

LOADING AND BRACING* ON FLAT-RACK ISO CONTAINERS OF JSOW (AGM-154) MISSILE PACKED IN CNU-710 CONTAINERS

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® THE PROCEDURES SHOWN HEREIN ARE APPLICABLE TO LOADS THAT ARE TO BE SHIPPED BY TRAILER/CONTAINER-ON-FLATCAR (T/COFC) RAIL, MOTOR, OR WATER CARRIERS.

U.S. ARMY MATERIEL COMMAND DRAWING

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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. ALL LOADS SHIPPED BY THE PROCEDURES DEPICTED IN THIS DRAWING MUST BE IN ACCORDANCE WITH THE REQUIREMENTS SET FORTH IN TITLE 49, THE UNITED STATES CODE OF FEDERAL REGULATIONS; AR 55-355/AFM 75-2; DOD 4500.32-R; DOD 5100.76-M; DOD 6055.9-STD; AS WELL AS ANY AND ALL OTHER APPLICABLE SERVICE REGULATIONS.
- C. THE SPECIFIED OUTLOADING PROCEDURES ARE APPLICABLE TO LOADS OF JSOW MISSILE PACKED IN CNU-710 CONTAINER. SEE PAGE 3 AND NAVSEA DRAWING 8411078 FOR DETAILS OF THE CONTAINER. **CAUTION:** REGARDLESS OF THE QUANTITY OF CONTAINERS TO BE SHIPPED, THE "MAXIMUM GROSS WEIGHT" OF THE FLATRACK ISO CONTAINER MUST NOT BE EXCEEDED.
- D. THE LOAD AS SHOWN IS BASED ON A 5,700 POUND 20' LONG BY 8' WIDE FLATRACK ISO CONTAINER WITH FULL HEIGHT ENDWALLS, AND INSIDE DIMENSIONS OF 19'-4" LONG BY 86" WIDE. THE LOAD IS DESIGNED FOR TRAILER/CONTAINER-ON-FLATCAR (T/COFC) SHIPMENT; HOWEVER, THE LOAD AS DESIGNED CAN ALSO BE MOVED BY OTHER SURFACE MODES OF TRANSPORT. **NOTICE:** OTHER CONTAINERS OF THE SAME DESIGN CONFIGURATION CAN BE USED.
- E. WHEN LOADING CONTAINERS, THEY ARE TO BE POSITIONED SO AS TO ACHIEVE A TIGHT LOAD BETWEEN THE END BLOCKING ASSEMBLY AND THE LADING. ALTHOUGH A TOTAL OF 1" OF UNBLOCKED SPACE ACROSS THE WIDTH OF A LOAD IS PERMITTED, LONGITUDINAL VOIDS WITHIN THE LOAD ARE TO BE HELD TO A MINIMUM, NOT EXCEEDING 1/2". EXCESSIVE SLACK CAN BE ELIMINATED FROM A LOAD BY INCREASING THE LENGTH OF THE STRUTS.
- F. DUNNAGE LUMBER SPECIFIED IS OF NOMINAL SIZE. FOR EXAMPLE, 1" X 4" MATERIAL IS ACTUALLY 3/4" THICK BY 3-1/2" WIDE AND 2" X 6" MATERIAL IS ACTUALLY 1-1/2" THICK BY 5-1/2" WIDE.
- G. A STAGGERED NAILING PATTERN WILL BE USED WHENEVER POSSIBLE WHEN NAILS ARE DRIVEN INTO JOINTS OF DUNNAGE ASSEMBLIES OR 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 BEHIND A NAIL IN A LOWER PIECE.
- H. WHEN INSTALLING END BLOCKING ASSEMBLIES AND ENDWALL GATES, THE ASSEMBLIES MUST BE POSITIONED SO AS TO BE SUPPORTED AND IN LINE WITH THE STRONG POINTS OF THE FLATRACK ENDWALLS. **NOTE:** SOME FLATRACK ENDWALLS WILL REQUIRE FILL PIECES TO BE INSTALLED ON THE END WALL GATES TO PROVIDE A UNIFORM LOAD BEARING SURFACE. NAIL THESE FILL PIECES TO THE END WALL GATES W/1 APPROPRIATELY SIZED NAIL EVERY SIX INCHES. THESE PIECES ARE NOT REQUIRED IF THE ENDWALL IS SMOOTH (IF THE HINGES DO NOT PROTRUDE).
- J. WHEN STEEL STRAPPING IS SEALED IN AN END-OVER-END LAP JOINT, A MINIMUM OF ONE SEAL WITH TWO PAIR OF NOTCHES WILL BE USED TO SEAL THE JOINT WHEN A NOTCH-TYPE SEALER IS BEING USED. A MINIMUM OF TWO SEALS, BUTTED TOGETHER WITH TWO PAIR OF CRIMPS PER SEAL, WILL BE USED TO SEAL THE JOINT WHEN A CRIMP-TYPE SEALER IS BEING USED. REFER TO THE "STRAP JOINT A" AND "STRAP JOINT B" DETAILS ON PAGE 4 FOR GUIDANCE.
- K. THE 2" STRAPPING USED FOR LOAD SECUREMENT, I.E., HOLD-DOWN STRAPS, WILL ONLY BE FASTENED TO THE FLATRACK CONTAINER BY UTILIZING TIEDOWN PROVISIONS LOCATED ON THE TOP OR ALONG THE SIDE OF THE FLATRACK BOTTOM SIDE RAILS. **CAUTION:** THE LOAD SECUREMENT STRAPS WILL NOT BE POSITIONED AROUND THE UNDERSIDE OR THROUGH THE FORKLIFT POCKETS OF THE FLATRACK CONTAINER. ADDITIONALLY, THE FLATRACK TIEDOWN PROVISIONS MUST BE AT LEAST AS STRONG AS THE 2" LOAD SECUREMENT STRAPPING BEING USED; AND BE OF A SUFFICIENT WIDTH TO RECEIVE THE 2" STRAPPING AND BE OF A DESIGN WHICH WILL PROVIDE A BEARING SURFACE ACROSS THE FULL WIDTH OF THE 2" STRAPPING SO THAT THE STRAPPING WILL NOT BE DEFORMED, ESPECIALLY AT ITS EDGES, WHEN PROPERLY TENSIONED.
- L. REFER TO ASSOCIATION OF AMERICAN RAILROADS MANUAL "GENERAL RULES GOVERNING THE LOADING OF COMMODITIES ON OPEN TOP CARS" FOR APPLICABLE LOADING RULES AS FOLLOWS: PREFACE, 1, 2, 3, 5, 7, 10, 12, 13, 14, AND 15. NOTE THAT ALL STRAPPING USED FOR LOAD SECUREMENT, I.E., HOLD-DOWN STRAPS, MUST BE MARKED AS SPECIFIED IN LOADING RULE 15.
- M. WHETHER A CONTAINER IS FULL OR IS LOADED WITH A REDUCED QUANTITY OF LADING UNITS, THE LENGTHWISE CENTER OF GRAVITY OF THE LOAD MUST BE WITHIN 12", IN EITHER DIRECTION, OF THE MID-POINT OF THE CONTAINER.
- N. PORTIONS OF THE FLATRACK DEPICTED WITHIN THIS DRAWING, SUCH AS THE ENDWALL, HAVE NOT BEEN SHOWN IN THE LOAD VIEWS FOR CLARITY PURPOSES.

(CONTINUED AT RIGHT)

O. MAXIMUM LOAD WEIGHT CRITERIA:

THE MAXIMUM LOAD WEIGHTS ARE CONTROLLED BY EQUIPMENT CAPABILITY FACTORS. ALTHOUGH THE HEAVIEST MAXIMUM LOADS ARE DELINEATED IN THE LOAD VIEWS, PROVISIONS ARE INCLUDED WITHIN THIS DRAWING SO THAT THE BASIC LOADS CAN BE ADJUSTED TO SATISFY A LESSER QUANTITY OF LADING UNITS. DEPENDING ON TRANSPORTATION ROUTING, IT MAY BE NECESSARY TO REDUCE THE LOAD WEIGHT TO SATISFY "WEIGHT LAWS" OF CERTAIN STATES. ALSO, IT MAY BE NECESSARY TO REDUCE THE LOAD WEIGHT TO SATISFY OTHER WEIGHT RESTRICTIONS IMPOSED ON THE INTERMODAL CONTAINER SYSTEM.

P. REQUIREMENTS CITED WITHIN THE ASSOCIATION OF AMERICAN RAILROADS (AAR) INTERMODAL LOADING GUIDE APPLY WHEN THE SHIPMENT MOVES BY TRAILER/CONTAINER-ON-FLATCAR (T/COFC). SPECIAL T/COFC NOTES FOLLOW:

- 1. A LOADED CONTAINER MUST BE ON A CHASSIS EQUIPPED WITH TWO BOGIE ASSEMBLIES WHEN BEING MOVED IN TOFC SERVICE.
- 2. THE LOAD LIMIT OF A T/COFC RAILCAR MUST NOT BE EXCEEDED, NOR WILL A CAR BE LOADED SO THAT THE TRUCK UNDER ONE END OF THE CAR CARRIES MORE THAN ONE-HALF OF THE LOAD LIMIT FOR THAT CAR.

Q. DURING INTRASTATE AND/OR INTERSTATE MOVES BY MOTOR CARRIER, A PROPER CHASSIS OR MODIFIED FLATBED TRAILER MUST BE USED TO PRECLUDE VIOLATION OF ONE OR MORE "WEIGHT LAWS" APPLICABLE TO THE STATE OR STATES INVOLVED.

R. THE LOAD AS SHOWN ON PAGE 5 MAY BE REDUCED BY ONE LAYER FOR A SHIPMENT OF TWO CONTAINERS, IF DESIRED. SEE THE LOAD ON PAGE 7 FOR PROCEDURES ON SHIPPING ONE CONTAINER. THREE CONTAINERS ON A SINGLE FLATRACK MAY NOT BE SHIPPED.

S. THE TWO CNU CONTAINER INTERLOCKS LOCATED ON EITHER SIDE OF THE CONTAINERS CAN BE UTILIZED IN PLACE OF STEEL STRAPPING WHEN UNITIZING CONTAINERS, AND HAS BEEN SHOWN AS THE PREFERRED METHOD IN THE LOAD ON PAGES 5. CONTAINERS MAY BE UNITIZED TWO HIGH USING INTERLOCKS. IF ANY OF THE CONTAINER INTERLOCKS ARE NOT FUNCTIONING PROPERLY, THE CONTAINERS MUST BE UNITIZED USING STEEL STRAPPING AS DEPICTED IN NAVY DRAWING 8411078. WHEN HANDLING INTERLOCKED CONTAINERS, LIFT BY BOTTOM CONTAINER ONLY. SEE THE "UNIT LOAD WITH INTERLOCK DETAIL" ON PAGE 4 AND NAVY DRAWING 8411078 FOR FURTHER DETAILS.

T. THE OUTLOADING PROCEDURES SPECIFIED HEREIN CAN ALSO BE UTILIZED FOR THE SHIPMENT OF THE DEPICTED CONTAINERS WHEN THEY ARE LOADED WITH AN ITEM WHICH IS IDENTIFIED DIFFERENTLY BY NOMENCLATURE THAN THE ITEM DESIGNATED IN THE DRAWING TITLE.

U. ANTI-CHAFING MATERIAL MAY BE INSTALLED AT POINTS OF CONTACT BETWEEN CONTAINERS AND STEEL STRAPPING, IF DESIRED, TO PREVENT CHAFING DAMAGE TO CONTAINER PAINT AND MARKINGS.

V. 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.

MATERIAL SPECIFICATIONS

LUMBER - - - - - : SEE TM 743-200-1 (DUNNAGE LUMBER) AND VOLUNTARY PRODUCT STANDARD PS 20.

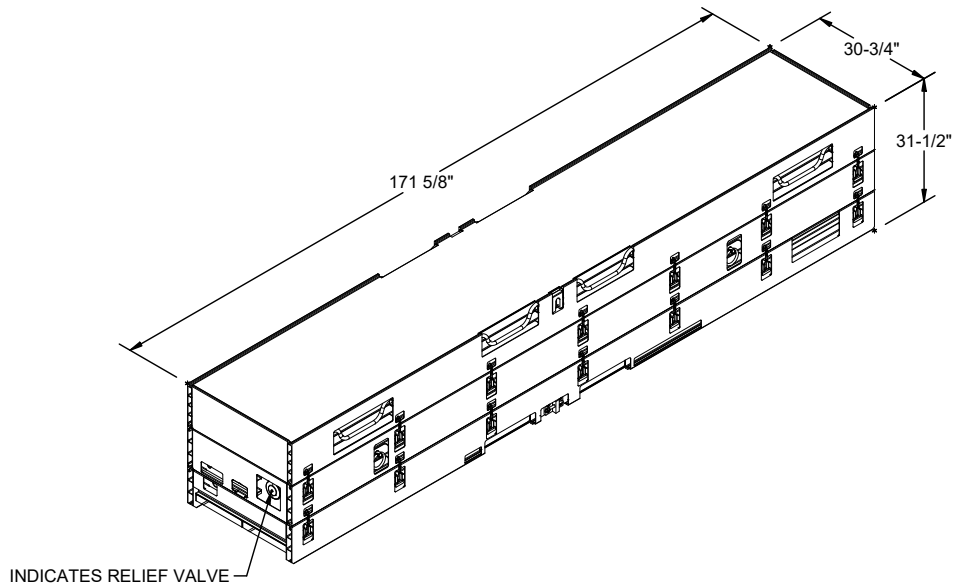
NAILS - - - - - : ASTM F1667; COMMON STEEL NAIL (NLCMS OR NLCMS).

STRAPPING, STEEL - - : ASTM D3953; FLAT STRAPPING, TYPE 1, HEAVY DUTY, FINISH A, B (GRADE 2), OR C.

SEAL, STRAP - - - - : ASTM D3953; CLASS H, FINISH A, B (GRADE 2), OR C, DOUBLE NOTCH TYPE, STYLE I, II, OR IV.

WIRE, CARBON STEEL - : ASTM A853; ANNEALED AT FINISH, BLACK OXIDE FINISH, 0.0800" DIA, GRADE 1006 OR BETTER.

STAPLE, STRAP - - - : COMMERCIAL GRADE.



CNU-710 CONTAINER

GROSS WEIGHT - - - - - 2,120 LBS
 CUBE - - - - - 96.2 CU FT

UNITIZATION AND HANDLING GUIDANCE

(UNITIZATION AND HANDLING GUIDANCE CONTINUED)

1. STACKING CONTAINERS FOR UNITIZING:

- A. AN UPPER CONTAINER SHOULD BE PLACED AS CLOSE AS POSSIBLE IN VERTICAL ALIGNMENT WITH THE NEXT LOWER CONTAINER.
- B. POSITION THE AFT END OF AN UPPER CONTAINER ABOVE THE AFT END OF THE NEXT LOWER CONTAINER.
- C. THE CONTAINER SKIDS OF AN UPPER CONTAINER SHOULD BE FULLY SEATED AGAINST THE SKID LOCATOR PIECES ON THE COVER OF THE NEXT LOWER CONTAINER.

2. UNITIZING PROCEDURE USING PREFERRED INTERLOCKING FEATURE (SHOWN ON PAGE 5).

- A. DETACH QUICK RELEASE PIN (BOTH SIDES) ON CONTAINER TO BE PLACED ON TOP.
- B. STACK TWO CONTAINERS AS SHOWN. BE SURE TO ALIGN THE STACKING FEATURES.
- C. SECURE TOP CONTAINER TO BOTTOM CONTAINER USING INTERLOCKING FEATURE.
- D. INSTALL QUICK RELEASE PIN (BOTH SIDES).

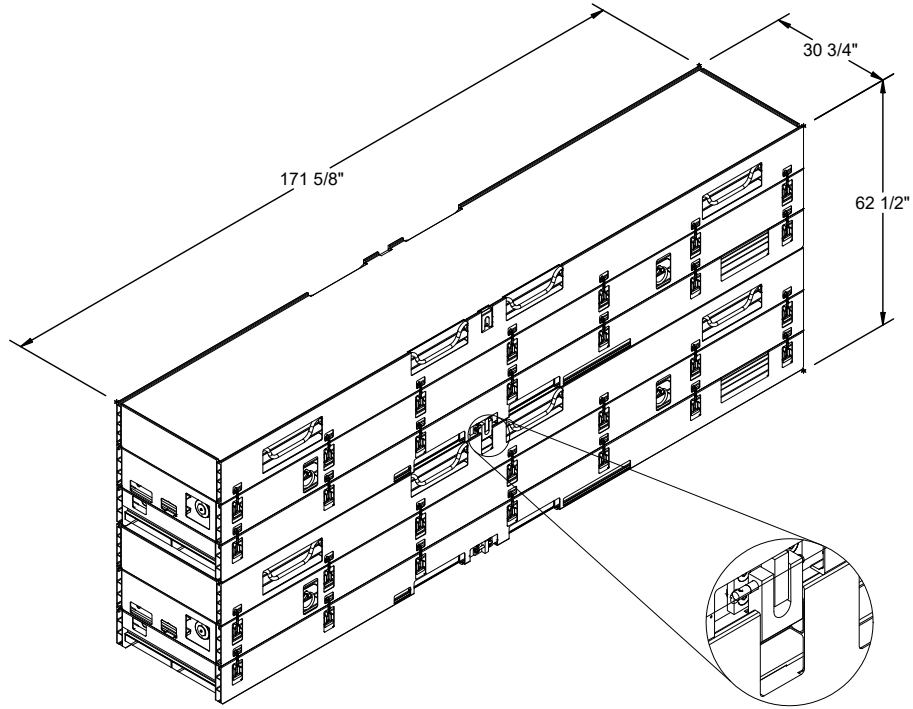
3. UNITIZING PROCEDURE USING OPTIONAL 1-1/4" BANDING STRAPS.

- A. STACK TWO CONTAINERS AS SHOWN. BE SURE TO ALIGN THE STACKING FEATURES.
- B. FEED UNITIZING STRAP THROUGH FORK POCKETS OF LOWER CONTAINER AND OVER TOP OF UPPER CONTAINER. LOCATE STRAPS AS CLOSE AS POSSIBLE TO OUTER EDGES OF FORK POCKETS (2 PLACES).
- C. PLACE EDGE PROTECTORS UNDERNEATH STRAP AT EACH OF THE FOUR EDGES (FOUR PER STRAP).
- D. TENSION AND SECURE EACH STRAP WITH ONE DOUBLE-NOTCHED SEAL.

(CONTINUED AT RIGHT)

4. CONTAINER OR CONTAINER STACK HANDLING:

- A. ONLY APPROVED AND APPROPRIATELY SIZED MATERIAL HANDLING EQUIPMENT WILL BE USED FOR HANDLING THE DEPICTED CONTAINERS. APPROVED MATERIAL HANDLING EQUIPMENT (FORKLIFT TRUCKS, CRANES, HAND TRUCKS, DOLLIES, ROLLER ASSEMBLIES, SLINGS, SPREADER BARS, ETC.) IS SPECIFIED ELSEWHERE.
- B. PRECAUTIONARY HANDLING TECHNIQUES NORMALLY EMPLOYED OR AS SPECIFIED FOR THE TYPE OF COMMODITY INVOLVED WILL BE OBSERVED.
- C. IF HANDLING IS ACCOMPLISHED WITH A FORKLIFT TRUCK, THE CONTAINERS SHOULD BE HANDLED FROM A SIDE POSITION AS MUCH AS POSSIBLE. CARE MUST BE EXERCISED WHEN INSERTING FORKS UNDER A CONTAINER, TO PREVENT DAMAGE TO THE CONTAINER BY THE FORK TINES OR THE FORKLIFT PACKAGE GUARD. IF ONE CONTAINER IS HANDLED BY SLINGING, THE SLING MAY BE ATTACHED TO THE LIFTING POINTS ON THE CONTAINER. DO NOT HANDLE STACKED CONTAINERS WITH A SLING.
- D. WHEN UNLOADING A CONTAINER OR CONTAINER STACK FROM THE END OPENING CONTAINER, THE FORKLIFT TINES WILL BE INSERTED UNDER THE LOWER CONTAINER, THE FORKLIFT WILL THEN ELEVATE THE END SLIGHTLY ABOVE THE FLOOR, AND BEGIN DRAGGING THE CONTAINER OR STACK FROM THE TRAILER AFTER ATTACHING A CHAIN OR WEB STRAP FROM A LOWER CONTAINER LIFT POINT AROUND THE FORKLIFT MAST TO A LIFT POINT OF THE OPPOSITE SIDE OF THE CONTAINER.
- E. THE MK45 HANDLIFT TRUCK IS PREFERRED FOR LIFTING AND MANUVERING THE CONTAINERS WITHIN THE END OPENING CONTAINER. THE MK45 HANDTRUCK CONSISTS OF A CAST ALUMINUM BODY MOUNTED ON TWO WHEELS WITH A LIFTING MECHANISM. THE MK45 LIFTING MECHANISM IS CONNECTED TO A RECESS IN THE END OF THE CONTAINER. THE HANDTRUCK SHALL BE USED IN PAIRS WITH ONE MK45 POSITIONED AT EACH END OF THE CONTAINER. THE WEIGHT CAPACITY OF TWO MK45 MOD 2 HANDTRUCKS IS 6,000 POUNDS.



UNIT LOAD WITH INTERLOCK DETAIL

GROSS WEIGHT - - - - - 4,240 LBS (APPROX)
 CUBE - - - - - 190.66 CU FT (APPROX)



ONE SEAL WITH
TWO PAIR OF
NOTCHES.

STRAP JOINT A

METHOD OF SECURING A
STRAP JOINT WHEN USING
A NOTCH-TYPE SEALER.

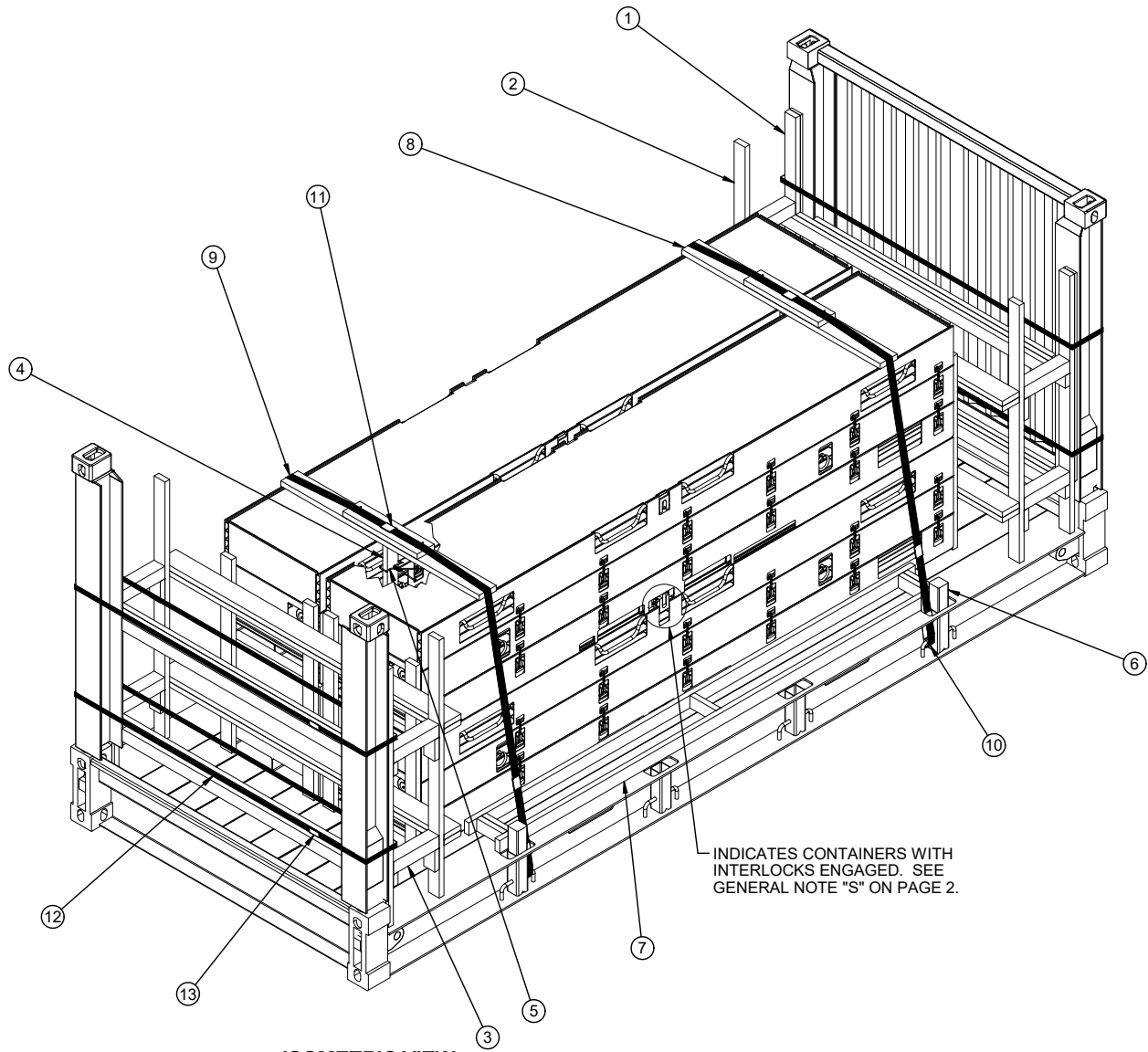


TWO SEALS, BUTTED
TOGETHER, WITH
TWO PAIR OF CRIMPS
EACH SEAL.

STRAP JOINT B

METHOD OF SECURING A
STRAP JOINT WHEN USING
A CRIMP-TYPE SEALER.

END-OVER-END LAP JOINT DETAILS



INDICATES CONTAINERS WITH INTERLOCKS ENGAGED. SEE GENERAL NOTE "S" ON PAGE 2.

ISOMETRIC VIEW

(KEY NUMBERS CONTINUED)

- ⑧ STRAPPING BOARD ASSEMBLY (2 REQD). POSITION VERTICALLY IN LINE WITH THE FLATRACK TIEDOWN POINTS AND ON THE FLAT SURFACE OF THE CONTAINER LIDS. SEE THE DETAIL ON PAGE 7.
- ⑨ HOLD-DOWN STRAP, 2" X .050" OR .044" X 24'-6" LONG STEEL STRAPPING (2 REQD). INSTALL EACH STRAP FROM TWO PIECES, EACH 12'-3" LONG. FASTEN TO A TIEDOWN PROVISION ON THE SIDE OF THE FLATRACK AND BRING UP TO THE TOP OF THE LOAD WHERE THEY CAN BE TENSIONED AND SEALED. STAPLE TO STRAPPING BOARD W/2 STAPLES EACH.
- ⑩ PAD, STRAPPING 2" X .050" OR .044" X 18" (4 REQD). PRE-POSITION THE PAD BETWEEN THE HOLD-DOWN STRAP AND THE FLATRACK TIEDOWN PROVISIONS. SEE THE "TIEDOWN DETAIL" ON PAGE 8.
- ⑪ SEAL FOR 2" STRAPPING (10 REQD, 5 PER STRAP). FASTEN 2" HOLD DOWN STRAP WITH ONE SEAL AT EACH LOCATION CRIMPED WITH TWO PAIR OF NOTCHES. FASTEN PAD WITH ONE SEAL CRIMPED WITH ONE PAIR OF NOTCHES. SEE THE "END-OVER-END LAP JOINT DETAILS" ON PAGE 3. SEE THE "TIEDOWN DETAIL" ON PAGE 8.
- ⑫ GATE STRAP, 1-1/4" X .035" OR .031" BY A LENGTH TO SUIT (REF: 18'-0") (4 REQD). INSTALL STRAPPING AROUND ENDWALL AND ENDWALL GATE AS SHOWN.
- ⑬ SEAL FOR 1-1/4" STRAPPING (4 REQD, 1 PER STRAP). CRIMP EACH SEAL WITH TWO PAIR OF NOTCHES. SEE THE "END-OVER-END LAP JOINT DETAILS" ON PAGE 3.

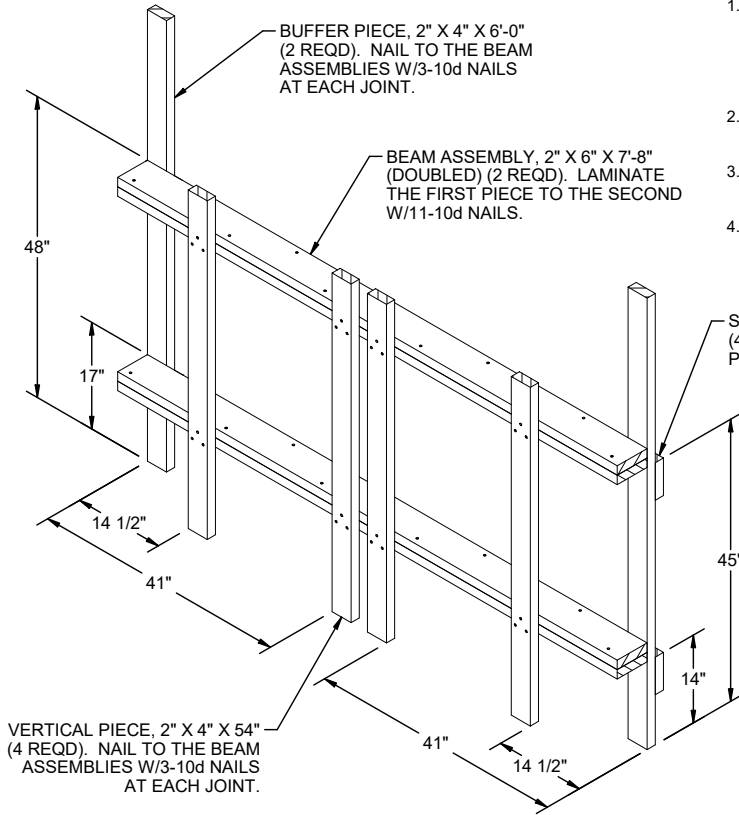
KEY NUMBERS

- ① ENDWALL GATE (2 REQD). SEE THE DETAIL ON PAGE 6.
- ② END BLOCKING ASSEMBLY (2 REQD). SEE THE DETAIL ON PAGE 6.
- ③ STRUT, 4" X 4" BY CUT-TO-FIT (REF: 14-3/4") (8 REQD). TOENAIL TO THE BUFFER PIECES OF THE END BLOCKING ASSEMBLY AND THE ENDWALL GATE W/2-12d NAILS AT EACH END. SEE THE "BEVEL-CUT" DETAIL ON PAGE 8.
- ④ ANTI-CHAFING BOARD, 2" X 4" X 62" (2 REQD). POSITION ANTI-CHAFING BOARD APPROXIMATELY 20" FROM EACH END OF THE CONTAINER STACK.
- ⑤ TIE WIRE, .0800" DIA 24" LONG (4 REQD, 2 PER ANTI-CHAFING BOARD). INSTALL THE WIRE TO FORM A COMPLETE LOOP AROUND THE ANTI-CHAFING BOARD AND LIFTING HANDLES ON THE SIDE OF CNU CONTAINERS. BRING ENDS TOGETHER AND TWIST TAUT.
- ⑥ STAKE, 4" X 4" X 18" (4 REQD). INSTALL THE STAKE INTO THE FLATRACK STAKE POCKETS WITH A TIGHT (SNUG) FIT. **NOTE:** REFERENCE DIMENSIONS FOR A TIGHT FITTING STAKE ARE 3-1/4" (ACTUAL) X 3-1/4" (ACTUAL). NAIL 1-20d NAIL THROUGH THE HOLE PROVIDED IN THE FACE OF THE FLATRACK STAKE POCKET AND INTO THE STAKE. BEND THE PROTRUDING HEAD OF THE NAIL OVER AND AGAINST THE STAKE POCKET. TOENAIL TO THE SIDE BLOCKING ASSEMBLY W/2-10d NAILS AT EACH CONTACT.
- ⑦ SIDE BLOCKING ASSEMBLY (2 REQD). SEE THE DETAIL ON PAGE 8.

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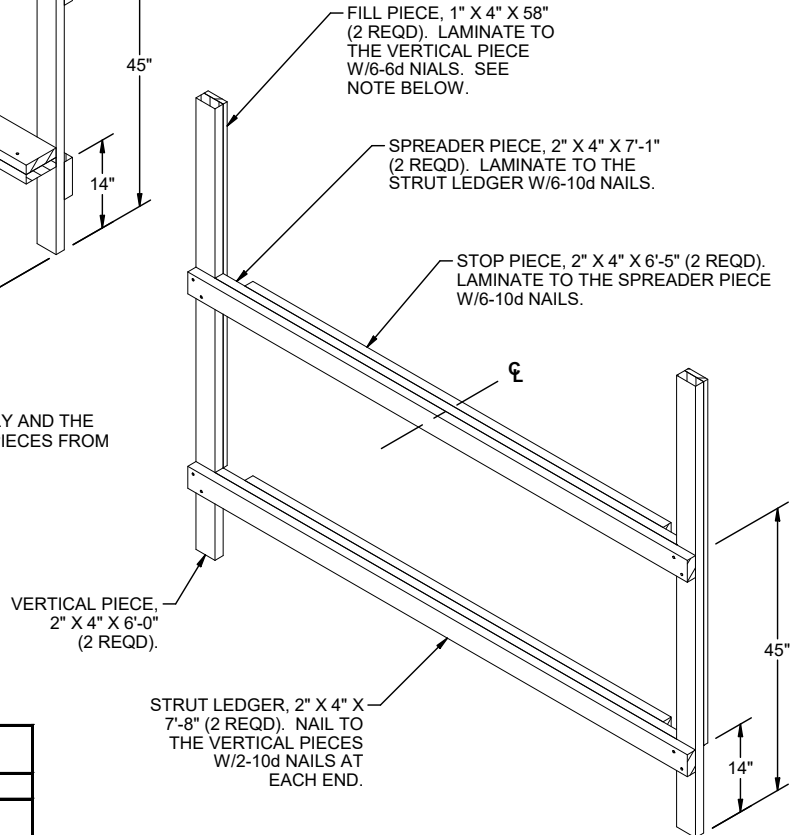
SPECIAL NOTES:

1. IF THE CORNER POSTS OF THE FLATRACK ARE SMOOTH, I.E., THE ENDWALL HINGE DOES NOT PROTRUDE FROM THE CORNER POST, THE FILL PIECES MAY BE ELIMINATED FROM THE ENDWALL GATES. ALSO, THE LENGTH OF THE FILL PIECE MUST BE ADJUSTED AS REQUIRED DEPENDING ON THE LENGTH OF THE PROTRUDING HINGE.
2. POSITION THE STRAPPING BOARD ASSEMBLIES AND THE HOLD-DOWN STRAPS SO AS TO BE VERTICALLY IN LINE WITH THE FLATRACK TIEDOWN POINTS.
3. ENSURE THAT THE LATERAL STRUTS OF THE SIDE BLOCKING ASSEMBLY ARE IN-LINE WITH THE STAKES AS SHOWN IN THE ISOMETRIC VIEW ON PAGE 4.
4. THE LOAD AS SHOWN MAY BE REDUCED BY TWO OR THREE CONTAINERS. SEE THE PROCEDURES ON PAGE 7 FOR SHIPMENT OF A ONE CONTAINER LOAD.



END BLOCKING ASSEMBLY

FOR ONE LAYER LOAD, ELIMINATE THE TOP BEAM ASSEMBLY AND THE TOP TWO STRUT LEDGERS, AND SHORTEN THE VERTICAL PIECES FROM 54" TO 23".



ENDWALL GATE

FOR ONE LAYER LOAD, ELIMINATE THE TOP STRUT LEDGER, SPREADER PIECE, AND STOP PIECE. SHORTEN THE VERTICAL PIECES AND THE FILL PIECES APPROPRIATELY. **NOTE:** THE FILL PIECES ARE ONLY REQUIRED IF THE ENDWALL HINGES PROTRUDE BEYOND THE EDGES OF THE FLATRACK CORNER POSTS, ELIMINATE IF THE CONTACT SURFACES IS FLAT.

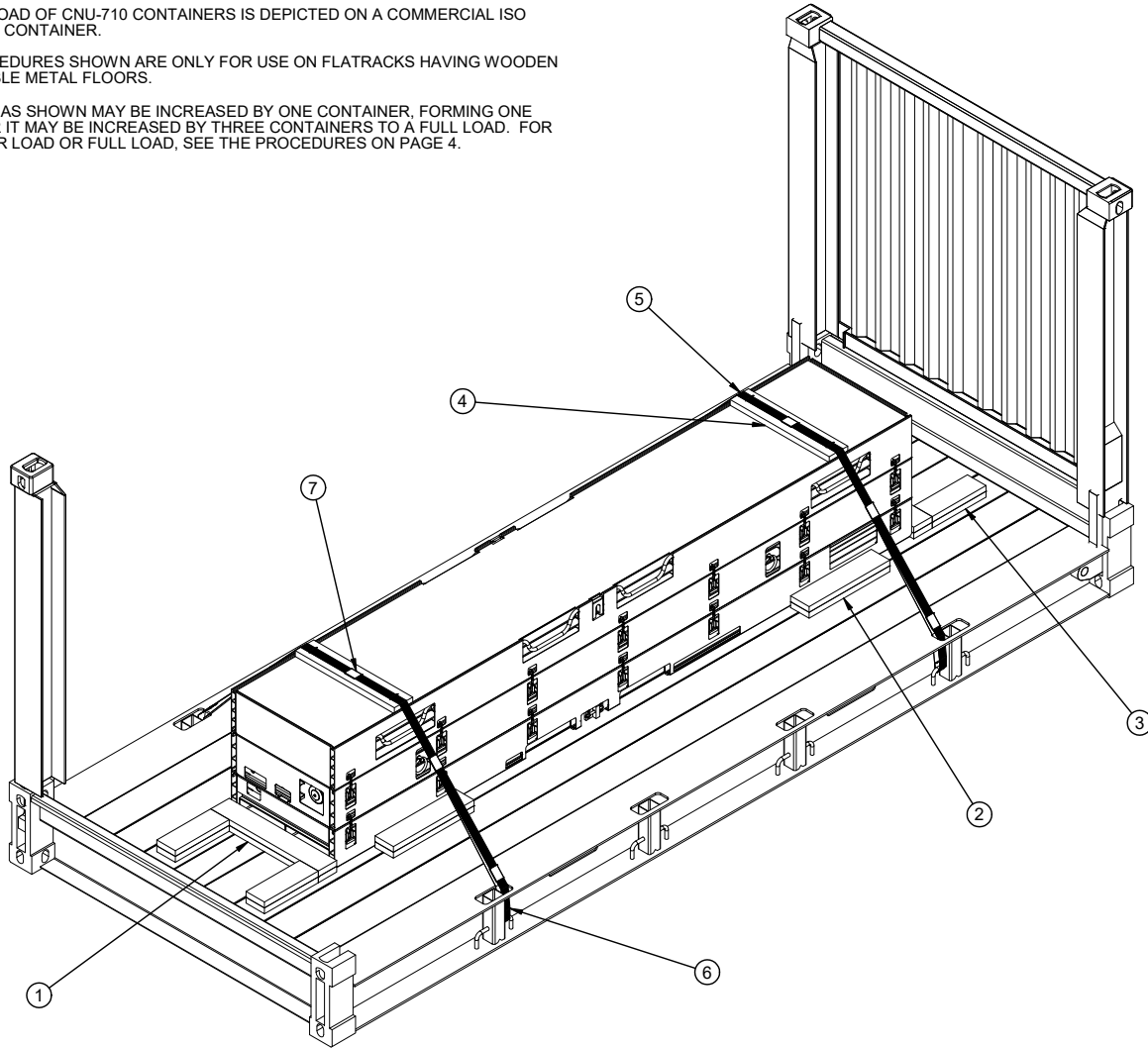
BILL OF MATERIAL		
LUMBER	LINEAR FEET	BOARD FEET
1" X 4"	20	7
2" X 4"	238	159
2" X 6"	76	76
4" X 4"	16	22
NAI LS	NO. REQD	POUNDS
6d (2")	24	1/4
10d (3")	236	3-3/4
12d (3-1/4")	40	3/4
20d (4")	4	1/4
STEEL STRAPPING, 1-1/4" - 72' REQD - - - 11 LBS		
SEAL FOR 1-1/4" STRAPPING - 4 REQD - - - 1/4 LBS		
STEEL STRAPPING, 2" - - - 55' REQD - - 18-1/2 LBS		
SEAL FOR 2" STRAPPING - - - 10 REQD - - - 2 LBS		
STAPLE FOR 2" STRAPPING - - 4 REQD - - - NIL		
WI RE, .080" DIA - - - - 8' REQD - - - 1/4 LBS		

LOAD AS SHOWN

ITEM	QUANTITY	WEIGHT (APPROX)
CNU CONTAINER	4	8,480 LBS
DUNNAGE		565 LBS
FLATRACK		5,700 LBS
TOTAL WEIGHT		14,745 LBS (APPROX)

SPECIAL NOTES:

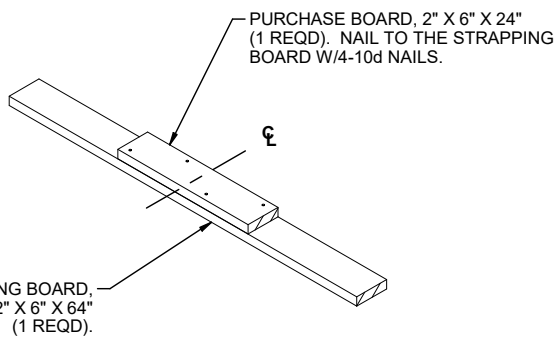
1. A 1-UNIT LOAD OF CNU-710 CONTAINERS IS DEPICTED ON A COMMERCIAL ISO FLATRACK CONTAINER.
2. THE PROCEDURES SHOWN ARE ONLY FOR USE ON FLATRACKS HAVING WOODEN OR NAILABLE METAL FLOORS.
3. THE LOAD AS SHOWN MAY BE INCREASED BY ONE CONTAINER, FORMING ONE LAYER, OR IT MAY BE INCREASED BY THREE CONTAINERS TO A FULL LOAD. FOR ONE LAYER LOAD OR FULL LOAD, SEE THE PROCEDURES ON PAGE 4.



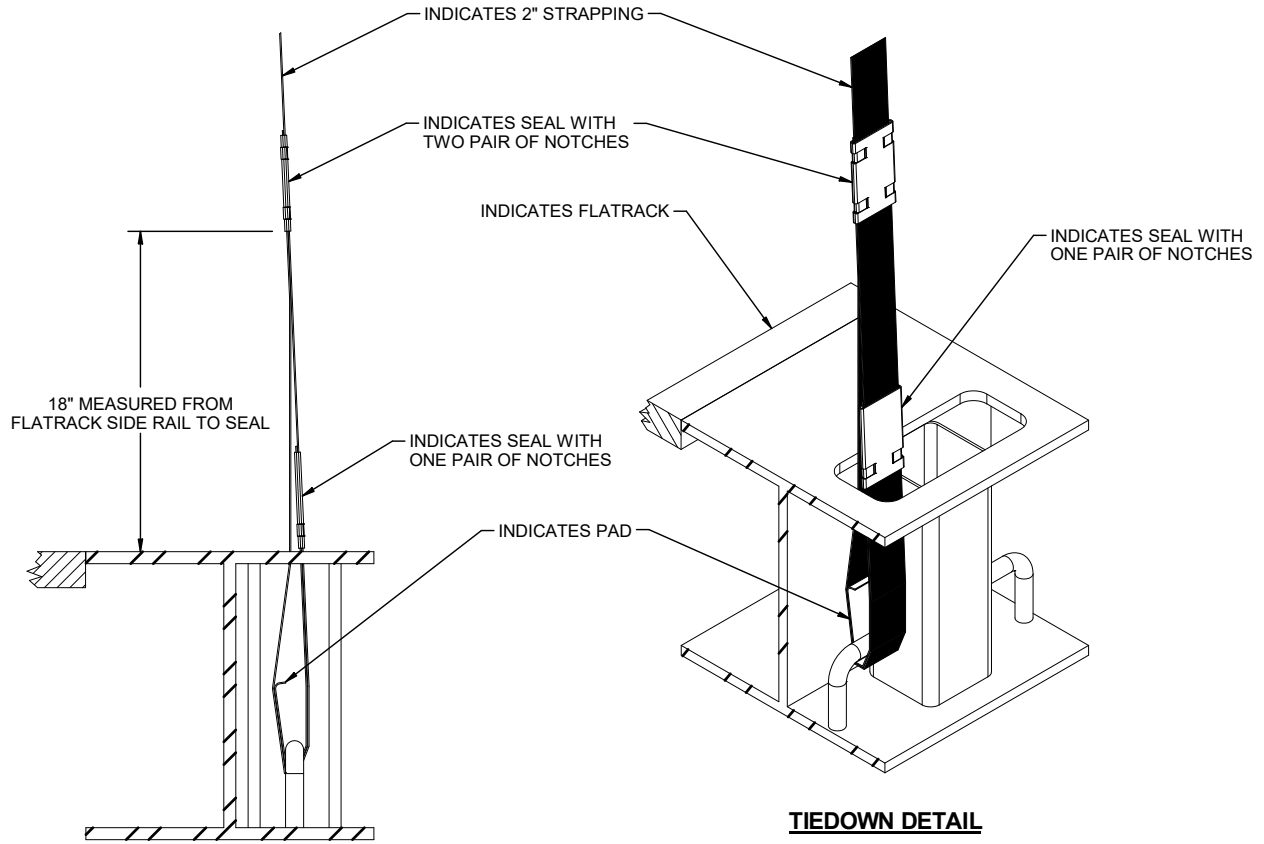
LESS-THAN-FULL-LOADPROCEDURE

KEY NUMBERS

- ① HEADER, 2" X 6" X 32" (DOUBLED) (2 REQD). INSTALL AGAINST THE CONTAINER ENDWALL. NAIL THE FIRST PIECE TO THE FLATRACK DECK W/4-10d NAILS. LAMINATE THE SECOND PIECE TO THE FIRST W/4-20d NAILS.
- ② SIDE BLOCKING, 2" X 6" X 24" (DOUBLED) (4 REQD). POSITION PARALLEL WITH THE SIDE OF THE CONTAINER AND WITHIN 12" OF THE END OF THE CONTAINER. NAIL THE FIRST PIECE TO THE FLATRACK DECK W/4-10d NAILS. LAMINATE THE SECOND PIECE TO THE FIRST W/4-20d NAILS.
- ③ BACK-UP CLEAT, 2" X 6" X 16" (DOUBLED) (4 REQD). INSTALL AGAINST THE HEADER, PIECE MARKED ①, WITH THE OUTSIDE EDGE OF THE BACK-UP CLEAT INSTALL FLUSH TO THE END OF THE HEADER. NAIL THE FIRST PIECE TO THE FLATRACK DECK W/4-10d NAILS. LAMINATE THE SECOND PIECE TO THE FIRST W/4-20d NAILS.
- ④ STRAPPING BOARD, 2" X 6" X 29-1/2" (2 REQD).
- ⑤ HOLD-DOWN STRAP, 2" X .050" OR .044" X 16'-0" LONG STEEL STRAPPING (2 REQD). INSTALL EACH STRAP FROM TWO PIECES, EACH 8'-0" LONG. FASTEN TO A TIEDOWN PROVISION ON THE SIDE OF THE FLATRACK AND BRING UP TO THE TOP OF THE LOAD WHERE THEY CAN BE TENSIONED AND SEALED. STAPLE TO STRAPPING BOARD W/2 STAPLES EACH.
- ⑥ PAD, STRAPPING 2" X .050" OR .044" X 18" (4 REQD). PRE-POSITION THE PAD BETWEEN THE HOLD-DOWN STRAP AND THE FLATRACK TIEDOWN PROVISIONS. SEE THE "TIEDOWN DETAIL" ON PAGE 8.
- ⑦ SEAL FOR 2" STRAPPING (10 REQD, 5 PER STRAP). FASTEN 2" HOLD DOWN STRAP WITH ONE SEAL AT EACH LOCATION CRIMPED WITH TWO PAIR OF NOTCHES. FASTEN PAD WITH ONE SEAL CRIMPED WITH ONE PAIR OF NOTCHES. SEE THE "END-OVER-END LAP JOINT DETAILS" ON PAGE 3. SEE THE "TIEDOWN DETAIL" ON PAGE 8.



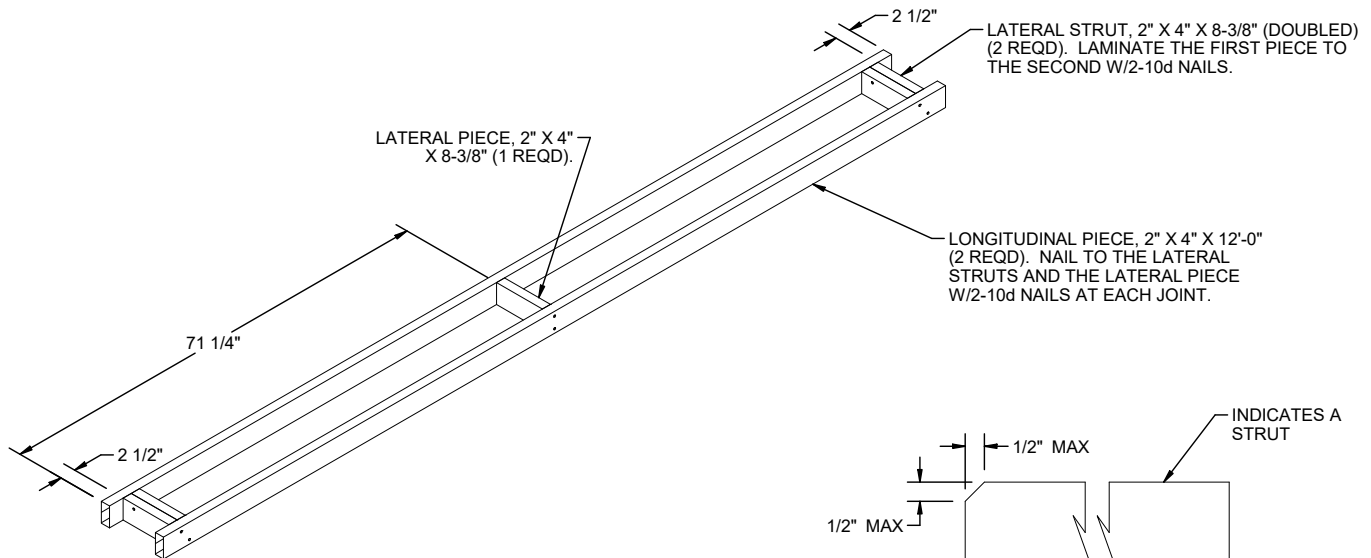
STRAPPING BOARD ASSEMBLY



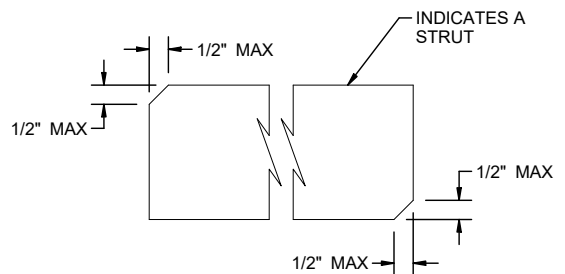
PARTIAL SIDE VIEW

TIEDOWN DETAIL

NOTE: THIS PROCEDURE IS USED FOR TIEDOWN OF LOAD USING FLATRACK SIDE RAIL TIEDOWN POINTS.



SIDE BLOCKING ASSEMBLY



BEVEL CUT

IF DESIRED, EACH END OF A STRUT MAY BE BEVEL-CUT AS SHOWN ABOVE TO FACILITATE THE ACHIEVMENT OF A TIGHT END OF LOAD FIT.