

D L / h

DATE 3/04/01

APPENDIX 108

LOADING AND BRACING PROCEDURES FOR AMMUNITION LOADED ON CONTAINER ROLL IN/OUT PLATFORM (CROP)

DEMOLITION MATERIALS UNITIZED ON WOODEN
PALLET; INCLUDES TWO UNIQUE PALLET UNIT
CONFIGURATIONS PER LOAD

INDEX

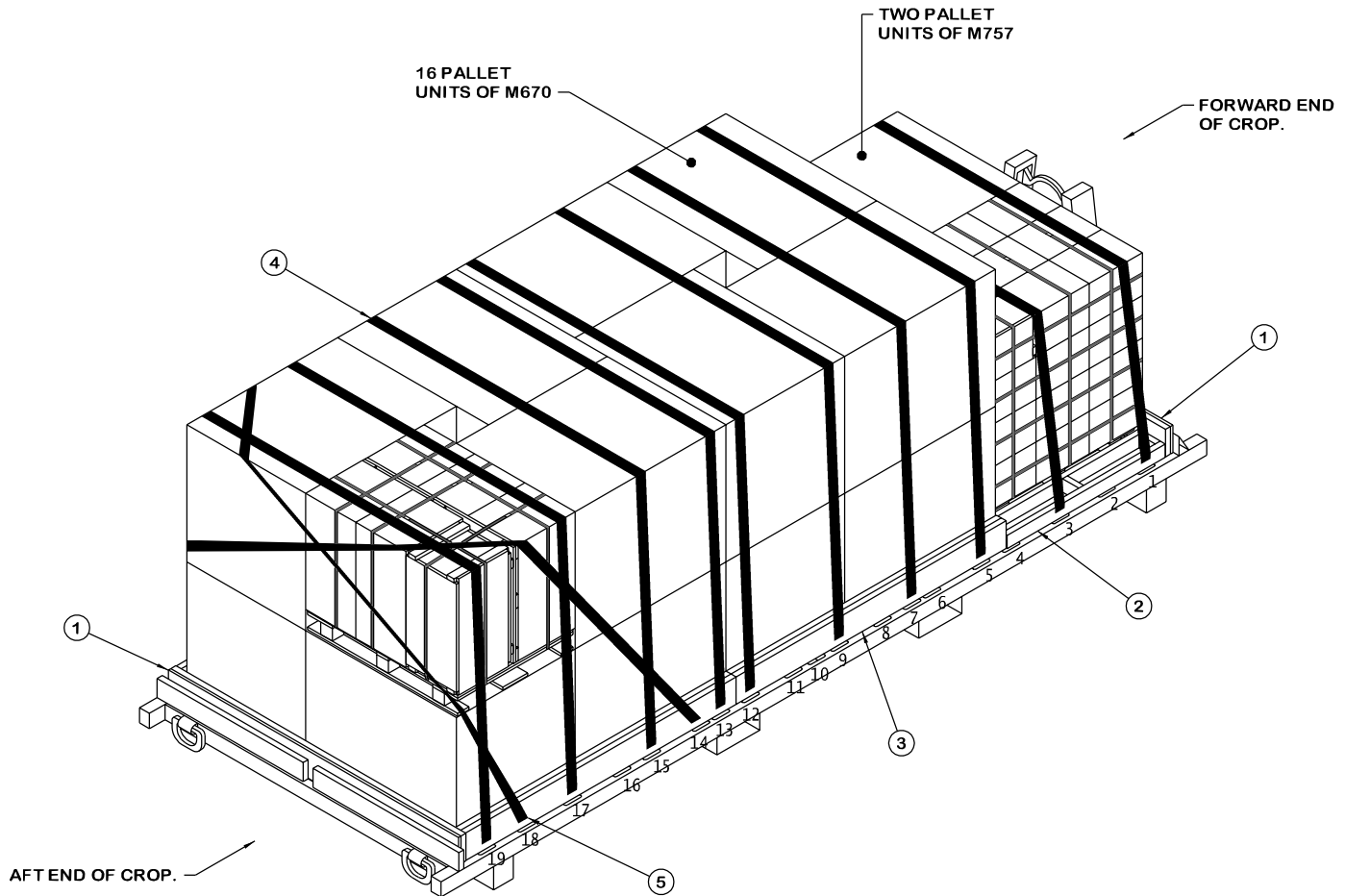
<u>ITEM</u>	<u>PAGE(S)</u>
TYPICAL LOADING PROCEDURES - - - - -	2
GENERAL NOTES - - - - -	3
PALLET UNIT DETAILS - - - - -	4
DETAILS - - - - -	5

NOTICE: THIS APPENDIX CANNOT STAND ALONE BUT MUST BE USED IN CONJUNCTION WITH THE BASIC CROP OUTLOADING PROCEDURES DRAWING 19-48-4906-CA17Q7.

- LOADING AND BRACING SPECIFICATIONS SET FORTH WITHIN THIS DRAWING ARE APPLICABLE TO LOADS THAT ARE TO BE SHIPPED BY TRAILER/CONTAINER-ON-FLATCAR (T/COFC) RAIL CARRIER SERVICE. THESE SPECIFICATIONS MAY ALSO BE USED FOR LOADS THAT ARE TO BE MOVED BY MOTOR OR WATER CARRIERS.

U.S. ARMY MATERIEL COMMAND DRAWING

APPROVED, U.S. ARMY OPERATIONS SUPPORT COMMAND <i>Timothy R. Fore</i>	ENGINEER	BASIC	WALTER GORDON		DO NOT SCALE			
		REV.			WEBSITE: HTTP://WWW.DAC.ARMY.MIL			
	TECHNICIAN	BASIC			JANUARY 2001			
	REV.							
	DRAFTSMAN	BASIC						
		REV.						
APPROVED BY ORDER OF COMMANDING GENERAL, U.S. ARMY MATERIEL COMMAND <i>J. P. White</i> U.S. ARMY DEFENSE AMMUNITION CENTER	TRANSPORTATION ENGINEERING DIVISION	<i>Raura A. Fyffe</i>						
	VALIDATION ENGINEERING DIVISION	<i>[Signature]</i> TESTED			CLASS	DIVISION	DRAWING	FILE
	ENGINEERING DIRECTORATE	<i>William R. Jurek</i>			19	48	4906/ 108	CA17Q7



ISOMETRIC VIEW

KEY NUMBERS

- ① END BLOCKING ASSEMBLY (2 REQD). SEE THE DETAIL ON PAGE 5. CENTER AGAINST CROP END GATE AND, AFTER PALLET UNITS ARE LOADED, NAIL TWO 12d NAILS THRU UPPER CORNER OF OPENING IN AFT END GATES INTO THE AFT END BLOCKING ASSEMBLY, WITH NAIL HEADS PROTRUDING AND BENT OVER VERTICAL TUBE OF END GATES TO PROVIDE LATERAL AND VERTICAL RESTRAINT.
- ② SIDE BLOCKING ASSEMBLY (2 REQD). SEE THE DETAIL ON PAGE 5. INSTALL ONE ASSEMBLY ON EACH SIDE OF CROP ADJACENT TO THE M757 PALLET UNITS. SEE GENERAL NOTE "G" ON PAGE 3.
- ③ SIDE FILL, 2" X 8" X 6'-10" (DOUBLED) (4 REQD). LAMINATE THE SECOND PIECE TO THE FIRST PIECE W/7-10d NAILS. INSTALL ON EACH SIDE OF CROP ADJACENT TO THE M670 PALLET UNITS. SEE GENERAL NOTE "G" ON PAGE 3.
- ④ HOLD-DOWN STRAP, 3-INCH WIDE WEB STRAP TIEDOWN ASSEMBLY FOR CROP (10 REQD). INSTALL EACH STRAP FROM THE DESIGNATED TIEDOWN ANCHOR ON ONE SIDE OF CROP, OVER TOP OF PALLET UNITS, TO CORRESPONDING TIEDOWN ANCHOR ON OPPOSITE SIDE OF CROP. ALIGN SCUFF SLEEVES OVER ALL SHARP EDGES AND FIRMLY TENSION STRAP. SEE GENERAL NOTES "F" AND "H" ON PAGE 3.
- ⑤ AFT END RESTRAINT STRAP, 3-INCH WIDE WEB STRAP TIEDOWN ASSEMBLY FOR CROP (2 REQD). INSTALL EACH STRAP FROM THE EIGHTEENTH TIEDOWN ANCHOR ON ONE SIDE OF THE CROP (ONE ON EACH SIDE), ACROSS THE AFT OF THE TOP LAYER OF PALLET UNITS, OVER THE TOP AND BACK DOWN TO THE FOURTEENTH TIEDOWN ANCHOR ON THE OPPOSITE SIDE OF THE CROP. ALIGN SCUFF SLEEVES OVER ALL SHARP EDGES AND FIRMLY TENSION STRAP. SEE GENERAL NOTES "F" AND "H" ON PAGE 3.

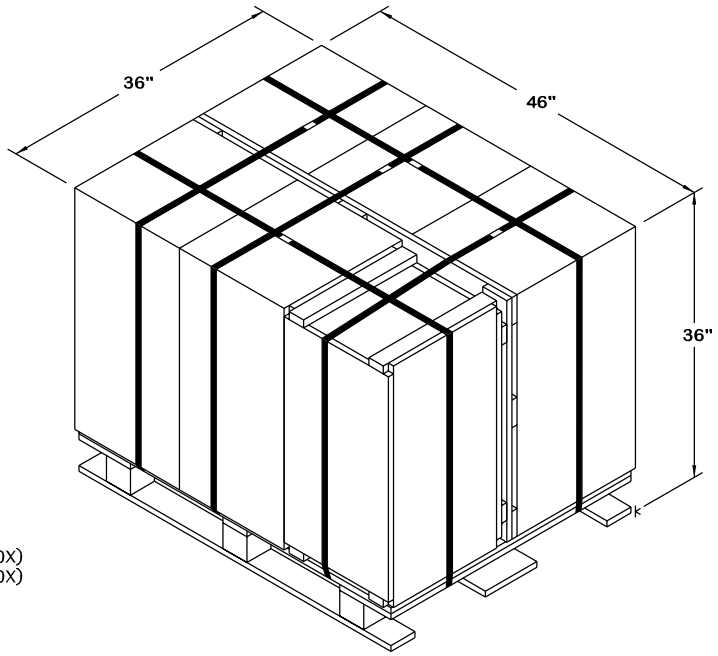
GENERAL NOTES

- A. THIS APPENDIX CANNOT STAND ALONE BUT MUST BE USED IN CONJUNCTION WITH THE BASIC LOADING PROCEDURES DRAWING 19-48-4906-CA17Q7. TO PRODUCE AN APPROVED LOAD, ALL PERTINENT PROCEDURES, SPECIFICATIONS AND CRITERIA SET FORTH WITHIN THE BASIC DRAWING WILL APPLY TO THE PROCEDURES DELINEATED IN THIS APPENDIX. ANY EXCEPTIONS TO THE BASIC PROCEDURES ARE SPECIFIED IN THIS APPENDIX.
- B. THE OUTLOADING PROCEDURES DEPICTED IN THIS DRAWING ARE APPLICABLE TO LOADS OF 18 PALLET UNITS. SEE PAGE 4 FOR DETAILS OF THE TYPICAL PALLET UNITS. AN M3 (SUMMA) CROP IS SHOWN AS TYPICAL. OTHER MANUFACTURER'S CROPS CAN BE USED FOR THE LOAD SHOWN ON PAGE 2. THE AFT AND FORWARD END FILL ASSEMBLIES OR PIECES MUST BE RESTRAINED FROM MOVING IN BOTH THE LATERAL AND VERTICAL DIRECTIONS. THIS IS ACCOMPLISHED IN THE LOAD SHOWN ON PAGE 2 WITH HOLD DOWN PIECES AND RETAINING NAILS. IF THE CONFIGURATION OF A CROP IS SUCH THAT VERTICAL OR LATERAL RESTRAINT CANNOT BE PROVIDED, ADDITIONAL RESTRAINT METHODS, TO INCLUDE HOLD DOWN PIECES, RETAINING NAILS, AND/OR 2" WIDE WEB STRAP TIEDOWN ASSEMBLIES MUST BE INSTALLED.
- C. THE LOADING PROCEDURES DEPICTED HEREIN MAY BE USED FOR OUTLOADING PALLET UNITS WITH DIMENSIONS OTHER THAN WHAT IS SHOWN ON PAGE 4, PROVIDED THE OVERALL PALLET UNIT DIMENSIONS RESULT IN A LOAD THAT IS CONTAINED WITHIN AN ENVELOPE OF 211" L X 89" W X 73-1/2" H.
- D. DIMENSIONS, CUBE AND WEIGHT OF THE PALLET UNITS WILL VARY SLIGHTLY DEPENDING UPON THE ACTUAL DIMENSIONS OF THE BOXES AND THE WEIGHT OF THE SPECIFIC ITEM BEING UNITIZED.
- E. DIMENSIONS GIVEN FOR DUNNAGE ASSEMBLIES WILL BE FIELD CHECKED PRIOR TO THEIR ASSEMBLY. PALLET UNITS MUST FIT SNUGLY AGAINST THE DUNNAGE ASSEMBLIES. THIS GUIDANCE MUST BE APPLIED PRIOR TO BEGINNING AN OUTLOADING OPERATION. ALSO, DUE TO VARIATION OF PALLET UNIT DIMENSIONS, ADJUSTMENTS MAY BE REQUIRED AS TO THE LOCATION OF CERTAIN PIECES ON DUNNAGE ASSEMBLIES.
- F. ALL WEB STRAP TIEDOWN ASSEMBLIES MUST HAVE THE EXCESS LENGTH OF THE STRAP SECURED. ROLL UP AND BUNDLE THE EXCESS LENGTH OF WEB STRAP, SECURING WITH CABLE TIES. SEE THE "STRAP END SECUREMENT" DETAIL AND GENERAL NOTE "K.12" IN THE BASIC PROCEDURE DRAWING 19-48-4906-CA17Q7.
- G. EACH END OF THE SIDE FILL PIECES AND ASSEMBLIES MUST BE SECURED BY NAILING A 10d NAIL THRU A 3" WEBSTRAP HOOK SLOT. SEE "STRAP HOOK DETAIL" AND GENERAL NOTE "G.2" IN THE BASIC PROCEDURES DRAWING 19-48-4906-CA17Q7.
- H. UNUSED WEB STRAP TIEDOWN ASSEMBLIES MUST BE SECURED AS DELINEATED IN GENERAL NOTE "K.13" IN THE BASIC PROCEDURE DRAWING 19-48-4906-CA17Q7.
- J. 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 0.454 KG.

BILL OF MATERIAL		
LUMBER	LINEAR FEET	BOARD FEET
1" X 8"	15	10
2" X 3" (ACTUAL)	2	1
2" X 4"	19	12
2" X 8"	69	92
NAILS	NO. REQD	POUNDS
6d (2")	16	NIL
10d (3")	58	1
12d (3-1/4")	2	NIL

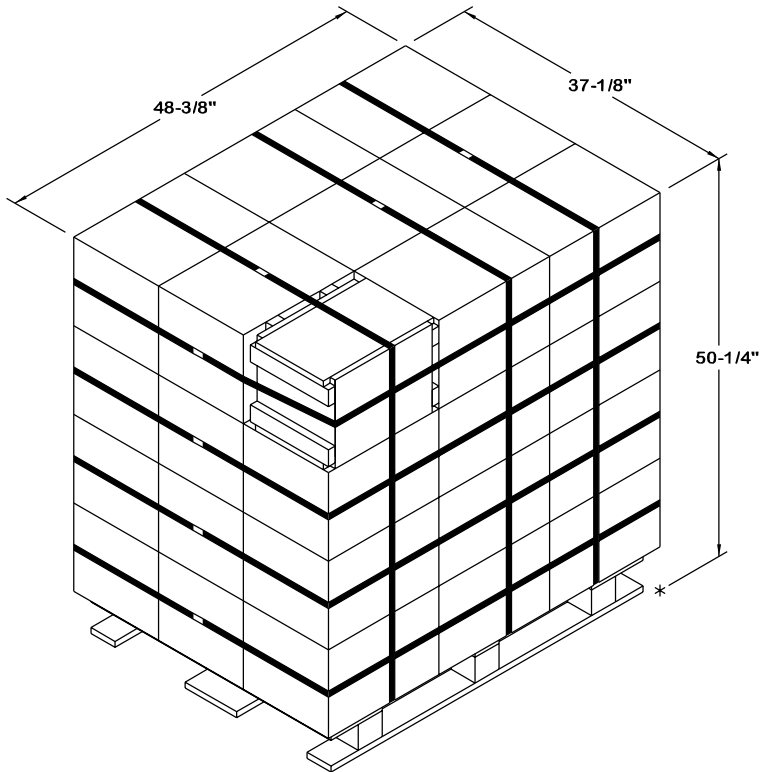
LOAD AS SHOWN

ITEM	QUANTITY	WEIGHT (APPROX)
M670 PALLET UNIT - - - - -	16 - - - - -	11,600 LBS
M757 PALLET UNIT - - - - -	2 - - - - -	4,254 LBS
DUNNAGE - - - - -	- - - - -	231 LBS
CROP - - - - -	- - - - -	3,800 LBS
TOTAL WEIGHT - - - - -		19,885 LBS (APPROX)



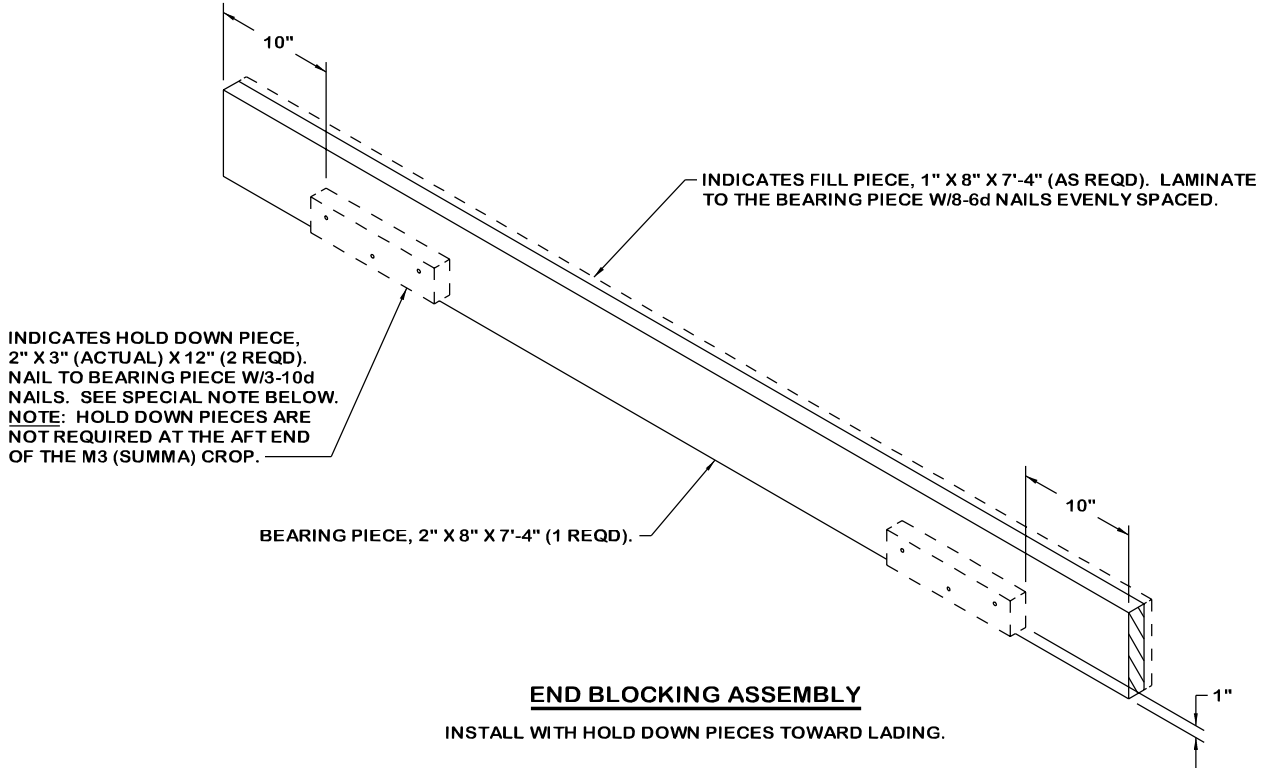
M670 PALLET UNIT DETAIL

GROSS WEIGHT - - - - - 725 LBS (APPROX)
 CUBE - - - - - 34.5 CU FT (APPROX)

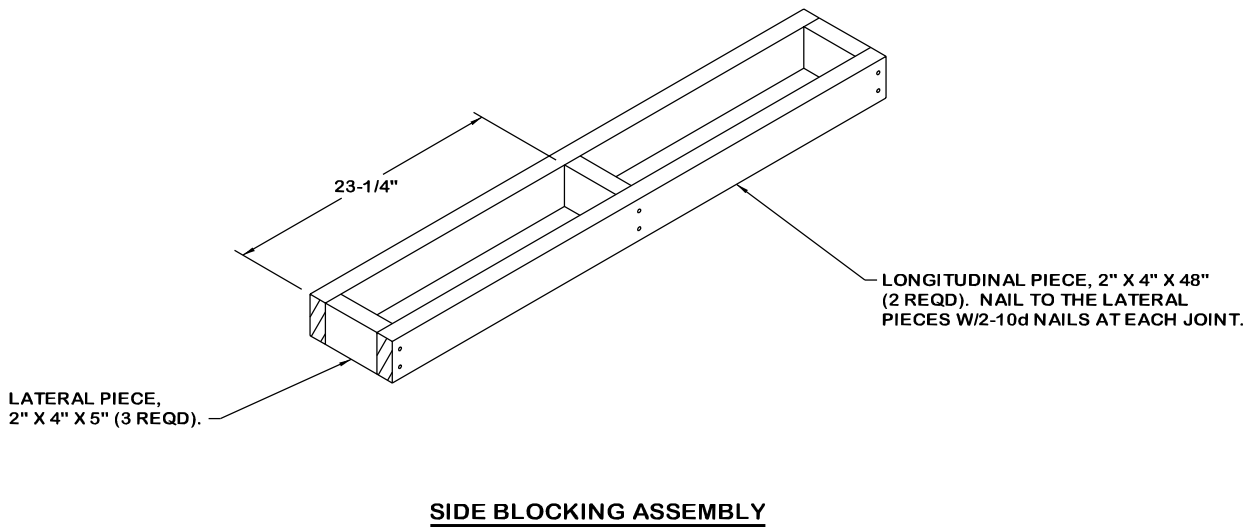


M757 PALLET UNIT DETAIL

GROSS WEIGHT - - - - - 2,127 LBS (APPROX)
 CUBE - - - - - 52.2 CU FT (APPROX)



SPECIAL NOTE: HOLD DOWN PIECES (IF REQD) MUST BE RECESSED UNDERNEATH THE PALLET UNITS. FIELD CHECK DIMENSIONS BEFORE ASSEMBLY TO ENSURE A PROPER FIT. SEE GENERAL NOTES "B" AND "E" ON PAGE 3.



DETAILS

