

# UNITIZATION PROCEDURES FOR BRADLEY ARMOR TILES UNITIZED IN PALLET BOXES

## TILE, ARMOR, BRADLEY, XM44, UNITIZED 14 FIBER- BOARD BOXES PER PALLET BOX

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### U.S. ARMY MATERIEL COMMAND DRAWING

APPROVED, COMBAT CAPABILITIES DEVELOPMENT COMMAND ARMAMENTS CENTER HANSEN.JOSEPH.13764 <small>Digitally signed by HANSEN.JOSEPH.W.13764 95538 Date: 2022.09.22 08:29:13 -05'00'</small> PH.W.137649553 8 FCDD-ACE-LTP		<b>CAUTION: VERIFY PRIOR TO USE AT <a href="https://www.dau.edu/cop/ammo/pages/default.aspx">https://www.dau.edu/cop/ammo/pages/default.aspx</a> THAT THIS IS THE MOST CURRENT VERSION OF THIS DOCUMENT. THIS IS PAGE 1 OF 6.</b>			
APPROVED, U.S. ARMY JOINT MUNITIONS COMMAND WARD.GINA.M.1369379808 <small>Digitally signed by WARD.GINA.M.1369379808 Date: 2022.09.22 13:12:22 -05'00'</small> AMSJM-MLT		<b>DO NOT SCALE</b>		<b>SEPTEMBER 2022</b>	
		DESIGN ENGINEER	BASIC REV.	QUYEN TRAN	
APPROVED BY ORDER OF COMMANDING GENERAL, U.S. ARMY MATERIEL COMMAND BRAILSFORD.KEITH.10286 <small>Digitally signed by BRAILSFORD.KEITH.ANTHONY. 1028655661 Date: 2022.09.22 13:23:22 -05'00'</small> 55661 DEFENSE AMMUNITION CENTER		ENGINEERING DIVISON	FIEFFER.LAURA.A.1230375727 <small>Digitally signed by FIEFFER.LAURA.A.1230375727 Date: 2022.09.14 12:56:50 -05'00'</small>	CLASS	DIVISION
		TEST ENGINEER TEST REPORT	NA	FELICIANO.ADIN.1259200373 <small>Digitally signed by FELICIANO.ADIN.1259200373 Date: 2022.09.14 07:55:42 -05'00'</small>	DRAWING
		EXPLOSIVE SAFETY DIRECTORATE	FIEFFER.LAURA.A.1230375727 <small>Digitally signed by FIEFFER.LAURA.A.1230375727 Date: 2022.09.14 12:56:50 -05'00'</small>	19	48
				4221/33	20PA1009

**GENERAL NOTES**

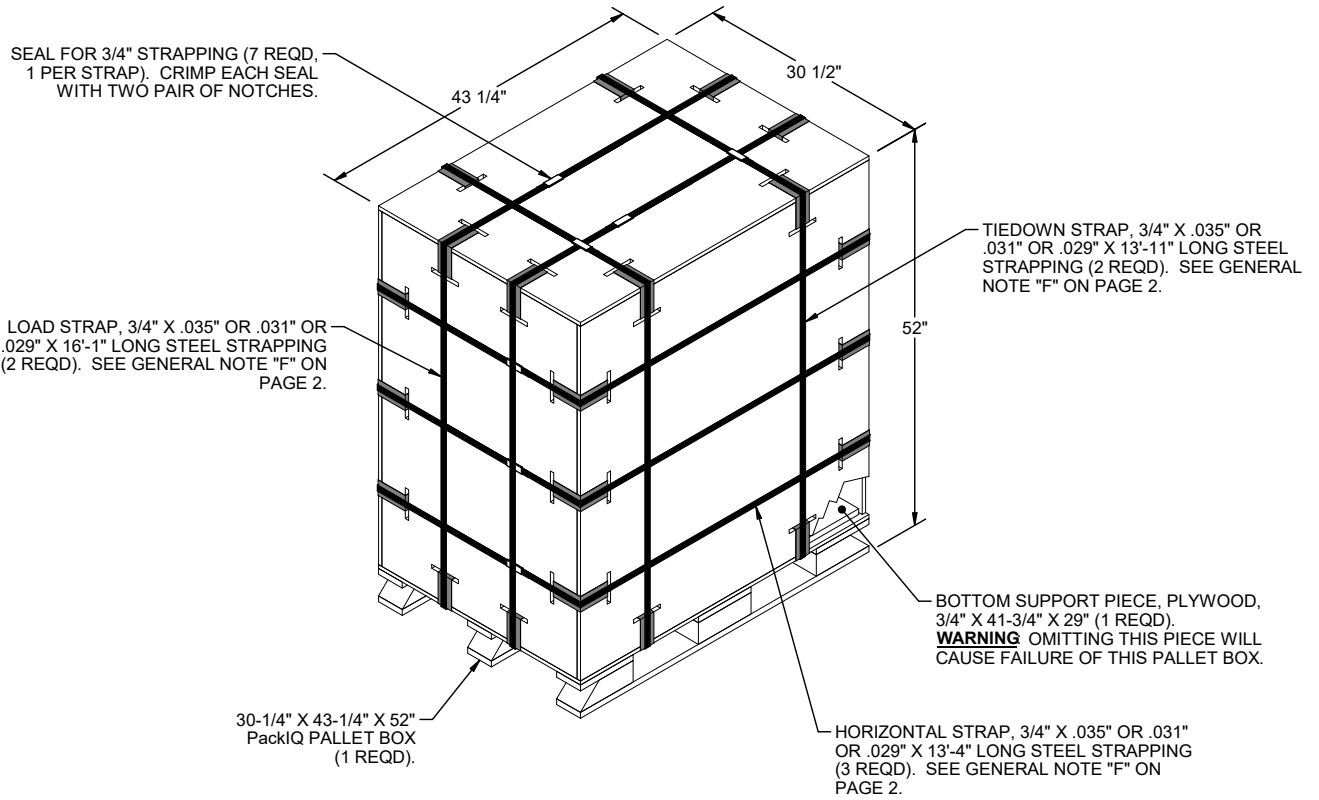
- A. THIS DOCUMENT HAS BEEN PREPARED AND ISSUED IN ACCORDANCE WITH AR 740-1, AND AUGMENTS TM 743-200-1 (CHAPTER 5) AND CONFORMS TO MIL-STD-1660.
- B. THE PROCEDURES SPECIFIED HEREIN ARE APPLICABLE TO XM44 BRADLEY ARMOR TILES PACKED IN FIBERBOARD BOX, UNITIZED 14 FIBERBOARD BOXES IN A PALLET BOX.
- C. FOR DETAILS OF THE FIBERBOARD BOX, SEE DEVCOM DRAWING 13028590.  
  
BOX DIMENSIONS: 20-1/2" LONG X 14-1/8" WIDE X 10-7/8" HIGH  
BOX CUBE: 1.82 CUBIC FEET  
BOX WEIGHT: 103 POUNDS
- D. THE FOLLOWING AMC DRAWINGS ARE APPLICABLE FOR OUTLOADING AND STORAGE OF THE ITEMS COVERED BY THIS APPENDIX.  
  
CARLOADING - - - - 19-48-4115-5PA1002  
TRUCKLOADING - - - - 19-48-4117-11PA1003  
STORAGE - - - - 19-48-4118-1-2-3-4-14-22PA1002  
END OPENING ISO CONTAINER - - - - 19-48-4153-15PA1002  
MILVAN - - - - 19-48-4166-15PA1003  
SIDE OPENING ISO CONTAINER - - - - 19-48-4267-15PA1009
- E. UNLESS OTHERWISE SPECIFIED, A MANUFACTURING TOLERANCE OF PLUS-OR-MINUS 1/4" IS ALLOWED ON ALL DIMENSIONS. HOWEVER, SIMILAR PIECES IN AN ASSEMBLY MUST BE WITHIN 1/8" OF THE SAME DIMENSION.
- F. INSTALL EACH HORIZONTAL, LOAD OR TIEDOWN STRAP TO BE LOCATED AS SHOWN. HORIZONTAL STRAPS MUST BE TENSIONED AND SEALED PRIOR TO THE APPLICATION OF TIEDOWN AND LOAD STRAPS. LOAD STRAPS MUST BE TENSIONED AND SEALED AFTER THE HORIZONTAL STRAPS AND PRIOR TO THE TIEDOWN STRAPS.
- G. WHEN APPLYING ANY STRAP, CARE MUST BE EXERCISED TO ASSURE THAT THE END OF THE STRAP ON THE UNDERSIDE OF THE JOINT EXTENDS AT LEAST 6" BEYOND THE SEAL. THIS EXTRA MINIMUM LENGTH OF STRAP IS REQUIRED TO PERMIT SUBSEQUENT TIGHTENING OF LOOSENED STRAPPING. RETENSIONING CAN BE ACCOMPLISHED WITHOUT REPLACING STRAPPING OR SPLICING STRAPPING THROUGH THE USE OF A MANUAL OR PNEUMATIC FEEDWHEEL TYPE TENSIONING TOOL AND THE APPLICATION OF ONE ADDITIONAL SEAL.
- H. IN ORDER TO OBTAIN COMPACT AND SOUND UNITS, ALL STRAPS SHALL BE LOCATED IN PROPER ALIGNMENT AND TENSIONED UNTIL THEY CUT INTO THE EDGE OF THE PALLET BOX AND THE PALLET DECK. AFTER TENSIONING, ALL STRAPS WILL BE SECURED USING ONE SEAL AND TWO PAIR OF NOTCHES PER SEAL.
- J. PALLET BOXES, HARDBOARD, FIBERBOARD, AND PLYWOOD ARE MANUFACTURED WOOD AND THEREFORE DO NOT REQUIRE HEAT TREATMENT.
- K. UNIT LOAD MARKING MUST BE APPLIED IN ACCORDANCE WITH DEVCOM DRAWING 13028588.
- L. ARMOR TILE BOXES MUST FIT SNUGLY WITHIN THE PALLET BOX. THE UNBLOCKED SPACE WITHIN THE PALLET BOX MUST NOT EXCEED 1/2" IN ANY DIRECTION. FILLERS SUCH AS PLYWOOD, FIBERBOARD, HONEYCOMB FILLER, FOAM CUSHIONING MATERIAL OR HARDBOARD SHALL BE ADDED AS REQUIRED TO OBTAIN A TIGHT PACK.
- M. THE UNITIZATION PROCEDURES DEPICTED HEREIN MAY ALSO BE USED FOR UNITIZING XM44 ARMOR TILES WHEN IDENTIFIED BY DIFFERENT NATIONAL STOCK NUMBER (NSN) THEN WHAT IS SHOWN AT RIGHT, PROVIDED THE BOX PACK DOES NOT VARY FROM WHAT IS DELINEATED HEREIN. THE EXPLOSIVE CLASSIFICATION OF OTHER ITEMS MAY BE DIFFERENT THAN WHAT IS SHOWN.
- N. 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.

PALLET UNIT DATA				
ITEMS INCLUDED		*HAZARD CLASS AND DIVISION	*COMPATIBILITY GROUP	APPROX WEIGHT (LBS)
NSN	DODIC			
1375-01-588-3633	MP39	1.2.1	D	1,612

\*HAZARD CLASSIFICATION DATA CONTAINED IN THE ABOVE CHART IS FOR GUIDANCE AND INFORMATIONAL PURPOSES ONLY. VERIFICATION OF THE SPECIFIED DATA SHOULD BE MADE BY CONSULTING THE MOST RECENT JOINT HAZARD CLASSIFICATION SYSTEM LISTING OR OTHER APPROVED LISTING(S).

**MATERIAL SPECIFICATIONS**

- PALLET BOX - - - - : CLIP-LOK™ PART NUMBER 4175X29X455; PackIQ, 1 AMERICAN WAY ANDERSON, SC 29621; 864-231-8908; www.PACKIQ.COM
- PLYWOOD - - - - : COMMERCIAL ITEM DESCRIPTION A-A-55057, INDUSTRIAL PLYWOOD, INTERIOR WITH EXTERIOR GLUE, GRADE C-D. IF SPECIFIED GRADE IS NOT AVAILABLE, A BETTER INTERIOR OR AN EXTERIOR GRADE MAY BE SUBSTITUTED.
- STRAPPING, STEEL - - : ASTM D3953; FLAT STRAPPING, TYPE 1, HEAVY DUTY, FINISH B (GRADE 2), SIZE 3/4" X .035" OR .031" OR .029", OR 1-1/4" X .035" OR .031". NOTE: BRITISH OR SLIT EDGES SHALL HAVE FINISH A OVERLAY.
- SEAL, STRAP - - - - : ASTM D3953; CLASS H, FINISH B (GRADE 2), DOUBLE NOTCH TYPE, STYLE I, II, III, OR IV. ALTERNATIVE SEAL FINISH: SIGNODE OR DELTA PAINTED SEALS MAY BE USED AS AN ALTERNATIVE IF ALL SURFACES ARE PAINTED. GRITTED BACKING IS NOT PERMITTED.
- HARDBOARD - - - - : ANSI/AHA A135.4, CLASS 1.
- FIBERBOARD - - - - : ASTM D4727.
- HONEYCOMB FILLER - - : FIBERBOARD, FACING PAPER WEIGHT 69 POUNDS/1,000 SQUARE FEET, CORE PAPER WEIGHT 33 POUNDS/1,000 SQUARE FEET, 1/2" CORE CELL CENTERS, PACTIV CORPORATION (OR EQUAL).
- FOAM CUSHIONING MATERIAL - - - - : COMMERCIAL ITEM DESCRIPTION A-A-59136, CLASS 1, TYPE III, GRADE A, OR COMMERCIAL EQUIVALENT.



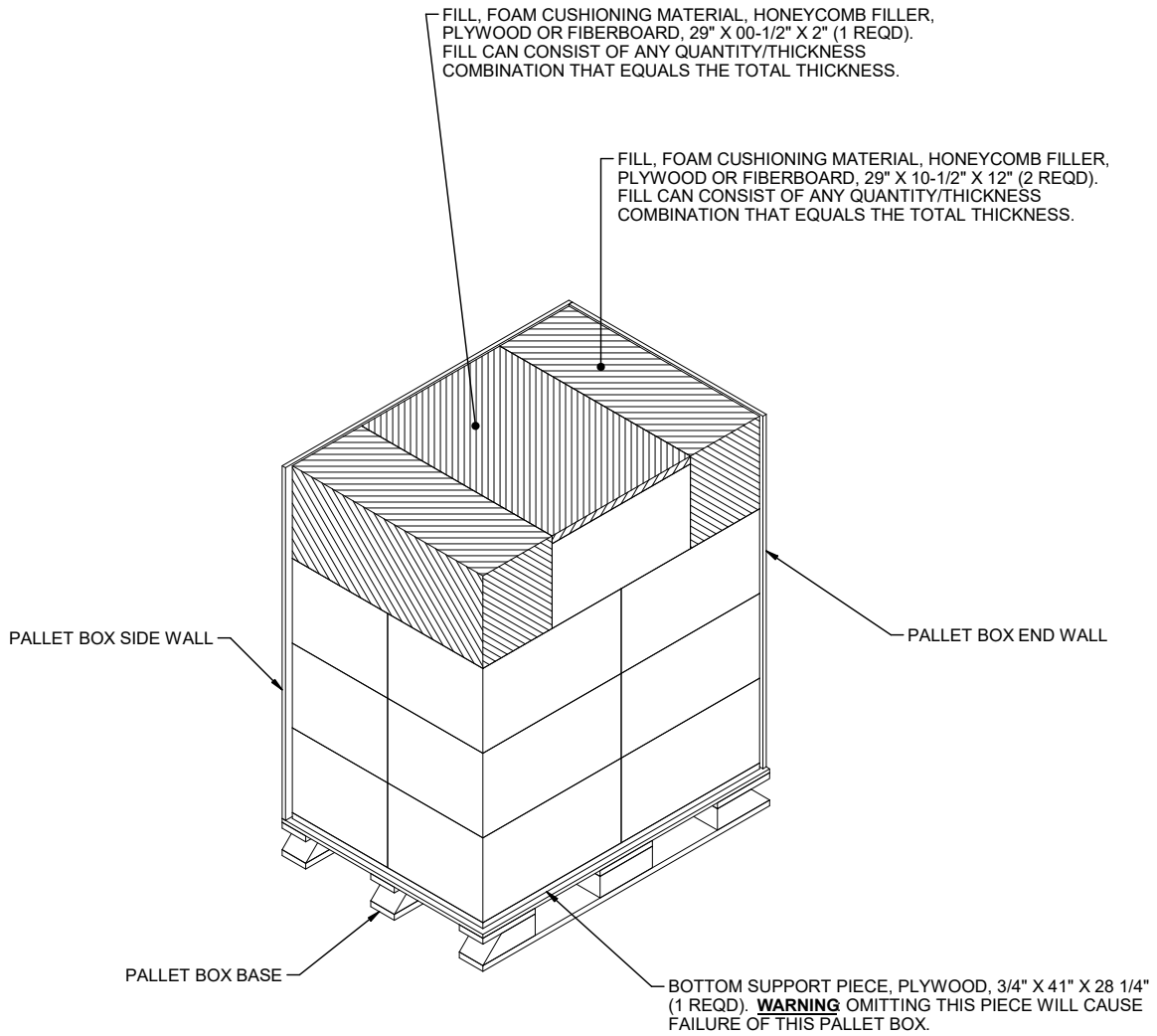
**PALLET UNIT**

14 BOXES OF ARMOR TILES @ 103 LBS	-----	1,442 LBS
DUNNAGE	-----	20 LBS
PALLET BOX	-----	150 LBS
<hr/>		
TOTAL WEIGHT	-----	1,612 LBS (APPROX)
CUBE	-----	39.7 CU FT (APPROX)

<b>BILL OF MATERIAL</b>					
PALLET BOX, PackIQ	-----	1 REQD	-----	150 LBS	
STEEL STRAPPING, 3/4"	-----	100.00'	REQD	-----	8.93 LBS
SEAL FOR 3/4" STRAPPING	-----	7 REQD	-----	NIL	
HONEYCOMB, 2"	-----	29.50 SQ FT	REQD	-----	11.00 LBS

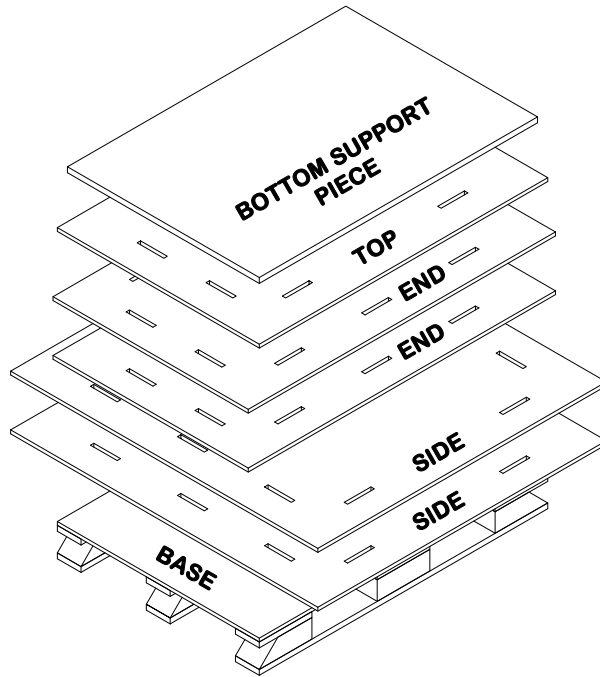
**SPECIAL NOTES:**

- SOURCE OF SUPPLY: THE PackIQ PALLET BOX, PART NUMBER 4175X29X455, IS APPROVED FOR USE. THIS PALLET BOX CAN BE OBTAINED FROM PackIQ, 1 AMERICAN WAY ANDERSON, SC 29621, 864-231-8908, www.packIQ.com.
- OTHER VENDORS' PALLET BOXES MAY BE QUALIFIED FOR USE BY SUBMITTING SAMPLE BOXES TO THE DEFENSE AMMUNITION CENTER, 1 C TREE ROAD, MCALESTER, OK 74501-9053. CONTACT THE DAC EXPLOSIVES SAFETY ENGINEERING DIVISION, ATCL-ACE, E-MAIL USARMY.MCALESTER.MBX.DAC-DET@ARMY.MIL.

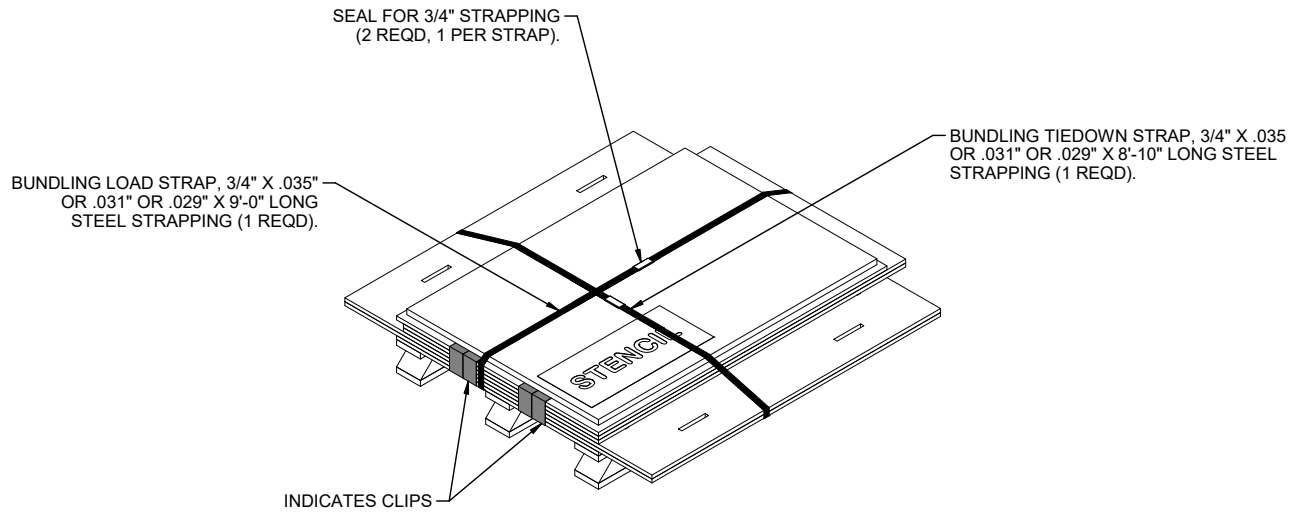


**PALLETT UNIT INTERNAL DUNNAGE**

SEE GENERAL NOTE "K" ON PAGE 2.

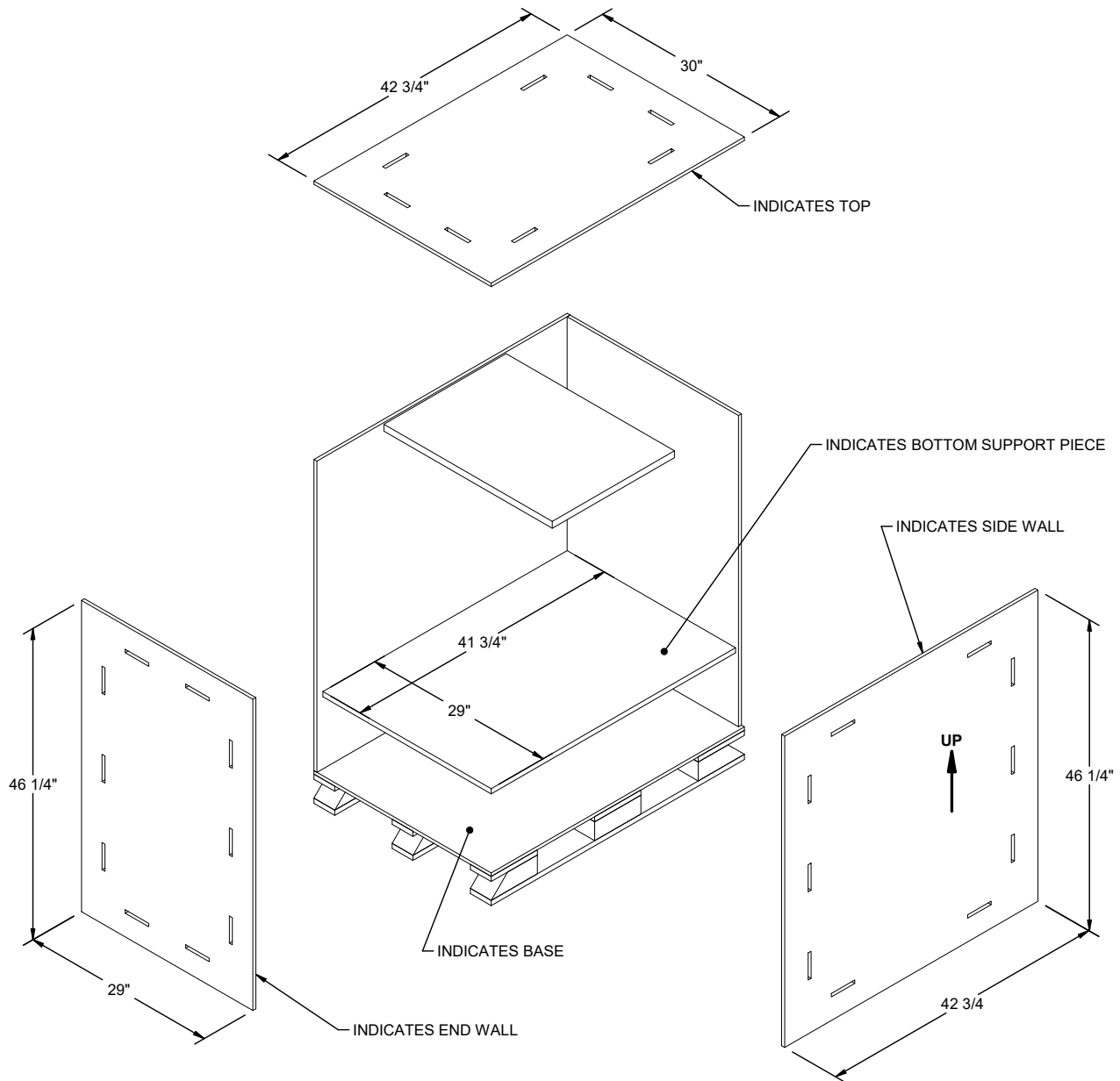


**STACKING FOR COLLAPSED PALLET BOX**



**COLLAPSED BOX**

SEE THE STENCIL DETAIL ON PAGE 6.



**STENCIL (FOR APPLICATION TO BOTTOM SUPPORT PIECE)**

**SPECIAL NOTES:**

1. THE DETAIL DEPICTED ABOVE WILL BE STENCILED ON THE BOTTOM SUPPORT PIECE TO SHOW ASSEMBLY INSTRUCTIONS. SEE THE "COLLAPSED BOX" DETAIL ON PAGE 5.
2. AN ARROW WITH "UP" WILL BE STENCILED ON THE SIDE PIECES AS SHOWN TO ENSURE THE STACKING SLOTS ARE ON TOP.