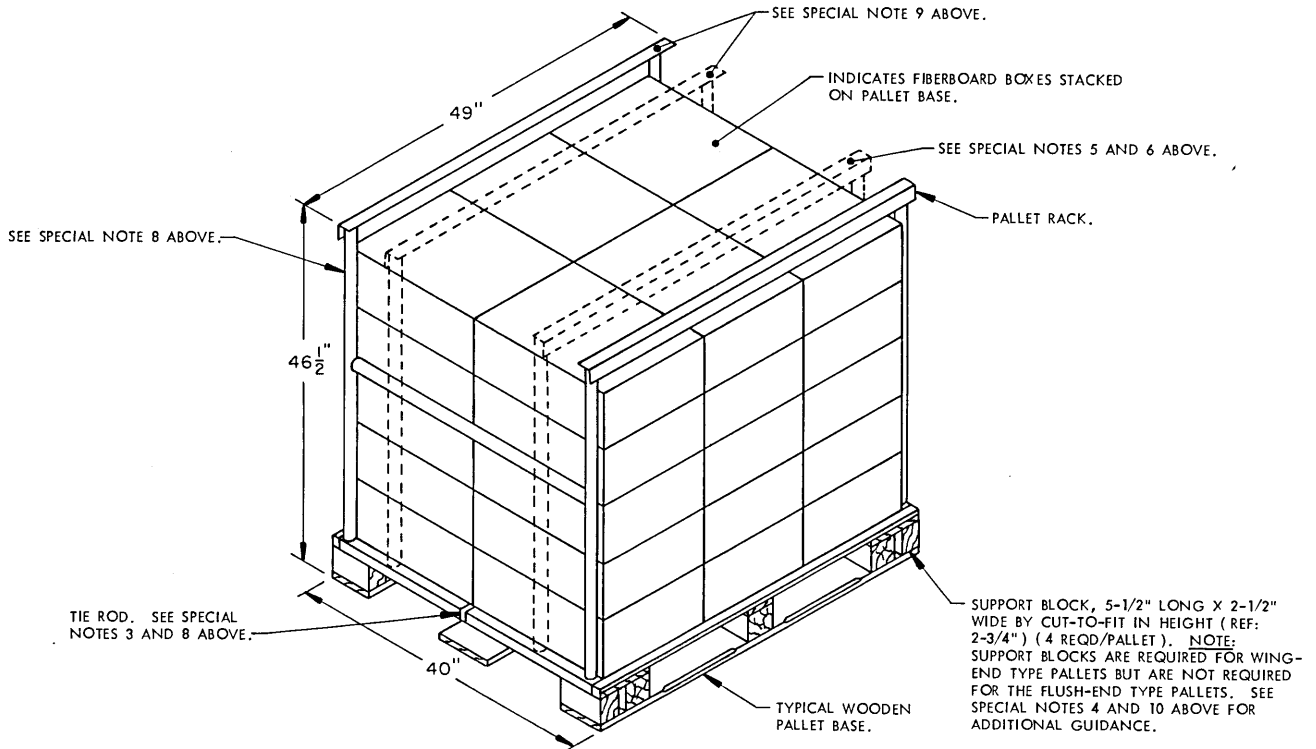
SECTION F-F

SPECIAL NOTES:

(SPECIAL NOTES CONTINUED)

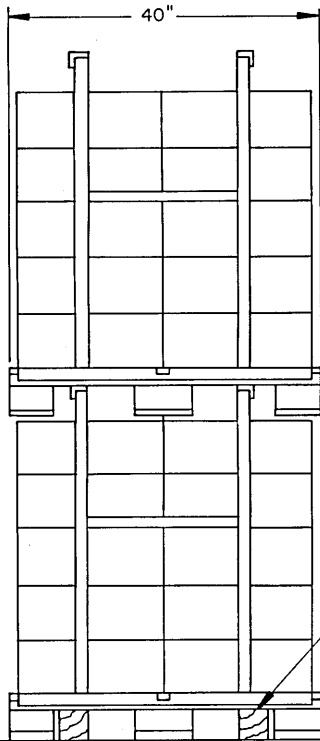
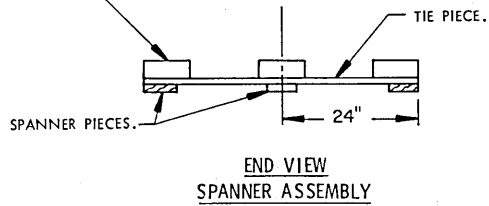
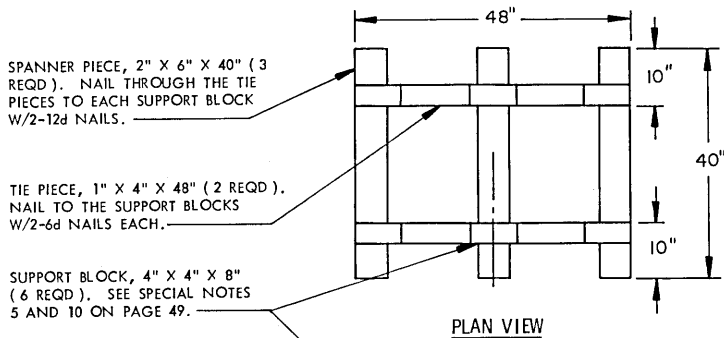
1. EACH PALLET WHICH VERTICALLY SUPPORTS ANOTHER PALLET REQUIRES THE USE OF A PALLET RACK, INSTALLED AS TYPICALLY SHOWN BY THE "RACK INSTALLATION" DETAIL BELOW. THE STACK SHOWN IN SECTION E-E WILL REQUIRE NINE PALLET RACKS. THE STACK SHOWN IN SECTION F-F WILL REQUIRE ONLY ONE PALLET RACK. THE STORAGE 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:** THE 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 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 BOARD (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 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 OR DRUMS IS SOLELY FOR THE CONVENIENCE OF STORAGE AND WILL NOT BE USED FOR SHIPPING PURPOSES.

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RACK INSTALLATION

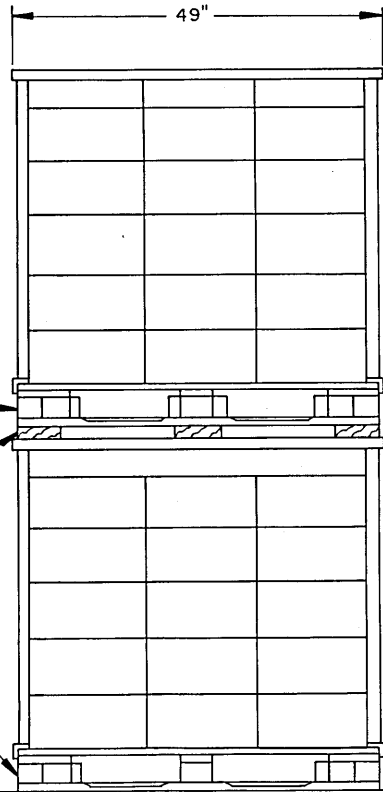
A TYPICAL PALLET UNIT IS SHOWN WITH A PALLET RACK INSTALLED ON A 4-WAY ENTRY, WING-END TYPE PALLET (MIL-P-15011). USE OF FLUSH-END TYPE PALLETS NEGATES THE REQUIREMENT FOR SUPPORT BLOCKS.



PROVIDE SHIMS AS REQUIRED. SEE SPECIAL NOTE 10 ON PAGE 49.

SPANNER ASSEMBLY, REQUIRED BETWEEN LAYERS WHEN PALLET UNITS ARE SIDE-HANDLED.

4" X 4" X 8" SUPPORT BLOCK (4 REQD PER FIRST-LAYER UNIT EQUIPPED WITH NARROW-TYPE PALLET RACK). POSITION TO BE UNDER THE VERTICAL MEMBERS OF THE PALLET RACK. SEE SPECIAL NOTES 5 AND 10 ON PAGE 49.



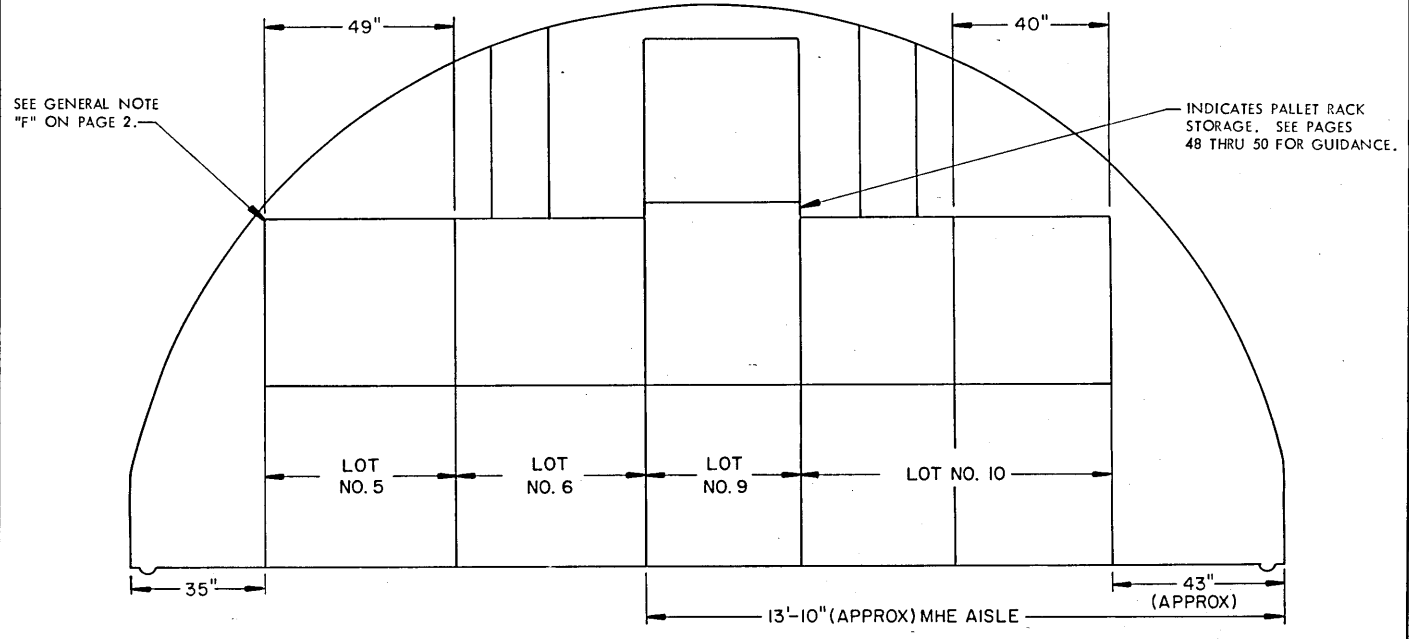
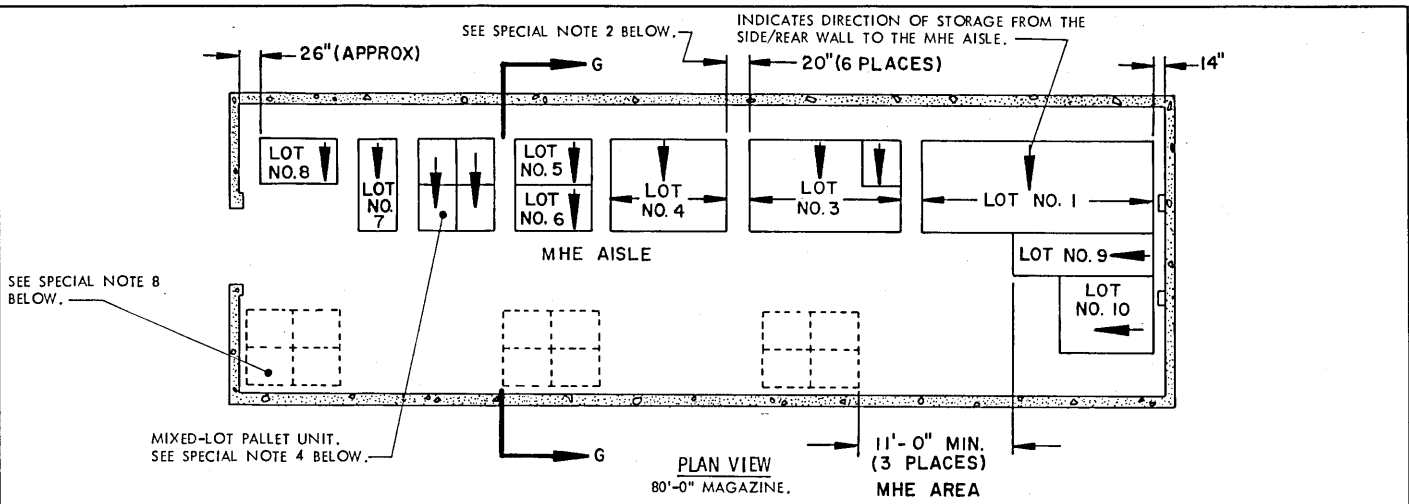
STACKING PROCEDURES FOR END-HANDLED PALLET UNITS

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

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

STACKING PROCEDURES FOR SIDE-HANDLED PALLET UNITS

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



SPECIAL NOTES:

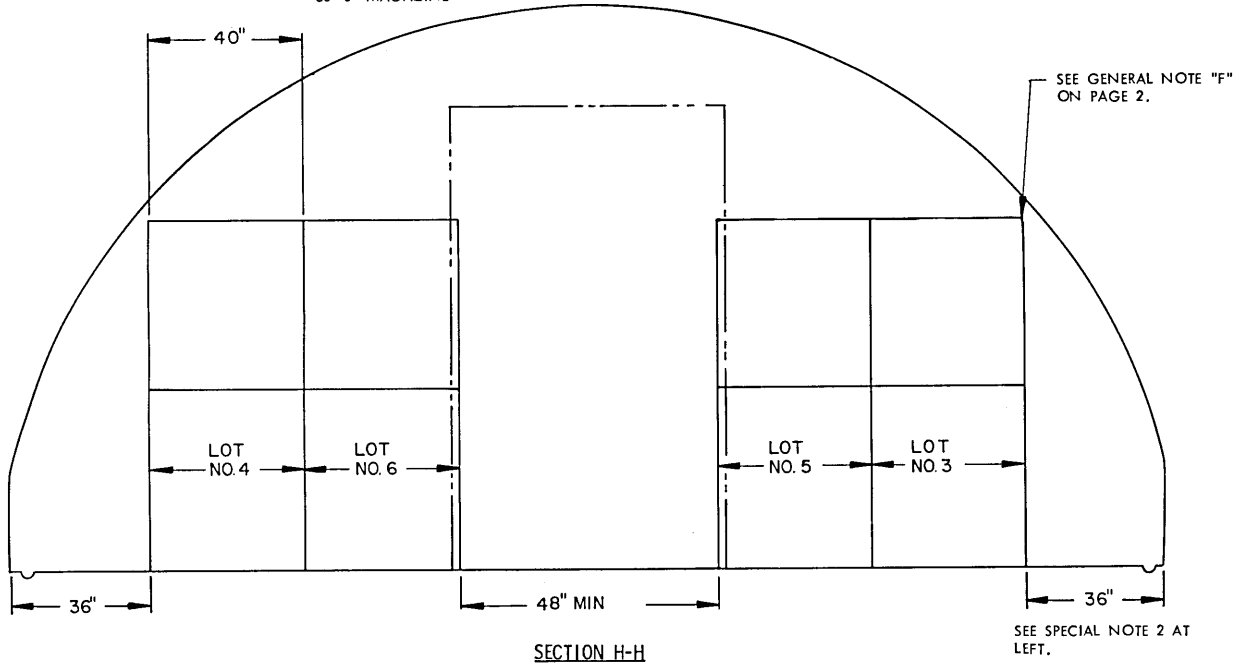
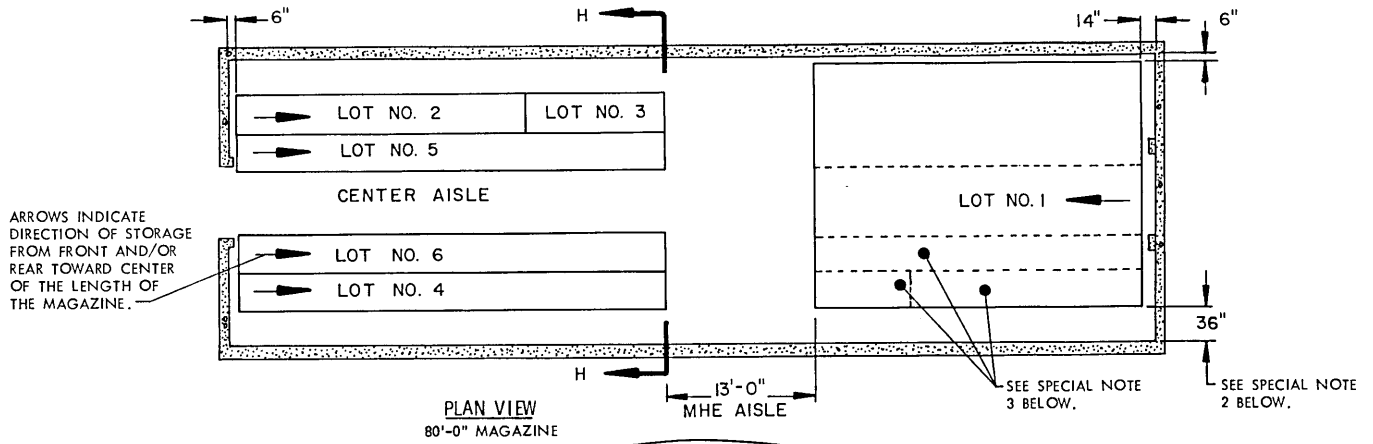
1. THE STORAGE PLANS AND CONFIGURATIONS SHOWN ON THIS PAGE ARE TYPICAL ONLY AND APPLY TO STORAGE OF NUMEROUS SMALL LOTS. ADAPTATIONS MAY BE MADE AS NUMBER AND SIZES OF LOTS TO BE STORED IN MAGAZINE REQUIRE.
2. AN INSPECTION AISLE NOT LESS THAN 18" WIDE MUST BE PROVIDED AT ONE SIDE OF EACH BURIED LOT.
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.

(CONTINUED AT RIGHT)

(SPECIAL NOTES CONTINUED)

7. WHEN TWO LOTS ARE STORED ADJACENT TO EACH OTHER, THEY SHOULD BE SEPARATED BY AT LEAST 1" TO PROVIDE CLEARANCE FOR REMOVAL OF EITHER LOT.
8. AREAS ENCLOSED 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.
9. ALTHOUGH STORAGE AS SHOWN DEPICTS THE USE OF PALLET RACK STORAGE AIDS, THE PRINCIPLES CAN BE APPLIED FOR OTHER PALLET CONFIGURATIONS.

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



SPECIAL NOTES:

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.
 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.
 7. ALTHOUGH STORAGE AS SHOWN DEPICTS THE USE OF PALLET RACK STORAGE AIDS, THE PRINCIPLES CAN BE APPLIED FOR OTHER PALLET CONFIGURATIONS.
- *A "LIFT" MAY CONSIST OF ONE (1) OR MORE PALLET UNITS, PROVIDING THE CAPACITY OF MHE PERMITS, AND SAFE HANDLING IS NOT JEOPARDIZED.

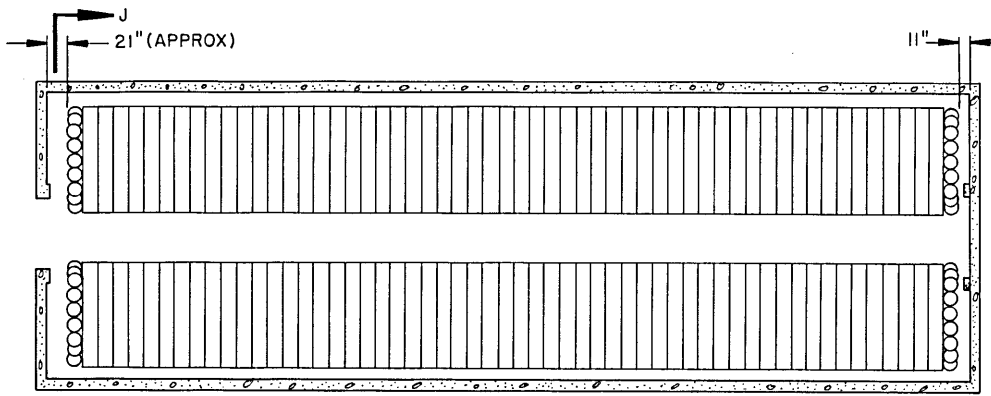
STORAGE IN 80'-0" MAGAZINE

ITEM	QUANTITY	EXPLOSIVE WT
FIBERBOARD DRUM	2,088	292,320 LBS

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

ITEM	QUANTITY	EXPLOSIVE WT
FIBERBOARD DRUM	1,008	141,120 LBS

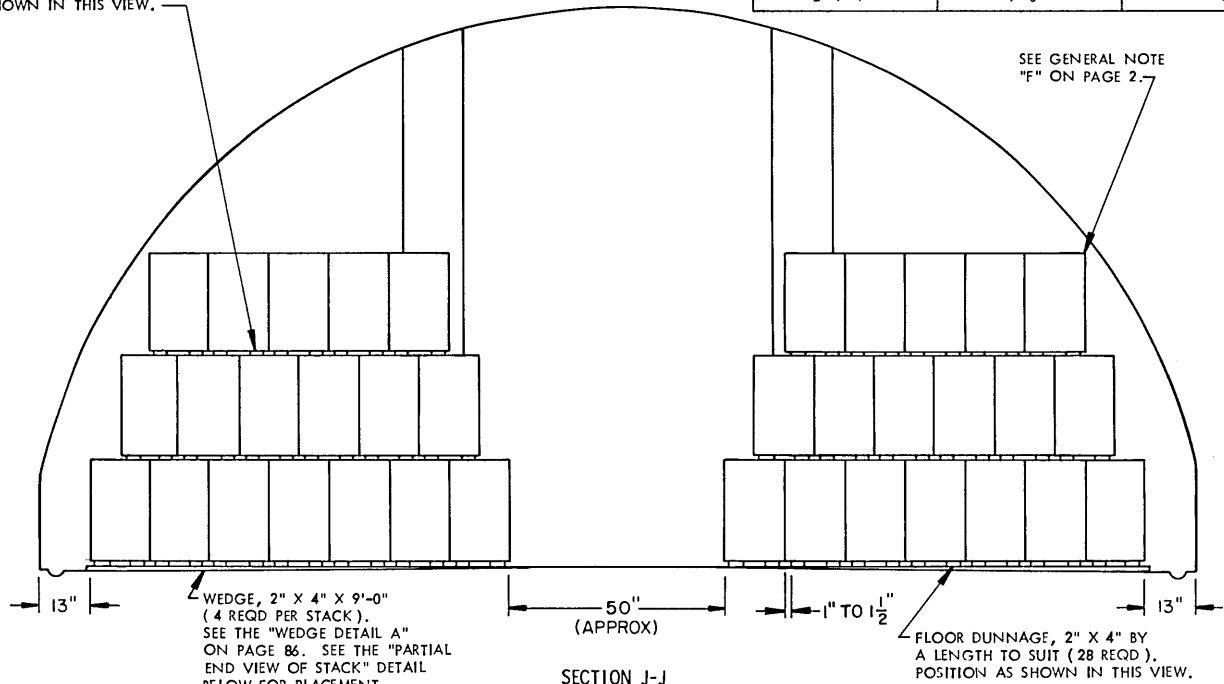
* 28 STACKS WITH 28" (APPROX) SPACE REMAINING. SEE GENERAL NOTE "E" ON PAGE 2 AND SPECIAL NOTE 5 BELOW.



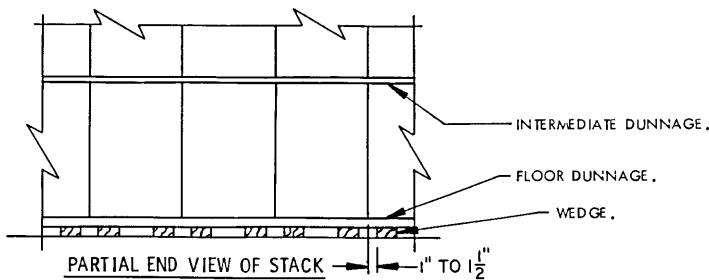
PLAN VIEW
30'-0" MAGAZINE.
(58 STACKS)

BILL OF MATERIAL (PER STACK)		
LUMBER	LINEAR FEET	BOARD FEET
1" X 4"	59	20
2" X 4"	38	25
WEDGES PER STACK		
LUMBER	LENGTH	NO. REQD
2" X 4"	9'-0"	4

INTERMEDIATE DUNNAGE, 1" X 4" BY A LENGTH TO SUIT (44 REQD). POSITION AS SHOWN IN THIS VIEW.



SECTION J-J
36 DRUMS PER STACK.



STORAGE METHOD A
FIBERBOARD DRUM STORAGE, UNPALLETIZED

SPECIAL NOTES:

- STORAGE AS SHOWN IS FOR A FIBERBOARD DRUM.
DRUM DIMENSIONS-----27-1/4" HIGH BY 16" DIAMETER
EXPLOSIVE WEIGHT-----140 POUNDS
- RANDOM LENGTHS OF LUMBER MAY BE USED FOR THE INTERMEDIATE AND FLOOR DUNNAGE.
- FIBERBOARD DRUMS, EXCEPT FOR NITROGUANIDINE AS SHOWN ON PAGE 67, WILL NOT BE STACKED MORE THAN THREE LAYERS HIGH.
- THE DRUMS IN EACH LAYER WILL BE STAGGERED ABOVE THE DRUMS IN THE LAYER UNDERNEATH, AS SHOWN.
- 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 84.

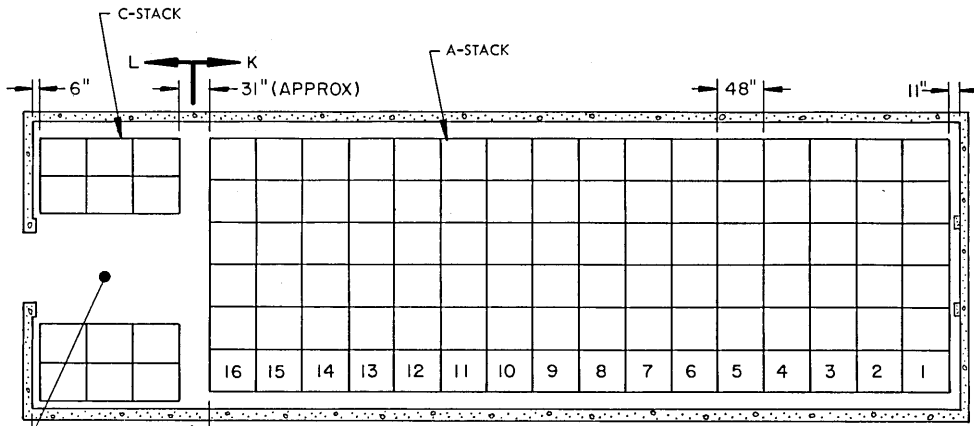
STORAGE IN 80'-0" MAGAZINE

ITEM	QUANTITY	EXPLOSIVE WT.
PALLET UNIT A	306	342,720 LBS
DRUMS	2,448	

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

ITEM	QUANTITY	EXPLOSIVE WT.
PALLET UNIT A	126	141,120 LBS
DRUMS	1,008	

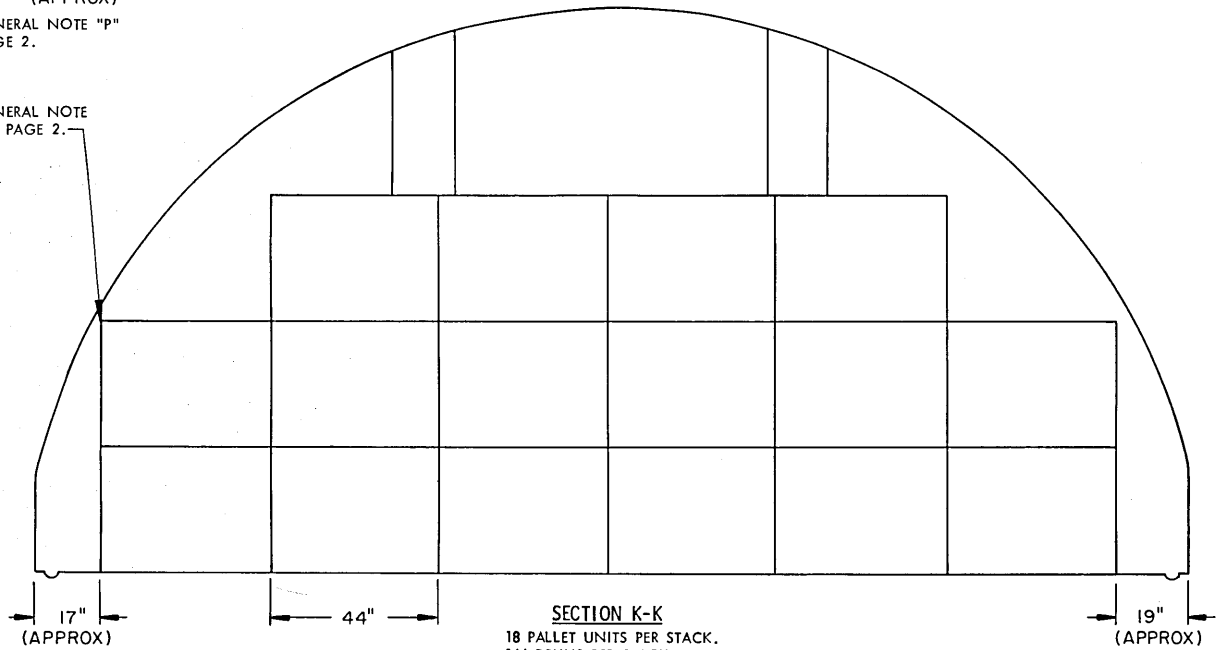
*6 A-STACKS
3 C-STACKS



PLAN VIEW
80'-0" MAGAZINE.

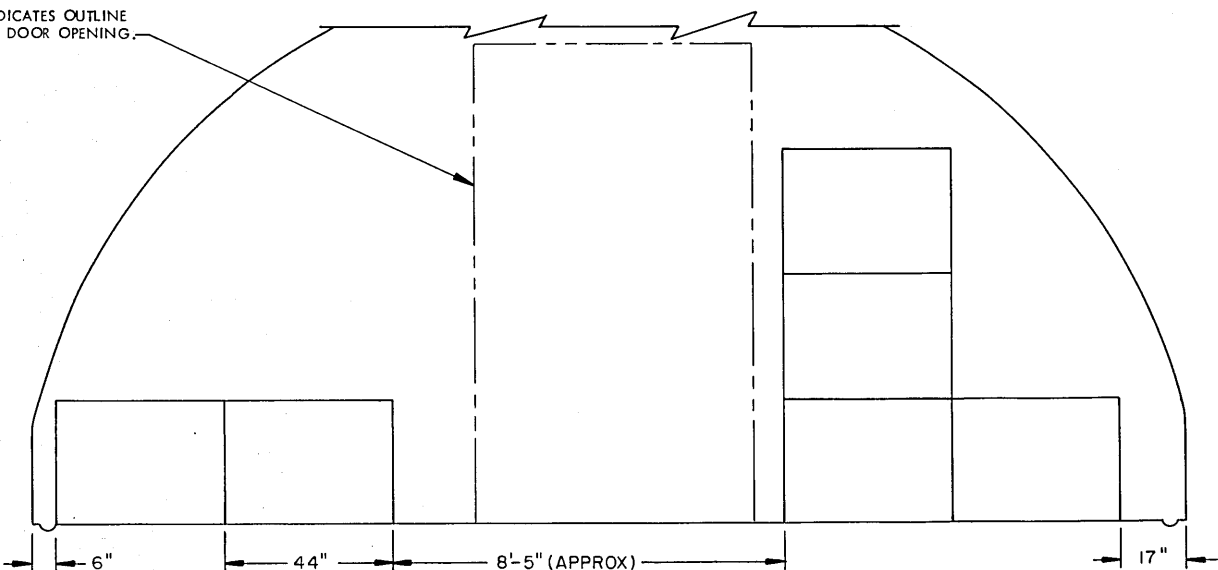
SEE GENERAL NOTE "P" ON PAGE 2.

SEE GENERAL NOTE "F" ON PAGE 2.

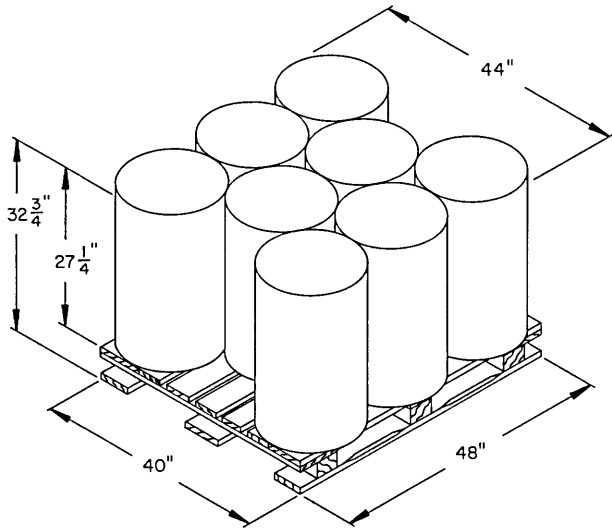


SECTION K-K
18 PALLET UNITS PER STACK.
144 DRUMS PER STACK.

INDICATES OUTLINE OF DOOR OPENING.



SECTION L-L



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

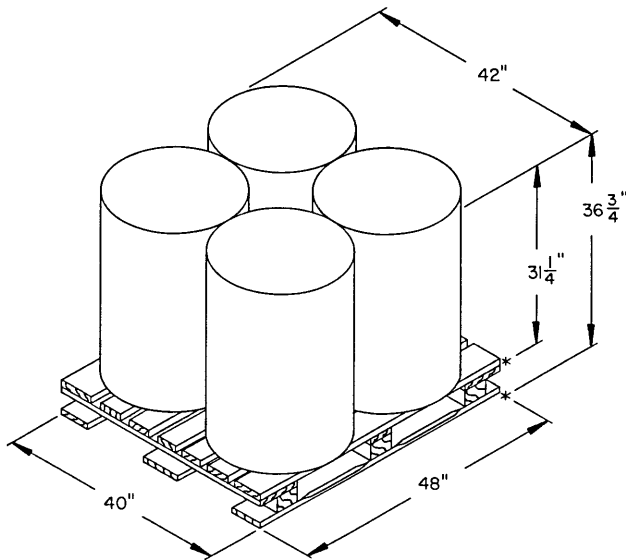
SPECIAL NOTES:

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

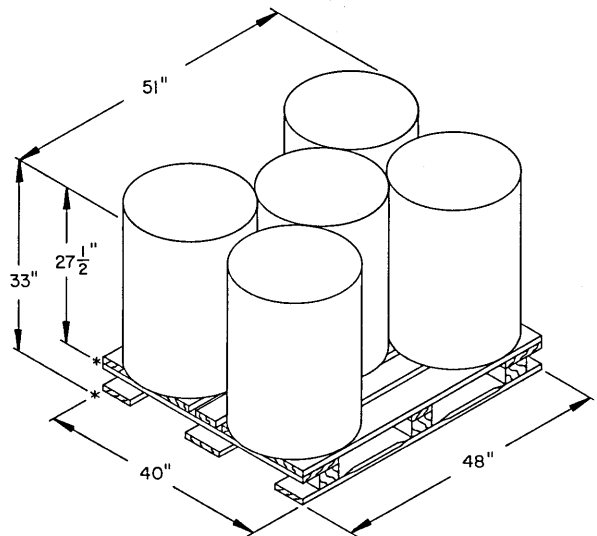
TYPICAL PALLET UNIT DIMENSIONS:

- 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.

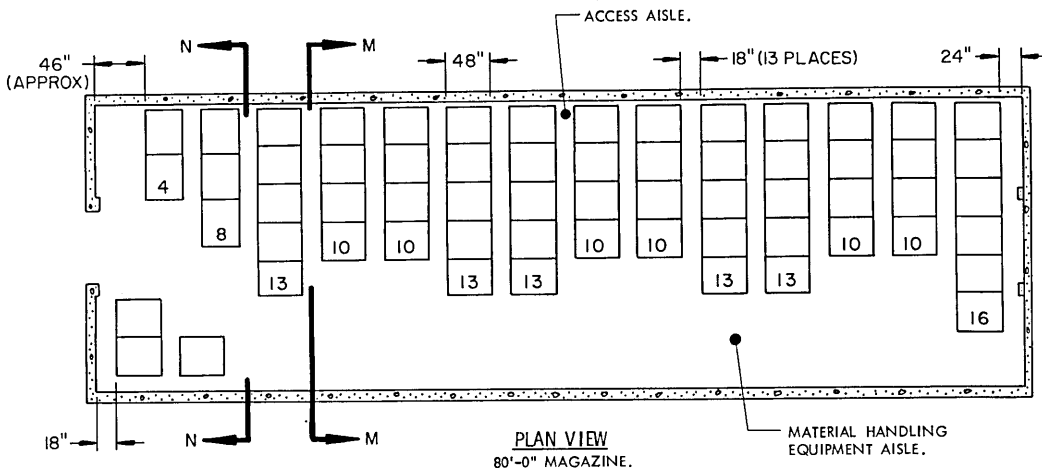
- 2. THE DRUM SIZES SHOWN ARE TYPICAL; ANY SIZE DRUM MAY BE PLACED ON A PALLET FOR STORAGE PURPOSES. ANY SIZE PALLET MAY BE USED, HOWEVER A SIZE SHOULD BE SELECTED WHICH WILL BE NEARLY FILLED WITH DRUMS IN ORDER TO PROVIDE GOOD STACKABILITY. ALSO, A PALLET SIZE SHOULD BE SELECTED THAT WILL PROVIDE FOR 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).



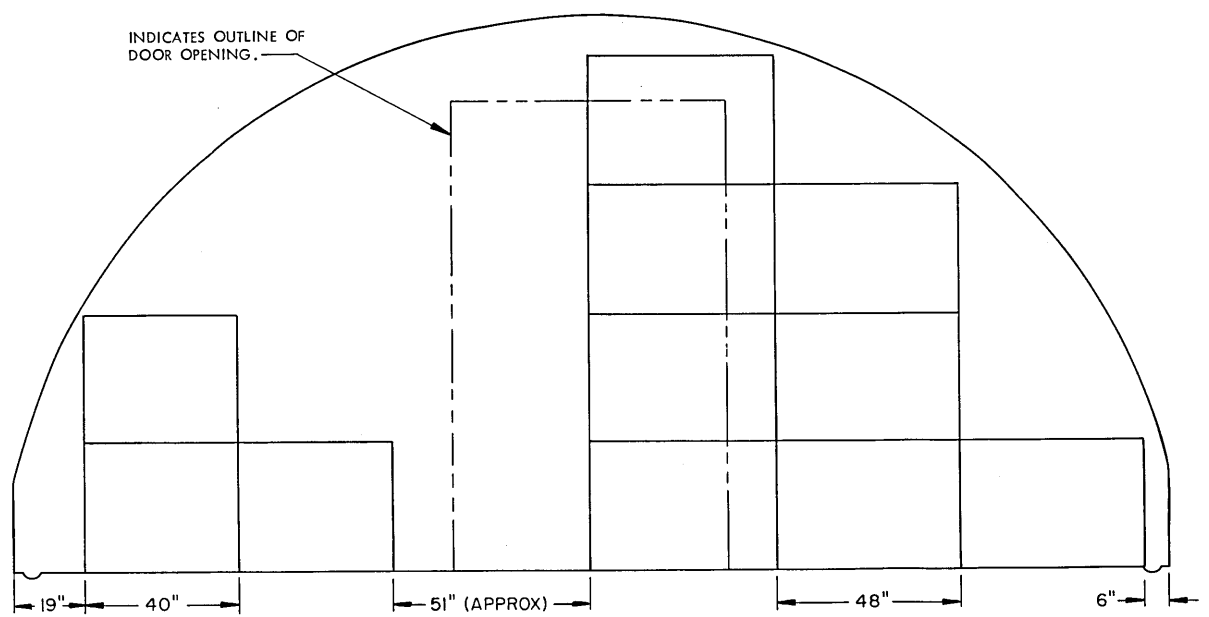
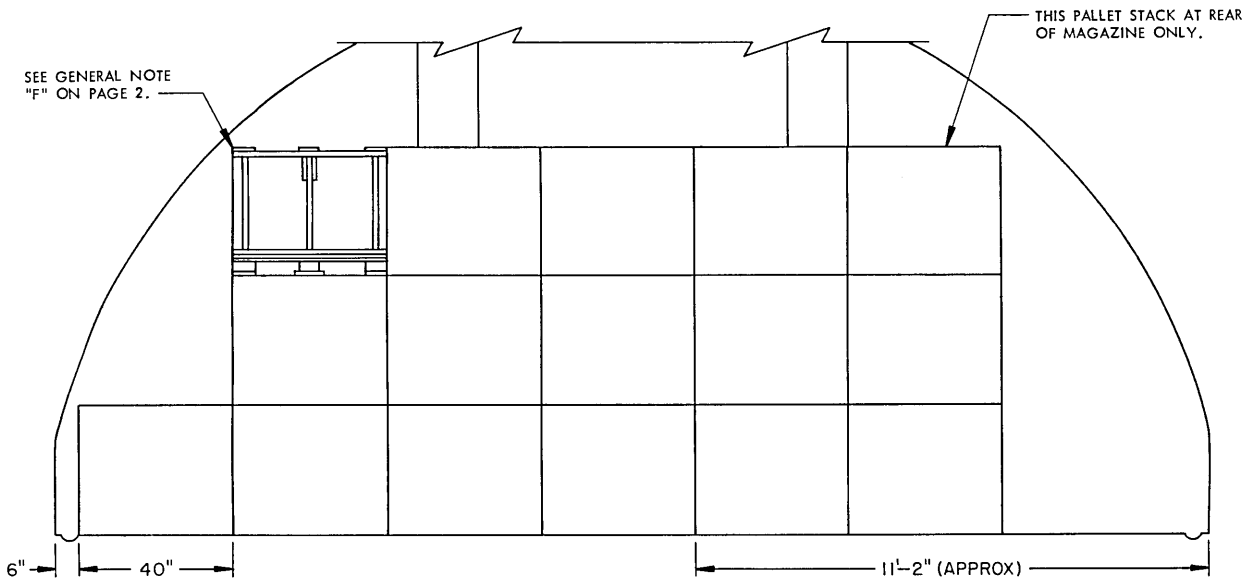
STORAGE IN 80'-0" MAGAZINE

ITEM	QUANTITY
PALLET UNIT -----	158
DRUMS -----	632
EXPLOSIVE WEIGHT -----	126,400 LBS

STORAGE IN 40'-0" MAGAZINE

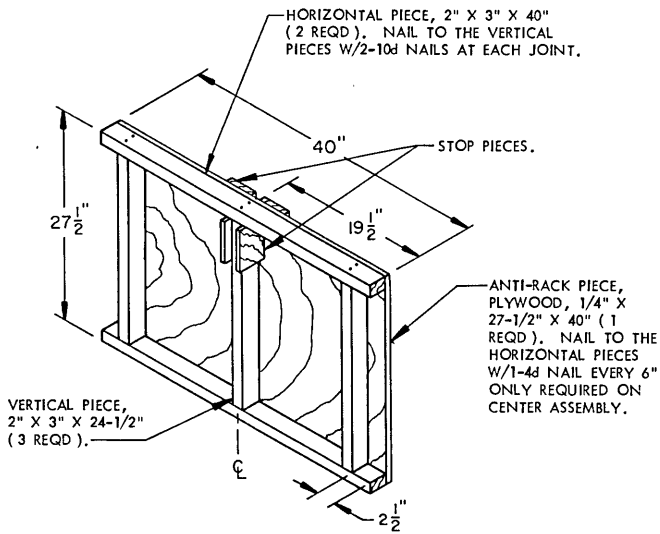
ITEM	QUANTITY
PALLET UNIT -----	76
DRUMS -----	304
EXPLOSIVE WEIGHT -----	60,800 LBS

SEE GENERAL NOTE "E" ON PAGE 2.



SPECIAL NOTES:

1. STORAGE AS SHOWN IS FOR THE RDX, WET, IN FIBERBOARD DRUMS (PALLETIZED).
 DRUM DIMENSIONS-----27-1/2" HIGH X 19-1/2" DIAMETER.
 PALLET UNIT DIMENSIONS-----40" LONG BY 48" WIDE X 33-3/4" HIGH.
 EXPLOSIVE WEIGHT PER PALLET UNIT-----800 POUNDS.
2. THE METHOD OF STORAGE SHOWN PERMITS INSPECTION OF INDIVIDUAL DRUMS.
3. STORAGE INSTALLATIONS HAVING FRONT/SIDE LOADING FORKLIFTS MAY STORE CONTAINERS OPPOSITE HAND FROM THAT SHOWN IN THESE VIEWS, I.E. PALLETIZED DRUMS MAY BE STACKED PERPENDICULAR TO THE RIGHT SIDE OF THE MAGAZINE IN LIEU OF PERPENDICULAR TO THE LEFT SIDE.
4. PALLETIZATION OF DRUMS IS SOLELY FOR THE CONVENIENCE OF STORAGE AND WILL NOT BE USED FOR SHIPPING DRUMS.
5. STORAGE AS SHOWN IS BASED ON THE USE OF THE 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.

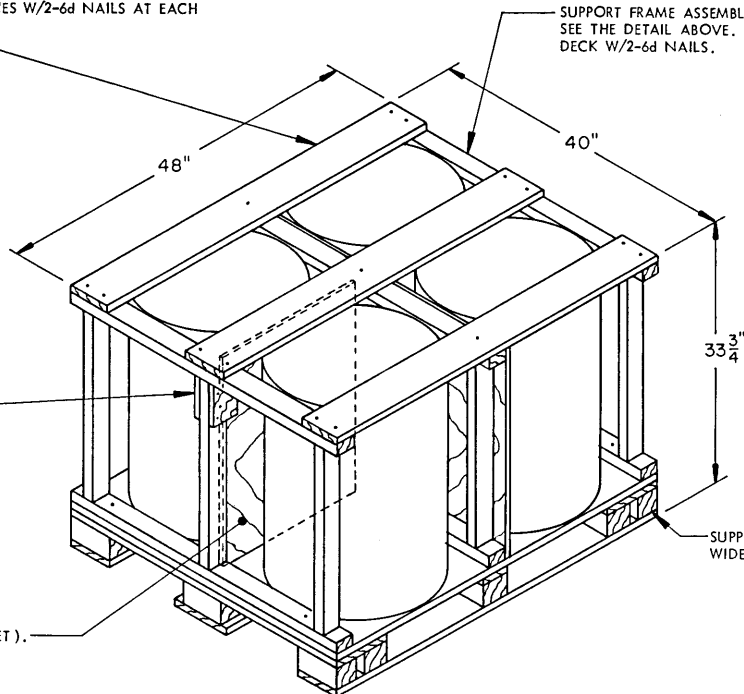
TIE PIECE, 1" X 6" X 48" (3 REQD). NAIL TO THE SUPPORT FRAME ASSEMBLIES W/2-6d NAILS AT EACH JOINT.

SUPPORT FRAME ASSEMBLY (3 REQD/PALLET), SEE THE DETAIL ABOVE. NAIL TO THE PALLET DECK W/2-6d NAILS.

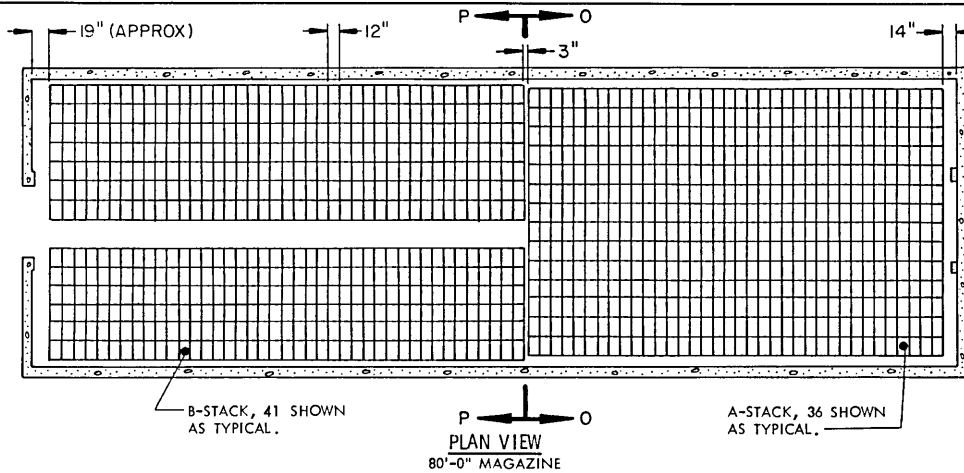
STOP PIECE, PLYWOOD,
1/2" X 4" X 6" (8
REQD/PALLET). NAIL
TO A SUPPORT FRAME
ASSEMBLY W/3-6d
NAILS.

ANTI-RACK PIECE, PLYWOOD,
1/2" X 19-3/4" WIDE (REF)
X 27-1/2" LONG (2 REQD/PALLET).

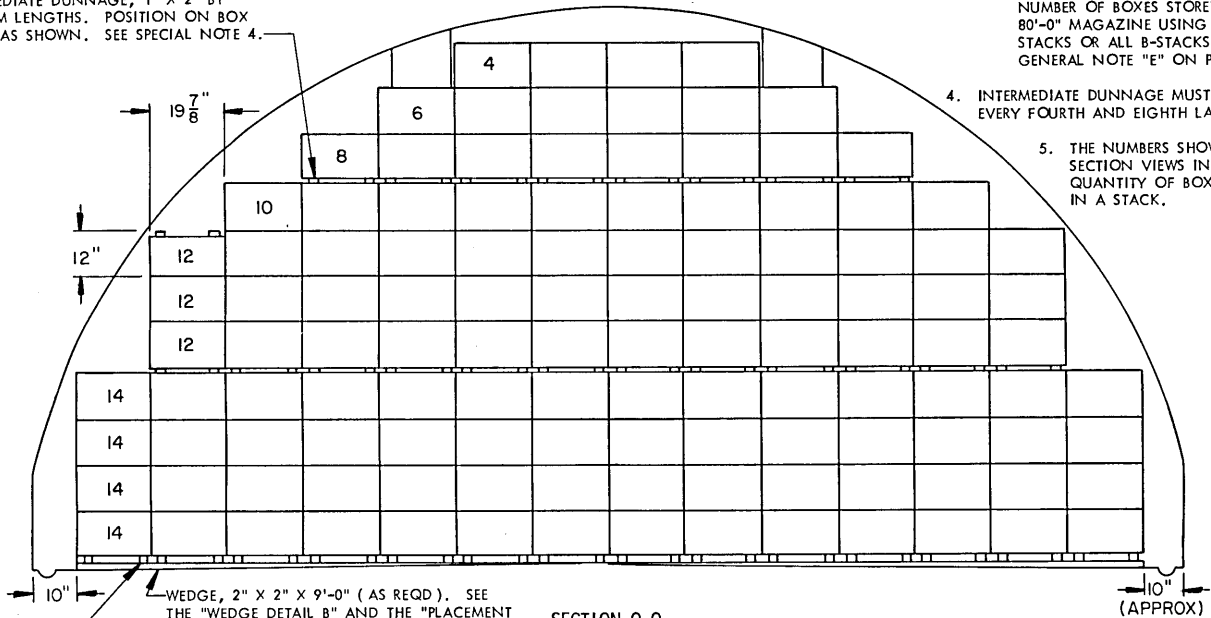
SUPPORT BLOCK, 5-1/2" LONG X 2-1/2"
WIDE X 2-3/4" THICK (REF) (6 REQD/PALLET).



PALLET UNIT



INTERMEDIATE DUNNAGE, 1" X 2" BY RANDOM LENGTHS. POSITION ON BOX CLEATS AS SHOWN. SEE SPECIAL NOTE 4.



SECTION O-O
120 BOXES PER STACK.

SPECIAL NOTES:

1. STORAGE AS SHOWN IS FOR A WOODEN BOX.
BOX DIMENSIONS--19-7/8" 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. 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. LOTS WILL NOT BE MIXED WITHIN STACKS.
3. MAXIMUM STORAGE IN AN 80'-0" MAGAZINE.

STACK TYPE	*MAXIMUM QUANTITY	EXPLOSIVE WEIGHT
A	9,240	462,000 LBS
B	8,085	404,250 LBS

* QUANTITY INDICATES THE MAXIMUM NUMBER OF BOXES STORED IN AN 80'-0" MAGAZINE USING ALL A-STACKS OR ALL B-STACKS. SEE GENERAL NOTE "E" ON PAGE 2.

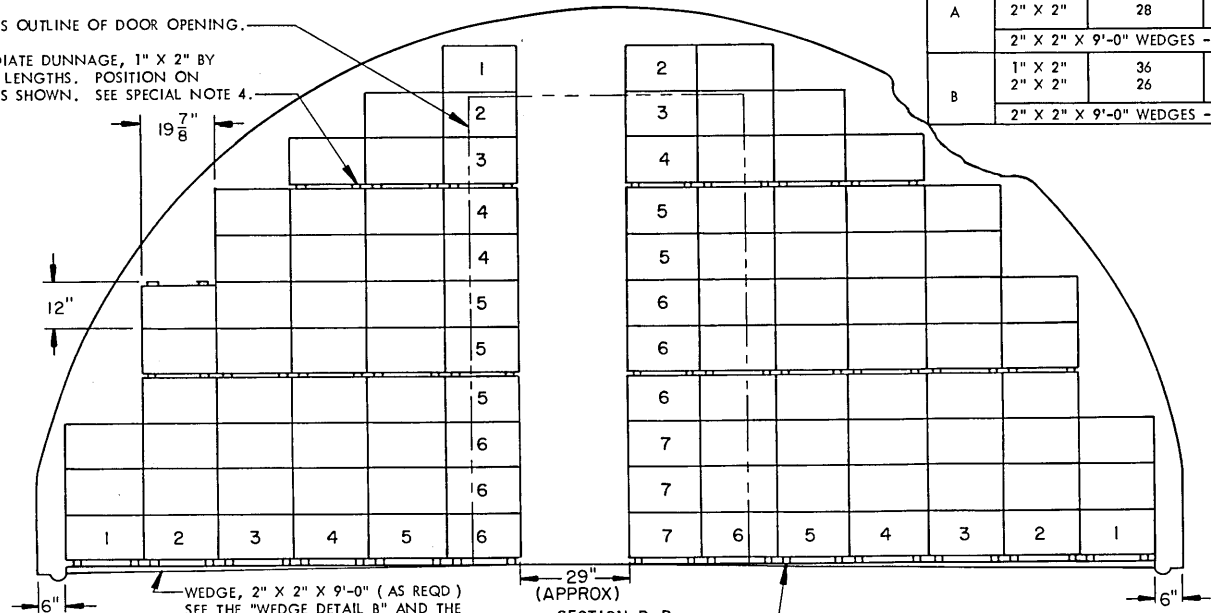
4. INTERMEDIATE DUNNAGE MUST BE USED ON EVERY FOURTH AND EIGHTH LAYER.
5. THE NUMBERS SHOWN IN THE SECTION VIEWS INDICATE THE QUANTITY OF BOXES PER LAYER IN A STACK.

WEDGE, 2" X 2" X 9'-0" (AS REQD). SEE THE "WEDGE DETAIL B" AND THE "PLACEMENT OF WEDGES" DETAIL ON PAGE 86.
FLOOR DUNNAGE, 2" X 2" BY RANDOM LENGTHS. POSITION IN LINE WITH BOX CLEATS AS SHOWN.

BILL OF MATERIAL (PER STACK)			
STACK	LUMBER	LINEAR FEET	BOARD FEET
A	1" X 2"	40	7
	2" X 2"	28	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		

INDICATES OUTLINE OF DOOR OPENING.

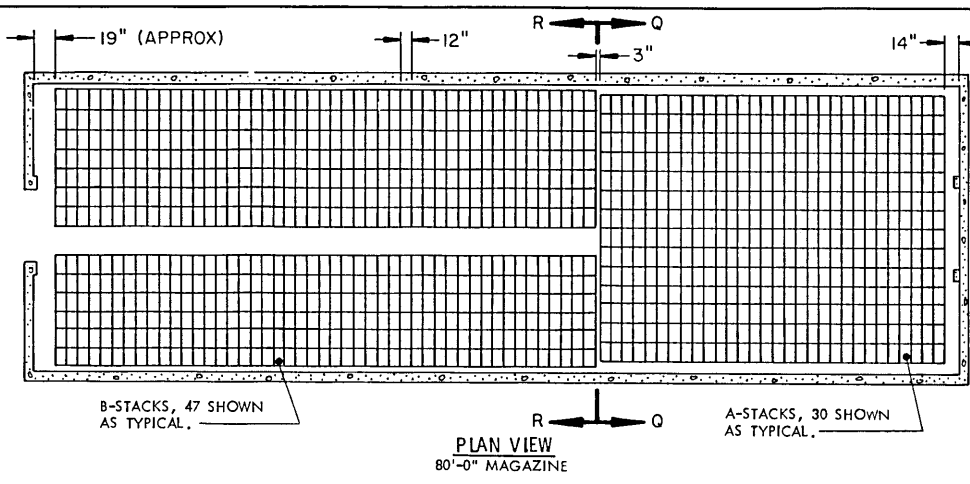
INTERMEDIATE DUNNAGE, 1" X 2" BY RANDOM LENGTHS. POSITION ON CLEATS AS SHOWN. SEE SPECIAL NOTE 4.



SECTION P-P
(APPROX)
105 BOXES PER STACK.

WEDGE, 2" X 2" X 9'-0" (AS REQD) SEE THE "WEDGE DETAIL B" AND THE "PLACEMENT OF WEDGES" DETAIL ON PAGE 86.

FLOOR DUNNAGE, 2" X 2" BY RANDOM LENGTHS. POSITION IN LINE WITH BOX CLEATS AS SHOWN.



SPECIAL NOTES:

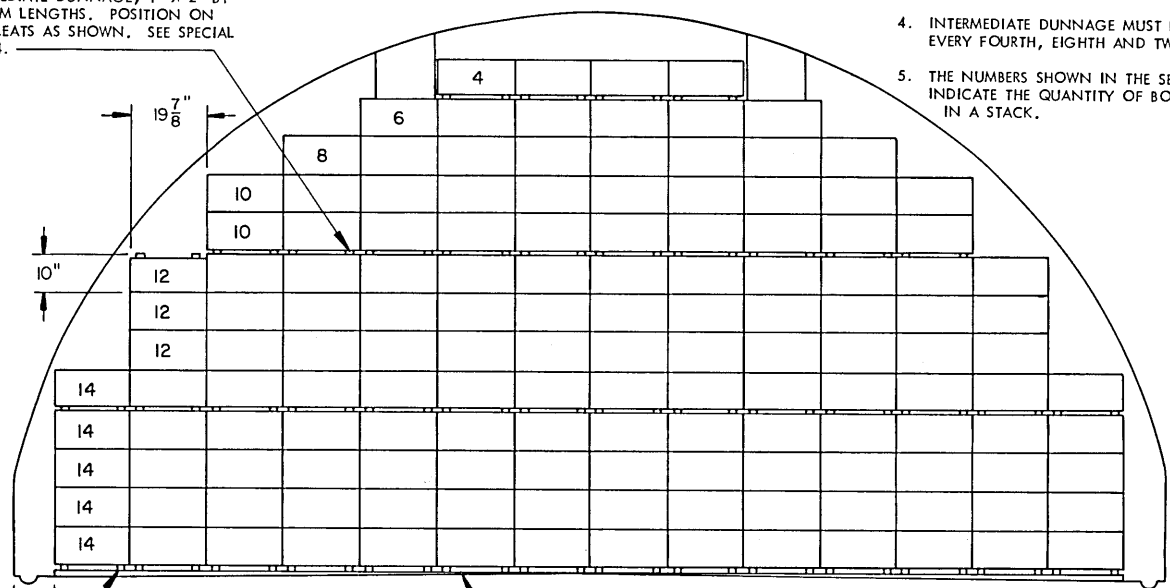
1. STORAGE AS SHOWN IS FOR A WOODEN BOX.
BOX DIMENSIONS-----19-7/8" LONG BY 12" WIDE BY 10" HIGH.
2. EXPLOSIVE WEIGHT-----50 POUNDS
WHENEVER PRACTICABLE THE LARGEST LOT SHOULD BE STORED IN THE REAR OF A MAGAZINE BY USING TYPE "A" STACKS. LOTS WILL NOT BE MIXED WITHIN STACKS. A THREE INCH (3") SEPARATION 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 80'-0" MAGAZINE.

STACK TYPE	MAXIMUM * QUANTITY	EXPLOSIVE WEIGHT
A	9,936	496,800 LBS
B	9,471	473,550 LBS

* QUANTITY INDICATES THE MAXIMUM NUMBER OF BOXES STORED IN AN 80'-0" 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, EIGHTH AND TWELFTH LAYER.
5. THE NUMBERS SHOWN IN THE SECTION VIEWS INDICATE THE QUANTITY OF BOXES PER LAYER IN A STACK.

INTERMEDIATE DUNNAGE, 1" X 2" BY RANDOM LENGTHS. POSITION ON BOX CLEATS AS SHOWN. SEE SPECIAL NOTE 4.



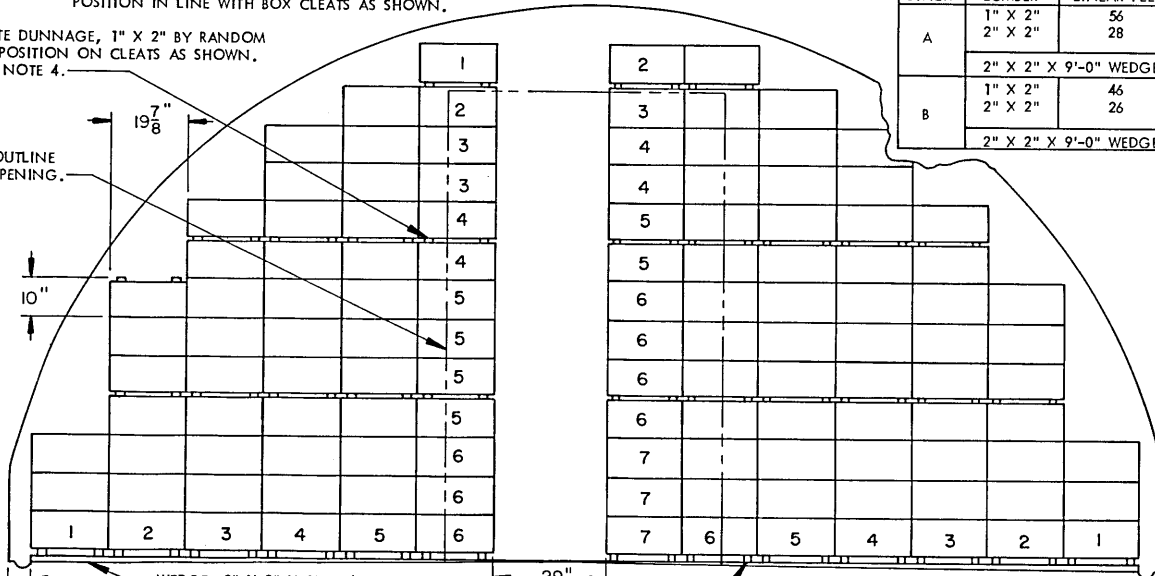
SECTION Q-Q
144 BOXES PER STACK.

WEDGE, 2" X 2" X 9'-0" (AS REQD). SEE THE "WEDGE DETAIL B" AND THE "PLACEMENT OF WEDGES" DETAIL ON PAGE 86.
FLOOR DUNNAGE, 2" X 2" BY RANDOM LENGTHS. POSITION IN LINE WITH BOX CLEATS AS SHOWN.

BILL OF MATERIAL (PER STACK)			
STACK	LUMBER	LINEAR FEET	BOARD FEET
A	1" X 2"	56	10
	2" X 2"	28	10
2" X 2" X 9'-0" WEDGES ---2 REQD			
B	1" X 2"	46	8
	2" X 2"	26	9
2" X 2" X 9'-0" WEDGES --- 2 REQD			

INTERMEDIATE DUNNAGE, 1" X 2" BY RANDOM LENGTHS. POSITION ON CLEATS AS SHOWN. SEE SPECIAL NOTE 4.

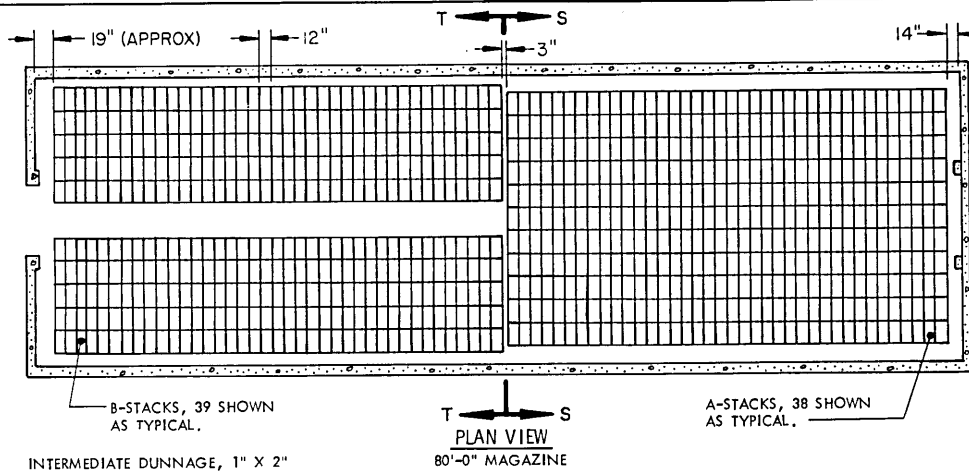
INDICATES OUTLINE OF DOOR OPENING.



SECTION R-R
123 BOXES PER STACK.

WEDGE, 2" X 2" X 9'-0" (AS REQD). SEE THE "WEDGE DETAIL B" AND THE "PLACEMENT OF WEDGES" DETAIL ON PAGE 86.
FLOOR DUNNAGE, 2" X 2" BY RANDOM LENGTHS. POSITION IN LINE WITH BOX CLEATS AS SHOWN.

COMP B AND COMP C-3 (PACKED IN WOODEN BOX)



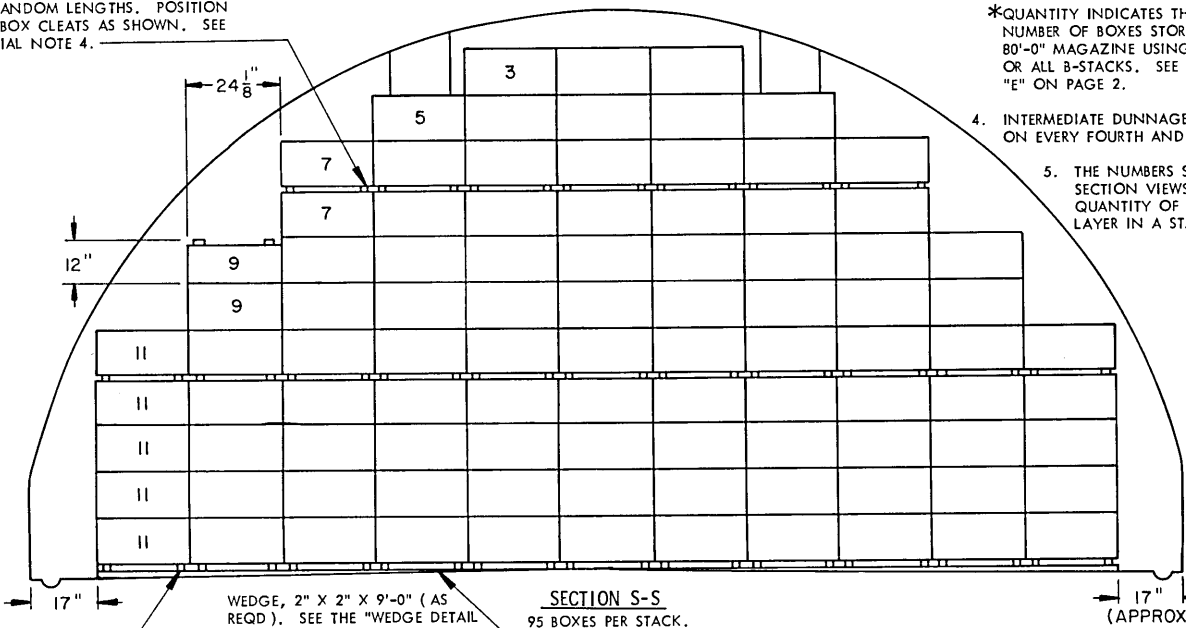
- SPECIAL NOTES:**
1. STORAGE AS SHOWN IS FOR A WOODEN BOX.
 BOX DIMENSIONS-----24-1/8" LONG BY 12" WIDE BY 12" HIGH.
 EXPLOSIVE WEIGHT-----50 POUNDS
 2. WHENEVER PRACTICABLE THE LARGEST LOT SHOULD BE STORED IN THE REAR OF A MAGAZINE BY USING TYPE "A" STACKS. LOTS WILL NOT BE MIXED WITHIN STACKS. A THREE 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 80'-0" MAGAZINE

STACK TYPE	MAXIMUM* QUANTITY	EXPLOSIVE WEIGHT
A	7,315	365,750 LBS
B	6,314	315,700 LBS

*QUANTITY INDICATES THE MAXIMUM NUMBER OF BOXES STORED IN AN 80'-0" MAGAZINE USING ALL A-STACKS OR ALL B-STACKS. SEE GENERAL NOTE "E" ON PAGE 2.

INTERMEDIATE DUNNAGE, 1" X 2" BY RANDOM LENGTHS. POSITION ON BOX CLEATS AS SHOWN. SEE SPECIAL NOTE 4.

4. INTERMEDIATE DUNNAGE MUST BE USED ON EVERY FOURTH AND EIGHTH LAYER.
5. THE NUMBERS SHOWN IN THE SECTION VIEWS INDICATE THE QUANTITY OF BOXES PER LAYER IN A STACK.



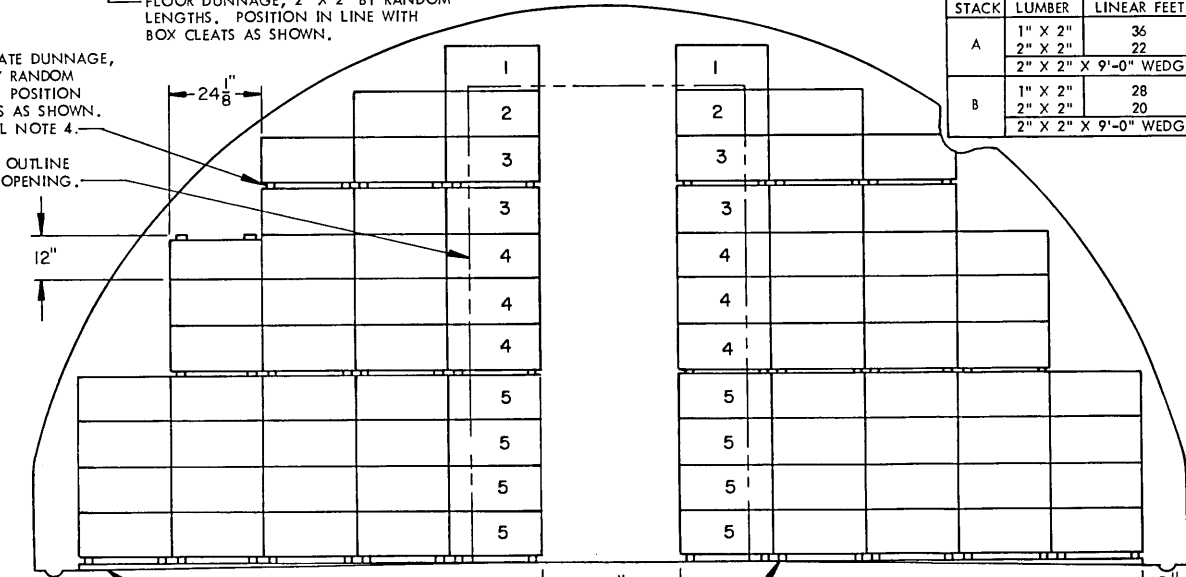
WEDGE, 2" X 2" X 9'-0" (AS REQD). SEE THE "WEDGE DETAIL B" AND THE "PLACEMENT OF WEDGES" DETAIL ON PAGE B6.

FLOOR DUNNAGE, 2" X 2" BY RANDOM LENGTHS. POSITION IN LINE WITH BOX CLEATS AS SHOWN.

BILL OF MATERIAL (PER STACK)			
STACK	LUMBER	LINEAR FEET	BOARD FEET
A	1" X 2"	36	6
	2" X 2"	22	8
	2" X 2" X 9'-0" WEDGES -- 2 REQD		
B	1" X 2"	28	5
	2" X 2"	20	7
	2" X 2" X 9'-0" WEDGES -- 2 REQD		

INTERMEDIATE DUNNAGE, 1" X 2" BY RANDOM LENGTHS. POSITION ON CLEATS AS SHOWN. SEE SPECIAL NOTE 4.

INDICATES OUTLINE OF DOOR OPENING.



WEDGE, 2" X 2" X 9'-0" (AS REQD). SEE THE "WEDGE DETAIL B" AND THE "PLACEMENT OF WEDGES" DETAIL ON PAGE B6.

FLOOR DUNNAGE, 2" X 2" BY RANDOM LENGTHS. POSITION IN LINE WITH BOX CLEATS AS SHOWN.

SECTION T-T
82 BOXES PER STACK.

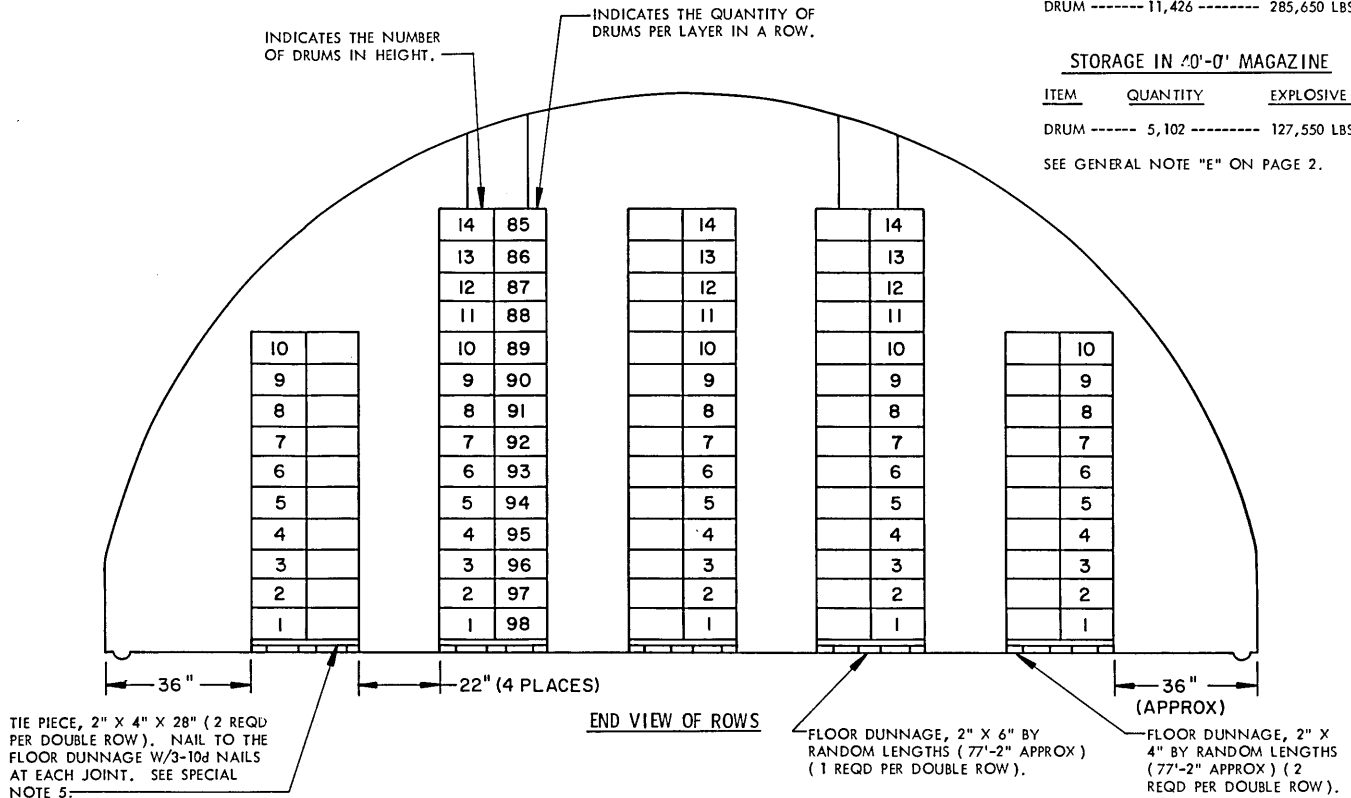
STORAGE IN 80'-0" MAGAZINE

ITEM	QUANTITY	EXPLOSIVE WT
DRUM	11,426	285,650 LBS

STORAGE IN 40'-0" MAGAZINE

ITEM	QUANTITY	EXPLOSIVE WT
DRUM	5,102	127,550 LBS

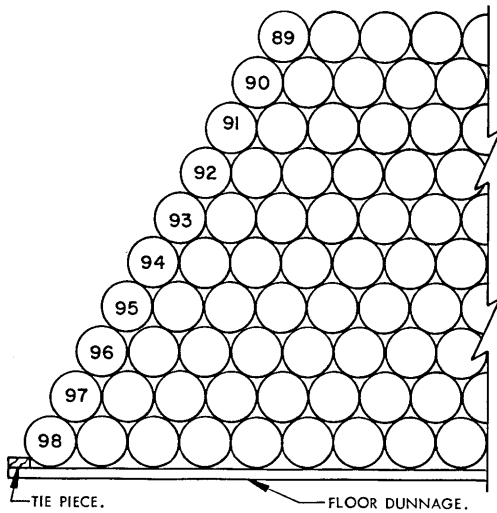
SEE GENERAL NOTE "E" ON PAGE 2.



BILL OF MATERIAL (PER DOUBLE ROW)		
LUMBER	LINEAR FEET	BOARD FEET
2" X 4"	159	106
2" X 6"	78	78
NAILS	NO. REQD	POUNDS
10d (3")	18	1/2

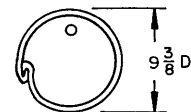
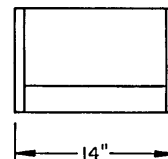
SPECIAL NOTES:

- STORAGE AS SHOWN IS FOR A METAL DRUM.
DRUM DIMENSIONS-----14" HIGH BY 9-3/8" DIAMETER.
EXPLOSIVE WEIGHT-----25 POUNDS.
- SEE THE "TYPICAL PLAN VIEW C" ON PAGE 4.
- STAGGER ALL JOINTS IN FLOOR DUNNAGE.
- THE OPENING END OF ALL DRUMS MUST BE FACING THE AISLE.
- CAUTION:** ALL NAILING MUST BE DONE OUTSIDE OF THE MAGAZINE.
- WHEN IT IS NECESSARY FOR STABILITY OF ROWS, LEVEL BY WEDGING AND/OR USING SHIMS UNDER THE FLOOR DUNNAGE.
- THE WATER SHED SEAM ON THE DRUM MUST BE TURNED DOWN TO AVOID GATHERING OF MOISTURE.
- THE METHOD OF STORAGE SHOWN PERMITS INSPECTION OF INDIVIDUAL DRUMS.
- IN A 40' MAGAZINE THERE WILL BE 47 DRUMS IN THE BOTTOM LAYER. THERE WILL BE FOUR (4) ROWS OF 425 DRUMS AND SIX (6) ROWS OF 567 DRUMS.



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.

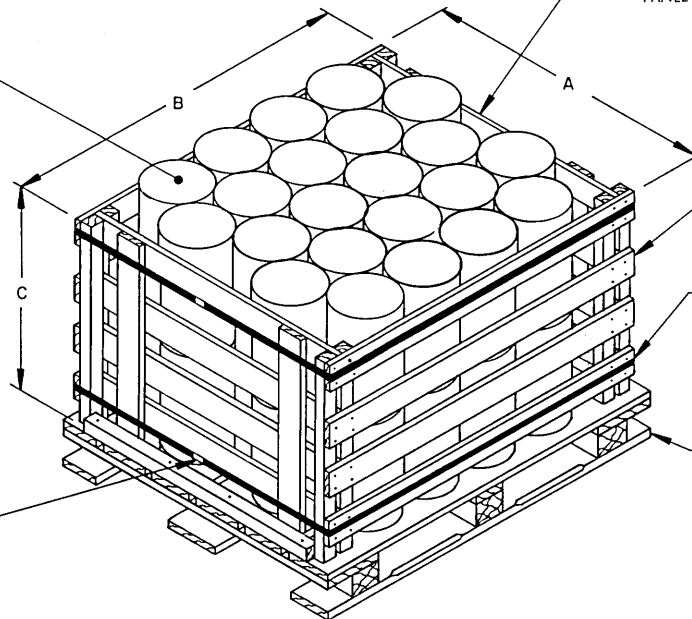


DRUM DETAIL

SEE SPECIAL NOTE 7.

INDICATES BLACK POWDER PACKED IN METAL DRUM. POSITION EACH DRUM WITH THE OPENING END AT THE TOP.

END PANEL (2 REQD.). INSERT EACH END BETWEEN CLEATS OF SIDE PANELS AS SHOWN. SEE THE "END PANEL A" DETAIL ON PAGE 63.



SIDE PANEL (2 REQD.). SEE THE DETAIL ON PAGE 63.

STRAP, STEEL, 3/4" X .031" BY A LENGTH TO ENCIRCLE THE BOX (2 REQD.). WIDER STRAPPING MAY BE USED.

PALLET, 40" X 48" (1 REQD.).

SEAL FOR 3/4" STRAPPING, (2 REQD., 1 PER STRAP). SEE GENERAL NOTE "V" ON PAGE 2.

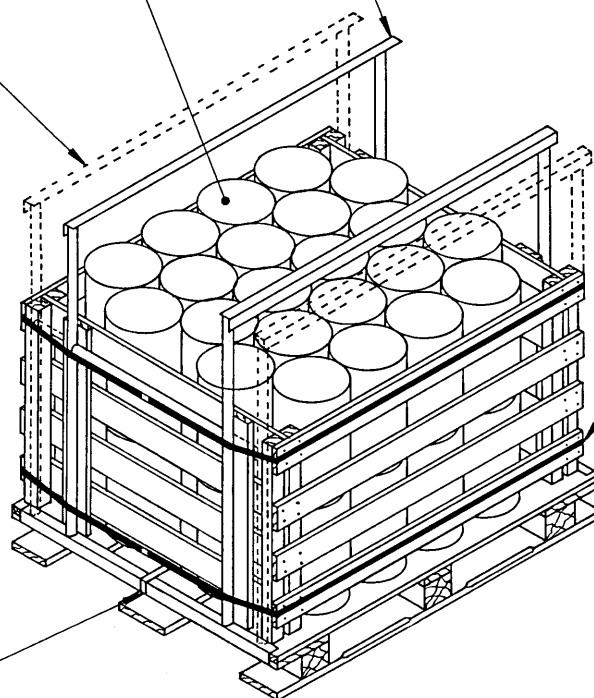
BOX PALLET UNIT

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

INDICATES BLACK POWDER PACKED IN METAL DRUM.

INDICATES NARROW PALLET RACK.

INDICATES WIDE PALLET RACK. SEE SPECIAL NOTE 4 ON PAGE 49.



STRAP, STEEL, 3/4" X .031" BY LENGTH TO ENCIRCLE THE BOX PALLET UNIT AND PALLET RACK (2 REQD.).

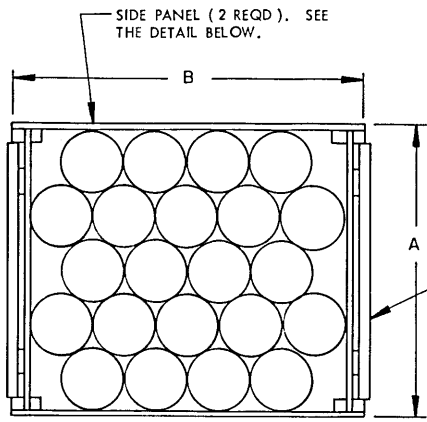
PALLET, 40" X 48" (1 REQD.).

A TIE ROD MUST BE INSTALLED TO TIE THE BASES OF THE TWO VERTICAL FRAME MEMBERS TOGETHER.

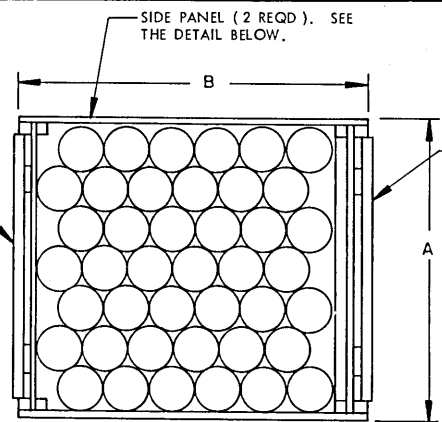
BOX PALLET UNIT DIMENSIONAL CHART			
DRUM SIZE	A	B	C
8-1/4" D X 13-3/4" H	39"	46-1/2"	26"
8" D X 16" H	38"	45-1/4"	30-1/2"
6" D X 14" H	39-1/2"	45-3/4"	27"
6" D X 7-1/2" H	39-1/2"	45-3/4"	28"

APPLICATION OF PALLET RACK

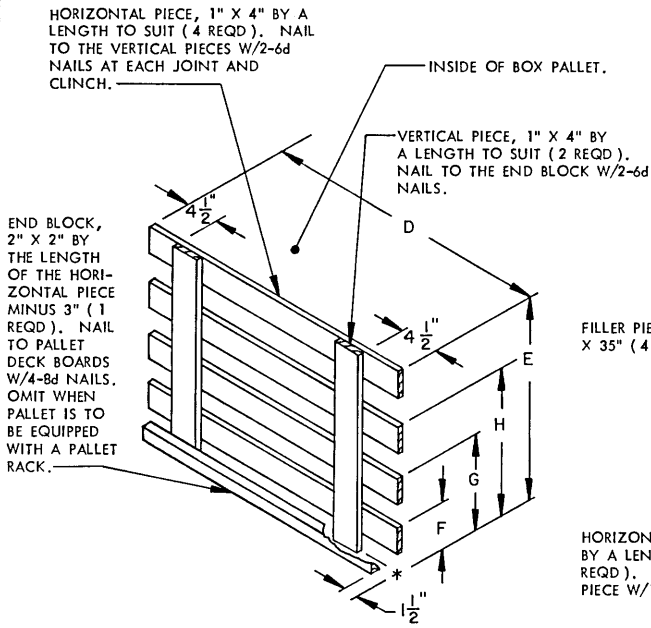
A NARROW PALLET RACK IS SHOWN. THE DOTTED LINES INDICATE A WIDE PALLET RACK. SEE THE SPECIAL NOTES ON PAGE 49 FOR GUIDANCE IN THE USE OF PALLET RACKS.



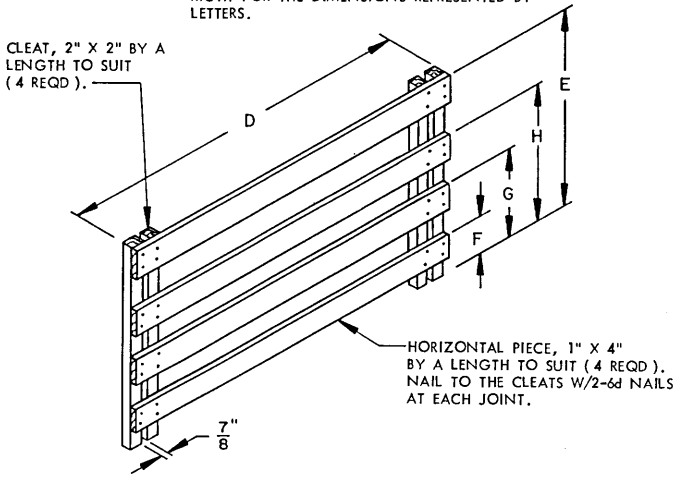
PLAN VIEW A
44 DRUMS 8" D X 16" H (2 LAYERS)



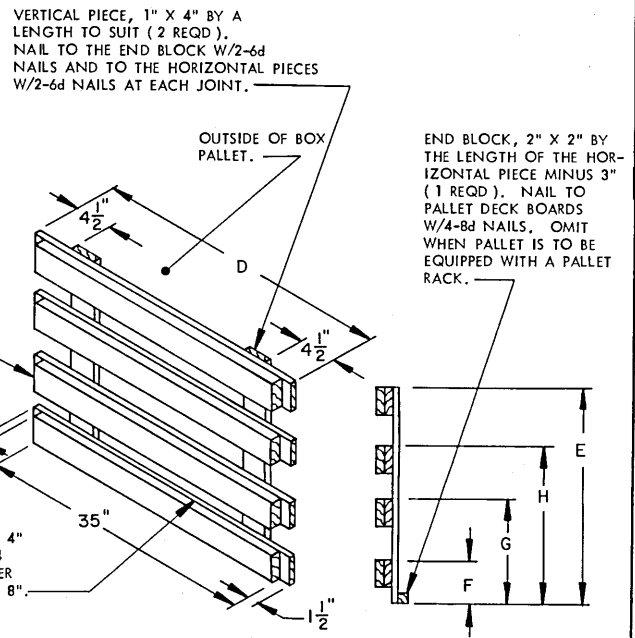
PLAN VIEW B
168 DRUMS 6" D X 7-1/2" H (4 LAYERS)
OR
84 DRUMS 6" D X 14" H (2 LAYERS)



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



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

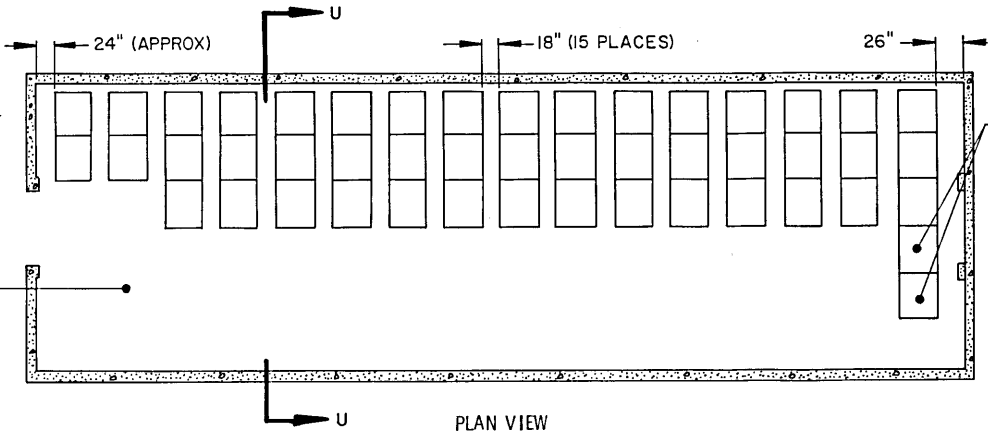


END PANEL B **END VIEW**
ONLY 1 REQD FOR THE BOX PALLET UNIT IN PLAN VIEW B.

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"	19-1/2"
6" D X 7-1/2" H	45-3/4"	28"	5-1/2"	13"	20-1/2"

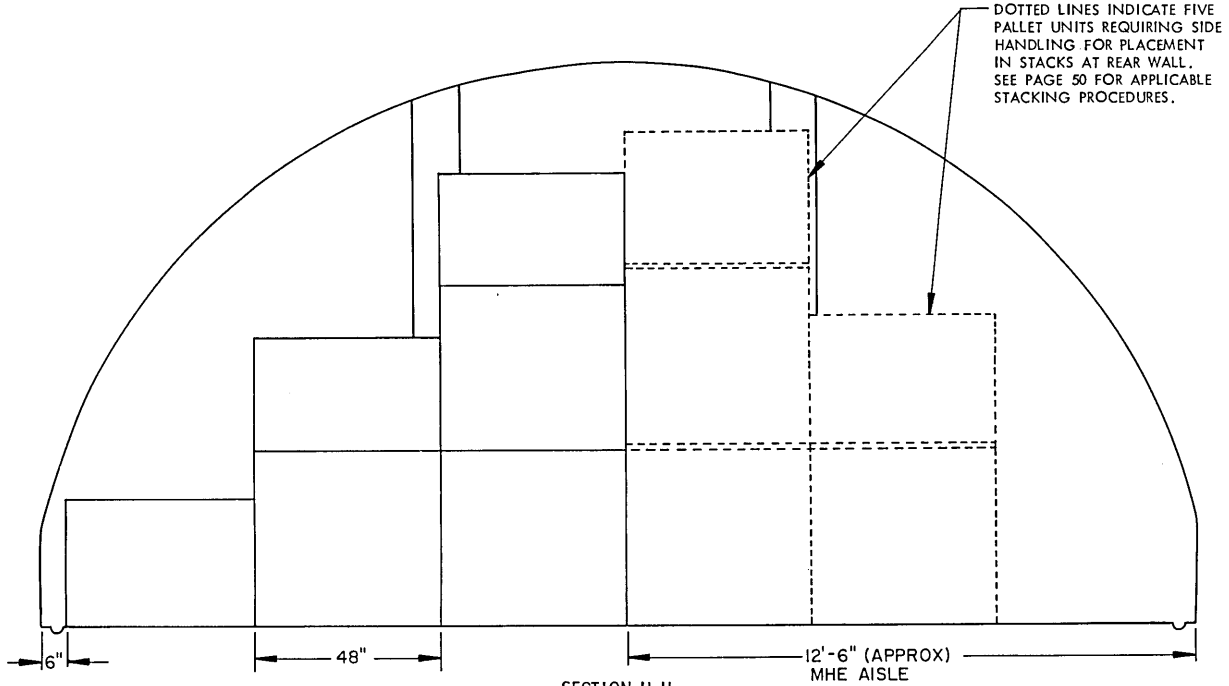
BLACK POWDER (PACKED IN METAL DRUM) (PALLETIZED)

IF DESIRED, AND MHE PERMITS, ADDITIONAL 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 PALLET UNITS. CAUTION: PALLET UNITS WILL ONLY BE HANDLED SEPARATELY; I.E., STACKED UNITS WILL NOT BE MOVED BY ONE LIFT.



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

PLAN VIEW
80'-0" MAGAZINE.

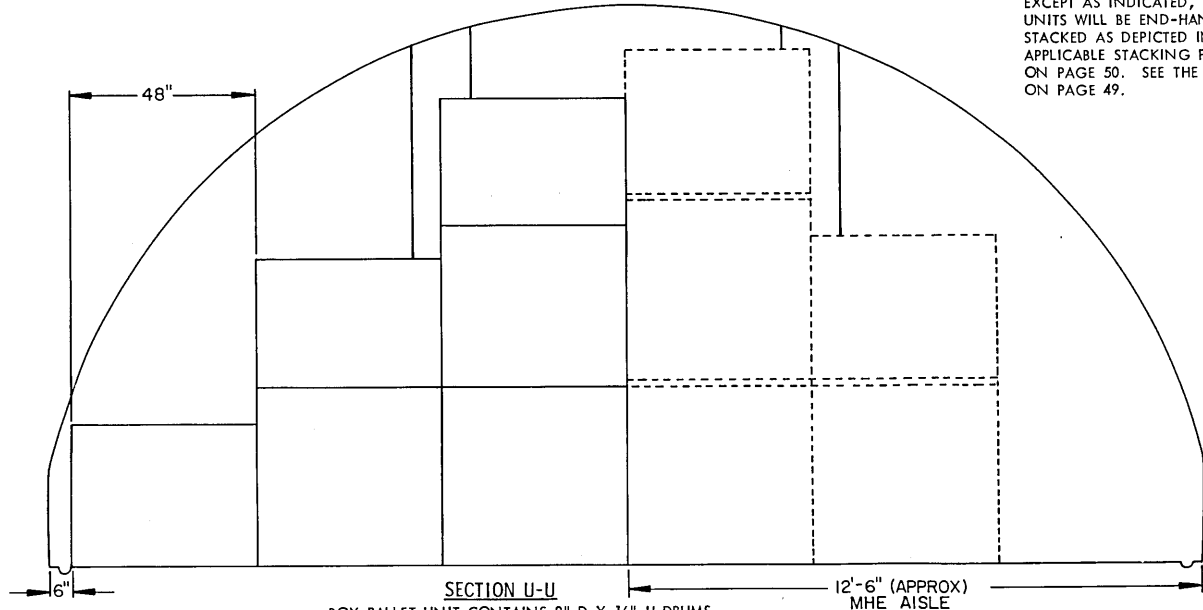


DOTTED LINES INDICATE FIVE PALLET UNITS REQUIRING SIDE HANDLING FOR PLACEMENT IN STACKS AT REAR WALL. SEE PAGE 50 FOR APPLICABLE STACKING PROCEDURES.

SECTION U-U

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

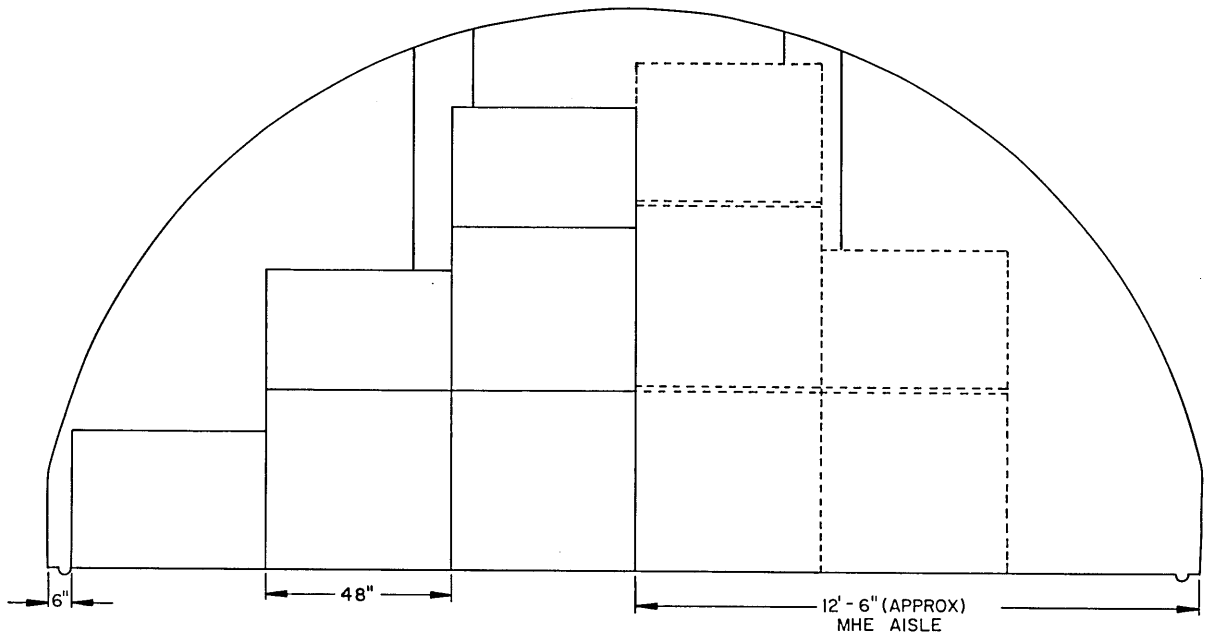
NOTE: EXCEPT AS INDICATED, ALL PALLET UNITS WILL BE END-HANDLED AND STACKED AS DEPICTED IN THE APPLICABLE STACKING PROCEDURES ON PAGE 50. SEE THE SPECIAL NOTES ON PAGE 49.



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. STORAGE INSTALLATIONS HAVING FRONT/SIDE LOADING FORKLIFTS MAY STORE CONTAINERS OPPOSITE HAND FROM THAT SHOWN IN THESE VIEWS, I.E., PALLETIZED DRUMS MAY BE STACKED PERPENDICUALR TO THE RIGHT SIDE OF THE MAGAZINE IN LIEU OF PERPENDICUALR TO THE LEFT SIDE.
4. THE SHORTER HEIGHT UNIT AT THE LEFT SIDE OF EACH SECTION VIEW AND IN THE TOP LAYER OF EACH PALLET STACK IN THOSE VIEWS IS THE BOX PALLET UNIT AS DETAILED AT THE TOP OF PAGE 62. THE TALLER UNITS IN EACH VIEW ARE THE BOX PALLET UNITS WITH PALLET RACKS INSTALLED.
5. PALLETIZATION OF DRUMS IS SOLELY FOR THE CONVENIENCE OF STORAGE AND WILL NOT BE USED FOR SHIPPING DRUMS.
6. 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.

STORAGE IN 80'-0" MAGAZINE

ITEM	QUANTITY	EXPLOSIVE WT.
WOODEN BOX-----	9,248-----	462,400 LBS

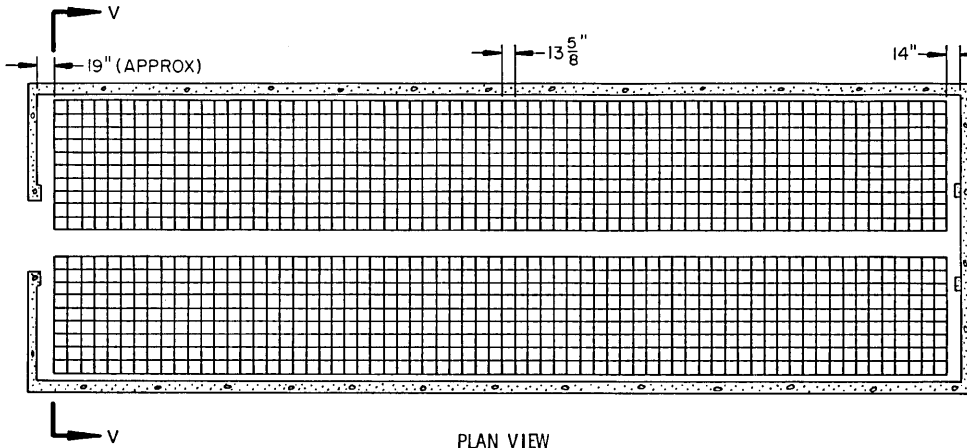
*STORAGE IN 40'-0" MAGAZINE

ITEM	QUANTITY	EXPLOSIVE WT.
WOODEN BOX-----	4,488-----	224,400 LBS

* 33 STACKS WITH 16" (APPROX) SPACE AT FRONT. SEE GENERAL NOTE "E" ON PAGE 2.

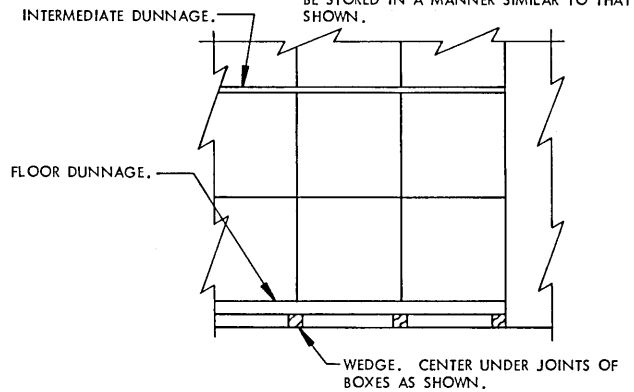
SPECIAL NOTES:

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.



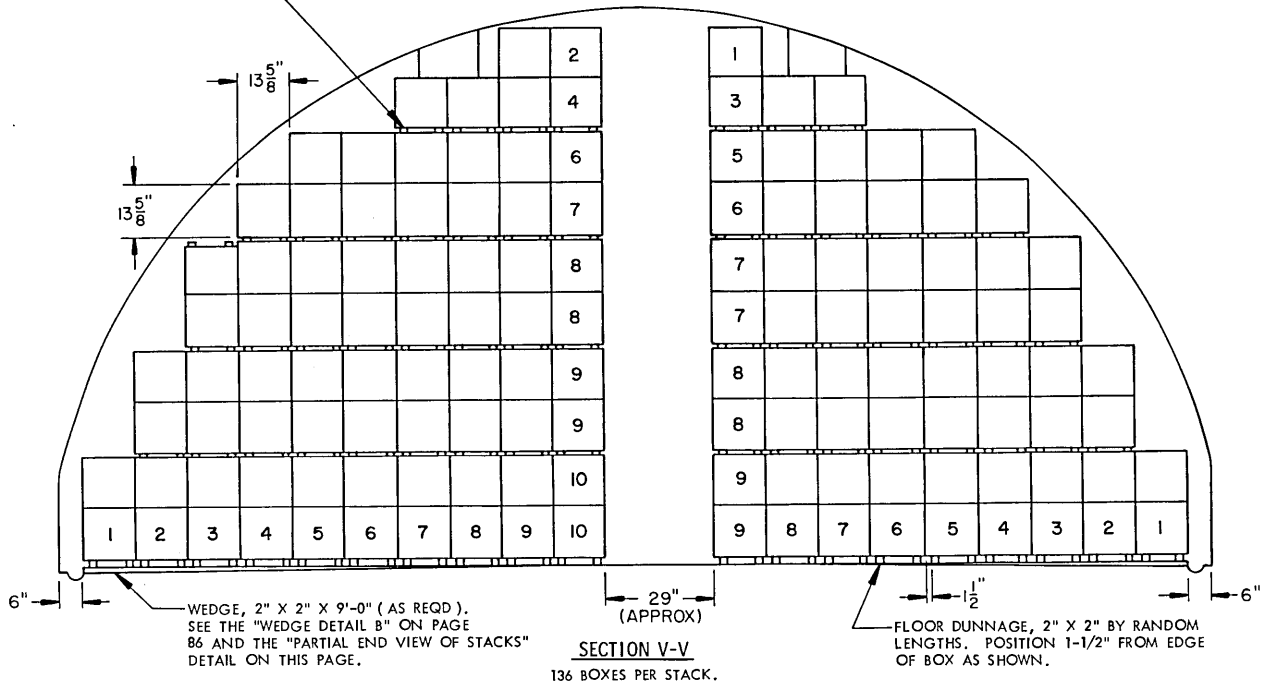
PLAN VIEW
80'-0" MAGAZINE
68 STACKS

BILL OF MATERIAL (PER STACK)		
LUMBER	LINEAR FEET	BOARD FEET
1" X 2"	119	20
2" X 2"	44	15
WEDGES PER STACK		
LUMBER	LENGTH	NO. REQD
2" X 2"	9'-0"	2



PARTIAL END VIEW OF STACKS

INTERMEDIATE DUNNAGE, 1" X 2" BY RANDOM LENGTHS. POSITION 1-1/2" FROM EDGE OF BOX AS SHOWN. SEE SPECIAL NOTE 3.



BLACK POWDER (PACKED IN WOODEN BOX)

STORAGE IN 80'-0" MAGAZINE

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

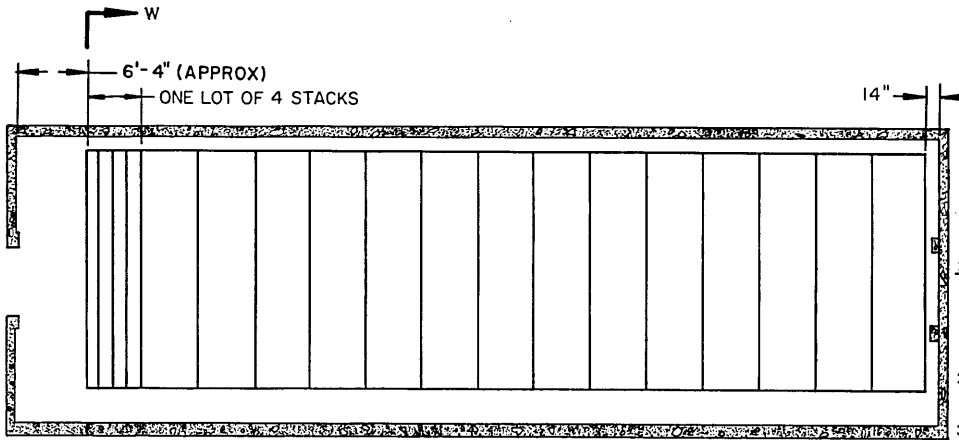
*** STORAGE IN 40'-0" MAGAZINE**

ITEM	QUANTITY	EXPLOSIVE WT.
DRUM	1,400	70,000 LBS

* 28 STACKS WITH 60" (APPROX) SPACE AT FRONT. SEE GENERAL NOTE "E" ON PAGE 2 AND SPECIAL NOTE 3 BELOW.

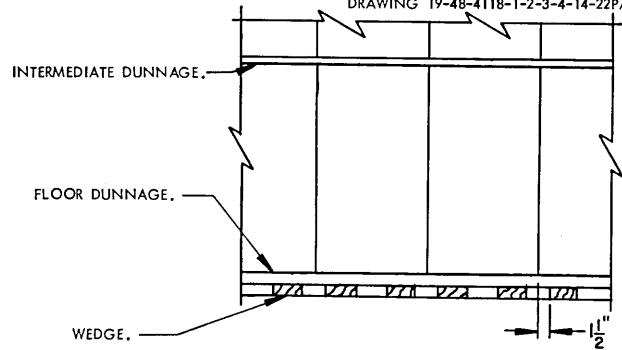
SPECIAL NOTES:

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 W-W INDICATE THE QUANTITY OF DRUMS PER LAYER IN A STACK.
3. THESE STORAGE PROCEDURES SHOULD ONLY BE USED IN GEOGRAPHICAL AREAS WHICH HAVE LOW HUMIDITY LEVELS. FOR STORAGE IN HIGH HUMIDITY AREAS, REFER TO THE PROCEDURES ON PAGE 85.
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.

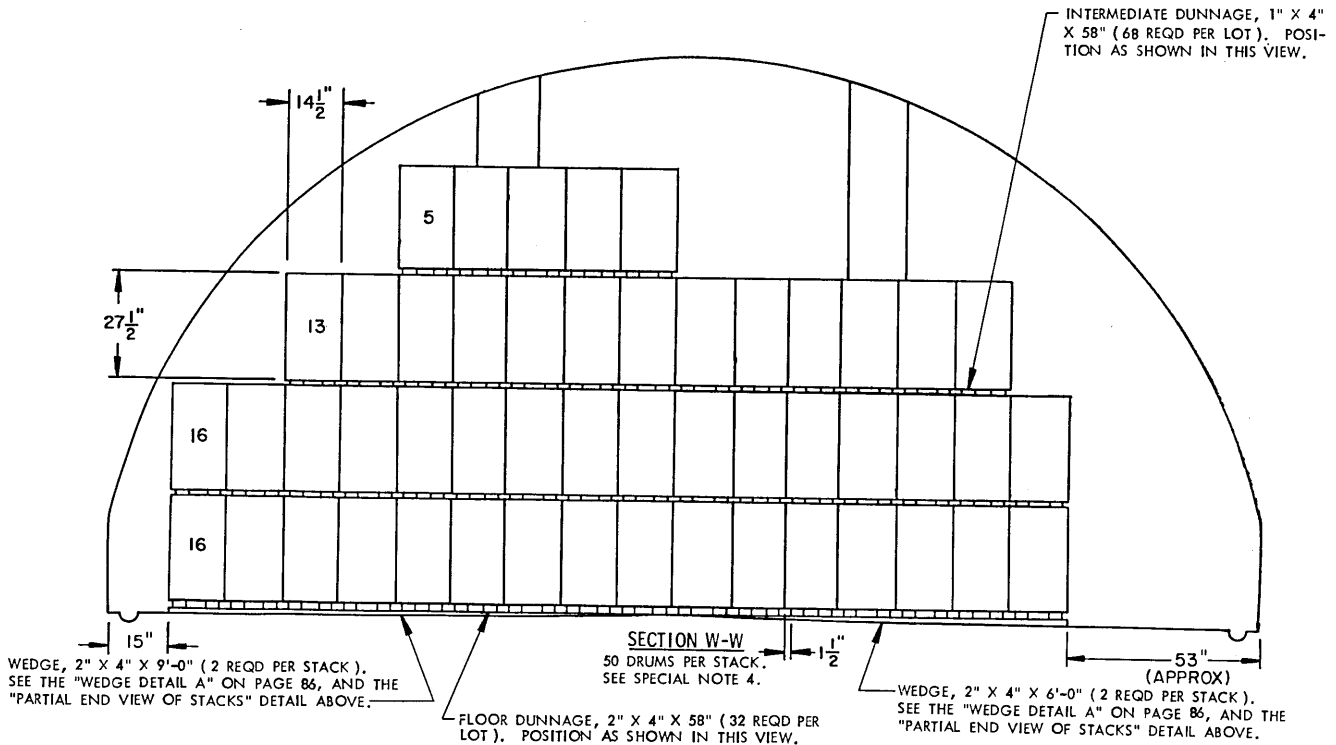


PLAN VIEW
80'-0" MAGAZINE.
60 STACKS.

BILL OF MATERIAL (PER LOT)		
LUMBER	LINEAR FEET	BOARD FEET
1" X 4"	329	110
2" X 4"	155	104
WEDGES PER STACK		
LUMBER	LENGTH	NO. REQD
2" X 4"	6'-0"	2
2" X 4"	9'-0"	2



PARTIAL END VIEW OF STACKS



SECTION W-W
50 DRUMS PER STACK.
SEE SPECIAL NOTE 4.

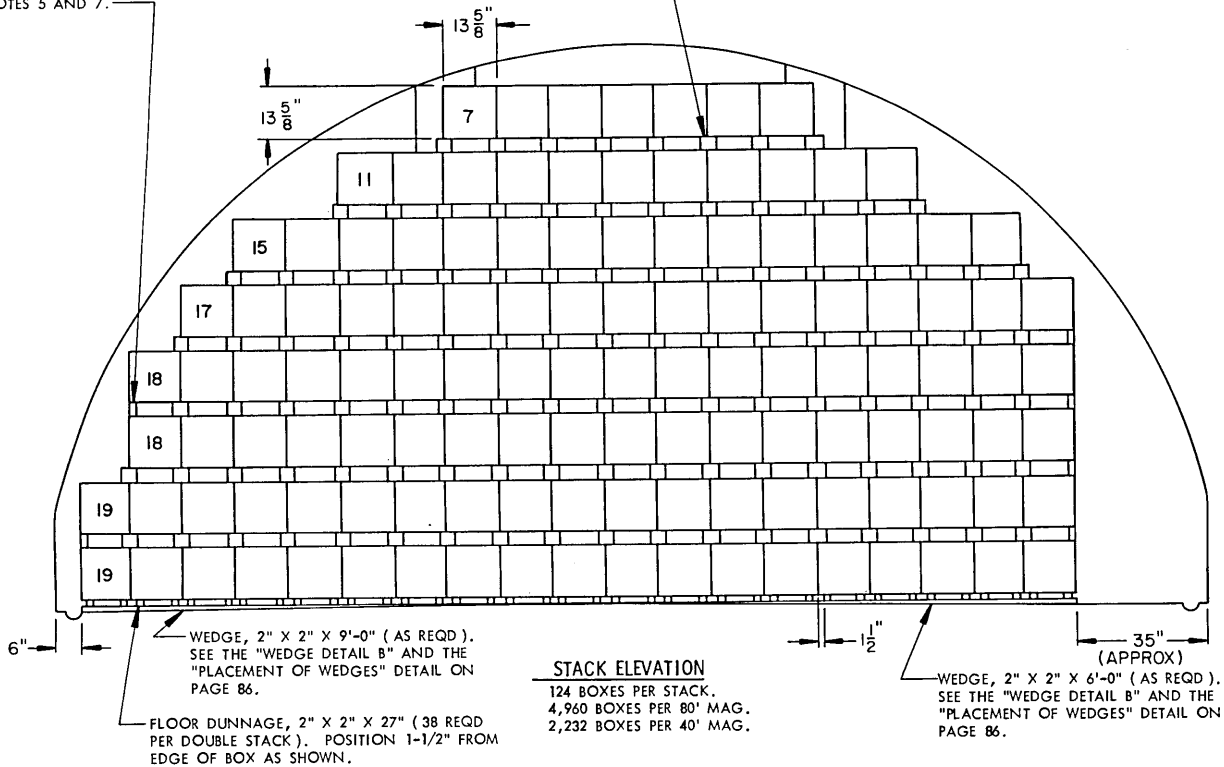
FLOOR DUNNAGE, 2" X 4" X 58" (32 REQD PER LOT). POSITION AS SHOWN IN THIS VIEW.

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 STACKS" DETAIL ABOVE.

STORAGE METHOD A
NITROGUANIDINE (PACKED IN FIBERBOARD DRUMS)

SUPPORT BLOCK (6 REQD PER DOUBLE STACK). SEE THE "SUPPORT BLOCK B" DETAIL ON PAGE 86 AND SPECIAL NOTES 5 AND 7.

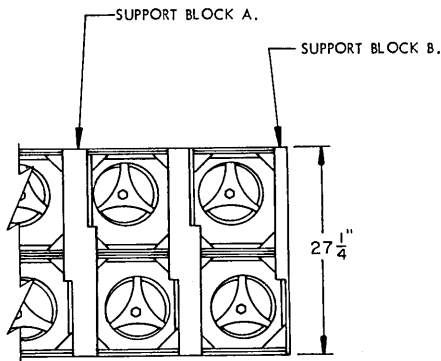
SUPPORT BLOCK (105 REQD PER DOUBLE STACK). SEE THE "SUPPORT BLOCK A" DETAIL ON PAGE 86 AND SPECIAL NOTES 5 AND 7.



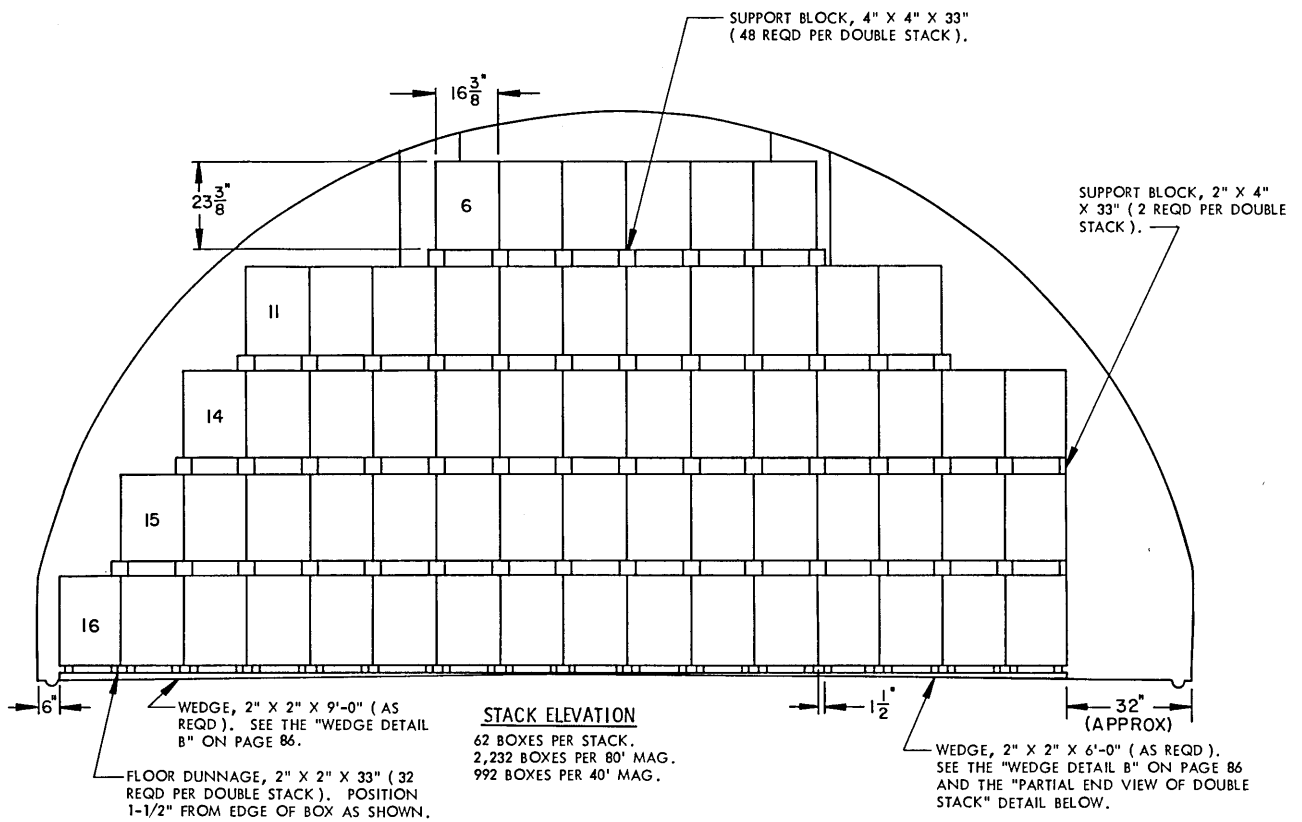
BILL OF MATERIAL (PER DOUBLE STACK)		
LUMBER	LINEAR FEET	BOARD FEET
2" X 2"	86	29
2" X 4"	14	10
4" X 4"	237	316
WEDGES PER DOUBLE STACK		
LUMBER	LENGTH	NO. REQD
2" X 2"	6'-0"	3
2" X 2"	9'-0"	3

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 6,200 POUNDS. THE EXPLOSIVE WEIGHT FOR AN 80'-0" MAGAZINE WILL BE 248,000 POUNDS. THERE WILL BE APPROXIMATELY 54" SPACE AT THE FRONT OF THE MAGAZINE. THE EXPLOSIVE WEIGHT FOR A 40'-0" MAGAZINE WILL BE 111,600 POUNDS AND THERE WILL BE APPROXIMATELY 53" SPACE AT THE FRONT OF THE MAGAZINE. SEE GENERAL NOTE "E" ON PAGE 2.



PARTIAL PLAN VIEW OF DOUBLE STACK



STACK ELEVATION

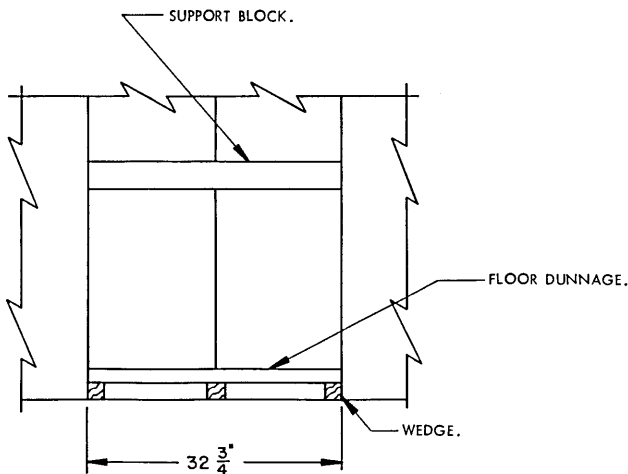
62 BOXES PER STACK.
 2,232 BOXES PER 80' MAG.
 992 BOXES PER 40' MAG.

BILL OF MATERIAL (PER DOUBLE STACK)

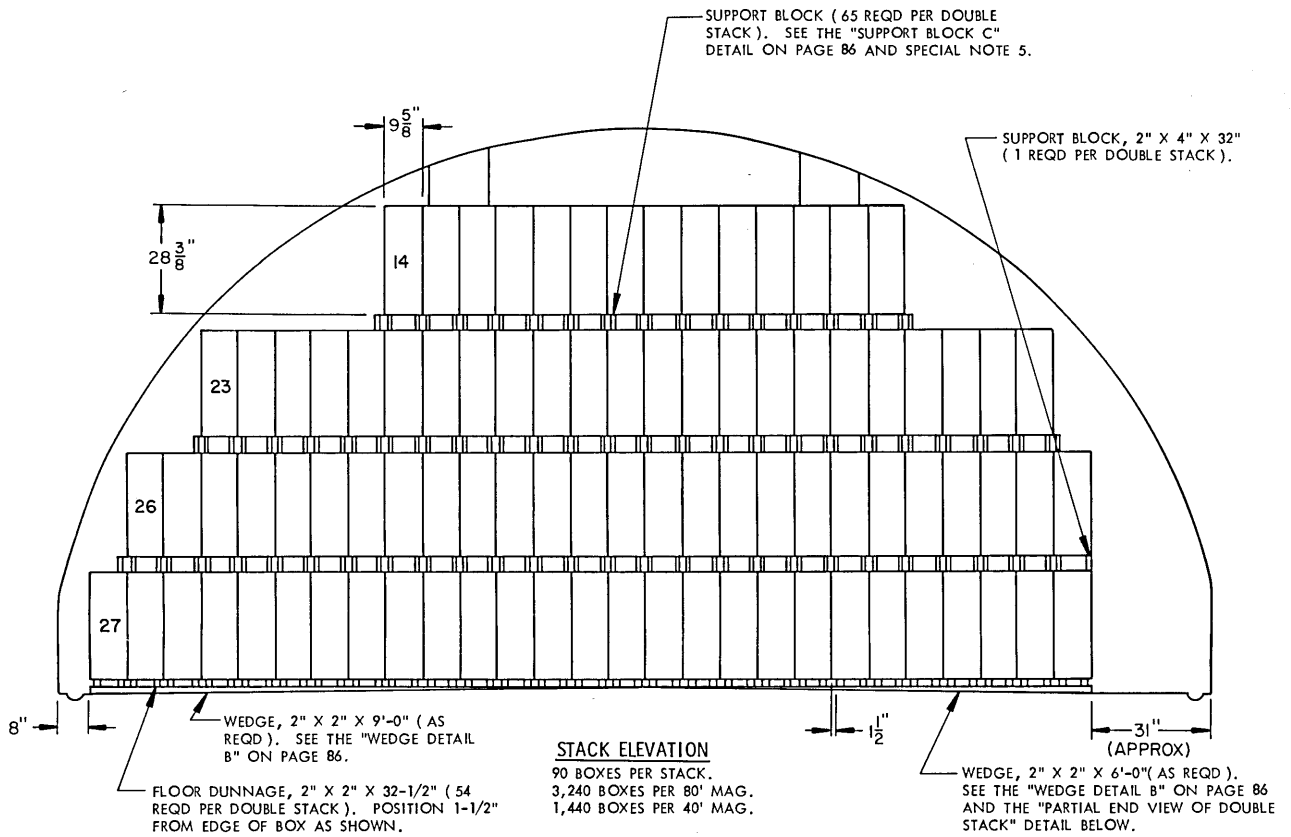
LUMBER	LINEAR FEET	BOARD FEET
2" X 2"	88	30
2" X 4"	6	4
4" X 4"	132	176
WEDGES PER DOUBLE STACK		
LUMBER	LENGTH	NO. REQD
2" X 2"	6'-0"	3
2" X 2"	9'-0"	3

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 WILL BE 6,200 POUNDS. THERE WILL BE APPROXIMATELY 19" SPACE AT THE FRONT OF THE MAGAZINE. THE EXPLOSIVE WEIGHT FOR A 40'-0" MAGAZINE WILL BE 99,200 POUNDS AND THERE WILL BE APPROXIMATELY 54" SPACE AT THE FRONT OF THE MAGAZINE. SEE GENERAL NOTE "E" ON PAGE 2.



PARTIAL END VIEW OF DOUBLE STACK



STACK ELEVATION

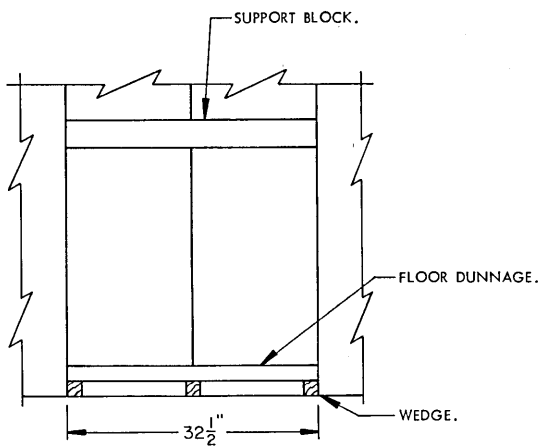
90 BOXES PER STACK.
 3,240 BOXES PER 80' MAG.
 1,440 BOXES PER 40' MAG.

SPECIAL NOTES:

1. STORAGE AS SHOWN IS FOR THE M2 AND MK7 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 9,900 POUNDS. THE EXPLOSIVE WEIGHT FOR AN 80'-0" MAGAZINE WILL BE 356,400 POUNDS. THERE WILL BE APPROXIMATELY 24" SPACE AT THE FRONT OF THE MAGAZINE. THE EXPLOSIVE WEIGHT FOR A 40'-0" MAGAZINE WILL BE 158,400 POUNDS AND THERE WILL BE APPROXIMATELY 57" 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.

BILL OF MATERIAL (PER DOUBLE STACK)

LUMBER	LINEAR FEET	BOARD FEET
2" X 2"	147	49
2" X 4"	3	2
4" X 4"	174	232
WEDGES PER DOUBLE STACK		
LUMBER	LENGTH	NO. REQD
2" X 2"	6'-0"	3
2" X 2"	9'-0"	3



PARTIAL END VIEW OF DOUBLE STACK

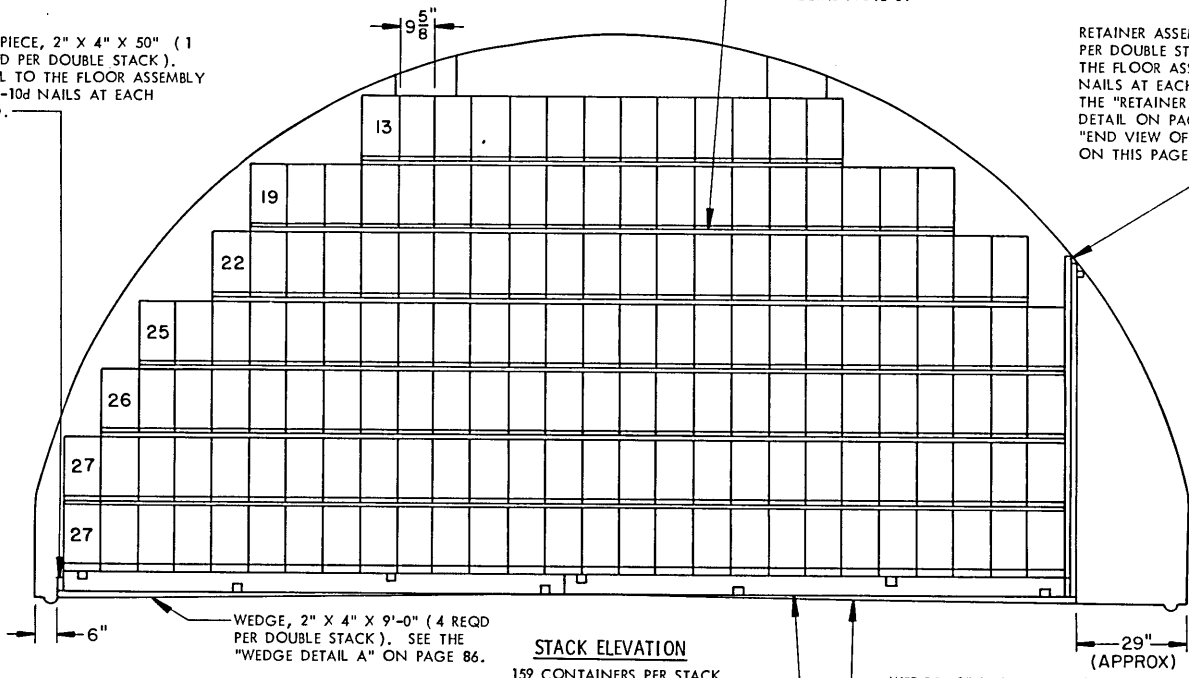
STORAGE METHOD A

POWDER, PROPELLANT (PACKED IN STEEL BOX, M2 AND MK7)

TIE PIECE, 2" X 4" X 50" (1 REQD PER DOUBLE STACK). NAIL TO THE FLOOR ASSEMBLY W/2-10d NAILS AT EACH END.

INTERMEDIATE DUNNAGE, 1" X 4" BY LENGTH TO SUIT (24 REQD PER DOUBLE STACK). SEE THE "END VIEW OF DOUBLE STACK" AND SPECIAL NOTE 6.

RETAINER ASSEMBLY (1 REQD PER DOUBLE STACK). NAIL TO THE FLOOR ASSEMBLY W/2-10d NAILS AT EACH JOINT. SEE THE "RETAINER ASSEMBLY A" DETAIL ON PAGE 87 AND THE "END VIEW OF DOUBLE STACK" ON THIS PAGE.



WEDGE, 2" X 4" X 9'-0" (4 REQD PER DOUBLE STACK). SEE THE "WEDGE DETAIL A" ON PAGE 86.

STACK ELEVATION

159 CONTAINERS PER STACK.
3,498 CONTAINERS PER 80' MAG.
1,590 CONTAINERS PER 40' MAG.

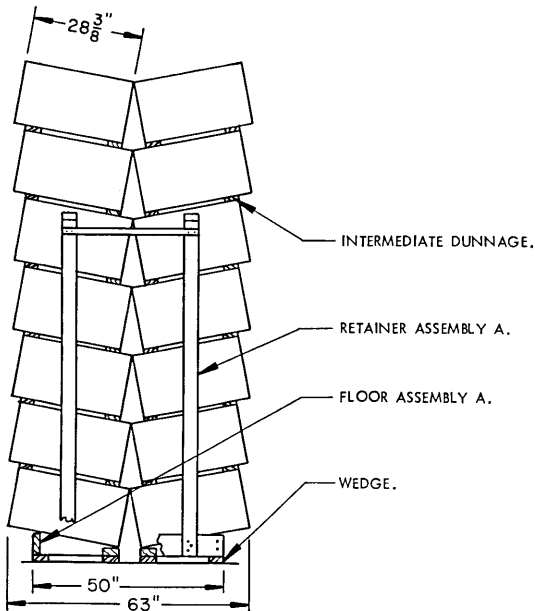
WEDGE, 2" X 4" X 6'-0" (4 REQD PER DOUBLE STACK). SEE THE "WEDGE DETAIL A" ON PAGE 86 AND THE "END VIEW OF DOUBLE STACK" DETAIL BELOW.

FLOOR ASSEMBLY (4 REQD PER DOUBLE STACK). SEE THE "FLOOR ASSEMBLY A" DETAIL ON PAGE 88.

BILL OF MATERIAL (PER DOUBLE STACK)		
LUMBER	LINEAR FEET	BOARD FEET
1" X 4"	424	142
2" X 2"	3	1
2" X 4"	76	51
2" X 6"	77	77
NAILS	NO. REQD	POUNDS
10d (3")	66	1
WEDGES PER DOUBLE STACK		
LUMBER	LENGTH	NO. REQD
2" X 4"	6'-0"	4
2" X 4"	9'-0"	4

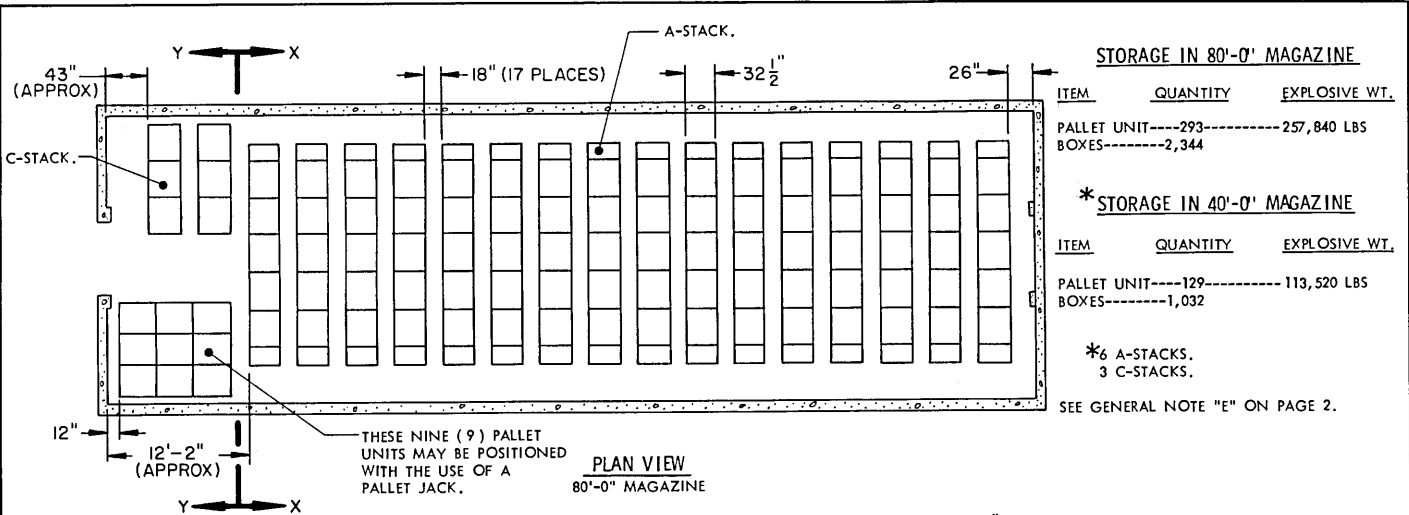
SPECIAL NOTES:

- STORAGE AS SHOWN IS FOR THE M2 AND MK7 STEEL BOX.
BOX DIMENSIONS-----16-1/4" LONG BY 9-5/8" WIDE BY 28-3/8" HIGH.
- SEE THE "TYPICAL PLAN VIEW B" ON PAGE 4.
- THE NUMBERS SHOWN IN THE STACK ELEVATION INDICATE THE QUANTITY OF BOXES PER LAYER IN A STACK.
- BOXES MUST BE STORED IN DOUBLE STACKS AS SHOWN.
- 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.
- NOTE:** JOINTS IN THE INTERMEDIATE DUNNAGE MUST BE STAGGERED BOTH HORIZONTALLY AND VERTICALLY.
- NOTE:** THE RETAINER ASSEMBLY MUST CONTACT THE MAGAZINE WALL FOR SUPPORT.
- THE METHOD OF STORAGE SHOWN PERMITS INSPECTION OF INDIVIDUAL BOXES.
- 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 17,490 POUNDS. THE EXPLOSIVE WEIGHT FOR AN 80'-0" MAGAZINE WILL BE 384,780 POUNDS. THERE WILL BE APPROXIMATELY 42" SPACE AT THE FRONT OF THE MAGAZINE. THE EXPLOSIVE WEIGHT FOR A 40'-0" MAGAZINE WILL BE 174,900 POUNDS AND THERE WILL BE APPROXIMATELY 56" OF SPACE AT THE FRONT OF THE MAGAZINE. SEE GENERAL NOTE "E" ON PAGE 2.
- 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 70, OR ON PAGE 89 IS THE OPTION OF THE STORING ACTIVITY.



END VIEW OF DOUBLE STACK

STORAGE METHOD B
POWDER, PROPELLANT (PACKED IN STEEL BOX, M2 AND MK7) :



STORAGE IN 80'-0' MAGAZINE

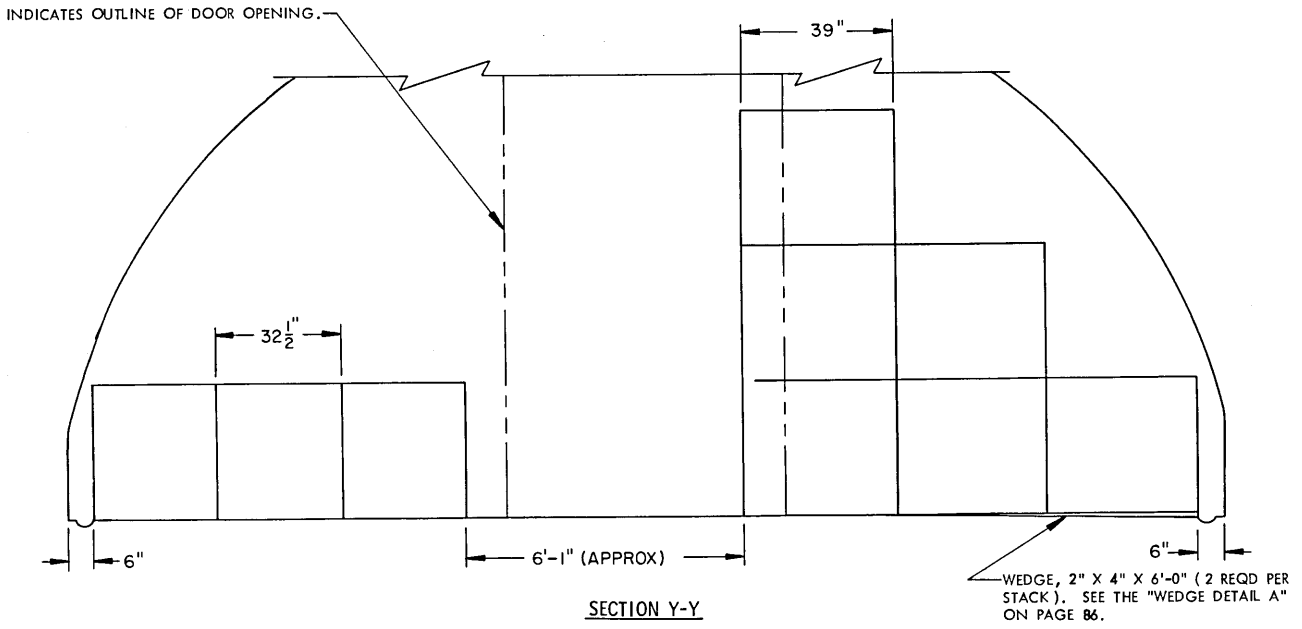
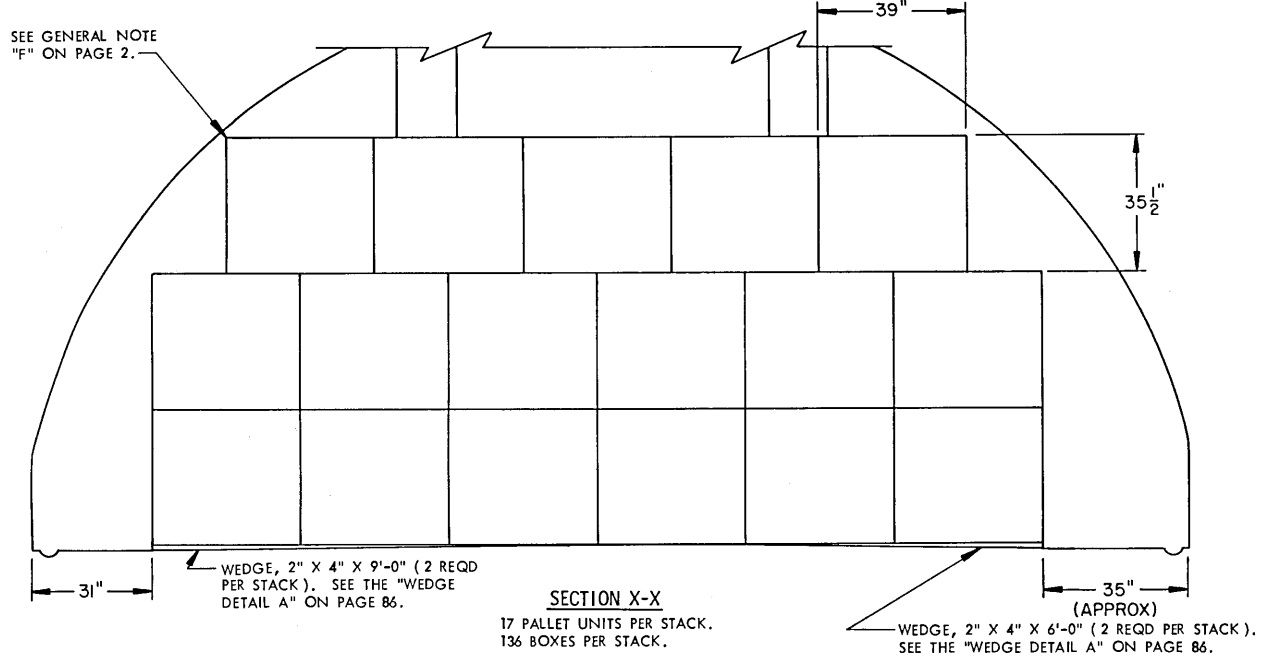
ITEM	QUANTITY	EXPLOSIVE WT.
PALLET UNIT	293	257,840 LBS
BOXES	2,344	

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

ITEM	QUANTITY	EXPLOSIVE WT.
PALLET UNIT	129	113,520 LBS
BOXES	1,032	

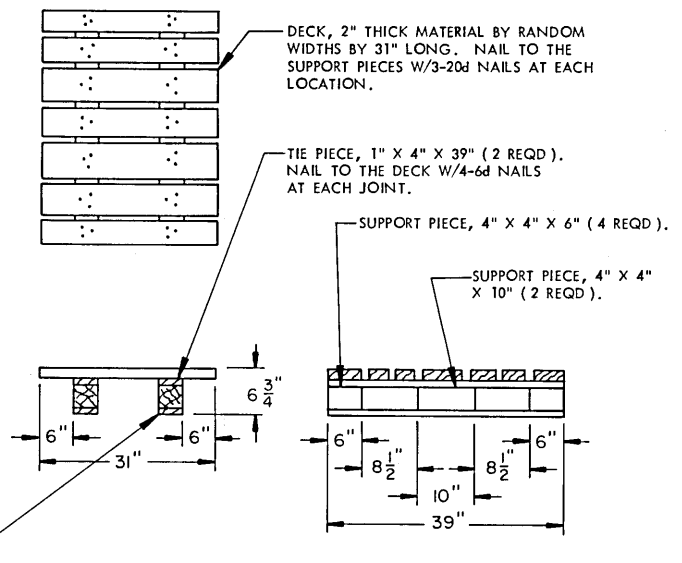
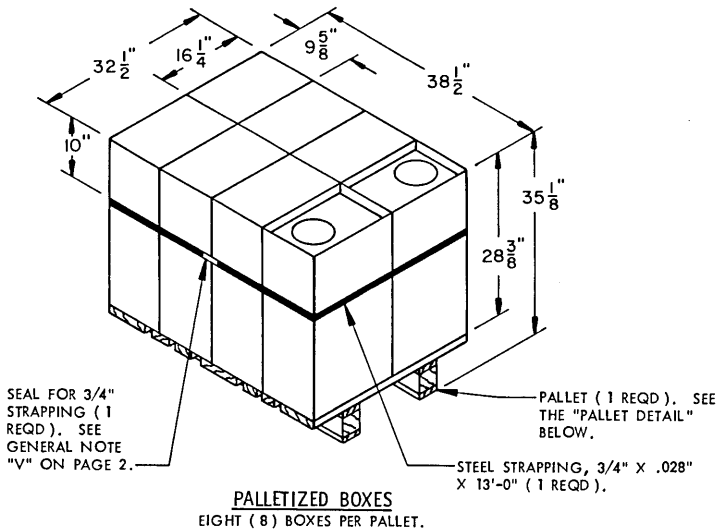
*6 A-STACKS.
3 C-STACKS.

SEE GENERAL NOTE "E" ON PAGE 2.



SPECIAL NOTES:

1. STORAGE AS SHOWN IS FOR THE M2 AND MK7 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 MK7 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 0 IN PALLET CRATE MK2 MOD 0 UNITIZED IN ACCORDANCE WITH WR-53/709, PROPELLANT GRAIN MK49 AND MODS IN PALLET CRATE MK4 MOD 0 (WR-53/505) AND PROPELLANT GRAIN MK88 MOD 0 (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.

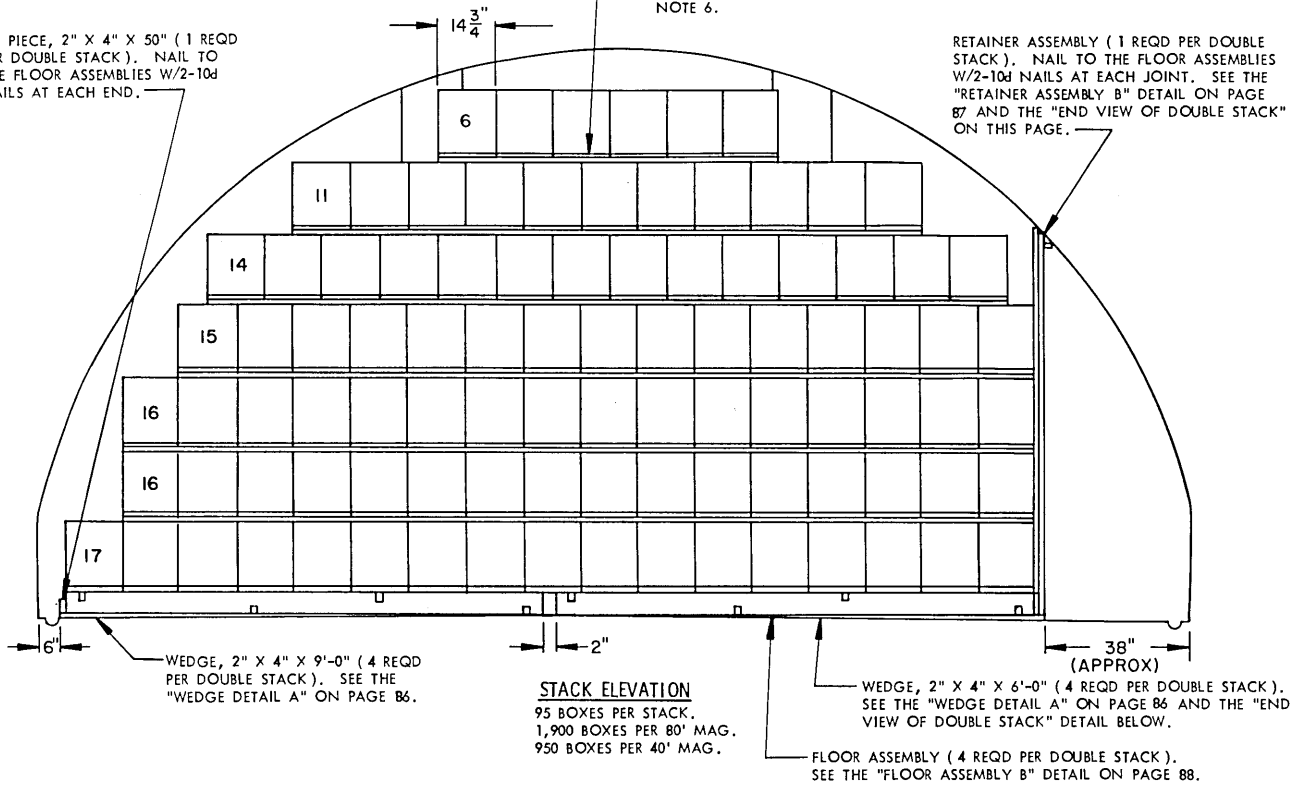


BILL OF MATERIAL (PER PALLET)		
LUMBER	LINEAR FEET	BOARD FEET
1" X 4"	13	5
2" X 4"	13	9
2" X 6"	6	6
4" X 4"	4	6
NAILS		POUNDS
6d (2")	48	1/2
20d (4")	18	3/4
STEEL STRAPPING, 3/4" X .028"-----13' REQD-----		1 LB
SEAL FOR 3/4" STRAPPING-----1 REQD-----		NIL

TIE PIECE, 2" X 4" X 50" (1 REQD PER DOUBLE STACK). NAIL TO THE FLOOR ASSEMBLIES W/2-10d NAILS AT EACH END.

INTERMEDIATE DUNNAGE, 1" X 4" BY LENGTH TO SUIT (24 REQD PER DOUBLE STACK). SEE THE "END VIEW OF DOUBLE STACK" AND SPECIAL NOTE 6.

RETAINER ASSEMBLY (1 REQD PER DOUBLE STACK). NAIL TO THE FLOOR ASSEMBLIES W/2-10d NAILS AT EACH JOINT. SEE THE "RETAINER ASSEMBLY B" DETAIL ON PAGE 87 AND THE "END VIEW OF DOUBLE STACK" ON THIS PAGE.



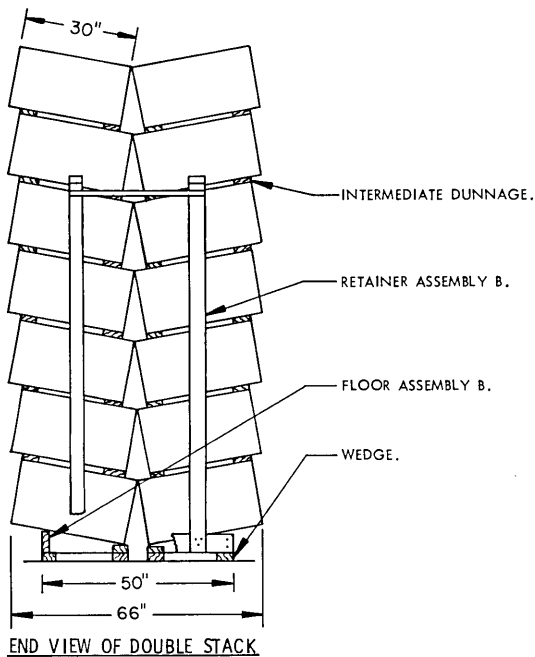
STACK ELEVATION

95 BOXES PER STACK.
1,900 BOXES PER 80' MAG.
950 BOXES PER 40' MAG.

BILL OF MATERIAL (PER DOUBLE STACK)		
LUMBER	LINEAR FEET	BOARD FEET
1" X 4"	384	128
2" X 2"	3	1
2" X 4"	78	52
2" X 6"	76	76
NAILS	NO. REQD	POUNDS
10d (3")	66	1
WEDGES PER DOUBLE STACK		
LUMBER	LENGTH	NO. REQD
2" X 4"	6'-0"	4
2" X 4"	9'-0"	4

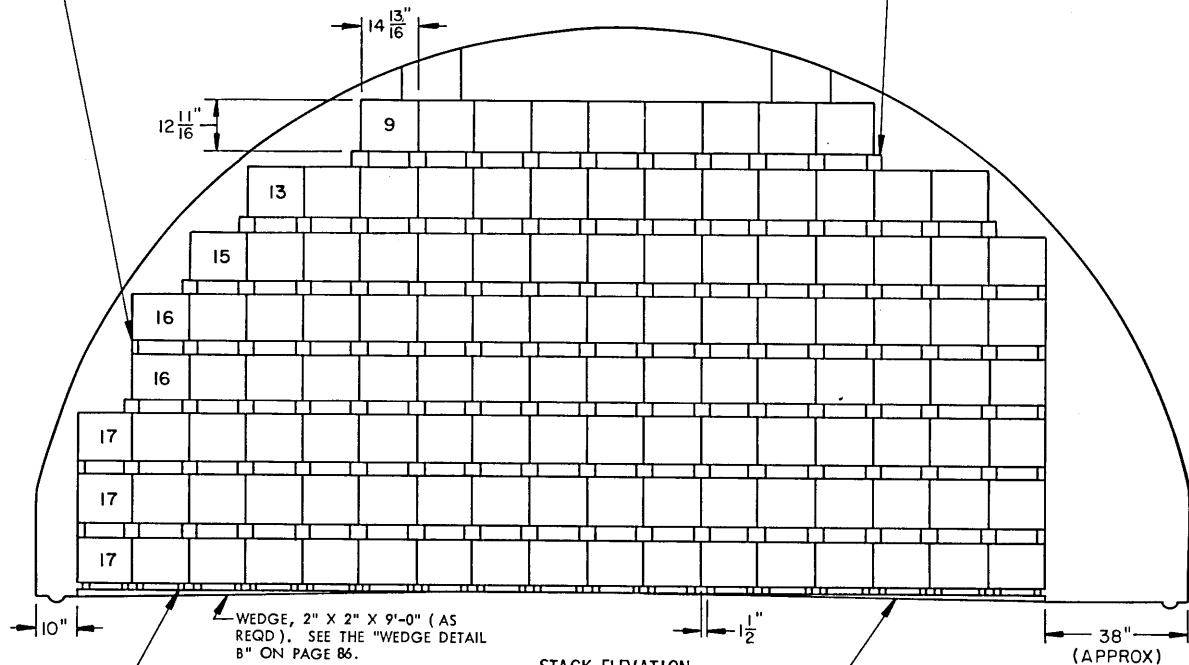
SPECIAL NOTES:

- STORAGE AS SHOWN IS FOR THE METAL-LINED WOODEN BOX.
BOX DIMENSIONS-----17-3/4" LONG BY 14-3/4" WIDE BY 30" HIGH.
- SEE THE "TYPICAL PLAN VIEW B" ON PAGE 4.
- THE NUMBERS SHOWN IN THE STACK ELEVATION INDICATE THE QUANTITY OF BOXES PER LAYER IN A STACK.
- BOXES MUST BE STORED IN DOUBLE STACKS AS SHOWN.
- 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.
- NOTE:** JOINTS IN THE INTERMEDIATE DUNNAGE MUST BE STAGGERED BOTH HORIZONTALLY AND VERTICALLY.
- NOTE:** THE RETAINER ASSEMBLY MUST CONTACT THE MAGAZINE WALL FOR SUPPORT.
- THE METHOD OF STORAGE SHOWN PERMITS INSPECTION OF INDIVIDUAL BOXES.
- THE EXPLOSIVE WEIGHT FOR THE METAL-LINED WOODEN BOX IS 150 POUNDS. THE EXPLOSIVE WEIGHT FOR THE STACK ELEVATION SHOWN ABOVE WILL BE 14,250 POUNDS. THE EXPLOSIVE WEIGHT FOR AN 80'-0" MAGAZINE WILL BE 285,000 POUNDS. THERE WILL BE APPROXIMATELY 7'-8" OF SPACE AT THE FRONT OF THE MAGAZINE. THE EXPLOSIVE WEIGHT FOR A 40'-0" MAGAZINE WILL BE 142,500 POUNDS AND THERE WILL BE APPROXIMATELY 41" OF SPACE AT THE FRONT OF THE MAGAZINE. SEE GENERAL NOTE "E" ON PAGE 2.



SUPPORT BLOCK, 2" X 4" X 36"
(8 REQD PER DOUBLE
STACK).

SUPPORT BLOCK, 4" X 4" X 36"
(102 REQD PER DOUBLE STACK).



WEDGE, 2" X 2" X 9'-0" (AS
REQD). SEE THE "WEDGE DETAIL
B" ON PAGE 86.

FLOOR DUNNAGE, 2" X 2" X 36"
(34 REQD PER DOUBLE STACK).
POSITION 1-1/2" FROM EDGE
OF BOX AS SHOWN.

STACK ELEVATION

120 CONTAINERS PER STACK.
4,080 CONTAINERS PER 80' MAG.
1,920 CONTAINERS PER 40' MAG.

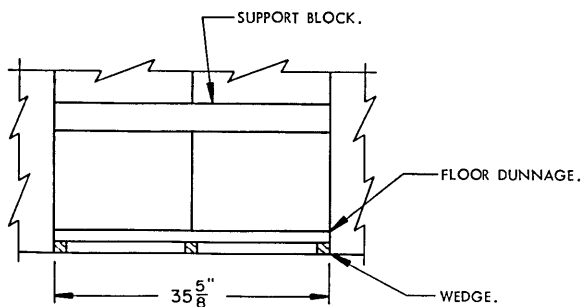
WEDGE, 2" X 2" X 6'-0" (AS REQD). SEE
THE "WEDGE DETAIL B" ON PAGE 86 AND THE
"PARTIAL END VIEW OF DOUBLE STACK" DETAIL
BELOW.

BILL OF MATERIAL (PER DOUBLE STACK)

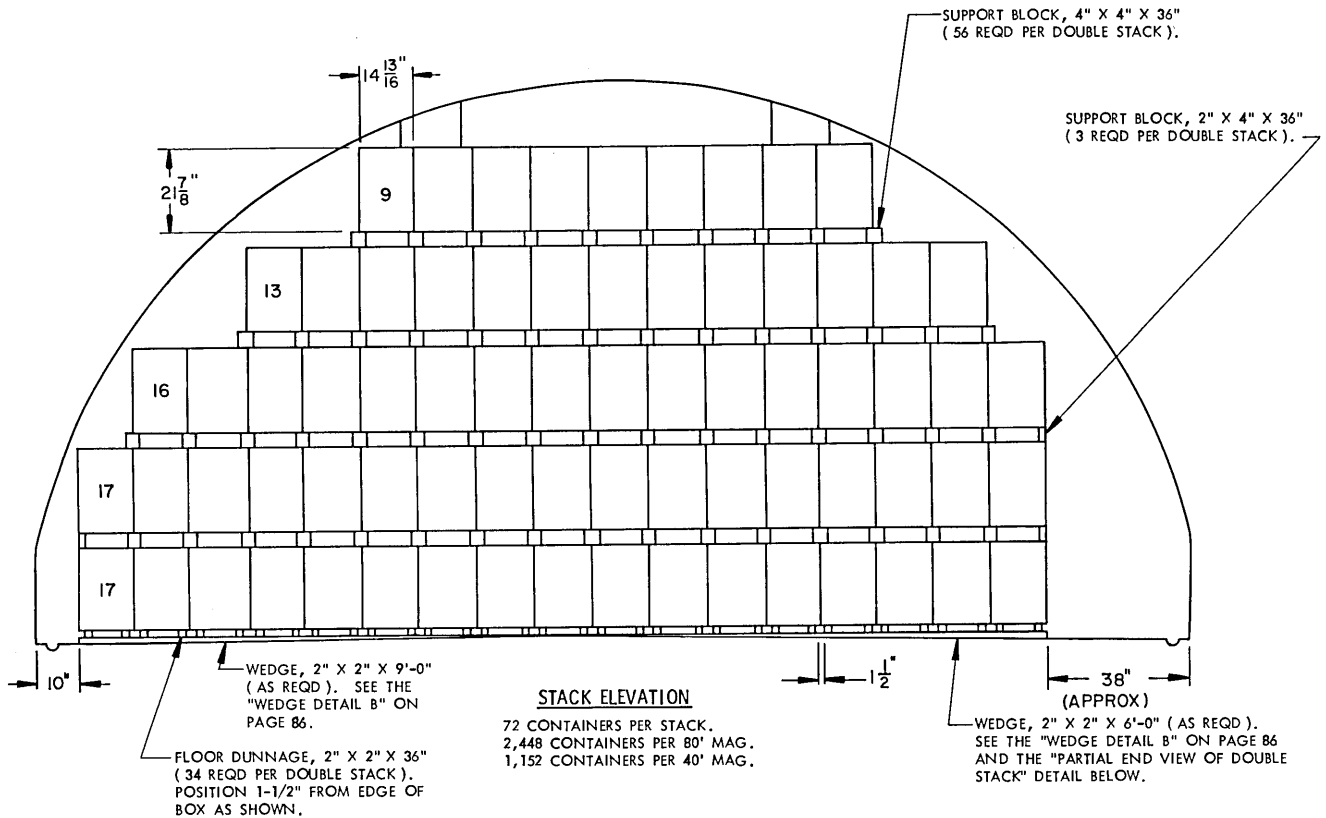
LUMBER	LINEAR FEET	BOARD FEET
2" X 2"	102	34
2" X 4"	24	16
4" X 4"	306	408
WEDGES PER DOUBLE STACK		
LUMBER	LENGTH	NO. REQD
2" X 2"	6'-0"	3
2" X 2"	9'-0"	3

SPECIAL NOTES:

- STORAGE AS SHOWN IS FOR A WOODEN BOX.
BOX DIMENSIONS-----17-13/16" LONG BY 14-13/16" WIDE BY 12-11/16" HIGH.
- SEE THE "TYPICAL PLAN VIEW B" ON PAGE 4.
- THE NUMBERS SHOWN IN THE STACK ELEVATION INDICATE THE QUANTITY OF BOXES PER LAYER IN A STACK.
- STORE IN DOUBLE STACKS FOR BETTER STABILITY. SEE THE "PARTIAL END VIEW OF DOUBLE STACK" ON THIS PAGE.
- THE METHOD OF STORAGE SHOWN PERMITS INSPECTION OF INDIVIDUAL BOXES.
- THE EXPLOSIVE WEIGHT FOR A WOODEN BOX IS 50 POUNDS. THE EXPLOSIVE WEIGHT FOR THE STACK ELEVATION SHOWN ABOVE WILL BE 6,000 POUNDS. THE EXPLOSIVE WEIGHT FOR AN 80'-0" MAGAZINE WILL BE 204,000 POUNDS. THERE WILL BE APPROXIMATELY 21" SPACE AT THE FRONT OF THE MAGAZINE. THE EXPLOSIVE WEIGHT FOR A 40'-0" MAGAZINE WILL BE 96,000 POUNDS AND THERE WILL BE APPROXIMATELY 32" SPACE AT THE FRONT OF THE MAGAZINE. SEE GENERAL NOTE "E" ON PAGE 2.



PARTIAL END VIEW OF DOUBLE STACK



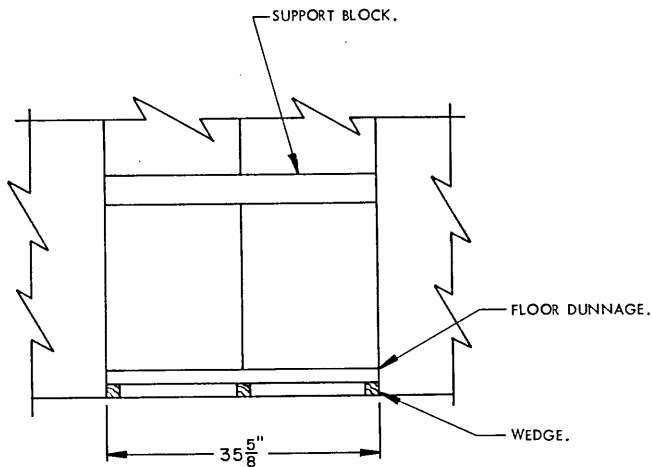
STACK ELEVATION

72 CONTAINERS PER STACK.
 2,448 CONTAINERS PER 80' MAG.
 1,152 CONTAINERS PER 40' MAG.

BILL OF MATERIAL (PER DOUBLE STACK)		
LUMBER	LINEAR FEET	BOARD FEET
2" X 2"	102	34
2" X 4"	9	6
4" X 4"	168	224
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 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 A WOODEN BOX IS 100 POUNDS. THE EXPLOSIVE WEIGHT FOR THE STACK ELEVATION SHOWN ABOVE WILL BE 7,200 POUNDS. THE EXPLOSIVE WEIGHT FOR AN 80'-0" MAGAZINE WILL BE 244,800 POUNDS. THERE WILL BE APPROXIMATELY 21" SPACE AT THE FRONT OF THE MAGAZINE. THE EXPLOSIVE WEIGHT FOR A 40'-0" MAGAZINE WILL BE 115,200 POUNDS AND THERE WILL BE APPROXIMATELY 32" SPACE AT THE FRONT OF THE MAGAZINE. SEE GENERAL NOTE "E" ON PAGE 2.

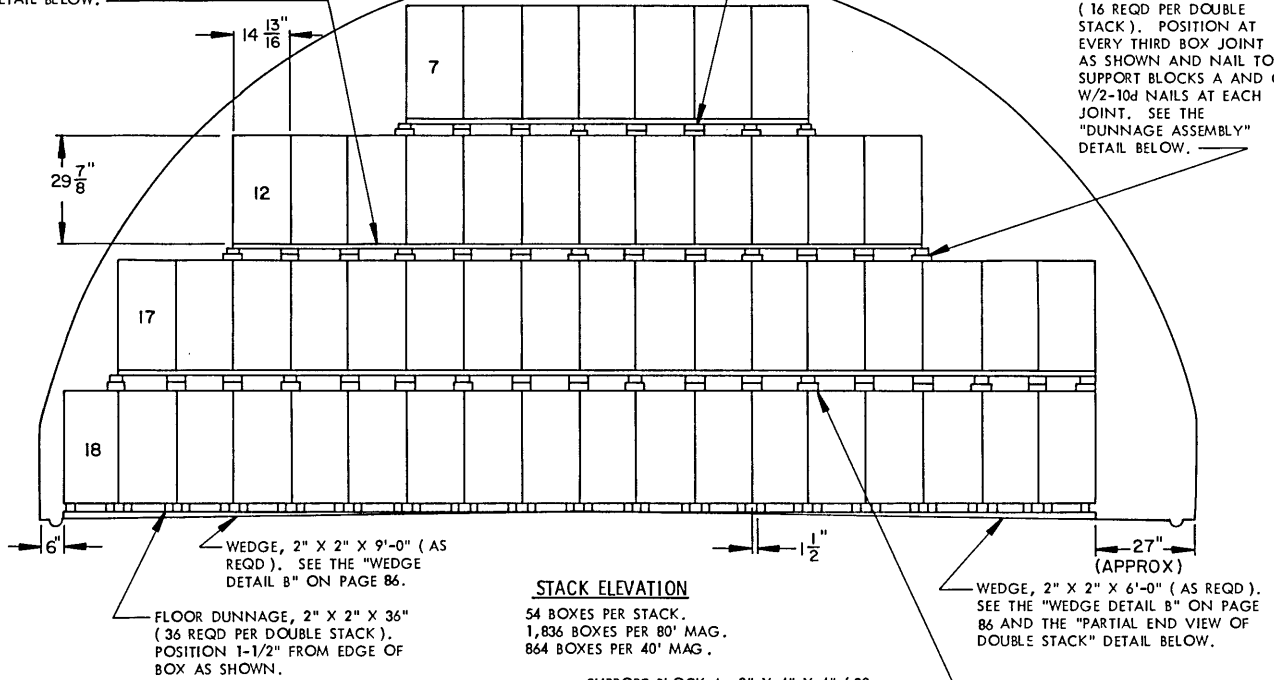


PARTIAL END VIEW OF DOUBLE STACK

INTERMEDIATE DUNNAGE, 1" X 4" BY LENGTH TO SUIT (12 REQD PER DOUBLE STACK). NAIL TO THE TIE PIECES, AND TO SUPPORT BLOCKS B AND D AND THE TIE PIECES W/2-6d NAILS AT EACH JOINT. SEE THE "DUNNAGE ASSEMBLY" DETAIL BELOW.

SUPPORT BLOCK B, 2" X 4" X 4" (DOUBLED) (46 REQD PER DOUBLE STACK). LAMINATE W/2-10d NAILS. SEE THE "DUNNAGE ASSEMBLY" DETAIL BELOW.

TIE PIECE, 2" X 4" X 36" (16 REQD PER DOUBLE STACK). POSITION AT EVERY THIRD BOX JOINT AS SHOWN AND NAIL TO SUPPORT BLOCKS A AND C W/2-10d NAILS AT EACH JOINT. SEE THE "DUNNAGE ASSEMBLY" DETAIL BELOW.



STACK ELEVATION

54 BOXES PER STACK.
1,836 BOXES PER 80' MAG.
864 BOXES PER 40' MAG.

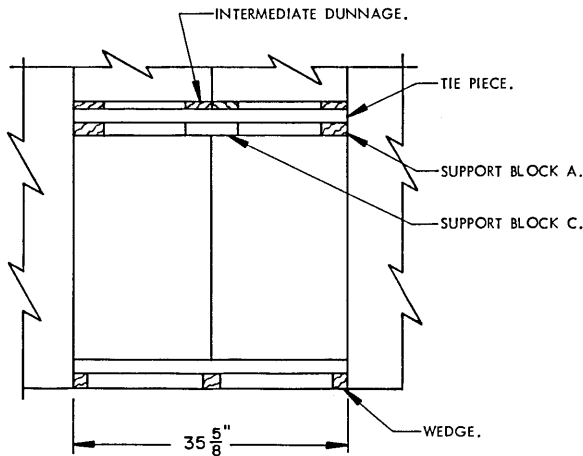
SUPPORT BLOCK A, 2" X 4" X 4" (32 REQD PER DOUBLE STACK). POSITION AT EVERY THIRD BOX JOINT AS SHOWN. SEE THE "DUNNAGE ASSEMBLY" DETAIL BELOW.

BILL OF MATERIAL (PER DOUBLE STACK)

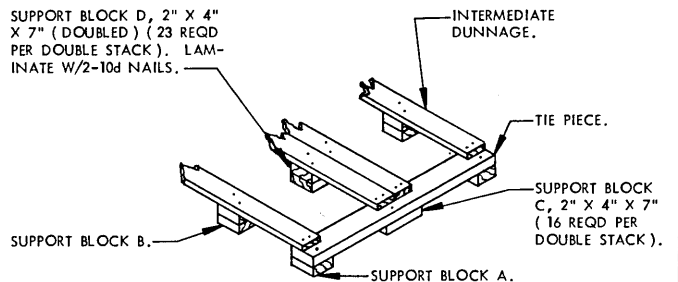
LUMBER	LINEAR FEET	BOARD FEET
1" X 4"	178	60
2" X 2"	108	36
2" X 4"	126	84
NAILS		
	NO. REQD	POUNDS
6d (2")	312	2
10d (3")	234	3-3/4
WEDGES PER DOUBLE STACK		
LUMBER	LENGTH	NO. REQD
2" X 2"	6'-0"	3
2" X 2"	9'-0"	3

SPECIAL NOTES:

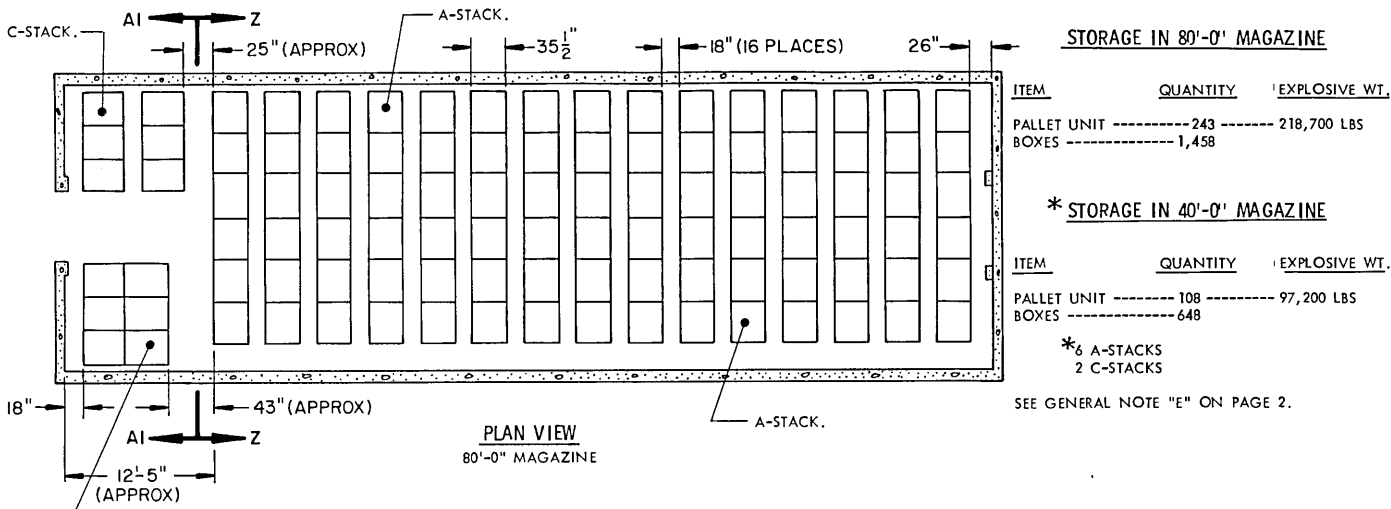
1. STORAGE AS SHOWN IS FOR A WOODEN BOX.
2. SEE THE "TYPICAL PLAN VIEW B" ON PAGE 4.
3. THE NUMBERS SHOWN IN THE STACK ELEVATION INDICATE THE QUANTITY OF BOXES PER LAYER IN A STACK.
4. STORE IN DOUBLE STACKS FOR BETTER STABILITY. SEE THE "PARTIAL END VIEW OF DOUBLE STACK" ON THIS PAGE.
5. THE METHOD OF STORAGE SHOWN PERMITS INSPECTION OF INDIVIDUAL BOXES.
6. THE EXPLOSIVE WEIGHT FOR A WOODEN BOX IS 150 POUNDS. THE EXPLOSIVE WEIGHT FOR THE STACK ELEVATION SHOWN ABOVE WILL BE 8,100 POUNDS. THE EXPLOSIVE WEIGHT FOR AN 80'-0" MAGAZINE WILL BE 275,400 POUNDS. THERE WILL BE APPROXIMATELY 21" SPACE AT THE FRONT OF THE MAGAZINE. THE EXPLOSIVE WEIGHT FOR A 40'-0" MAGAZINE WILL BE 129,600 POUNDS AND THERE WILL BE APPROXIMATELY 32" OF SPACE AT THE FRONT OF THE MAGAZINE. SEE GENERAL NOTE "E" ON PAGE 2.



PARTIAL END VIEW OF DOUBLE STACK



DUNNAGE ASSEMBLY



STORAGE IN 80'-0" MAGAZINE

ITEM	QUANTITY	EXPLOSIVE WT.
PALLET UNIT	243	218,700 LBS
BOXES	1,458	

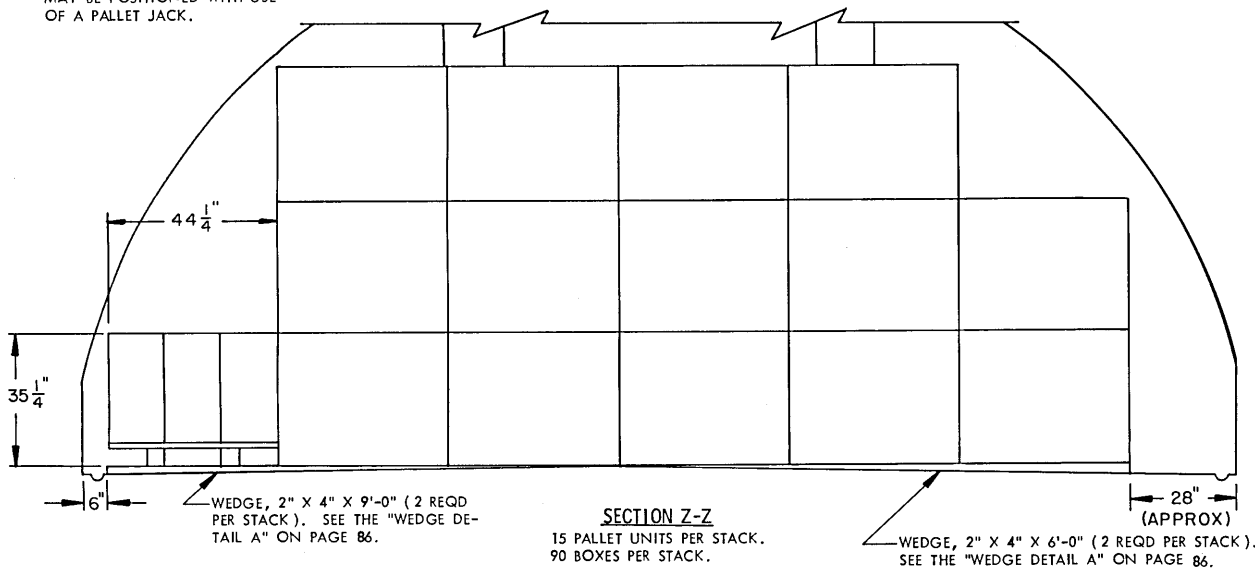
* STORAGE IN 40'-0" MAGAZINE

ITEM	QUANTITY	EXPLOSIVE WT.
PALLET UNIT	108	97,200 LBS
BOXES	648	

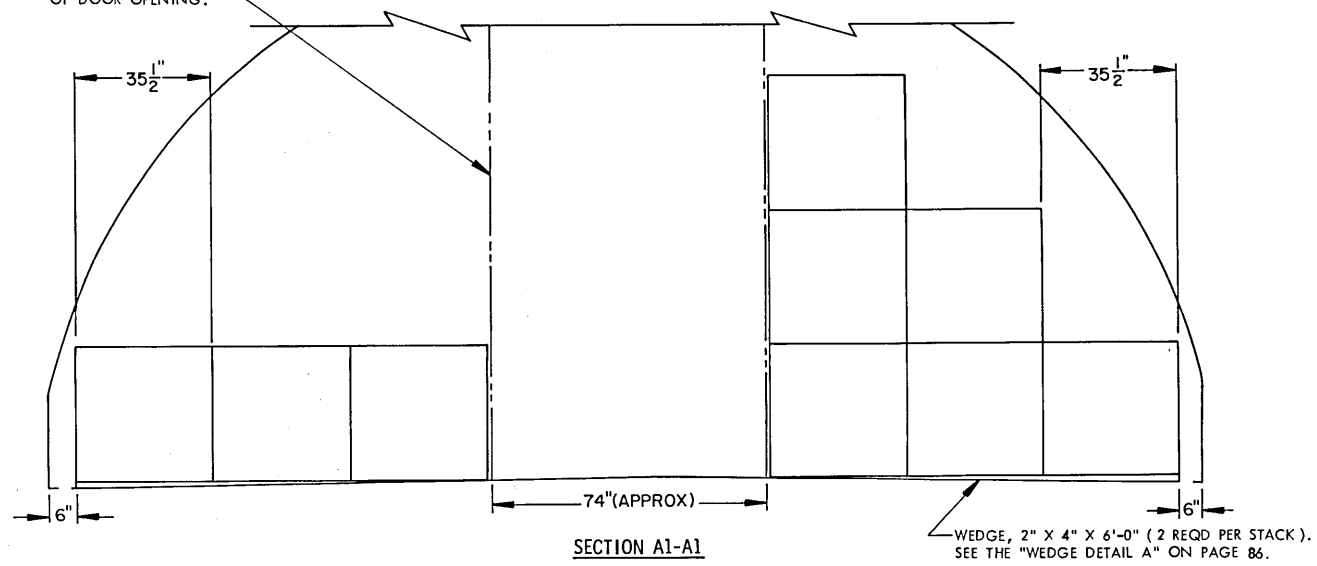
* 6 A-STACKS
2 C-STACKS

SEE GENERAL NOTE "E" ON PAGE 2.

THESE SIX (6) PALLET UNITS
MAY BE POSITIONED WITH USE
OF A PALLET JACK.

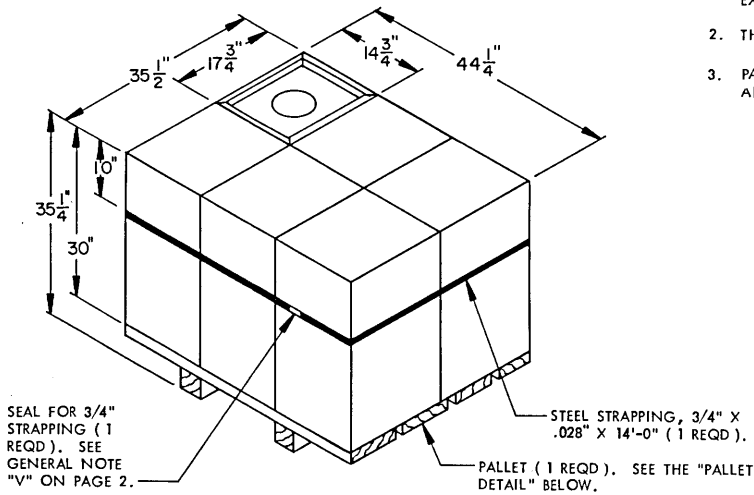


INDICATES OUTLINE
OF DOOR OPENING.



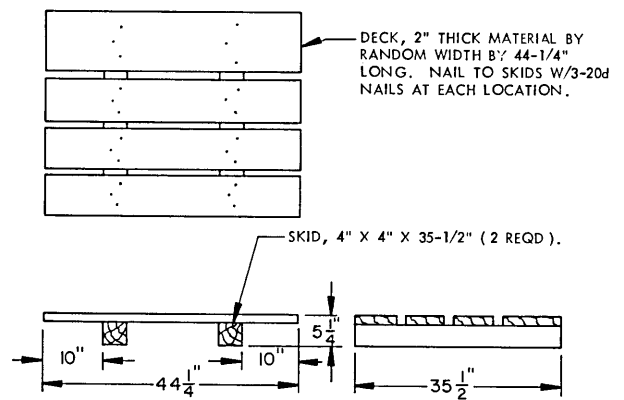
SPECIAL NOTES:

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 35-1/4" 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.

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



PALLET DETAIL

STORAGE IN 80'-0" MAGAZINE

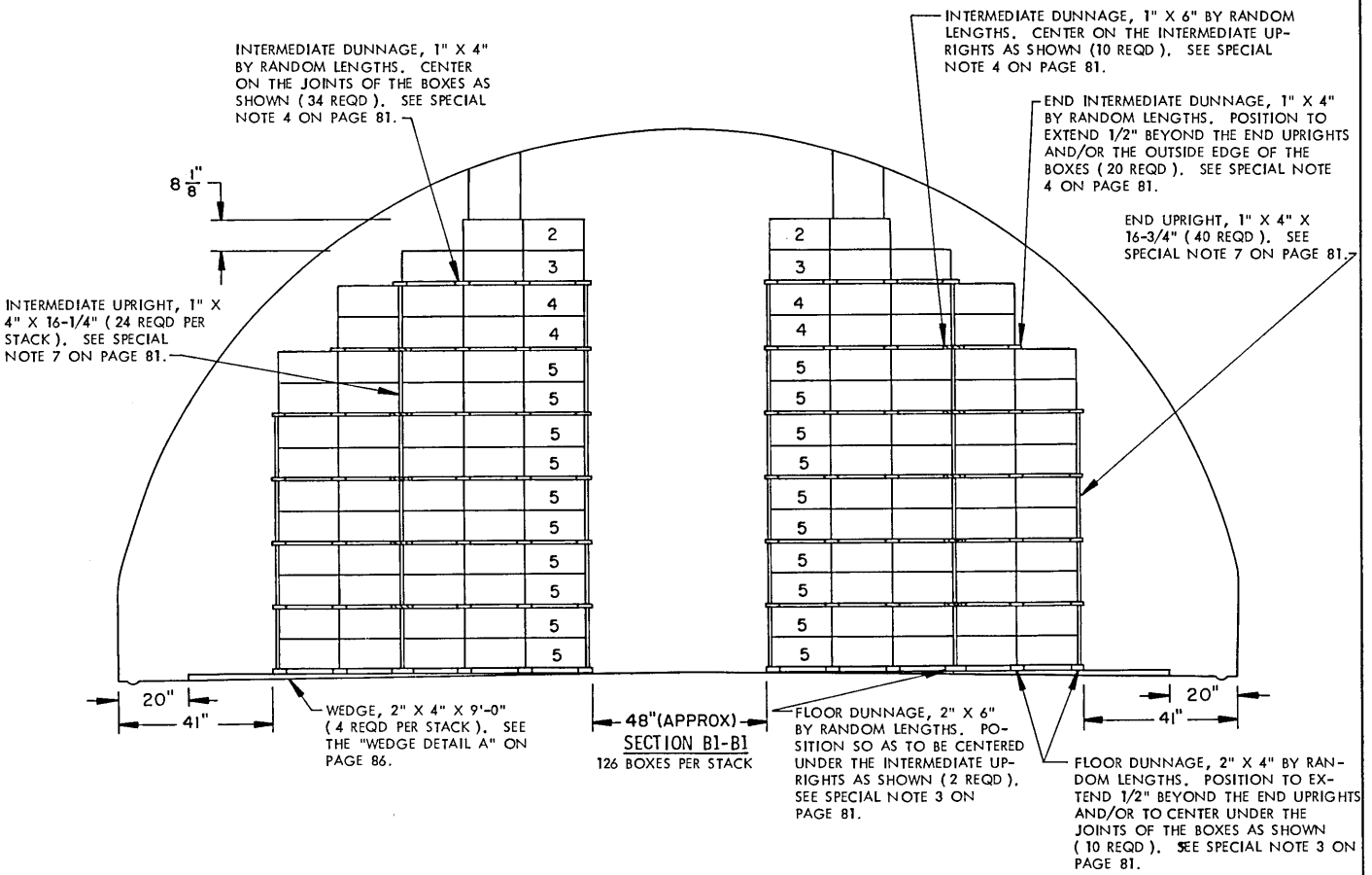
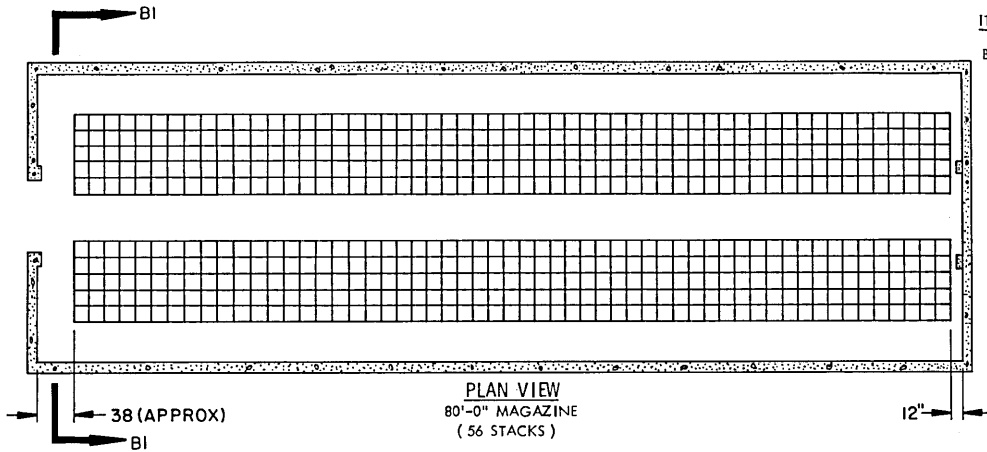
ITEM	QUANTITY	EXPLOSIVE WEIGHT
BOXED TNC	7,056	282,240 LBS

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

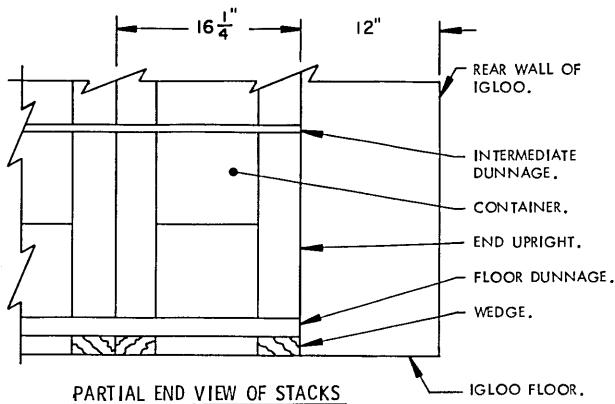
ITEM	QUANTITY	EXPLOSIVE WEIGHT
BOXED TNC	3,402	136,080 LBS

SEE GENERAL NOTE "E" ON PAGE 2, AND SPECIAL NOTE 8 AND "TABLE 4" ON PAGE 81.

* 27 STACKS WITH A 29" (APPROX) SPACE REMAINING AT FRONT.



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



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 LBS
2. STORAGE AS SHOWN IS FOR FIBERBOARD BOXES CONTAINING TNC. THE PROCEDURES ARE ALSO APPLICABLE FOR ALL THE ITEMS LISTED IN TABLE 4. THE EXPLOSIVE WEIGHT PER BOX AND PER 80'-0" AND 40'-0" ARCH TYPE MAGAZINES ARE GIVEN. **CAUTION:** THE EXPLOSIVE LIMIT FOR A MAGAZINE IS NOT TO BE EXCEEDED.
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 FOURTEEN (14) 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. **NOTE:** THE STORAGE PROCEDURES SHOWN 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 STORAGE PROCEDURES APPLICABLE TO THE STORAGE OF THESE ITEMS IN GEOGRAPHICAL AREAS HAVING LOW HUMIDITY, REFER TO THE STORAGE PROCEDURES ON PAGES 42 AND 43.

TABLE 4

80'-0" ARCH TYPE MAGAZINE			
ITEM	EXPL WT/BOX	QUANTITY	EXPLOSIVE WT
TNC	40 LBS	7,056	282,240 LBS
PENTOLITE	35 LBS	7,056	246,960 LBS
POTASSIUM PICRATE	35 LBS	7,056	246,960 LBS
COMPOSITION D-2	30 LBS	7,056	211,680 LBS
MAX 2	50 LBS	7,056	352,800 LBS
MOX 2B	50 LBS	7,056	352,800 LBS
40'-0" ARCH TYPE MAGAZINE			
ITEM	EXPL WT/BOX	QUANTITY	EXPLOSIVE WT
TNC	40 LBS	3,402	136,080 LBS
PENTOLITE	35 LBS	3,402	119,070 LBS
POTASSIUM PICRATE	35 LBS	3,402	119,070 LBS
COMPOSITION D-2	30 LBS	3,402	102,060 LBS
MAX 2	50 LBS	3,402	170,100 LBS
MOX 2B	50 LBS	3,402	170,100 LBS

BILL OF MATERIAL (PER STACK)

LUMBER	LINEAR FEET	BOARD FEET
1" X 4"	162	54
1" X 6"	14	7
2" X 4"	14	10
2" X 6"	3	3
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 80'-0" MAGAZINE

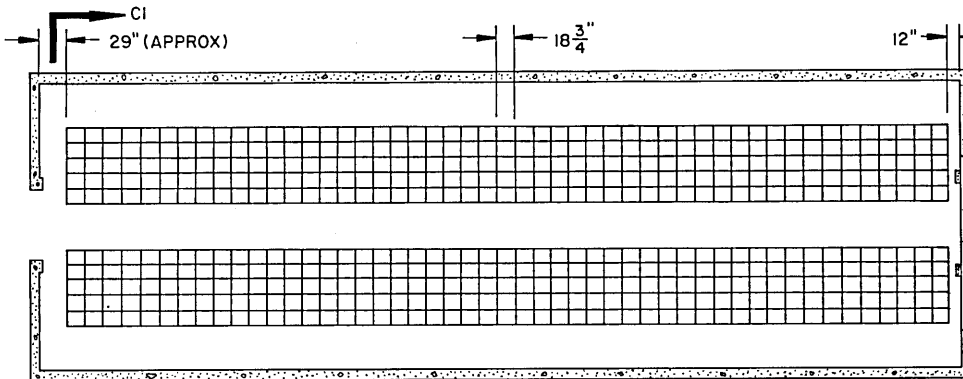
ITEM	QUANTITY	EXPLOSIVE WEIGHT
TNT (50-LB BOX) --	6,174	308,700 LBS

* STORAGE IN 40'-0" MAGAZINE

ITEM	QUANTITY	EXPLOSIVE WEIGHT
TNT (50-LB BOX) --	2,898	144,900 LBS

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

* 23 STACKS WITH A 36" (APPROX) SPACE REMAINING AT FRONT.



PLAN VIEW
80'-0" MAGAZINE
(49 STACKS)

INTERMEDIATE DUNNAGE, 1" X 4" BY RANDOM LENGTHS. CENTER ON THE JOINTS OF THE BOXES AS SHOWN (34 REQD). SEE SPECIAL NOTE 4 ON PAGE 83.

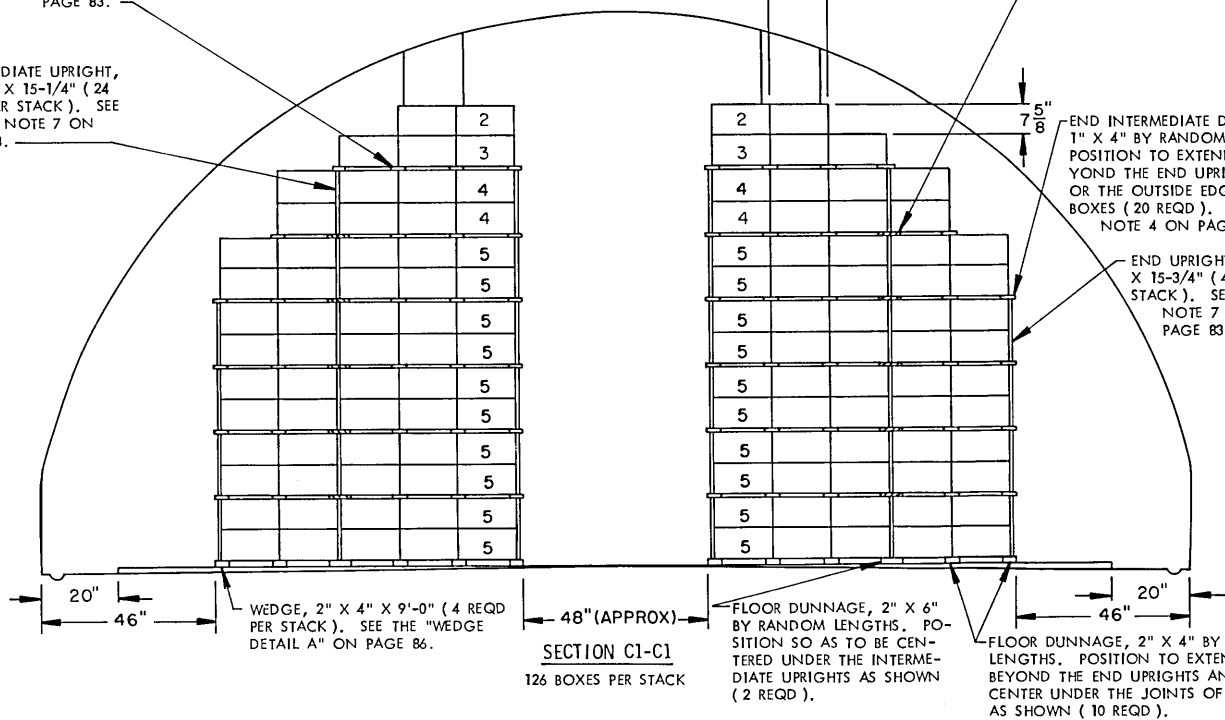
INTERMEDIATE UPRIGHT, 1" X 4" X 15-1/4" (24 REQD PER STACK). SEE SPECIAL NOTE 7 ON PAGE 83.

SEE SPECIAL NOTE 9 ON PAGE 83.

INTERMEDIATE DUNNAGE, 1" X 6" BY RANDOM LENGTHS. CENTER ON THE INTERMEDIATE UPRIGHTS AS SHOWN (10 REQD). SEE SPECIAL NOTE 4 ON PAGE 83.

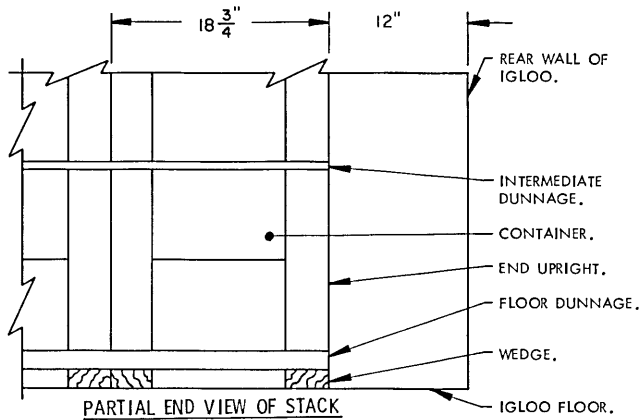
END INTERMEDIATE DUNNAGE, 1" X 4" BY RANDOM LENGTH. POSITION TO EXTEND 1/2" BEYOND THE END UPRIGHTS AND/OR THE OUTSIDE EDGE OF THE BOXES (20 REQD). SEE SPECIAL NOTE 4 ON PAGE 83.

END UPRIGHT, 1" X 4" X 15-3/4" (40 REQD PER STACK). SEE SPECIAL NOTE 7 ON PAGE 83.



SECTION C1-C1
126 BOXES PER STACK

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



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 THE OTHER ITEMS LISTED IN TABLE 5.
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 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 FOURTEEN (14) 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.
8. NOTE: THE STORAGE PROCEDURES SHOWN 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.
9. 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.

TABLE 5

80'-0" ARCH TYPE MAGAZINE			
ITEM	EXPL WT/BOX	QUANTITY	EXPLOSIVE WT
TNT	50 LBS	6,174	308,700 LBS
TNT	55 LBS	6,174	339,570 LBS
ALL COMPOSITION A	60 LBS	6,174	370,440 LBS
ALL COMPOSITION B	60 LBS	6,174	370,440 LBS
COMPOSITION C-3			
AND C-4	60 LBS	6,174	370,440 LBS
EXPLOSIVE D	50 LBS	6,174	308,700 LBS
CYCLOTOL	60 LBS	6,174	370,440 LBS
OCTOL	60 LBS	6,174	370,440 LBS
PBX	60 LBS(MAX)	6,174	370,440 LBS
TETRYL	60 LBS	6,174	370,440 LBS
TOVEX	50 LBS	6,174	308,700 LBS
PBXN 6	50 LBS	6,174	308,700 LBS

40'-0" ARCH TYPE MAGAZINE			
ITEM	EXPL WT/BOX	QUANTITY	EXPLOSIVE WT
TNT	50 LBS	2,898	144,900 LBS
TNT	55 LBS	2,898	159,390 LBS
ALL COMPOSITION A	60 LBS	2,898	173,800 LBS
ALL COMPOSITION B	60 LBS	2,898	173,800 LBS
COMPOSITION C-3			
AND C-4	60 LBS	2,898	173,800 LBS
EXPLOSIVE D	50 LBS	2,898	144,900 LBS
CYCLOTOL	60 LBS	2,898	173,800 LBS
OCTOL	60 LBS	2,898	173,800 LBS
PBX	60 LBS(MAX)	2,898	173,800 LBS
TETRYL	60 LBS	2,898	173,800 LBS
TOVEX	50 LBS	2,898	144,900 LBS
PBXN 6	50 LBS	2,898	144,900 LBS

BILL OF MATERIAL (PER STACK)

LUMBER	LINEAR FEET	BOARD FEET
1" X 4"	168	56
1" X 6"	16	8
2" X 4"	16	11
2" X 6"	4	4

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 AND C-4, EXPLOSIVE D,
 CYCLOTOL, OCTOL, PBX AND TETRYL (PACKED IN FIBERBOARD BOX)

STORAGE IN 80'-0" MAGAZINE

ITEM QUANTITY EXPLOSIVE WEIGHT

FIBERBOARD DRUM ----- 1,392 ----- 194,880 LBS

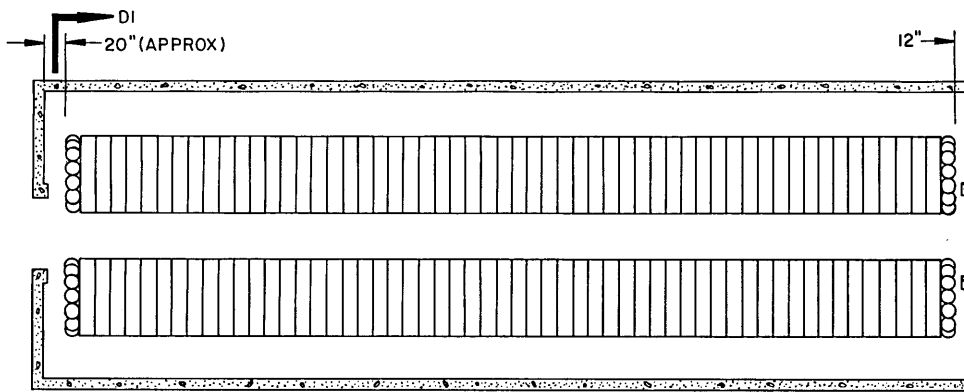
*** STORAGE IN 40'-0" MAGAZINE**

ITEM QUANTITY EXPLOSIVE WEIGHT

FIBERBOARD DRUM ----- 672 ----- 94,080 LBS

* 28 STACKS WITH 20" (APPROX) SPACE REMAINING AT FRONT.

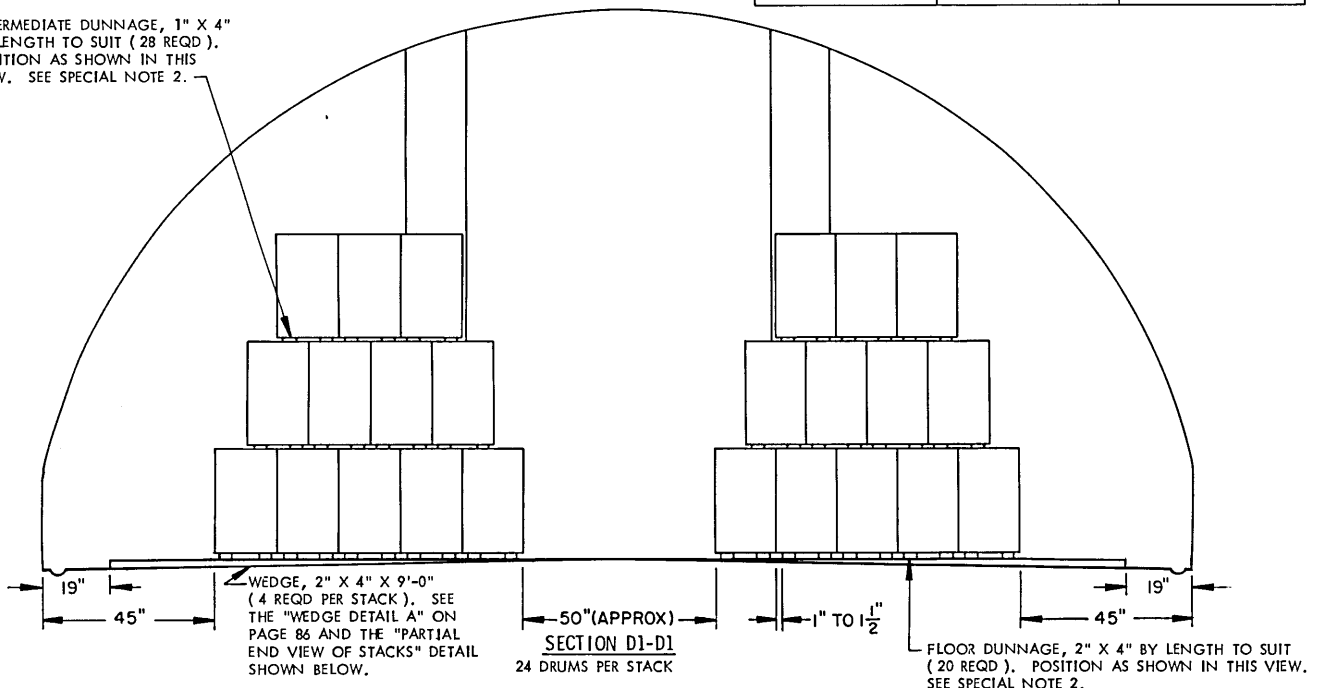
SEE GENERAL NOTE "E" ON PAGE 2.



PLAN VIEW
80'-0" MAGAZINE
(58 STACKS)

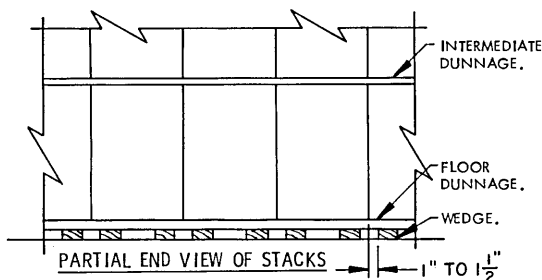
BILL OF MATERIAL (PER STACK)		
LUMBER	LINEAR FEET	BOARD FEET
1" X 4"	38	13
2" X 4"	27	18
WEDGES PER STACK		
LUMBER	LENGTH	NO. REQD
2" X 4"	9'-0"	4

INTERMEDIATE DUNNAGE, 1" X 4" BY LENGTH TO SUIT (28 REQD). POSITION AS SHOWN IN THIS VIEW. SEE SPECIAL NOTE 2.

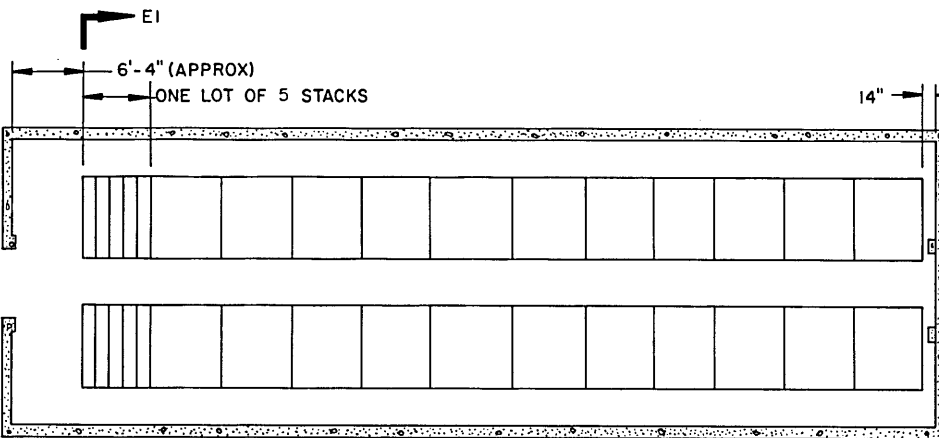


SPECIAL NOTES:

- STORAGE AS SHOWN IS FOR A FIBERBOARD DRUM.
DRUM DIMENSIONS -- 27-1/4" HIGH BY 16" DIAMETER.
EXPLOSIVE WEIGHT -- 140 POUNDS.
- RANDOM LENGTHS OF LUMBER MAY BE USED FOR THE INTERMEDIATE AND FLOOR DUNNAGE.
- FIBERBOARD DRUMS, EXCEPT FOR NITROGUANIDINE AS SHOWN ON PAGE 67, WILL NOT BE STACKED MORE THAN THREE LAYERS HIGH.
- THE DRUMS IN EACH LAYER WILL BE STAGGERED ABOVE THE DRUMS IN THE LAYER UNDERNEATH, AS SHOWN.
- THE STORAGE PROCEDURES SHOWN ON THIS PAGE SHOULD ONLY BE USED WHEN STORING FIBERBOARD DRUMS SUCH AS THESE IN GEOGRAPHICAL AREAS IN WHICH THERE IS A HIGH HUMIDITY LEVEL. FOR PROCEDURES APPLICABLE TO THE STORAGE OF DRUMS IN GEOGRAPHICAL AREAS WHICH HAVE LOW HUMIDITY LEVELS, REFER TO THE PROCEDURES ON PAGE 53.



STORAGE METHOD B
FIBERBOARD DRUM STORAGE, UNPALLETIZED



STORAGE IN 80'-0" MAGAZINE

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

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

ITEM	QUANTITY	EXPLOSIVE WEIGHT
DRUM	1,200	60,000 LBS

* 30 STACKS WITH 39" (APPROX) SPACE REMAINING.
SEE GENERAL NOTE "E" ON PAGE 2.

PLAN VIEW
80'-0" MAGAZINE
(60 STACKS, 12 LOTS)

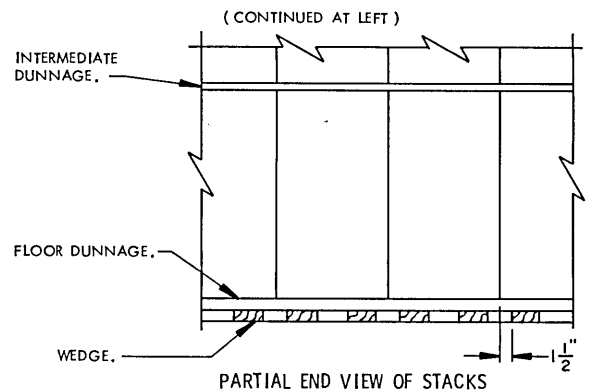
SPECIAL NOTES:

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 E1-E1 INDICATE THE QUANTITY OF DRUMS PER LAYER IN EACH HALF OF THE STACK.

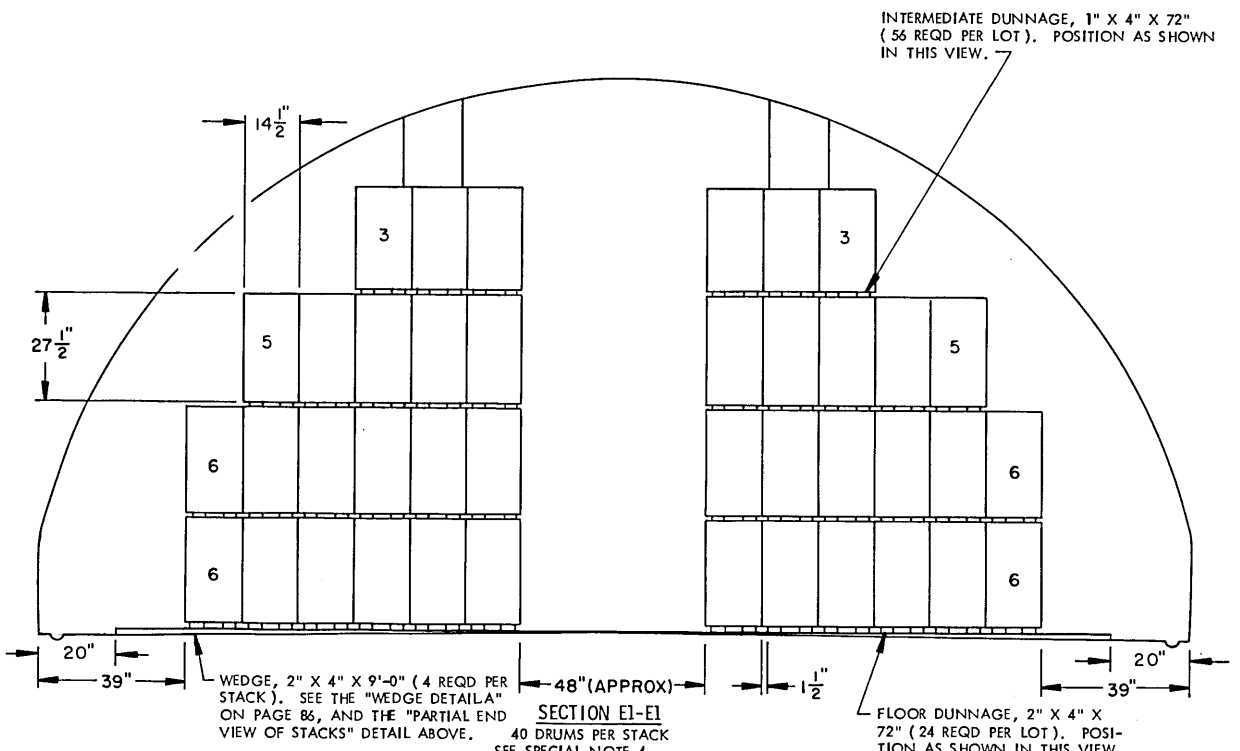
BILL OF MATERIAL (PER LOT)		
LUMBER	LINEAR FEET	BOARD FEET
1" X 4"	336	112
2" X 4"	144	96
WEDGES PER LOT		
LUMBER	LENGTH	NO. REQD
2" X 4"	9'-0"	16

(SPECIAL NOTES CONTINUED)

3. EACH LOT CONSISTS OF 10,000 LBS (200 DRUMS) FIVE (5) STACKS OF 40 DRUMS.
4. THE STORAGE PROCEDURES SHOWN ON THIS PAGE SHOULD ONLY BE USED WHEN STORING FIBERBOARD DRUMS SUCH AS THESE IN GEOGRAPHICAL AREAS IN WHICH THERE IS A HIGH HUMIDITY LEVEL. FOR PROCEDURES APPLICABLE TO THE STORAGE OF NITROGUANIDINE IN GEOGRAPHICAL AREAS WHICH HAVE LOW HUMIDITY LEVELS, REFER TO THE STORAGE PROCEDURES ON PAGE 67.
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.

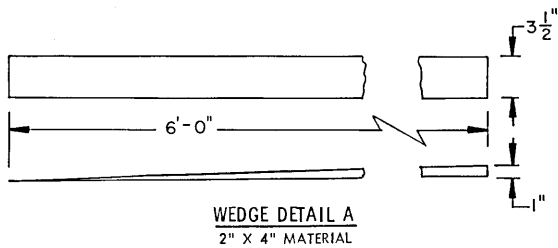


PARTIAL END VIEW OF STACKS

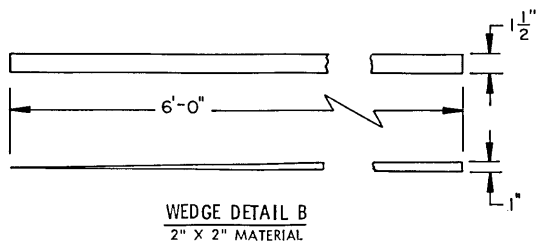


SECTION E1-E1
40 DRUMS PER STACK
SEE SPECIAL NOTE 4.

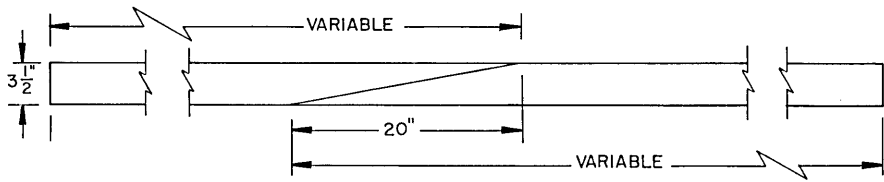
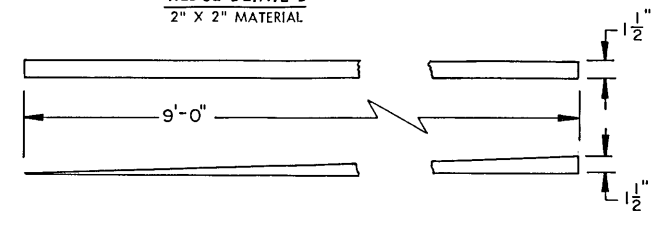
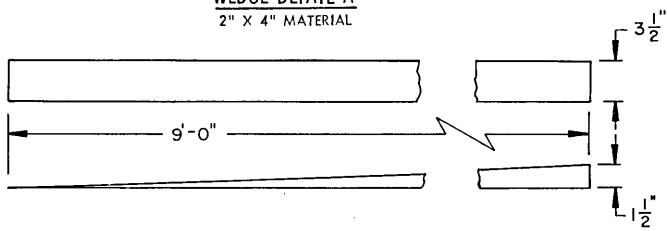
STORAGE METHOD B
NITROGUANIDINE (PACKED IN FIBERBOARD DRUMS)



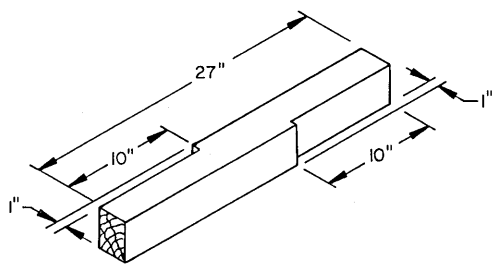
WEDGE DETAIL A
2" X 4" MATERIAL



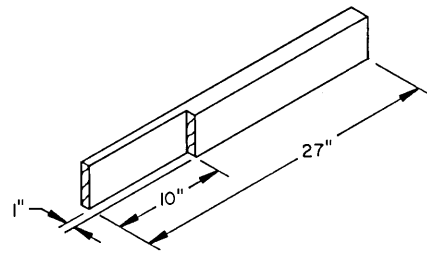
WEDGE DETAIL B
2" X 2" MATERIAL



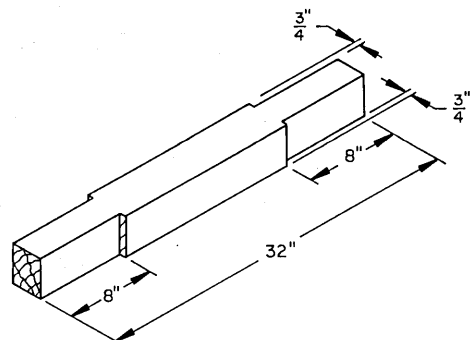
SPLICE DETAIL
1" X 4" OR 2" X 4" MATERIAL



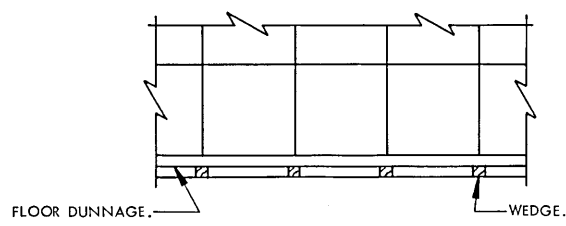
SUPPORT BLOCK A
4" X 4" MATERIAL. SEE
SPECIAL NOTE 5 ON
PAGE 68.



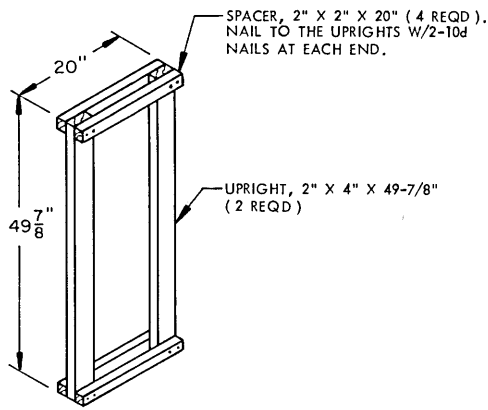
SUPPORT BLOCK B
2" X 4" MATERIAL. SEE
SPECIAL NOTE 5 ON
PAGE 68.



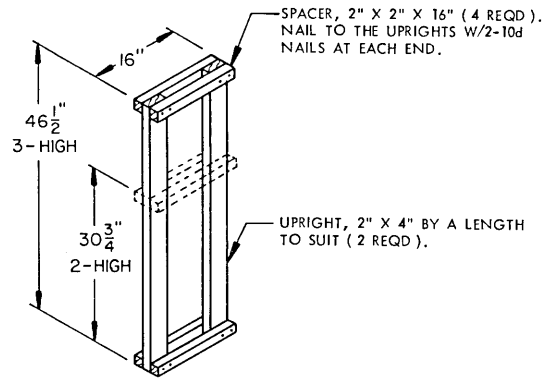
SUPPORT BLOCK C
4" X 4" MATERIAL. SEE
SPECIAL NOTE 5 ON
PAGE 70.



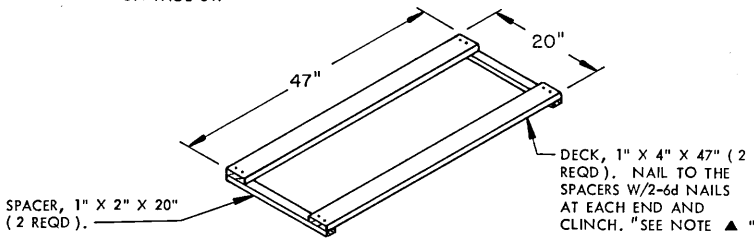
PLACEMENT OF WEDGES
NOTE: WEDGES ARE CENTERED
UNDER THE JOINTS BETWEEN
STACKS.



SEPARATOR ASSEMBLY A
FOR USE IN THE STORAGE SHOWN
ON PAGE 34.

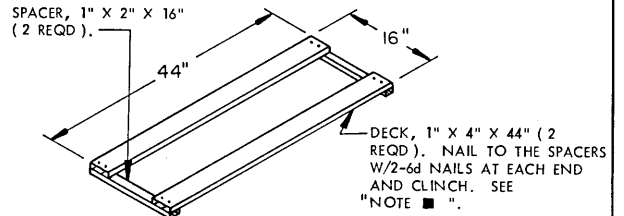


SEPARATOR ASSEMBLY B
FOR USE IN THE STORAGE SHOWN
ON PAGE 35.



DECK ASSEMBLY A

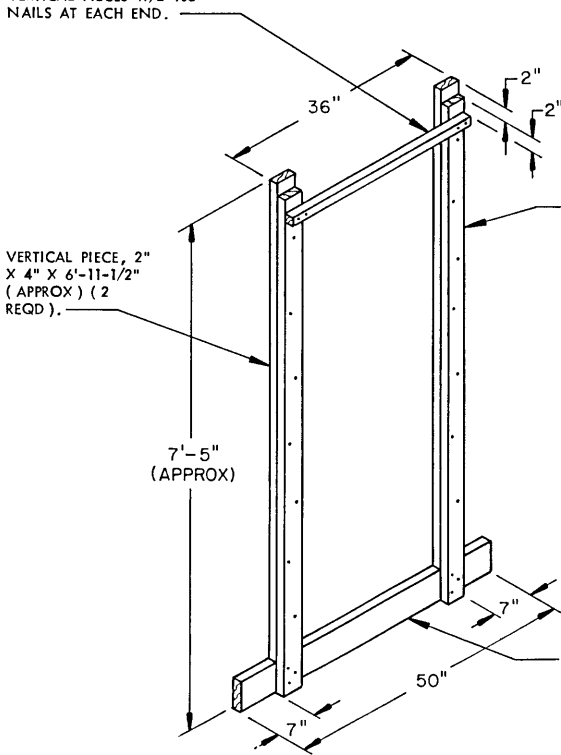
NOTE ▲ : 18 DECK ASSEMBLIES
OF THE SIZE SHOWN ABOVE AND
ONE DECK ASSEMBLY 31" LONG
ARE REQUIRED FOR THE STORAGE
SHOWN ON PAGE 34.



DECK ASSEMBLY B

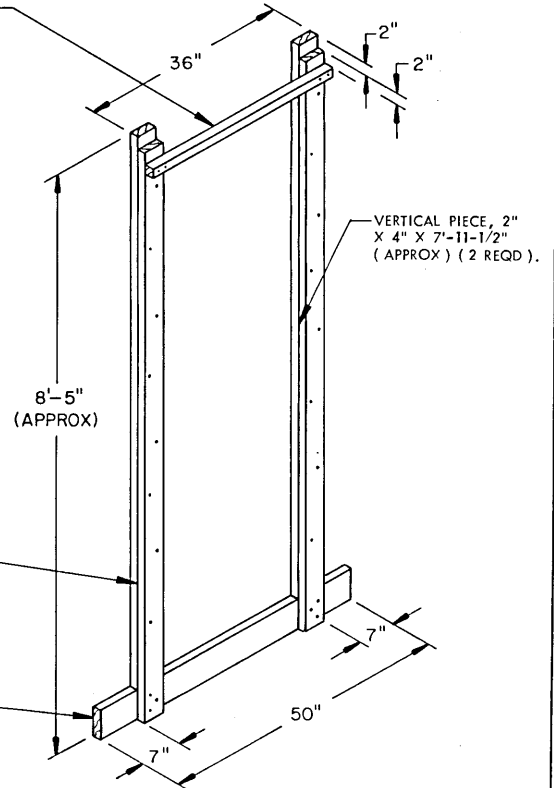
NOTE ■ : 21 DECK ASSEMBLIES
OF THE SIZE SHOWN ABOVE AND
6 DECK ASSEMBLIES 29-1/2" LONG
ARE REQUIRED FOR THE STORAGE SHOWN
ON PAGE 35.

TIE PIECE, 2" X 2" X 36"
(1 REQD). NAIL TO THE
VERTICAL PIECES W/2-10d
NAILS AT EACH END.

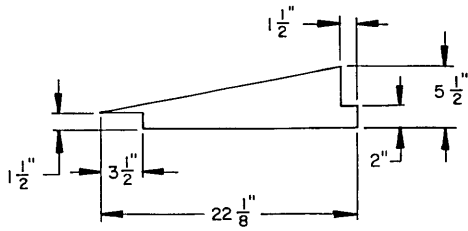


RETAINER ASSEMBLY A
SEE SPECIAL NOTE 7 ON PAGE 71.

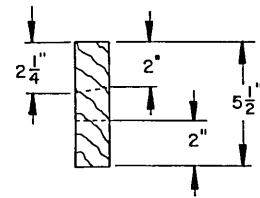
TIE PIECE, 2" X 2" X 36" (1
REQD). NAIL TO THE
VERTICAL
PIECES W/2-10d NAILS AT EACH
END.



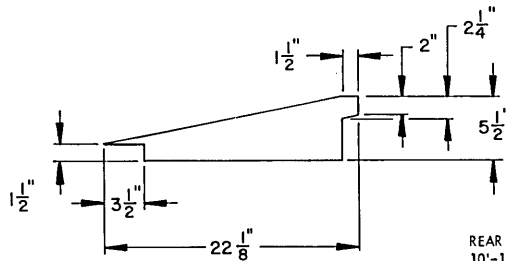
RETAINER ASSEMBLY B
SEE SPECIAL NOTE 7 ON PAGE 74.



BRACE A
2" X 6" MATERIAL



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

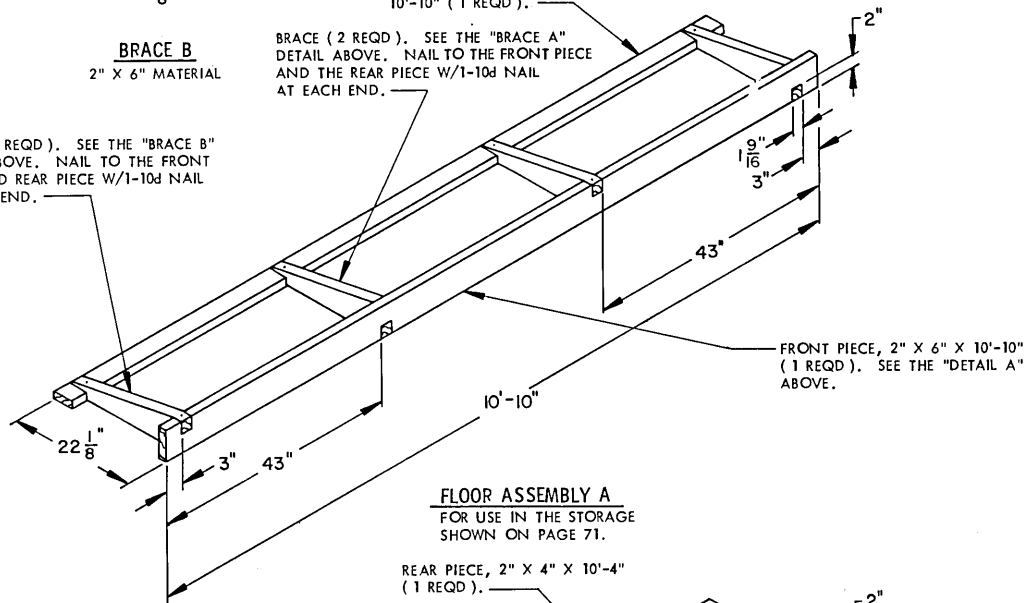


BRACE B
2" X 6" MATERIAL

REAR PIECE, 2" X 4" X 10'-10" (1 REQD).

BRACE (2 REQD). SEE THE "BRACE A" DETAIL ABOVE. NAIL TO THE FRONT PIECE AND THE REAR PIECE W/1-10d NAIL AT EACH END.

BRACE (2 REQD). SEE THE "BRACE B" DETAIL ABOVE. NAIL TO THE FRONT PIECE AND REAR PIECE W/1-10d NAIL AT EACH END.

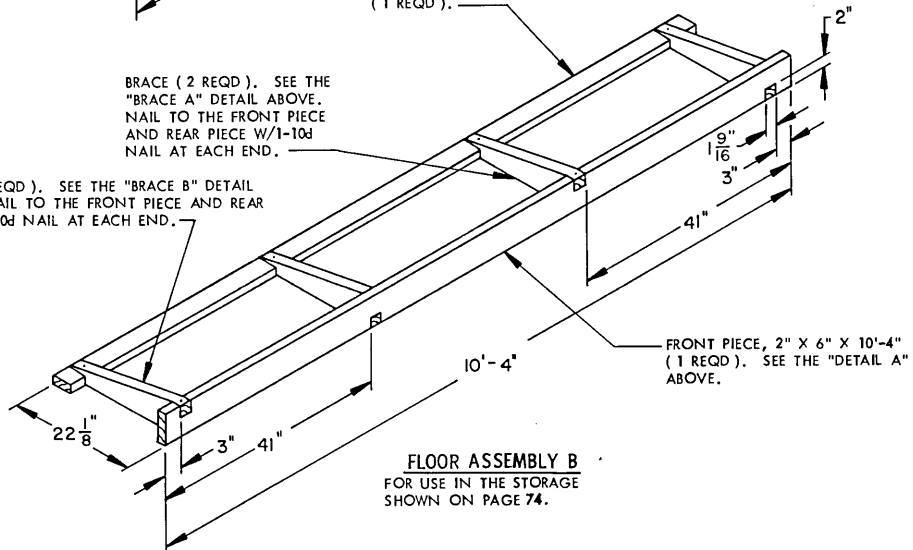


FLOOR ASSEMBLY A
FOR USE IN THE STORAGE SHOWN ON PAGE 71.

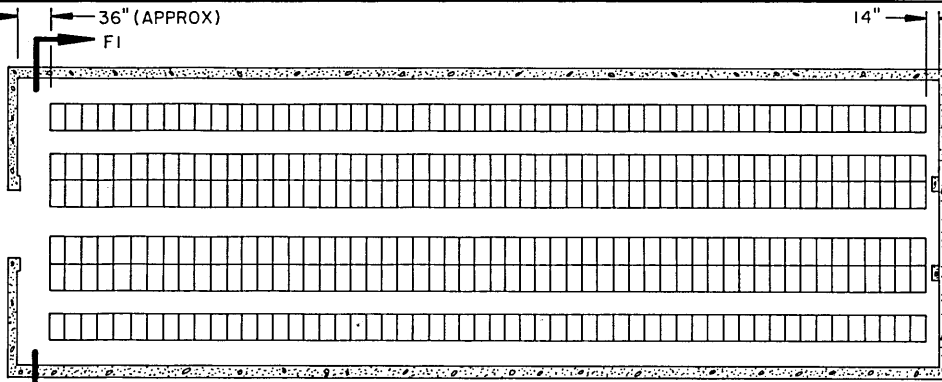
REAR PIECE, 2" X 4" X 10'-4" (1 REQD).

BRACE (2 REQD). SEE THE "BRACE A" DETAIL ABOVE. NAIL TO THE FRONT PIECE AND REAR PIECE W/1-10d NAIL AT EACH END.

BRACE (2 REQD). SEE THE "BRACE B" DETAIL ABOVE. NAIL TO THE FRONT PIECE AND REAR PIECE W/1-10d NAIL AT EACH END.



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



STORAGE IN 80'-0" MAGAZINE

ITEM	QUANTITY	EXPLOSIVE WEIGHT
BOXES	3,360	369,600 LBS

SEE GENERAL NOTE "E" ON PAGE 2.

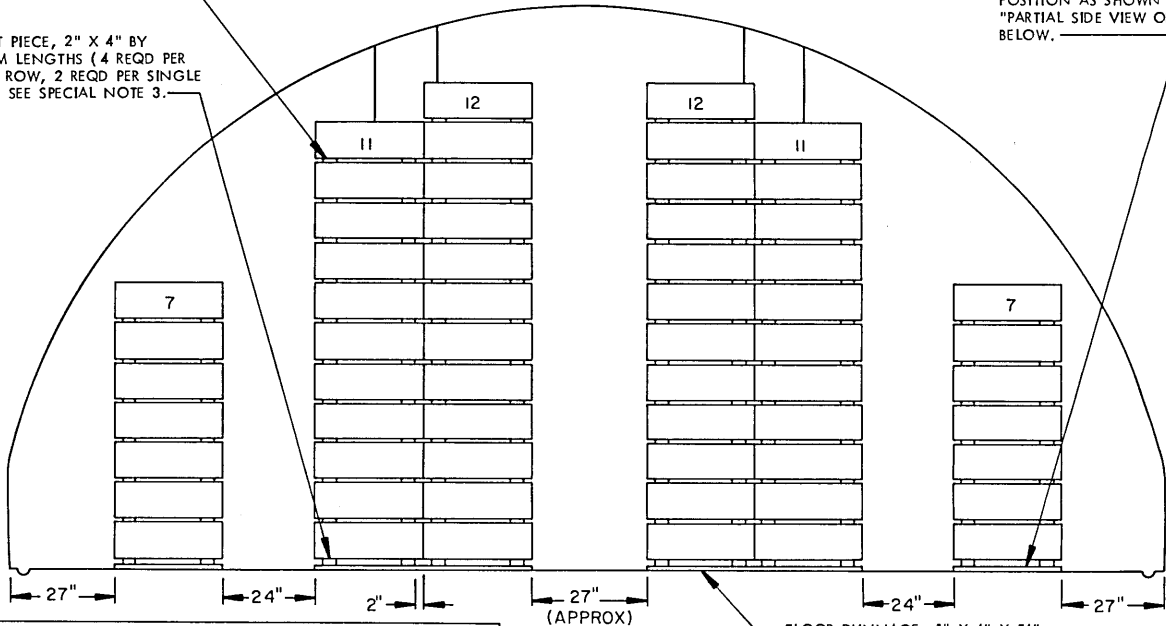
PLAN VIEW

80'-0" MAGAZINE
(56 STACKS)

INTERMEDIATE DUNNAGE, 1" X 4" BY RANDOM LENGTHS (42 REQD PER DOUBLE ROW, 12 REQD PER SINGLE ROW). SEE SPECIAL NOTE 4.

SUPPORT PIECE, 2" X 4" BY RANDOM LENGTHS (4 REQD PER DOUBLE ROW, 2 REQD PER SINGLE ROW). SEE SPECIAL NOTE 3.

FLOOR DUNNAGE, 1" X 4" X 28" (57 REQD, 1 PER STACK PLUS 1). POSITION AS SHOWN IN THE "PARTIAL SIDE VIEW OF A ROW" BELOW.



BILL OF MATERIAL (PER DOUBLE ROW) •

LUMBER	LINEAR FEET	BOARD FEET
1" X 4"	3,442	1,148
2" X 4"	304	203
(PER SINGLE ROW) ••		
LUMBER	LINEAR FEET	BOARD FEET
1" X 4"	1,043	348
2" X 4"	152	102

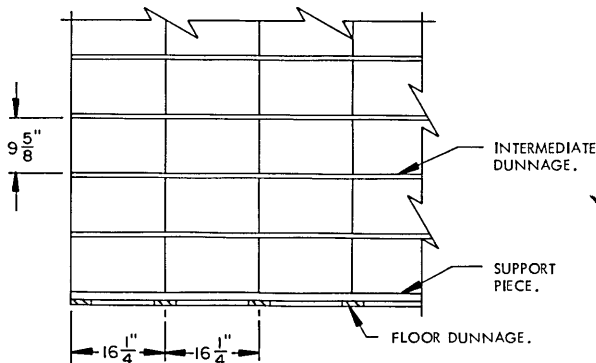
SECTION F1-F1
60 BOXES PER STACK

FLOOR DUNNAGE, 1" X 4" X 54" (57 REQD, 1 PER STACK PLUS 1). POSITION AS SHOWN IN THE "PARTIAL SIDE VIEW OF A ROW" BELOW.

- 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".

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.



PARTIAL SIDE VIEW OF A ROW

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

