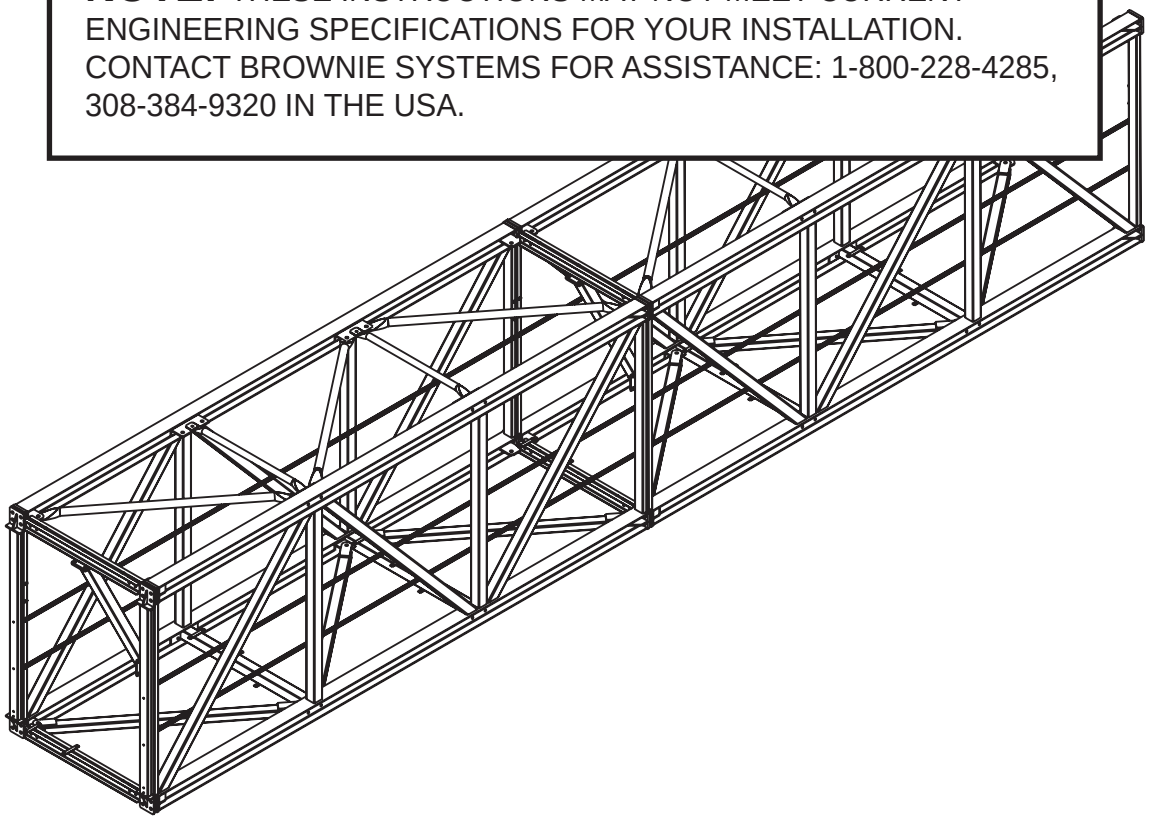
Brownie SYSTEMS

A Unit of **GLOBAL** Industries, Inc.

Thru Truss Catwalk

CONSTRUCTION AND OWNER'S MANUAL

NOTE: THESE INSTRUCTIONS MAY NOT MEET CURRENT ENGINEERING SPECIFICATIONS FOR YOUR INSTALLATION. CONTACT BROWNIE SYSTEMS FOR ASSISTANCE: 1-800-228-4285, 308-384-9320 IN THE USA.



P/N 4000033 rev 7-09 [1]

The Symbol shown below is used to call your attention to instructions concerning your personal safety. Watch this symbol - it points out important safety precautions. It means “ATTENTION” - Become Alert! Your Personal Safety Is Involved! Read the message that follows and be alert to the possibility of personal injury or death.

Be Alert!

Your Personal Safety Is Involved

A copy of this manual should be available at all times to the owner/operator. Additional copies may be requested from the company at the address shown on the back cover. Please reference manual part number 4000033 when requesting additional copies.

Please Contact BROWNIE SYSTEMS or Your Dealer
If You Have Any Questions Concerning This Manual

Keep This Manual In A Safe Place Available For Future Reference

A GENUINE

GLOBAL INDUSTRIES, INC.

PRODUCT

PREFACE

You have purchased the finest Thru Truss Catwalk manufactured today. The following information is intended as a guide for: Thru Truss Catwalk pre-assembly, proper construction of your Thru Truss Catwalk, and safe and proper use of your Thru Truss Catwalk after construction.

General Safety Statement

Your safety and the safety of others associated with Thru Truss Catwalks and grain system equipment, is of prime concern to us at Brownie Systems. This manual was written with the safety of the operator and/or others who come into contact with the Thru Truss Catwalk as our prime concern. We wrote this manual to help you to better understand how to safely build and use your Thru Truss Catwalk.

It is your responsibility as the owner, builder, operator, or supervisor, to know what specific requirements, precautions, and hazards exist and to make these known to all personnel working with the equipment or in the area, so that they too may take any necessary safety precautions that may be required!

Failure to read this Manual and its Safety Instructions by all personnel is a misuse of the equipment. We want you as our partner in safety!

All personnel, including construction personnel, must read and understand all equipment Operator's Manuals before starting Thru Truss Catwalk construction!

Contents

Warranty

Global Industries Inc. (the **Company**) makes the following warranty to the initial retail purchaser of its products (the **Customer**).

MATERIALS and WORKMANSHIP:

The Company warrants products manufactured by it to be free from defects in materials and workmanship in normal use and service for a period of one (1) year after date of delivery to the Customer.

COMPANY'S OBLIGATION and CUSTOMER'S EXCLUSIVE REMEDY:

The Company's sole obligation and the Customer's exclusive remedy under this warranty is as follows:

If within one (1) year after delivery to the customer the product fails to function properly due to a defect in either materials or workmanship, the Company will at its option, either repair the defective part or replace the defective part with a new or reconditioned part. Labor charges for removing defective parts and installing replacement parts, shipping charges with respect to such parts, and applicable sales and other taxes, if any, shall not be covered by this warranty.

CONDITIONS, LIMITATIONS, AND EXCLUSIONS:

There are no warranties or merchantability or fitness for a particular purpose with respect to any product manufactured or sold by the Company. Motors provided by the Company are in most instances warranted by the manufacturer thereof and are not warranted by the Company. The Company shall not be responsible under this warranty or otherwise for personal injury or for **Incidental or Consequential Damages,** including, without limitation, loss of use and lost profits. This warranty does not apply to defects or damages caused by misuse, improper maintenance, or improper installation of the Company's product or any equipment attached to or used in connection with the Company's product. The Company reserves the right to make changes or improvements to its products without incurring any obligation with respect to previously manufactured products. Field modification of this product without the expressed written permission of the Company constitutes a misuse of the product. The Company shall have no liability under this warranty until payment in full for the product in question has been made by the customer. The foregoing is the sole warranty made by the Company. No one is authorized to make other warranties on behalf of the Company.

1 Introduction

Safety

This Brownie Systems Construction and Owners Manual is written to assist and instruct those who are responsible for Thru Truss assembly, and for anyone using the Thru Truss once assembled.
Global Industries Inc. assumes no liability with respect to proper assembly, installation, and inspection, or use of its products established under applicable laws, all of which is the sole responsibility of the purchaser and those doing the assembly work.

Appurtenances and the accessories manufactured by us for use with our products conform only to applicable Federal or Safety Standards in effect at such time.

ALL INFORMATION ON THIS PAGE IS WARNING INFORMATION!

GENERAL SAFETY STATEMENT

Occupational safety is of prime concern to us at Brownie Systems. This manual was written with the safety of the operator or others who come in contact with the equipment as our prime concern. We wrote this manual to help you to better understand how to safely build and use the Thru Truss.

It is your responsibility as an owner or operator or supervisor, to know what specific requirements, precautions, and work hazards exist and to make these known to all other personnel working with the equipment or in the area, so that they too may take any necessary safety precautions that may be required.

Failure to read this Manual and its Safety Instructions by all personnel is a misuse of the equipment. We want you as our partner in safety.

Watch For This Symbol! It Points Out Important Safety Precautions.
It Means **"ATTENTION"** - Become Alert! Your Safety Is Involved!

WORK AREA SAFETY STATEMENT

Under no circumstances should persons not involved in the operation be allowed to **trespass** into or be present in the work area.

It shall be the duty of all operators to see that children and/or other persons stay out of the work area! Trespass into the work area by anyone not involved in the actual operations, or trespass into a hazard area by anyone, shall result in an immediate shut down by the operator.

It shall be the responsibility of all operators to see that the work area has secure footing and is clean and free of all debris and tools which might cause accidental tripping and/or falling. It shall also be their responsibility to keep the work area clean and orderly during the operation. It shall also be the responsibility of the operator to have damaged equipment repaired and to be made free of sharp edges.

Safety, continued

OSHA
OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970

Certain purchasers of our products may be subject to the requirements and standards of the William-Steiger Occupational Safety and Health Act of 1970, which prescribes standards for use of appurtenances of our manufacture, such as handrails, platforms, stairways, fixed ladders, ladder cages, and guard rails. (Occupational Safety and Health Standards Section 1910.21 through 1910.32). Before installing these devices, familiarize yourself with the above Federal Standards.

At the time of manufacture, these **optional** items conform to applicable standards. Global Industries Inc. assumes no liability with respect to proper construction, inspection, assembly, or use of its products under applicable laws, all of which is the sole responsibility of the purchaser and those doing the assembly work.

A. When climbing or walking on towers, ladders, catwalks, or trusses, take care not to fall from these structures. Common sense dictates that such appurtenances should not be used when conditions such as rain or wind preclude their safe use. Brownie Systems strongly recommends that optional climbing equipment be purchased to meet the current specifications set forth by OSHA or ANSI whether the individual operator is required by law to do so or not. A properly secured safety belt should be used at all times when performing operations work or maintenance on Brownie Thru Trusses.

B. Field modification of Brownie Thru Trusses or any auxiliary components or equipment without the authorization of the manufacturer may present unknown dangers to the operator and must be avoided.

ALL INFORMATION ON THIS PAGE IS WARNING INFORMATION!

WARNING! Make sure that all persons on the Thru Truss during construction are properly fastened to safety cables to prevent injury or death due to falling!

WARNING! Installation of accessories or equipment in or on a Thru Truss that would over stress the structure in any manner will void the Warranty. If you do not have specific recommendations from Brownie Systems, where additional loading is involved, please contact the Brownie Systems before installing any such appurtenances or equipment.

WARNING! Make sure that all persons within the work area on ladders, lifts, crane lifts, scafolds, or the like are secure and not in danger of falling! Also make sure that the work surfaces are clean and free of clutter.

Bolt Torque

Thru Truss Sections are available in 6’ 8”, 13’ 4”, and 20’ lengths. The following instructions provide step by step assembly and installation guidelines, based on 20’ catwalk sections; 6’ 8” and 13’ 4” sections follow the same general guidelines. **Any alterations to the product or deviation from instructed assembly and installation procedures, without the authorization of Brownie Systems is prohibited.**

The tools required for assembly and installation are:

1-1/2” open-end wrench and socket
1-1/8” open-end wrench and socket
3/4” open-end wrench and socket
1/2” open-end wrench and socket
Torque Wrench

Use torque values listed in the table below for all hardware assembly.

Bolt Torque Value Table

Part Number	Bolt Diameter (x length)	Torque (ft-lbs) Grade 8	Bolt Head Identification
90000242, 90000243	1” (x4-1/2”, x2-1/2”)	1,000 ft-lbs, 1,400 Nm, 138 kgf-m	Grade 8
90000237	3/4” (x2”)	410 ft-lbs, 556 Nm, 57 kgf-m	Grade 8
90000173, 90000187	1/2” (x6”, x1-3/4”)	120 ft-lbs, 163 Nm, 17 kgf-m	Grade 8
90000159	5/16” (x1-1/2”)	-	Carriage Bolt

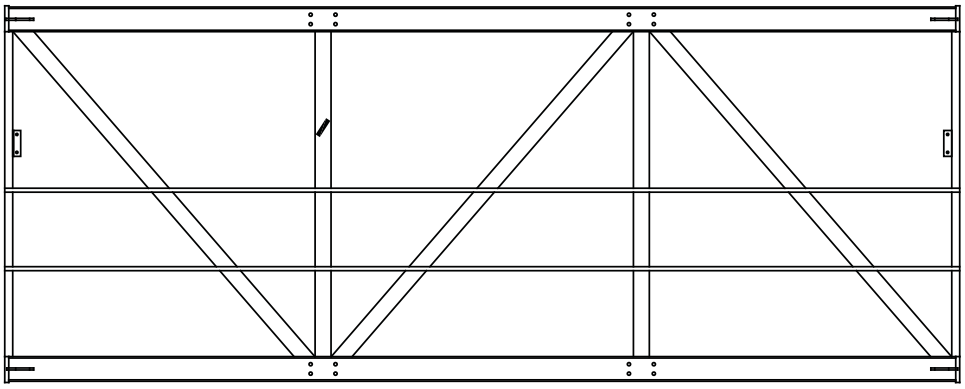
Contact the factory with any Thru-Truss construction or assembly problems.

Phone: 1-800-228-4285 Fax: 1-308-382-6954

WARNING! CRITICAL: The correct bolts as specified and provided by Brownie Systems must be used throughout the entire assembly of this Thru Truss! And, the correct bolt torques as indicated in the table above must be achieved throughout the entire truss assembly! Using the wrong bolts or not achieving the correct torque values could result in the structural damage or failure of this Thru Truss!

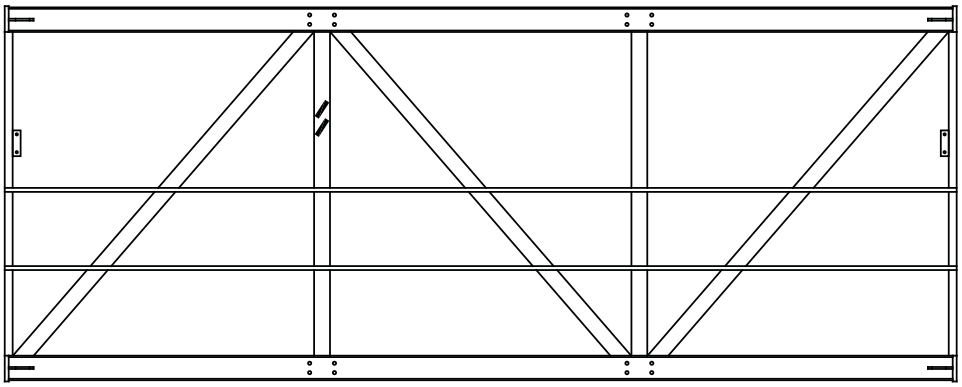
WARNING! Owners and Contractors: before construction of the Brownie Thru Truss is started Read and understand this manual!

Parts List, Thru Truss (drawings not to scale)

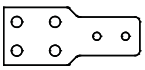


20’ truss side 1, 1 qty (4500810)

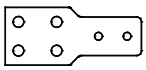
NOTE: The quantities given for each part are the quantities supplied for (1) Thru Truss section only.



20’ truss side 2, 1 qty (4500817)

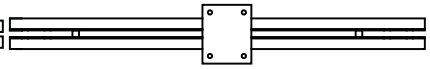


cross member bottom plate, 1/2” thickness, 2 qty (3497821)

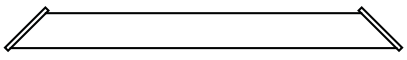


cross member top plate, 3/4” thickness, 2 qty (3497822)

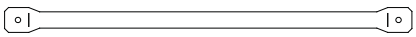
bottom section cross member, 1 qty
Thru 30” mtg., (3497823)
Thru 44” mtg., (3497842)



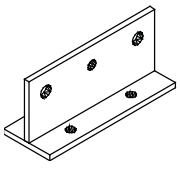
top section cross member, 1 qty
Thru 30” mtg., (3497824)
Thru 44” mtg., (3497843)



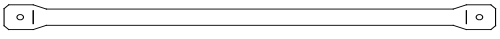
truss kicker, 1 qty (3497830)



top cross member tube, 2 qty
Thru 30” mtg. (3497831)
Thru 44” mtg. (3497805)

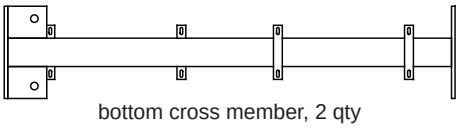


cross member mounting bracket, 4 qty (4500813)



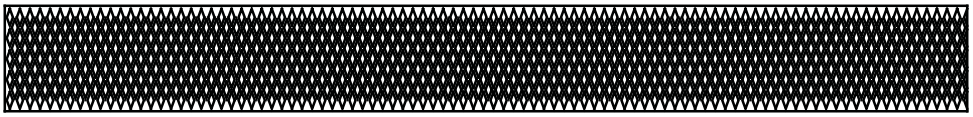
top wind diagonal tube, 2 qty
Thru 30” mtg., (3497832)
Thru 44” mtg., (3497806)

Parts List, Thru Truss, cont'd (drawings not to scale)



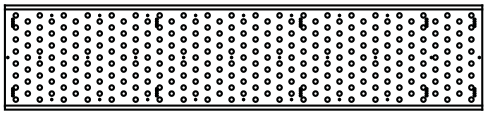
bottom cross member, 2 qty
Thru 30" mtg., (4500818)
Thru 44" mtg., (4500815)

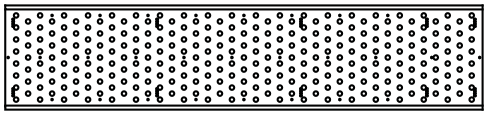
bottom wind diagonal, 3 qty
Thru 30" mtg., (4500819)
Thru 44" mtg. (4500811)



walk surface 2' x 20' x 4-1/2" x 12 (G1921129) gage galvanized steel

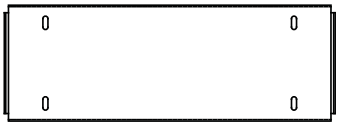
- or -





standard walkway 10' plank, 2 qty
(G1921128-1)

hardware package
for Thru Truss
1 qty (4500820)



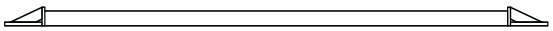
standard walkway splice
(G3497865)

Hardware Listing for the Thru Truss

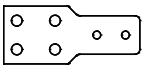
Part Number	Description	Qty
018909	5/16" flat washer	9
018913	5/16" hex nut	9
068951	3/4" lock washer	50
651426	1/2" grade 8 hex nut	9
90000159	5/16" x 1-1/2" carriage bolt	10
90000173	1/2" x 6" grade 8 hhcs	5
90000187	1/2" x 1-3/4" grade 8 hhcs	5
90000237	3/4" x 2" grade 8 hhcs	50
90000242	1" x 4-1/2" grade 8 hhcs	17
90000243	1 x 2-1/2" grade 8 hhcs	13
9005049	3/4" grade 8 hex nut	50
9005065	1" grade 8 hex nut	30
90010041	1/2" lock washer	9
90010057	1" lock washer	30
1929030	1" square plastic plug	4
G1921147	GRP galvanized diamond anchor	9

NOTE: **hhcs** is the acronym for **hex head cap screw**. This acronym will be used throughout the manual.

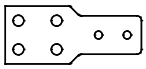
Parts List, Terminating End Package



truss terminating end member (3497836), 1 qty

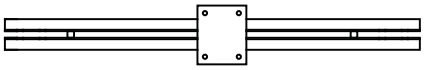


cross member bottom plate, 1/2" thickness, 2 qty (3497821)

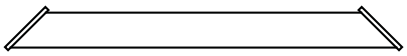


cross member top plate, 3/4" thickness, 2 qty (3497822)

bottom section cross member, 1 qty
Thru 30" mtg., (3497823)
Thru 44" mtg., (3497842)



top section cross member, 1 qty
Thru 30" mtg., (3497824)
Thru 44" mtg., (3497843)



truss kicker, 1 qty (3497830)

NOTE: The quantities given for each part are the quantities supplied for (1) Terminating End Package Only.

hardware package for Thru Truss Terminating End Package 1 qty (4502504)

Hardware Listing for Thru Truss Terminating End

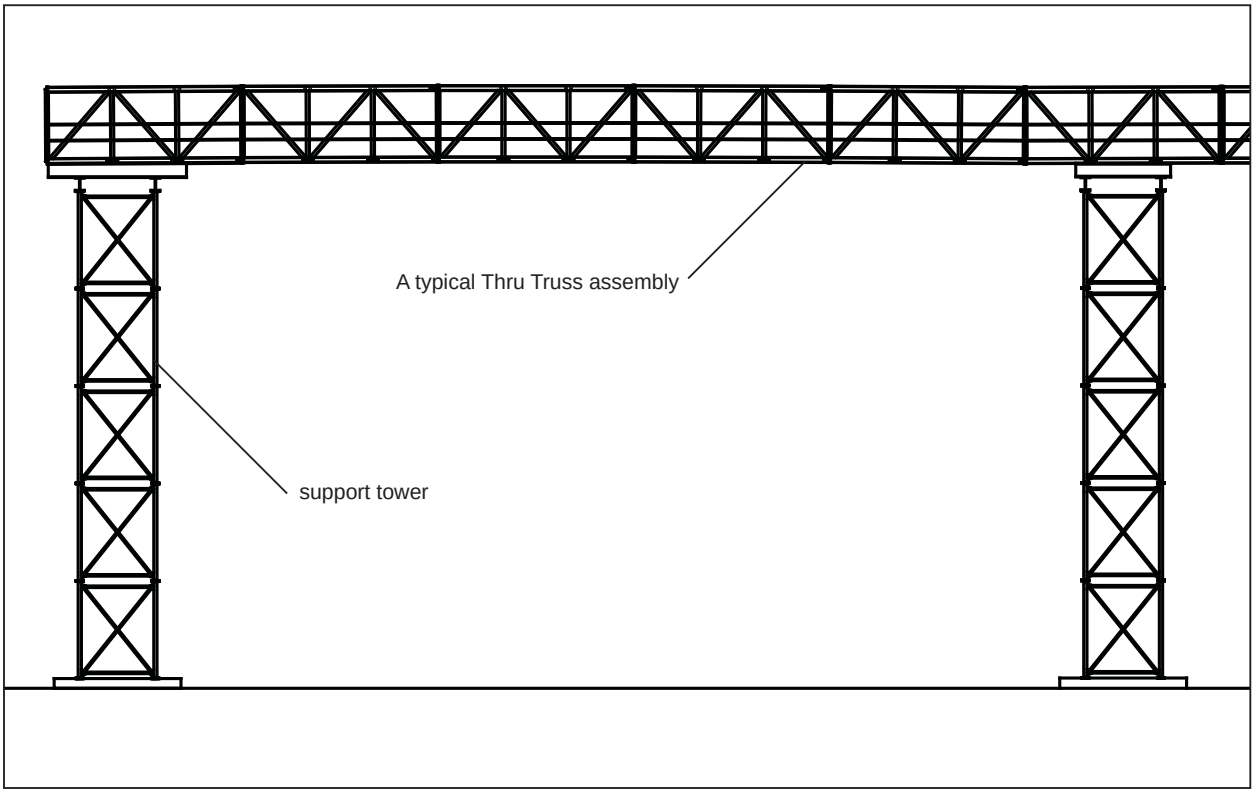
Part Number	Description	Qty
068951	3/4" lock washer	55
651426	1/2" grade 8 hex nut	8
90000173	1/2" x 6" grade 8 hhcs	4
90000187	1/2" x 1-3/4" grade 8 hhcs	4
90000189	3/4" x 3" grade 8 hhcs	55
90000191	1" x 4" grade 8 hhcs	16
900005049	3/4" grade 8 hex nut	55
90005065	1" grade 8 hex nut	22
90010041	1/2" lock washer	8
90010057	1" lock washer	25

NOTE: **hhcs** is the acronym for **hex head cap screw**. This acronym will be used throughout the manual.

2 Assembly

WARNING! **The contractor/owner should contact Brownie Systems to verify or clarify any question regarding Thru Truss drawings, instructions, components before starting the installation work.**

WARNING! **If any question or difficulty should arise during the process of Thru Truss installation, the contractor, owner should contact Brownie Systems to get an answer or to resolve the problem.**



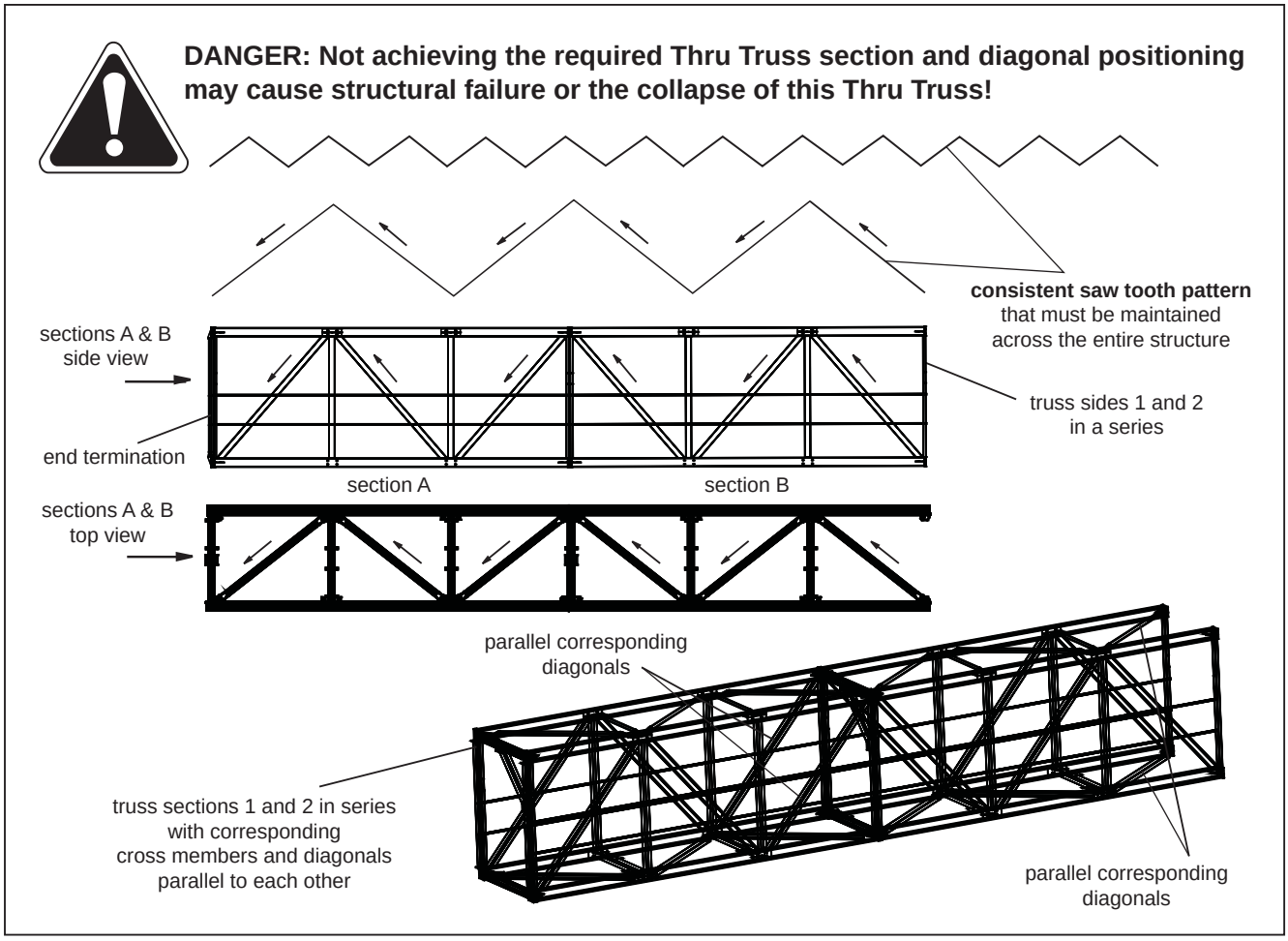
(a) **EXAMPLE OF A TYPICAL THRU TRUSS INSTALLED TO SUPPORTING TOWERS**

Positioning for Truss Sections and Diagonals

1 **Remember, when laying out the truss sections remember that the following specific layout pattern MUST be adhered to throughout construction!** See fig.s a - c.

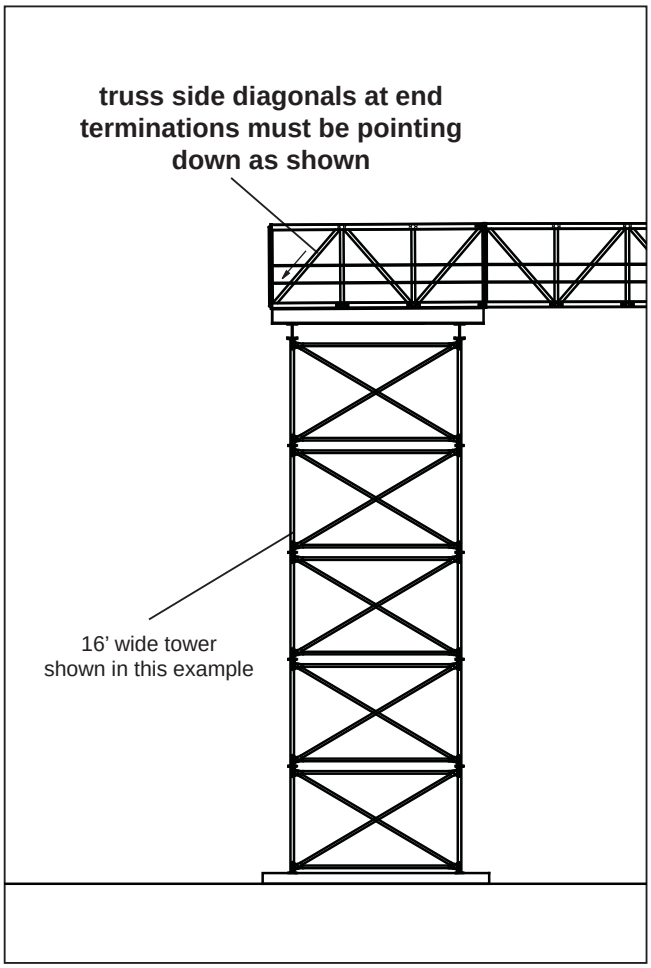
(1) In each section, the corresponding 1 and 2 truss sides need to be positioned so that their diagonals and cross members are parallel. And, consecutive truss sides in a series also need to be positioned so that a **consistent saw tooth pattern** is maintained across the entire structure!

(2) In the same manner, corresponding top and bottom truss diagonals and cross members need to be kept parallel. Also consecutive top and bottom truss diagonals in a series need to be positioned so that a **consistent saw tooth pattern** is maintained across the entire structure!

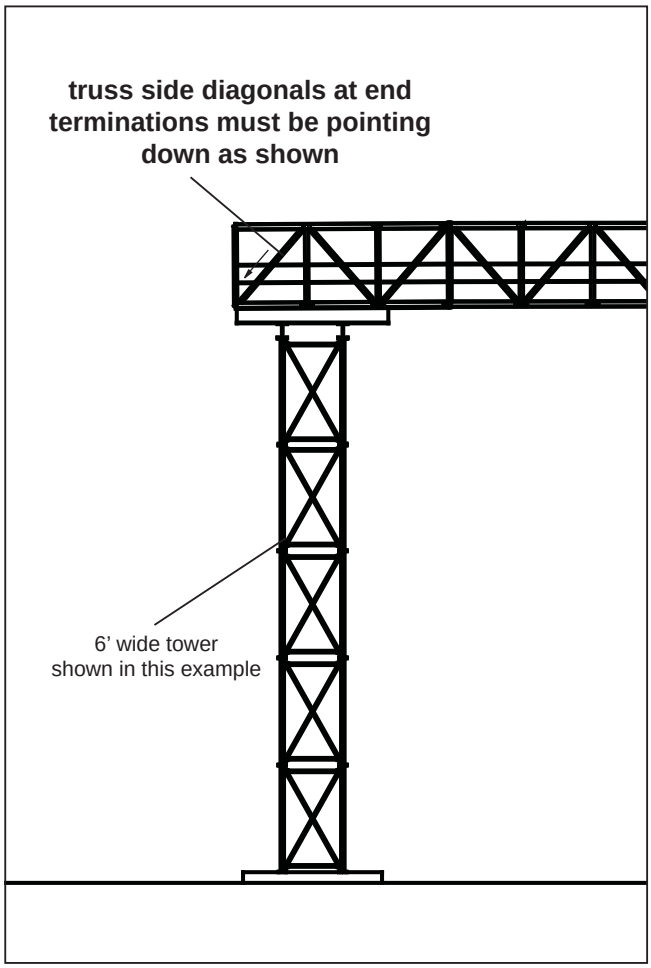


a **REQUIRED POSITIONING FOR TRUSS SECTIONS AND DIAGONALS**

WARNING! CORRECT END TERMINATION POSITIONING: It is required that truss side diagonals must be pointing down at the end terminations for each truss run (as shown in fig.s b and c).



b EXAMPLE OF A TYPICAL TERMINATING END

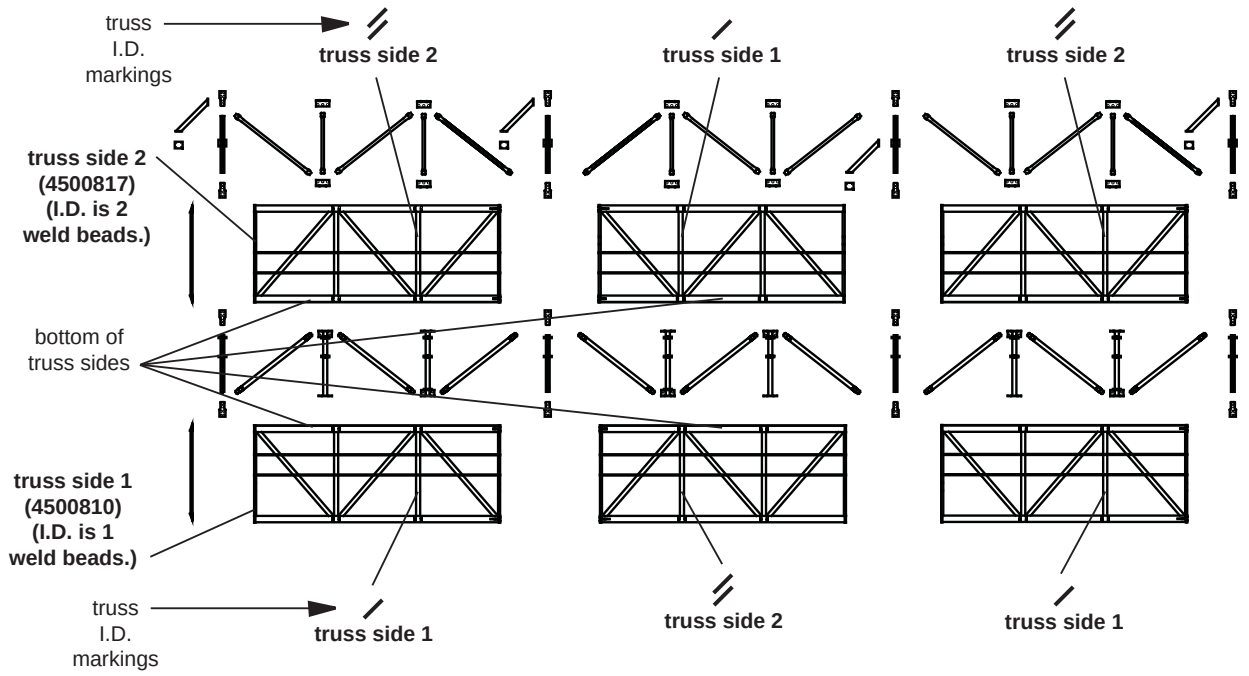


c EXAMPLE OF A TYPICAL TERMINATING END

Layout Truss Parts on the Ground

WARNING! Brownie Systems strongly recommends choosing a relatively level area near the site of installation for the assembly of Thru Truss Components. Failure to choose a flat area for truss component assembly could result in difficulty, component damage, or danger during the assembly!

2 Layout truss parts on the ground in their correct order near the site where the Thru Truss is to be installed (fig. a). Check to make sure all needed parts are present for assembly. **Make absolutely sure the correct positioning for truss sections and diagonals is achieved during construction! The positioning instructions on the previous 2 pages must be followed throughout the assembly of the entire truss!**

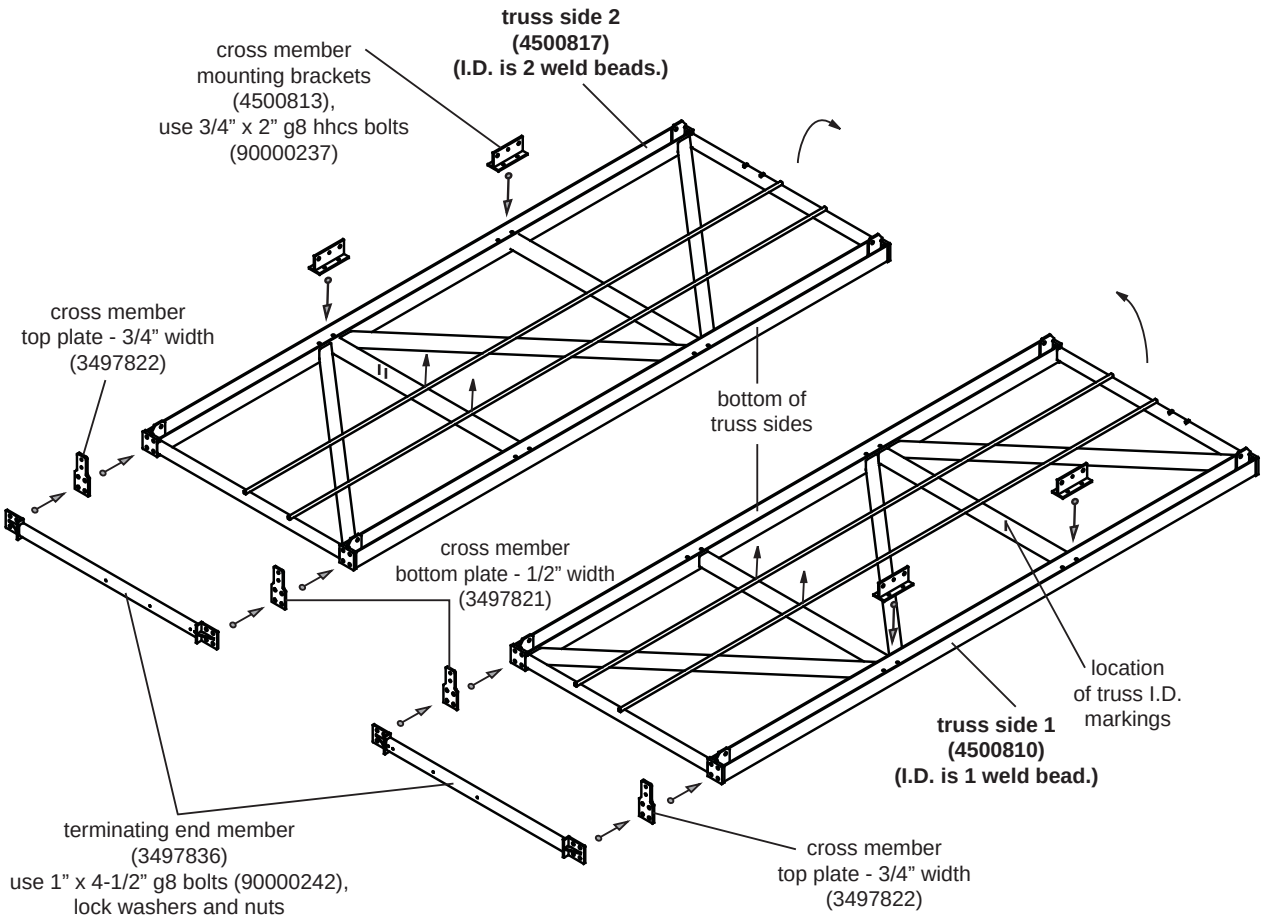


(a) **LAYOUT TRUSS COMPONENTS ON THE GROUND**

Install Mounting Brackets & End Terminations

3 Assemble the first terminating end section for the entire truss structure first. Before assembling the rest of this section, attach the cross member mounting brackets to the truss sides using 3/4" x 2" grade 8 hhcs as shown (fig.b). Finger tighten only. Locate the truss sides 1 and 2 so that the mid rails will be on the inward sides of the truss section. **Each truss section must have a truss side 1 and truss side 2.** Check truss and bolt identification markings to be sure that the correct corresponding truss sides are chosen and to make sure that the correct bolts are used.

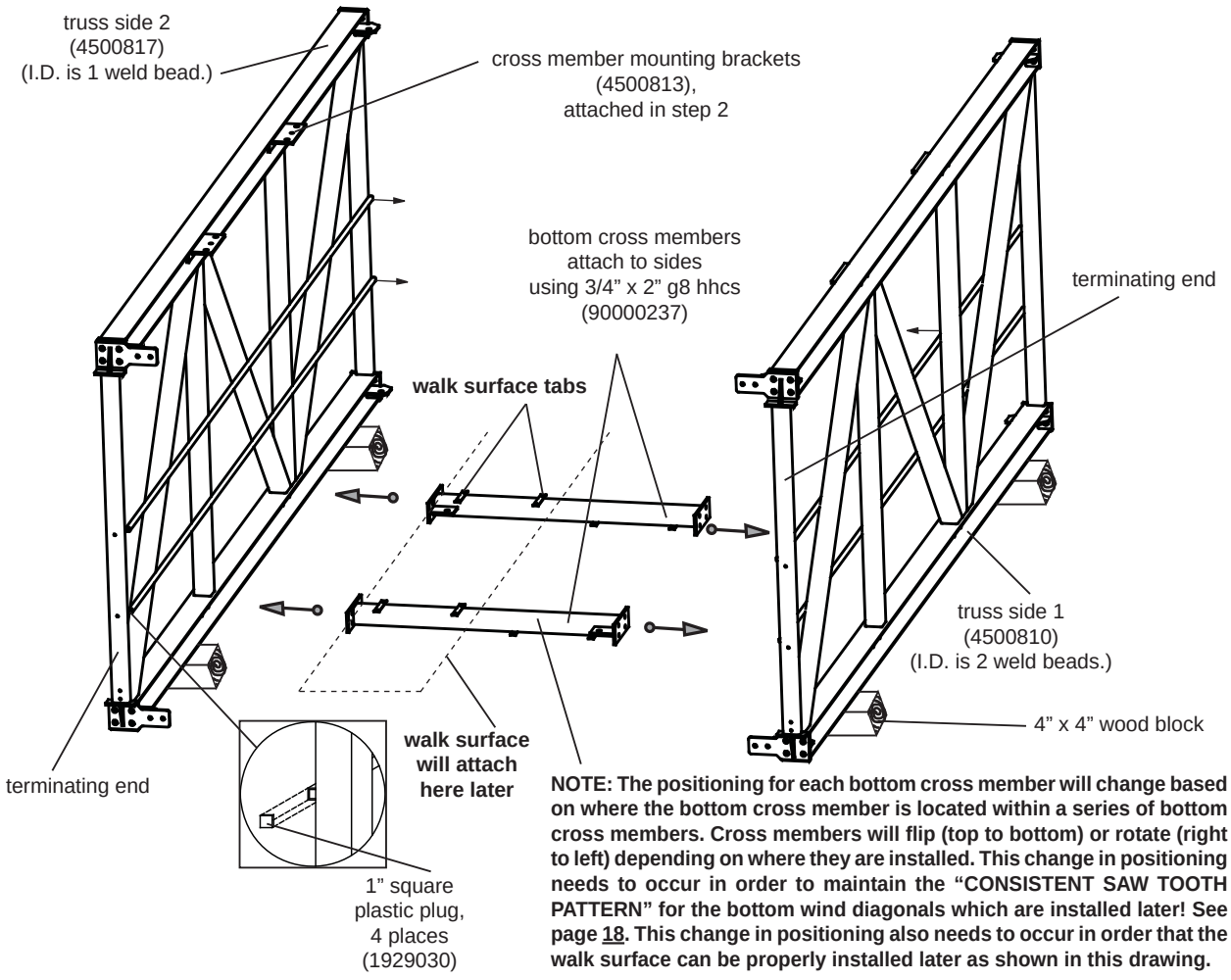
4 Attach truss terminating end members on the end that will become *the terminating end* of the truss. At the same time attach the cross member top plates and the cross member bottom plates. Cross member top and bottom plates are attached by sandwiching them between the terminating end members and the truss sides 1 and 2. Use 1" x 4-1/2" grade 8 hhcs bolts, lock washers, and nuts. Finger tighten only.



b **ATTACH MOUNTING BRACKETS AND END TERMINATION**

Install Bottom Cross Members

5 Turn the truss sides upright and rest the them on 4" x 4" wood blocks (fig. b). Position the (2) truss sides 1 and 2 opposing each other, as shown. **The section positioning pattern on page 14 - 15 must be adhered to!** Plug the mid rails at each end, using 1" square plastic plugs. Finger tighten bolts only at this time. Install the (2) bottom cross members by connecting each of them to truss sides 1 and 2. Position the bottom cross members so that the walk surface tabs are facing upward and so that they will be on the correct side of the truss floor for this Thru Truss run.



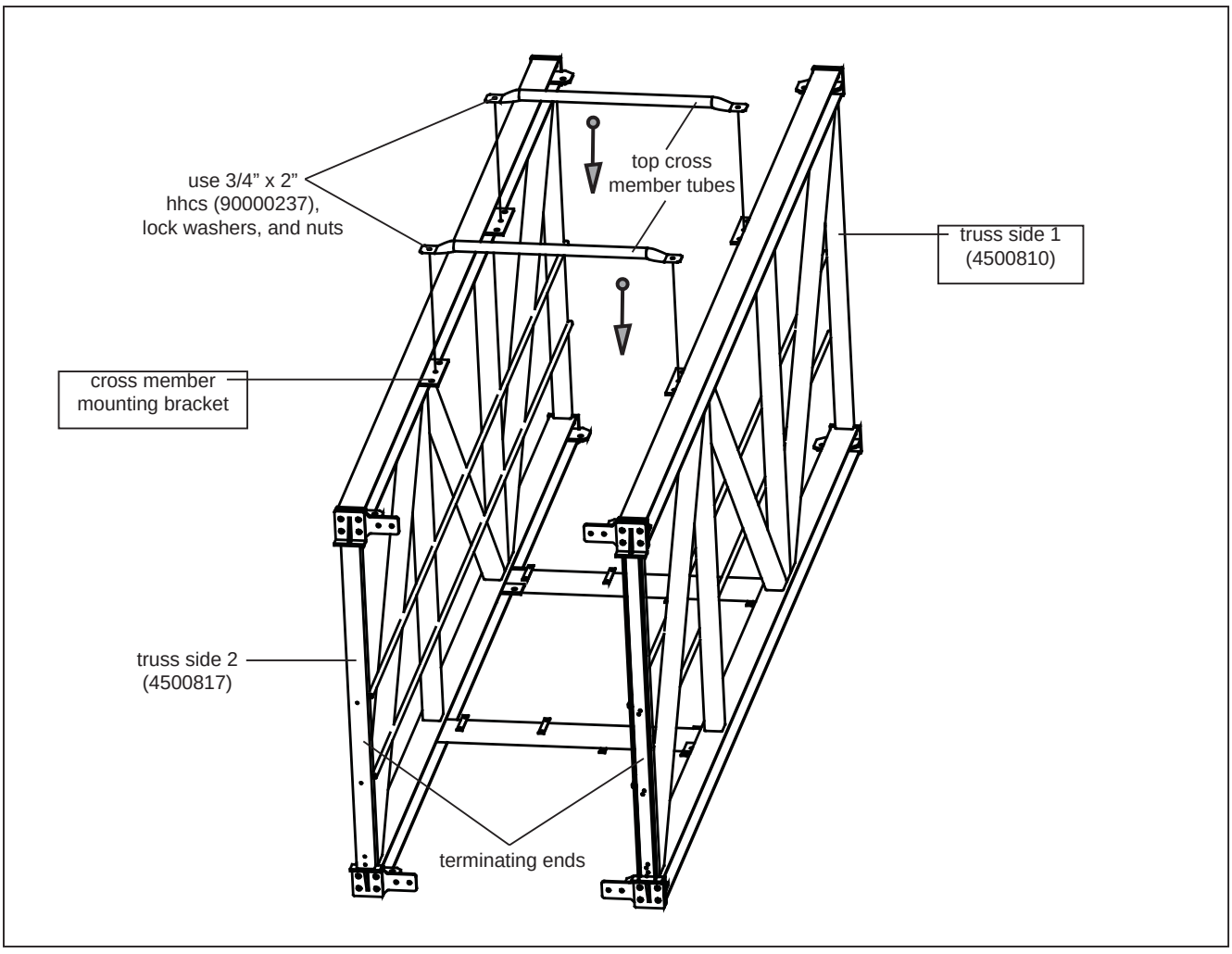
NOTE: The positioning for each bottom cross member will change based on where the bottom cross member is located within a series of bottom cross members. Cross members will flip (top to bottom) or rotate (right to left) depending on where they are installed. This change in positioning needs to occur in order to maintain the "CONSISTENT SAW TOOTH PATTERN" for the bottom wind diagonals which are installed later! See page 18. This change in positioning also needs to occur in order that the walk surface can be properly installed later as shown in this drawing.

b **ATTACH BOTTOM CROSS MEMBERS AND INSERT THE PLASTIC PLUGS FOR MID RAILS**

WARNING! The required section positioning pattern shown on page 14 - 15 must be strictly adhered to throughout construction. Maintaining this consistent saw tooth pattern across the entire structure is essential to prevent structural damage or failure!

Install Top Cross Member Tubes

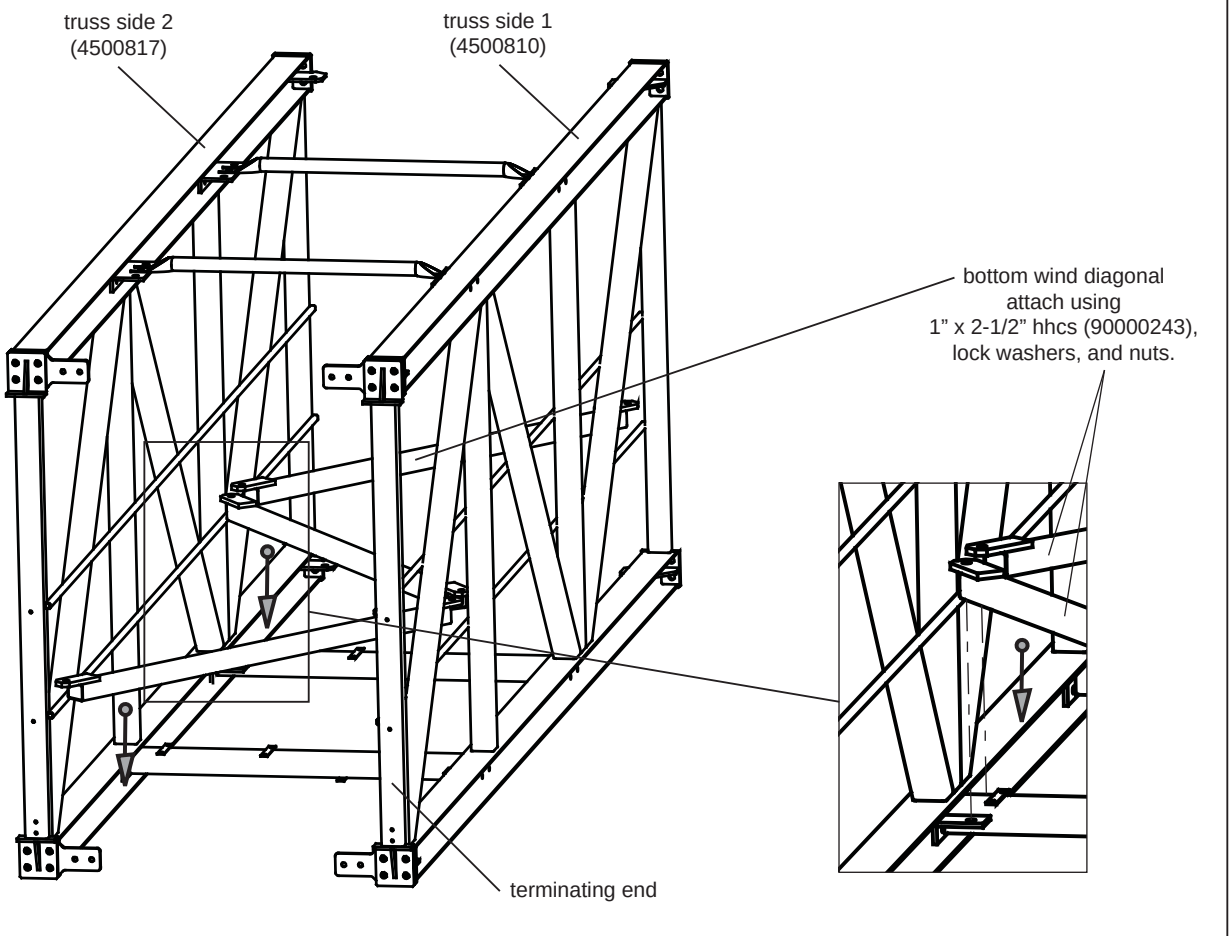
6 Attach the top cross member tubes to the cross member mounting brackets as shown. (fig. a). Use 3/4" x 2" hhcs, lock washers, and nuts. Finger tighten these connections only at this time.



a **ATTACH TOP CROSS MEMBER TUBES**

Install Bottom Wind Diagonals

7 Attach the bottom wind diagonals to the cross member mounting brackets as shown. (fig. a). Use 1” x 2-1/2” hhcs, lock washers, and nuts. Finger tighten these connections only at this time.

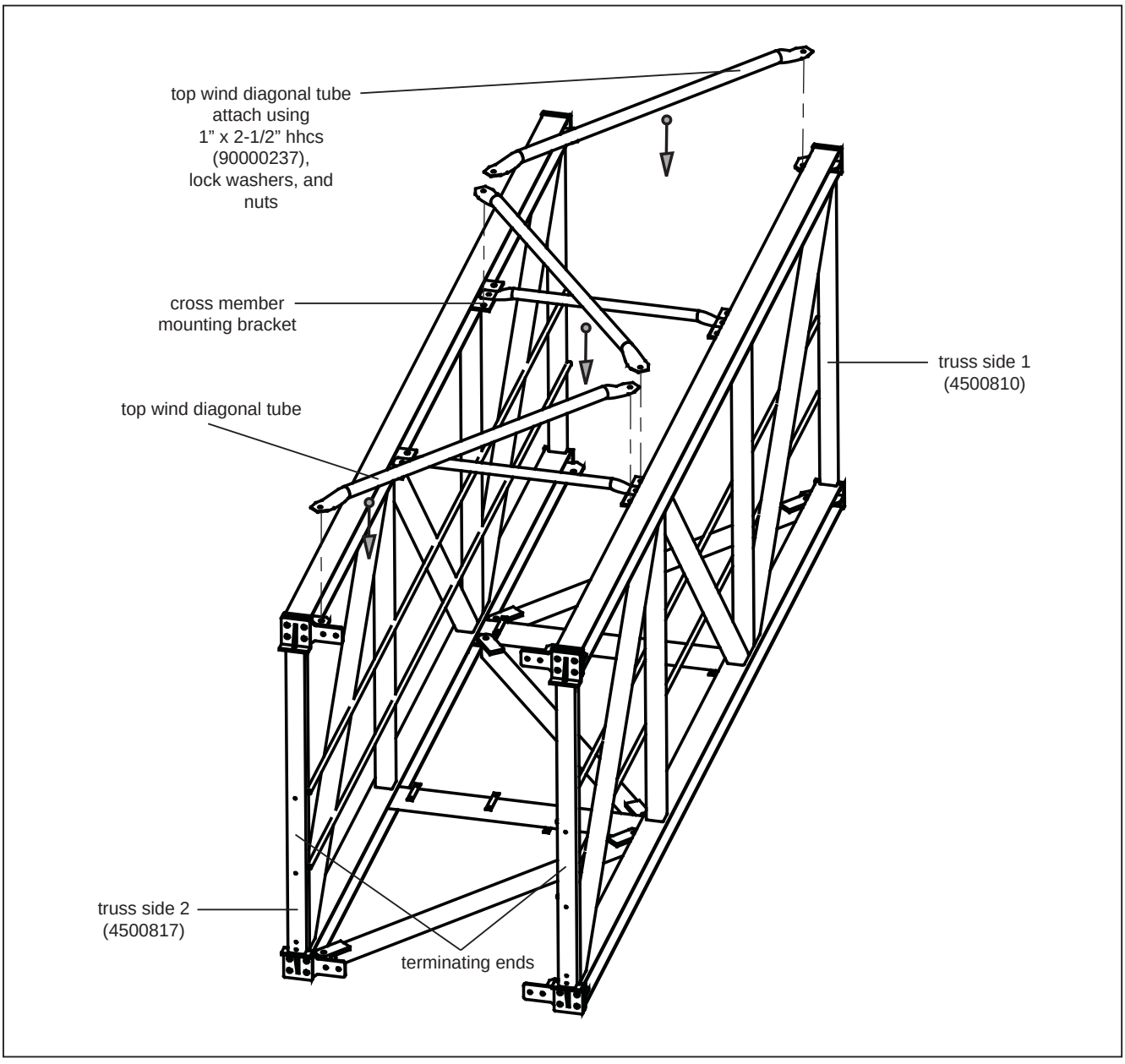


(a) **INSTALLING BOTTOM WIND DIAGONALS**

WARNING! If there is difficulty with the installation of the bottom wind diagonals, make sure the truss sides are square to each other.

Install Top Wind Diagonals

8 Attach the top wind diagonal tubes to the cross member mounting brackets as shown. (fig. b). Use 1” x 2-1/2” hhcs, lock washers, and nuts. Finger tighten these connections only at this time.

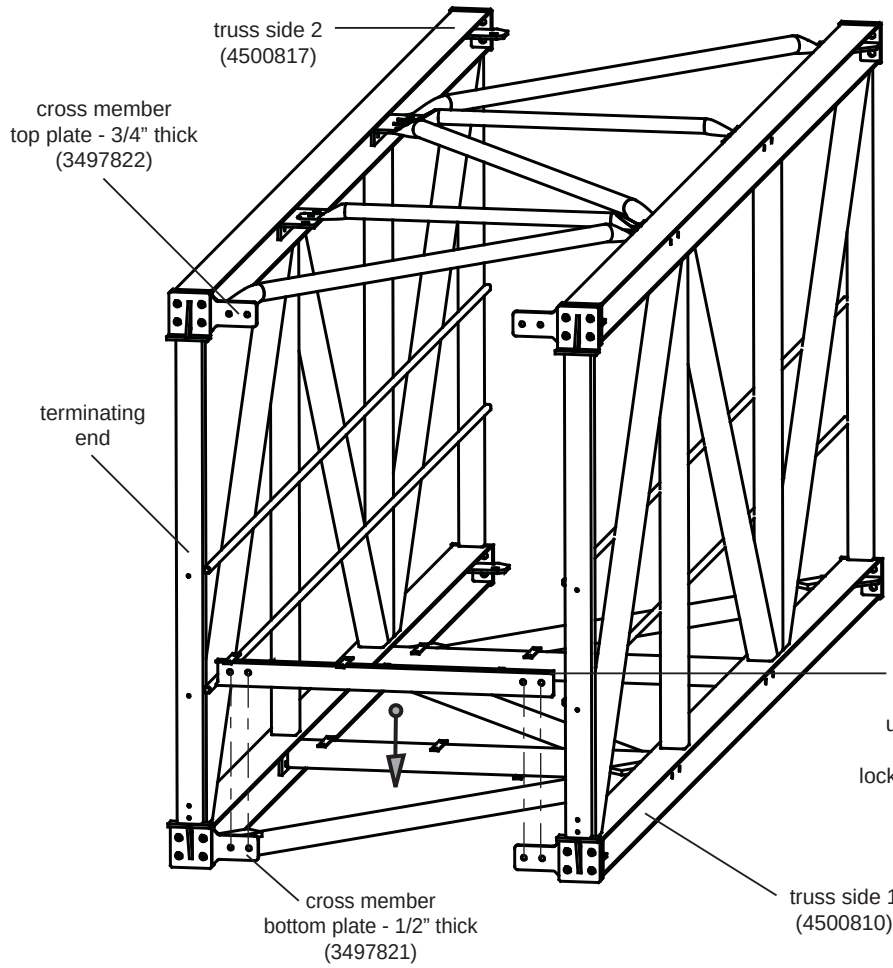


b **ATTACH TOP WIND DIAGONAL TUBES**

Install Bottom Section Cross Members

WARNING! It is required that the TERMINATING bottom section cross member be installed at each end of your Thru Truss run.

9 Attach the bottom section cross member between the truss sides 1 and 2 (fig a). The tabs on the bottom section cross members are for attaching the walk surface. Position them facing up to the desired side for attaching your walk surface. The bottom section cross member is to be attached so that the truss cross member bottom plates are sandwiched between the channels of the bottom section cross member. Use 3/4" x 2" grade 8 hex bolts, lock washers and nuts at these connections. Finger tighten bolts only at this time.



NOTE: One bottom section cross member will be required to terminate each truss run.

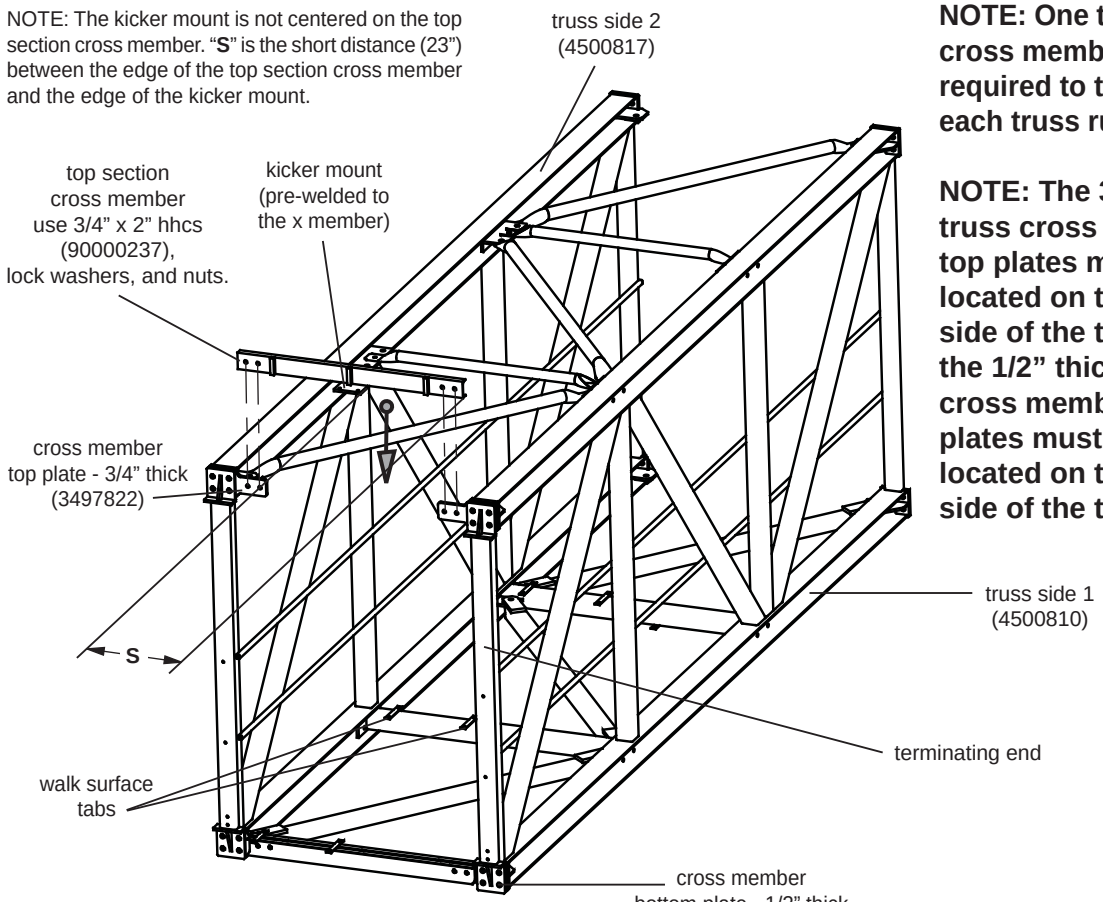
NOTE: The 3/4" thick truss cross member top plates must be located on the top side of the truss and the 1/2" thick truss cross member bottom plates must be located on the bottom side of the truss!

a **ATTACH THE BOTTOM SECTION CROSS MEMBER**

Install Top Section Cross Members

WARNING! It is required that the TERMINATING top section cross member be installed at each end of your Thru Truss run.

10 Attach the top section cross member between the truss sides 1 and 2 (fig b). The top section cross member is to be attached so that the 3/4" thick cross member top plates are sandwiched between the channels of the top section cross member. Use 3/4" x 2" grade 8 hhcs, lock washers and nuts at these connections. Attach these bolts finger tight at this time. Plan ahead to have the kicker mount located on the opposite side of where the walk surface will be. The kicker must be mounted on the correct side of the Thru Truss for this installation to prevent head injury to those who will be using the walk surface.



NOTE: One top section cross member will be required to terminate each truss run.

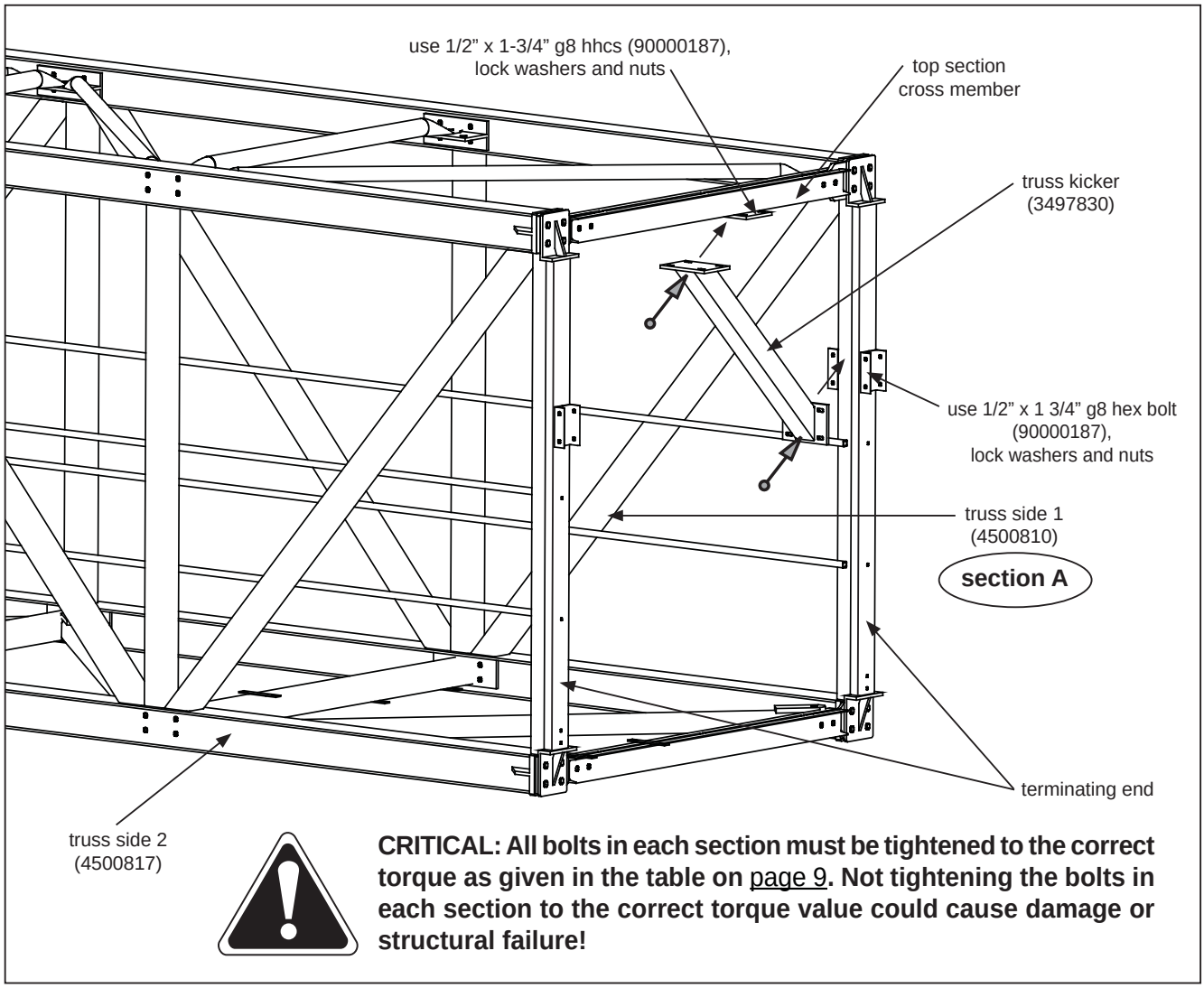
NOTE: The 3/4" thick truss cross member top plates must be located on the top side of the truss and the 1/2" thick truss cross member bottom plates must be located on the bottom side of the truss!

b **ATTACHING THE TOP SECTION CROSS MEMBER**

Install the Truss Kicker

11 Attach the truss kicker to the top section cross member and to the kicker plate at the terminating end (fig. a). Use the 1/2" x 6" grade 8 hhcs bolts, lock washers, and nuts to attach the truss kicker to the kicker plate. Remember, mount the kicker on the correct side of the Thru Truss for this installation to prevent head injury to those who will be using the walk surface (see the previous page).

12 Tighten all bolt connections in section A down to their proper torque at this time. See page 9 to find the correct torque required for each bolt connection. Do not torque the bolted connections in section B until section B is joined to section A.

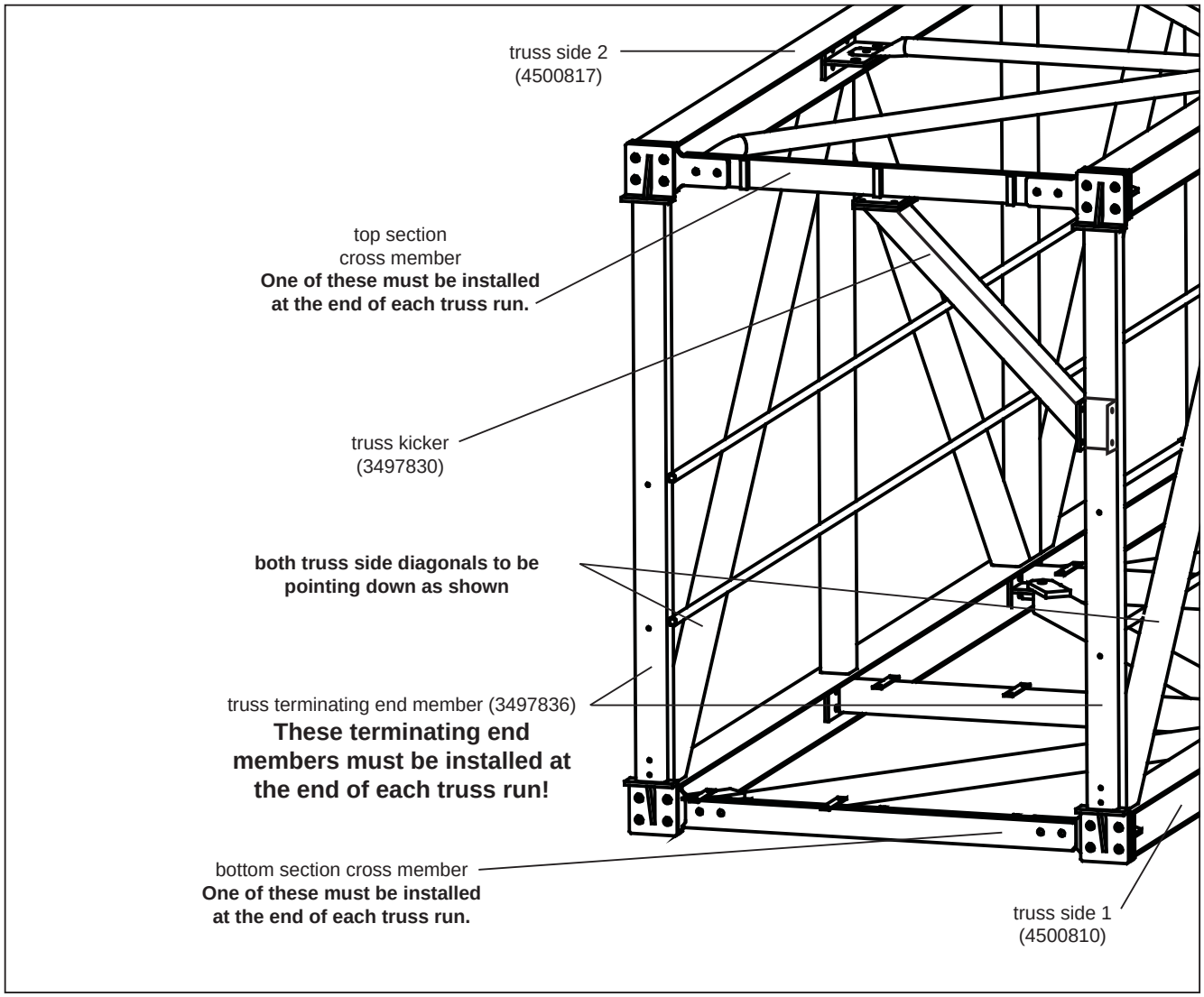


a **ATTACH THE TRUSS KICKER**

Install the Required Truss End Terminations

13 Make sure that both ends of every truss are assembled so that they have the required end terminations as shown (fig. b). Each terminating end of a truss must have (1) truss section cross member, (2) truss terminating end members, (1) bottom section cross member, and (1) truss kicker. It is critical that all bolts are torqued to their correct values as shown in the table on page 9.

14 Repeat steps **1** - **13** to assemble the next truss section. It is critical that the correct positioning for truss sections and diagonals be maintained throughout the entire truss run (see **page 14 - 15**)! The "**consistent saw tooth pattern**" must remain consistent throughout the entire truss. Truss side diagonals must point down at the truss ends!



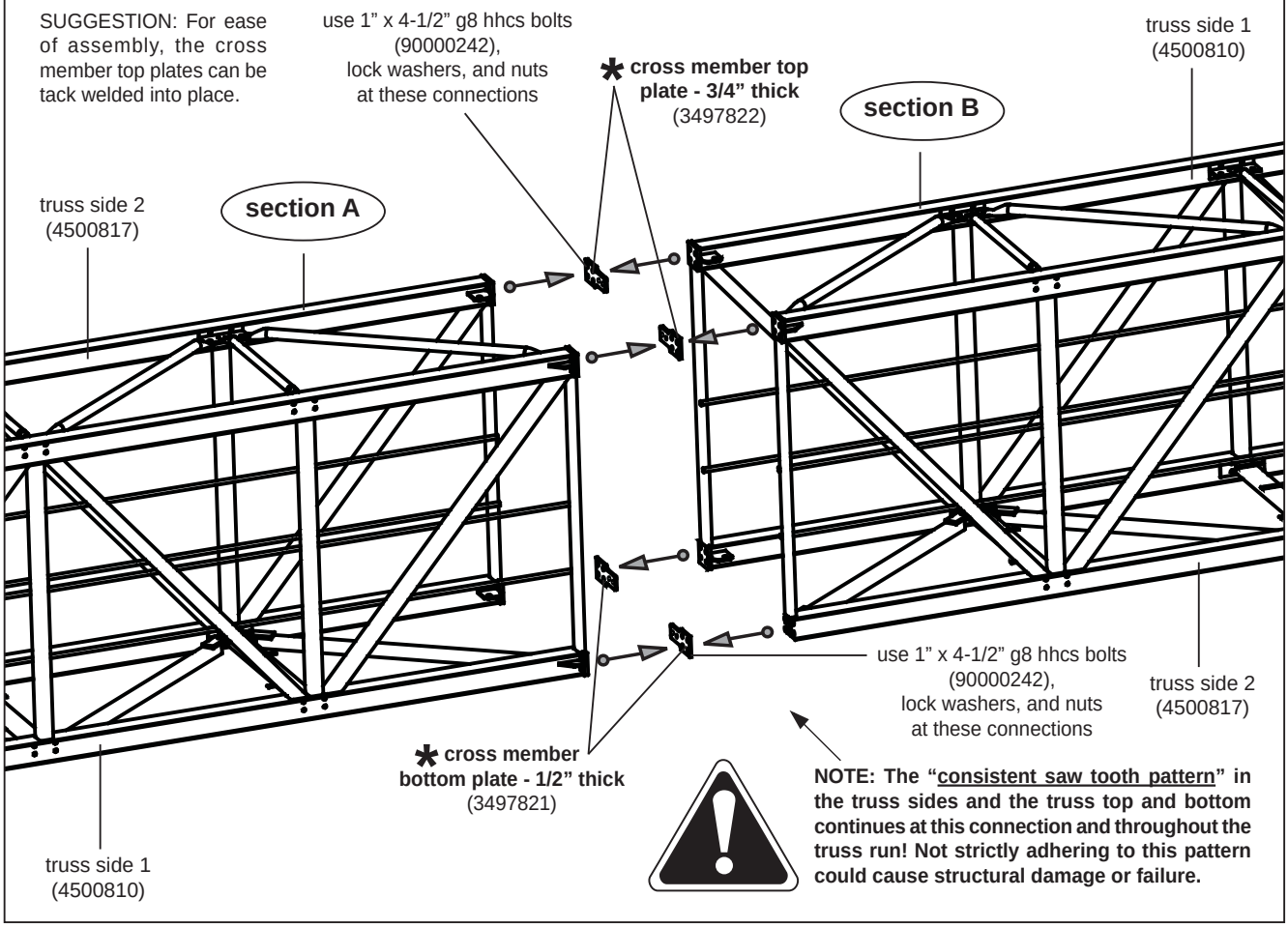
b **REQUIRED TRUSS END TERMINATIONS**

Connect Truss Sections Together

15 Connect truss (section A) to truss (section B). The bolt connections in (section A) should already be torqued to the correct values. The bolt connections in (section B) should only be finger tight until the connection between sections is made. Be sure to sandwich the cross member top and bottom plates between truss sections. **It is critical that the 3/4" thick cross member top plates be used at the upper section connections and that the 1/2" thick cross member bottom plates be used at the lower section connections.** Torque the bolt connections at section connections to the correct values as shown on page 9.

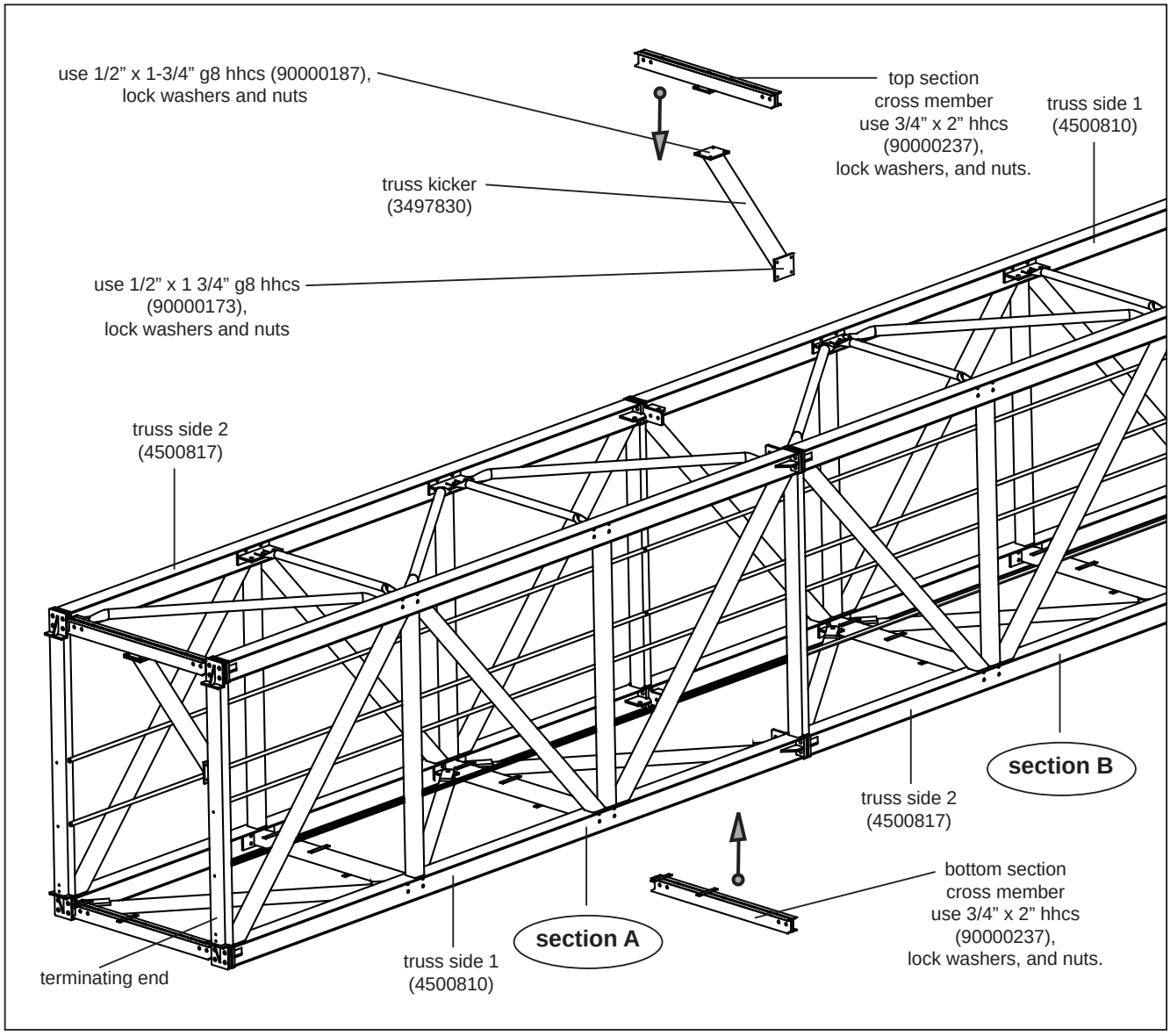
16 Torque each of the bolt connections in (section 2) to the correct torque value at this time. Refer to the table on page 9 to obtain the correct torques for each bolt connection.

*** CRITICAL: The 3/4" cross member top plates must be used on the top side of the truss at section connections. The 1/2" cross member bottom plates must be used on the bottom side of the truss at section connections as shown below. This must be done at every section connection or structural damage or failure may result!**



(a) CONNECT TRUSS SECTIONS TOGETHER

17 After connecting sections 1 and 2, attach the bottom and top section cross members at the truss section connection as shown in steps **9** and **10**. Then attach the truss kicker as shown in step **11**. For a quick reference see fig. b below.

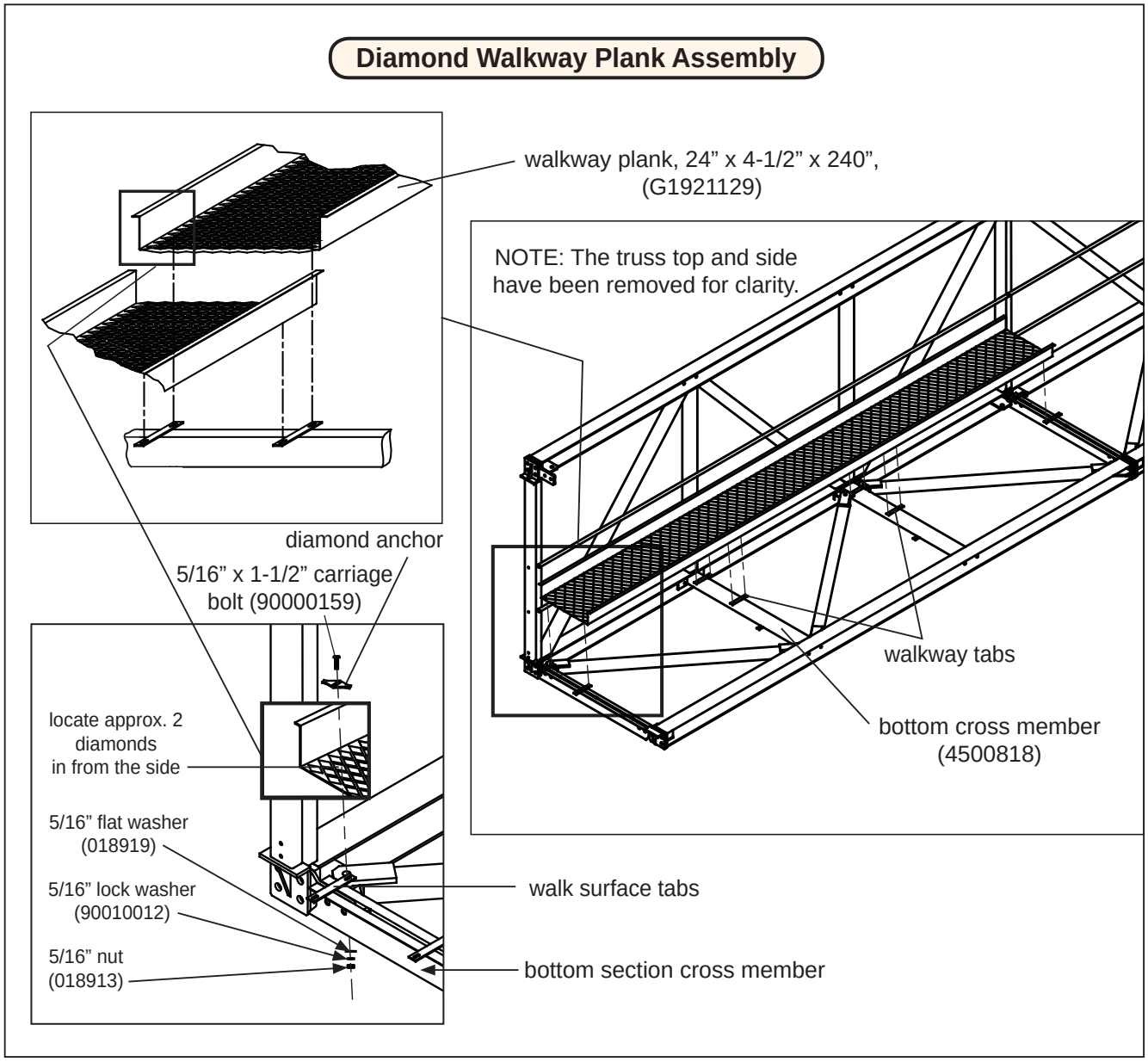


b **AT SECTION CONNECTIONS ATTACH THE TOP AND BOTTOM SECTION CROSS MEMBERS. ALSO, ATTACH THE TRUSS KICKER.**

Install the Walkway

18 Place and align the walk surfaces inside of the truss sections before connecting the rest of the truss sections together. The walk surfaces are heavy and so heavy lifting will be reduced if the walk surfaces are located to the inside of truss sections before the truss sections are joined.

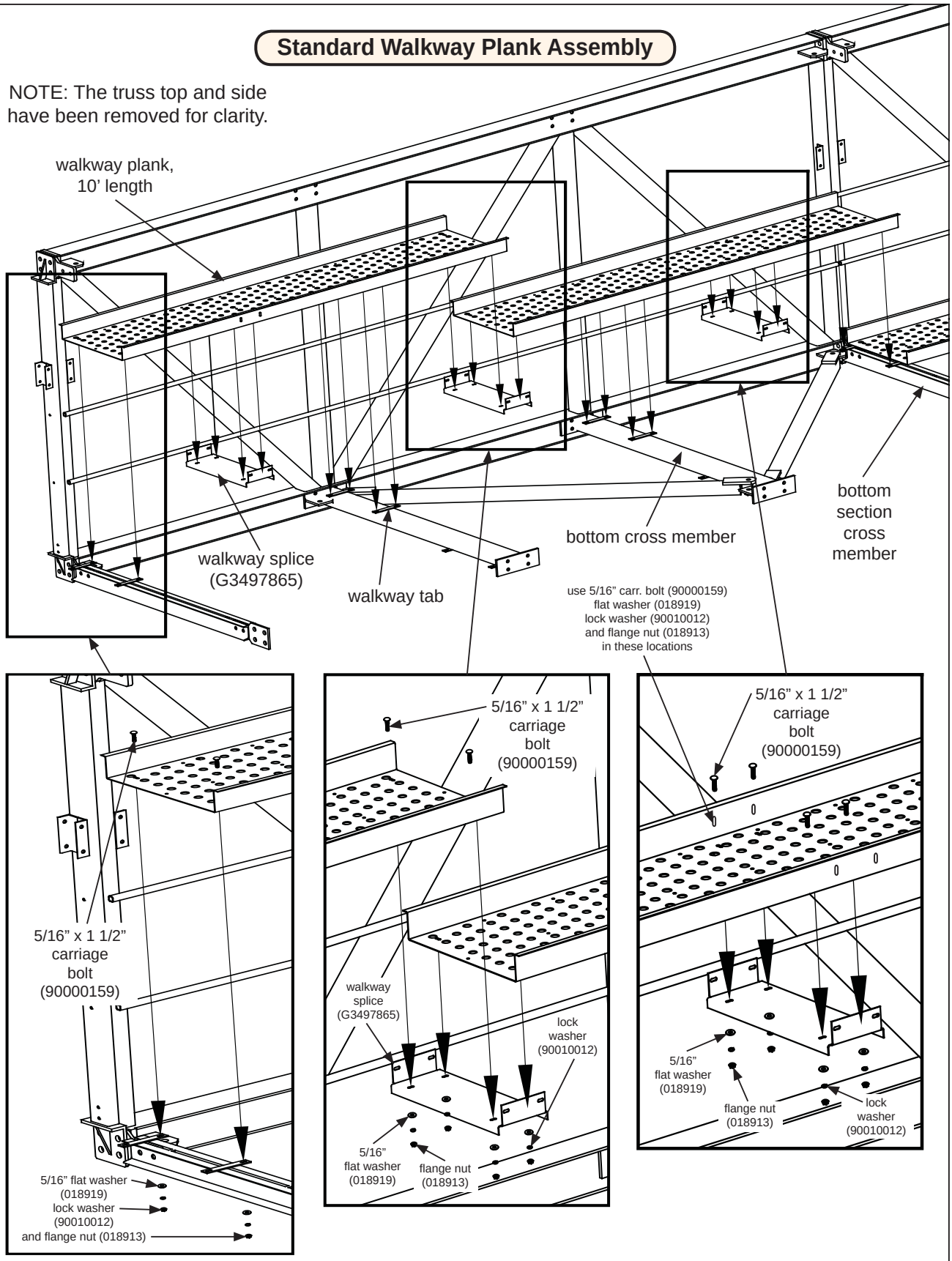
19 Assemble the walkway to the tabs on the bottom cross members using 5/16" x 1-1/2" carriage bolts, flat washers, lock washers, nuts (as shown in figure a or figures b - c). Note: the diamond walkway requires the use of diamond anchors and the standard walkway requires the use of splices. Join walkway to walkway at the same location where truss sections are joined together. Two 10' standard walkway planks are installed per truss section. Planks do not overlap; instead they butt end to end.



a **INSTALL THE DIAMOND WALKWAY**

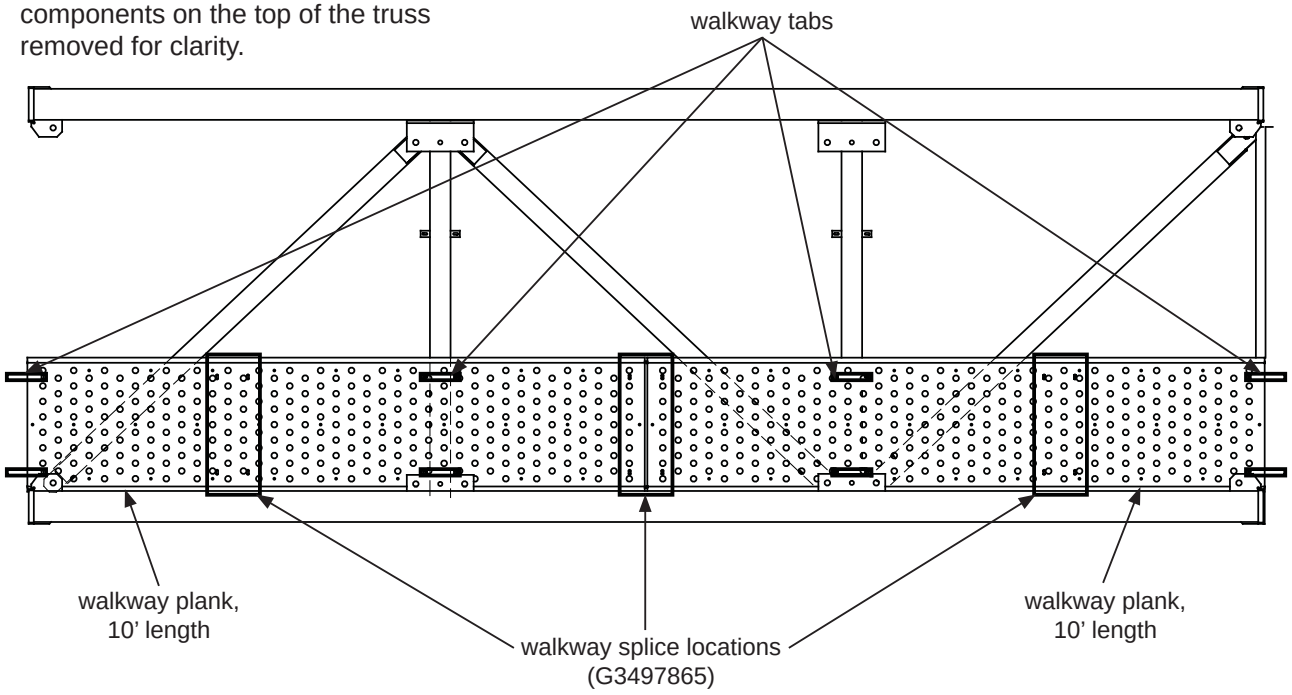
Standard Walkway Plank Assembly

NOTE: The truss top and side have been removed for clarity.



b **INSTALL THE STANDARD WALKWAY**

NOTE: This Thru Truss section is shown from the top view with the components on the top of the truss removed for clarity.



C **STANDARD WALKWAY SPLICE LOCATIONS**

Complete Thru Truss Assembly

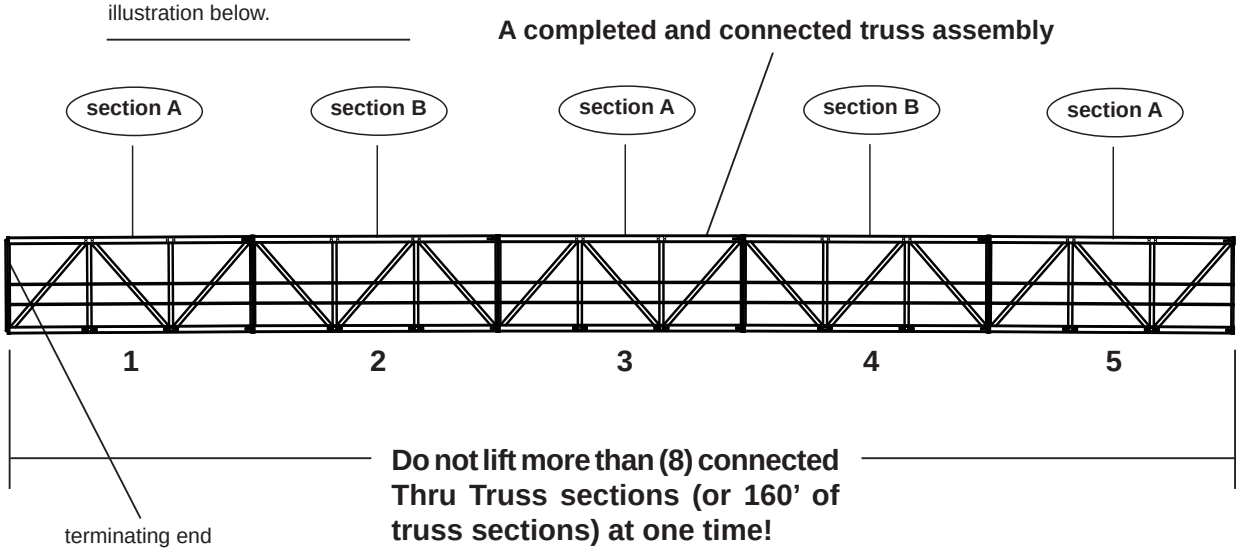
20 **Be mindful of that the conveyor will need to be installed inside the Thru Truss.** Conveyor sections will need to be moved to the inside of the truss sections in preparation for conveyor assembly. Move conveyor sections into their respective truss sections before the truss sections are all connected together. This should decrease the amount of heavy lifting required to assemble your conveyor.

21 Continue assembling and connecting truss sections repeating steps **1** - **20** until the Thru Truss assembly is completed. **Do not lift more than (8) connected 20' truss sections at one time!** See fig. d and the Thru Truss weight information below and on **pages 36 - 37** regarding lifting truss sections into place.

WARNING! NOTE: The number of truss sections joined together at one time is dependent on the capabilities of the crane lifting the unit into place. Do not lift more than (8) connected 20' truss sections at one time!

Weight of Thru Truss
30" Mounting = 190 lbs / foot
44" Mounting = 200 lbs / foot

NOTE: Only 5 connected Thru Truss Sections are shown in the illustration below.



d **COMPLETE THRU TRUSS ASSEMBLY**

Mount the Conveyor

WARNING! Mount the conveyor to the truss sections prior to lifting the truss into place.

22 Determine the conveyor mounting locations. Span angle iron (not supplied) across at least two cross members (6' 9"). See fig. a (as an example only). The recommendations for angle size is provided in the table below. Weld angle iron to the cross members at all the contact points.

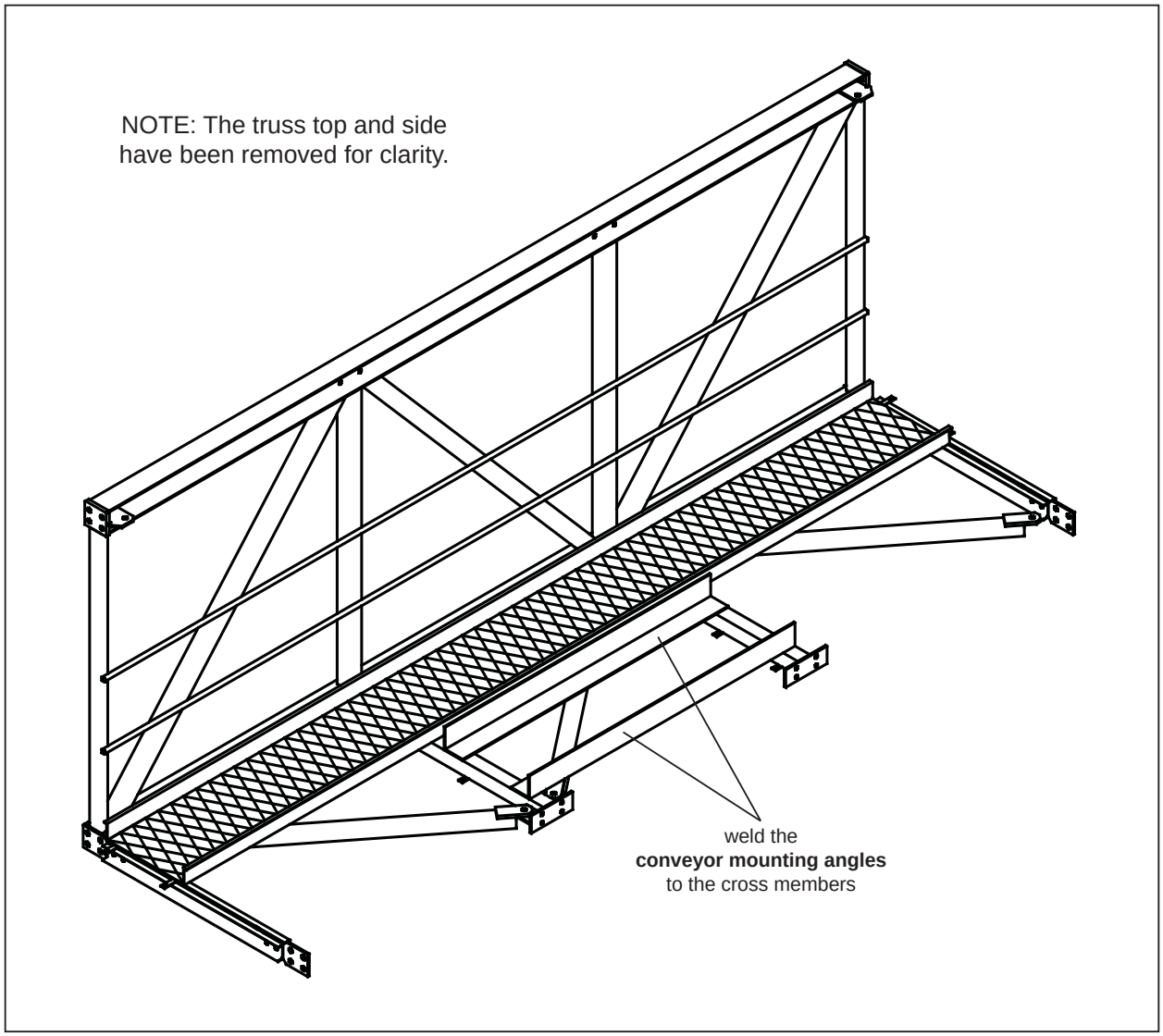
Angle Size Recommendations

CONVEYOR LOAD	ANGLE SIZES FOR SECTIONS WITH NO DRIVE MOTORS	ANGLE SIZES FOR SECTIONS WITH DRIVE MOTORS		
		Drive Motor Weights		
		1000 - 2000 lbs	2000 - 3000 lbs	3000 - 6000 lbs
0 - 200 lbs/ft	3 x 3 x 1/4	4 x 4 x 1/4	4 x 4 x 1/4	–
200 - 400 lbs/ft	4 x 4 x 1/4	–	4 x 4 x 3/8	–
400 - 600 lbs/ft	4 x 4 x 3/8	–	–	6 x 6 x 3/8

Note: Angle iron is supplied by Brownie Systems upon request only.

23 Lift and position the conveyor into place. (The mounting locations on the conveyor must rest on welded angle iron.)

24 Weld or bolt on the conveyor to conveyor any mounting members. If bolting the mounting members to the conveyor, do not drill into the cross members! Apply touch-up paint on all of the welded surfaces.

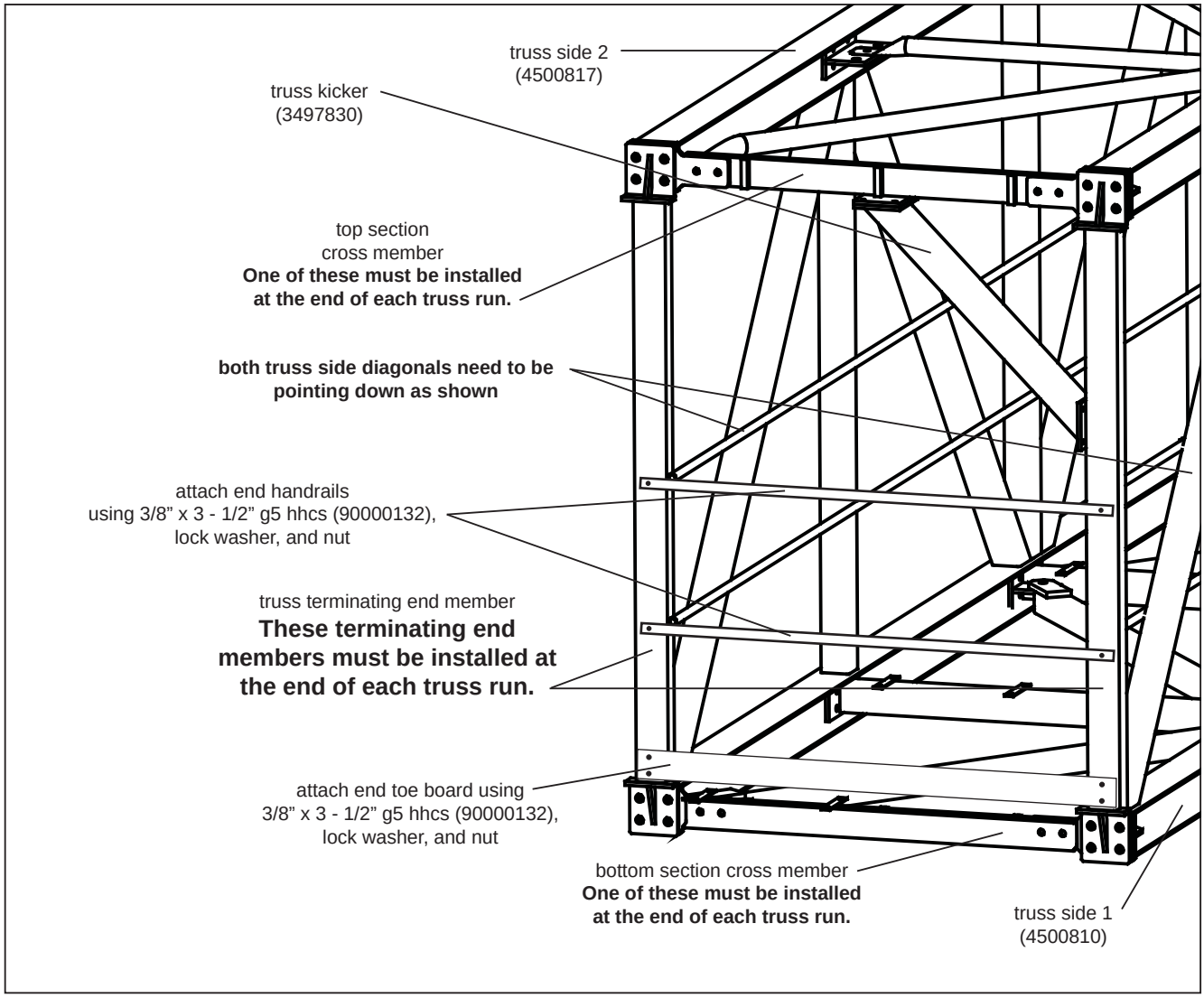


a **MOUNT THE CONVEYOR**

Complete the Required End Terminations

25 Install the required end terminations on any truss ends where end terminations have not yet been installed! All truss ends must have proper end terminations as shown in fig. a. Each terminating end of a truss must have (1) truss section cross member, (2) truss terminating end members, (1) bottom section cross member, and (1) truss kicker. It is critical that all bolts are torqued to their correct values as shown in the table on page 7. **Remember, the truss side diagonals must be pointing down at all truss end locations, see page 15.**

26 Install end handrails at the end terminations as shown in fig. a.



(a) **COMPLETE REQUIRED TRUSS END TERMINATIONS**

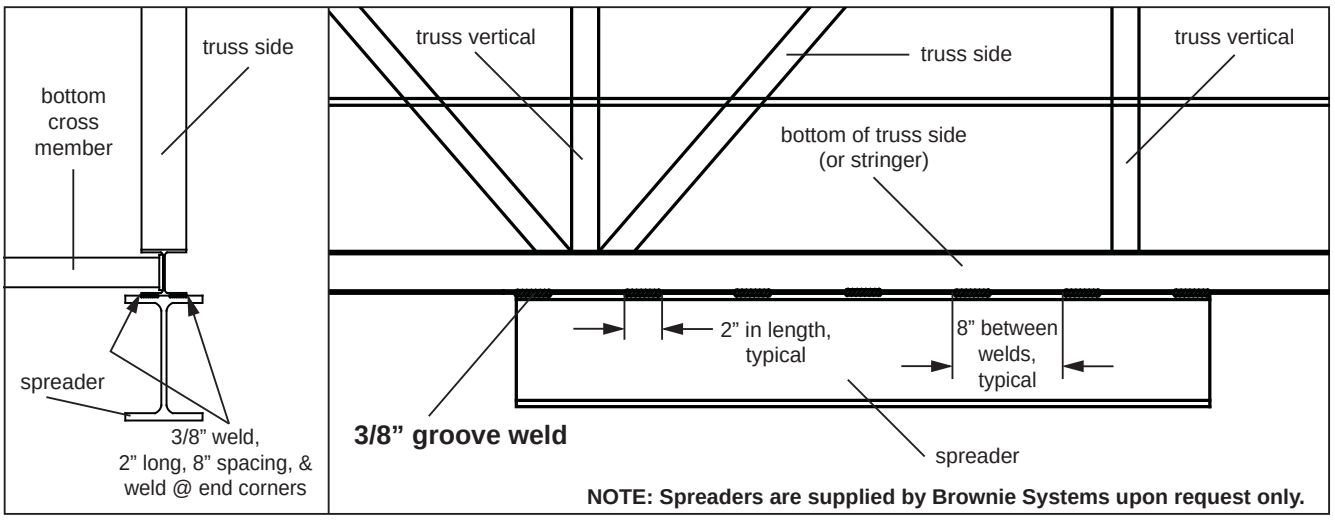
WARNING! CRITICAL: The required End Terminations must be installed at both ends of every Thru Truss! Each End Termination must include: (1) truss section cross member, (2) truss terminating end members, (1) bottom section cross member, and (1) truss kicker.

Install Spreaders to Connect Support System

27 Measure and predetermine the exact locations and sizes for the truss spreaders that will need to be installed to rest Thru Truss Assemblies on. **Pages 35 - 42** **must be pre-read NOW!** Weld the truss spreaders to the bottoms of the Thru Truss sides before lifting the truss assemblies onto the support system (fig. b). All spreaders need to be positioned directly under truss sides as shown in fig. a. Paint all welded areas. See the note below for Brownie Systems recommendation for the spreader and support beam size.

Note: Brownie Systems recommends using a spreader beam of size W8 x 35 to connect to the Thru Truss Support System.

WARNING! Spreaders are required to properly transfer the Thru Truss load to the support structures! NOTE: Both opposing truss sides of the Thru Truss need to be supported equally. Each spreader will need to fully span and cover the distance underneath at least two truss verticals and any diagonals that accompany them!



b **INSTALL SPREADERS TO CONNECT SUPPORT SYSTEM**

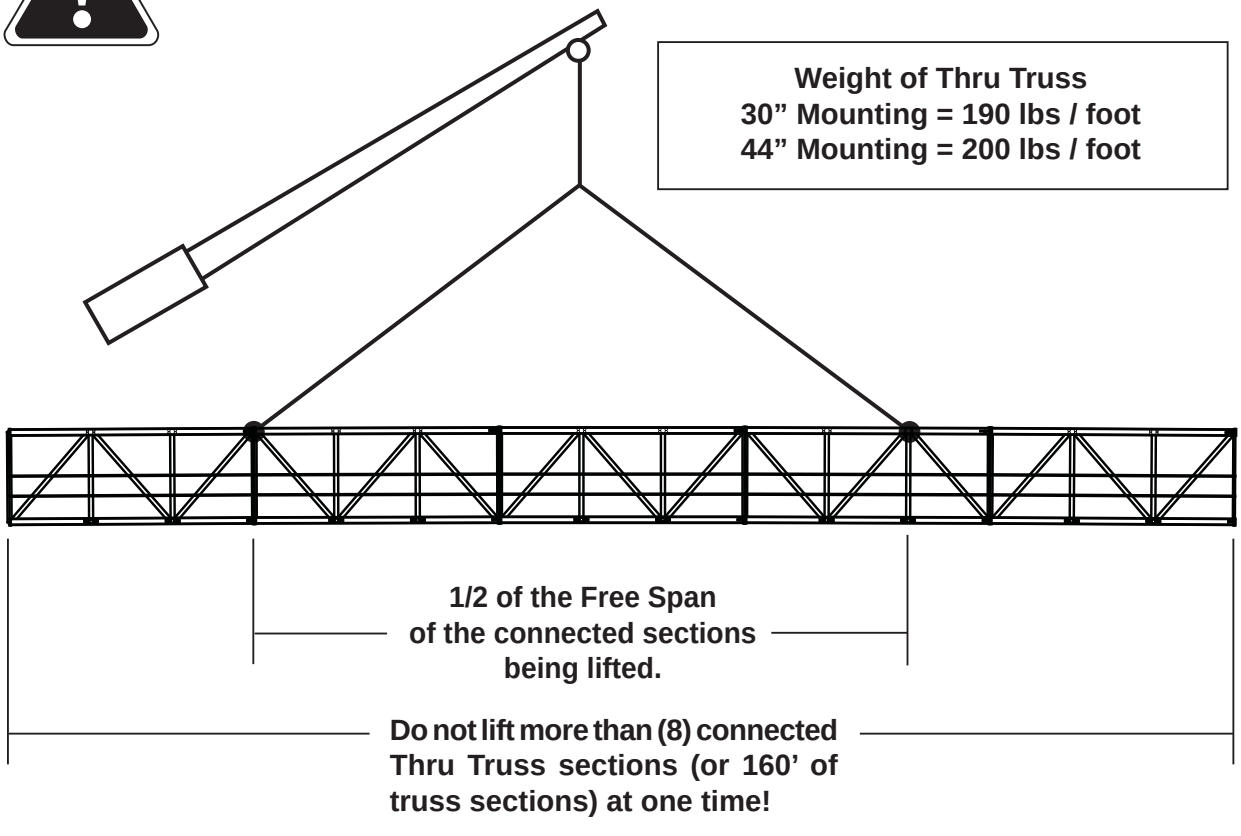
Lift Thru Truss Assemblies into Location

WARNING! Contractors/Owners - Pre-read the rest of this manual before lifting the Thru Truss assemblies or before starting the Installation of the Thru Truss to the Supporting System.

Important! TYPICAL TRUSS RIGGING RULE: Rigging from the crane must lift truss assembly at points equal to half the truss free span.

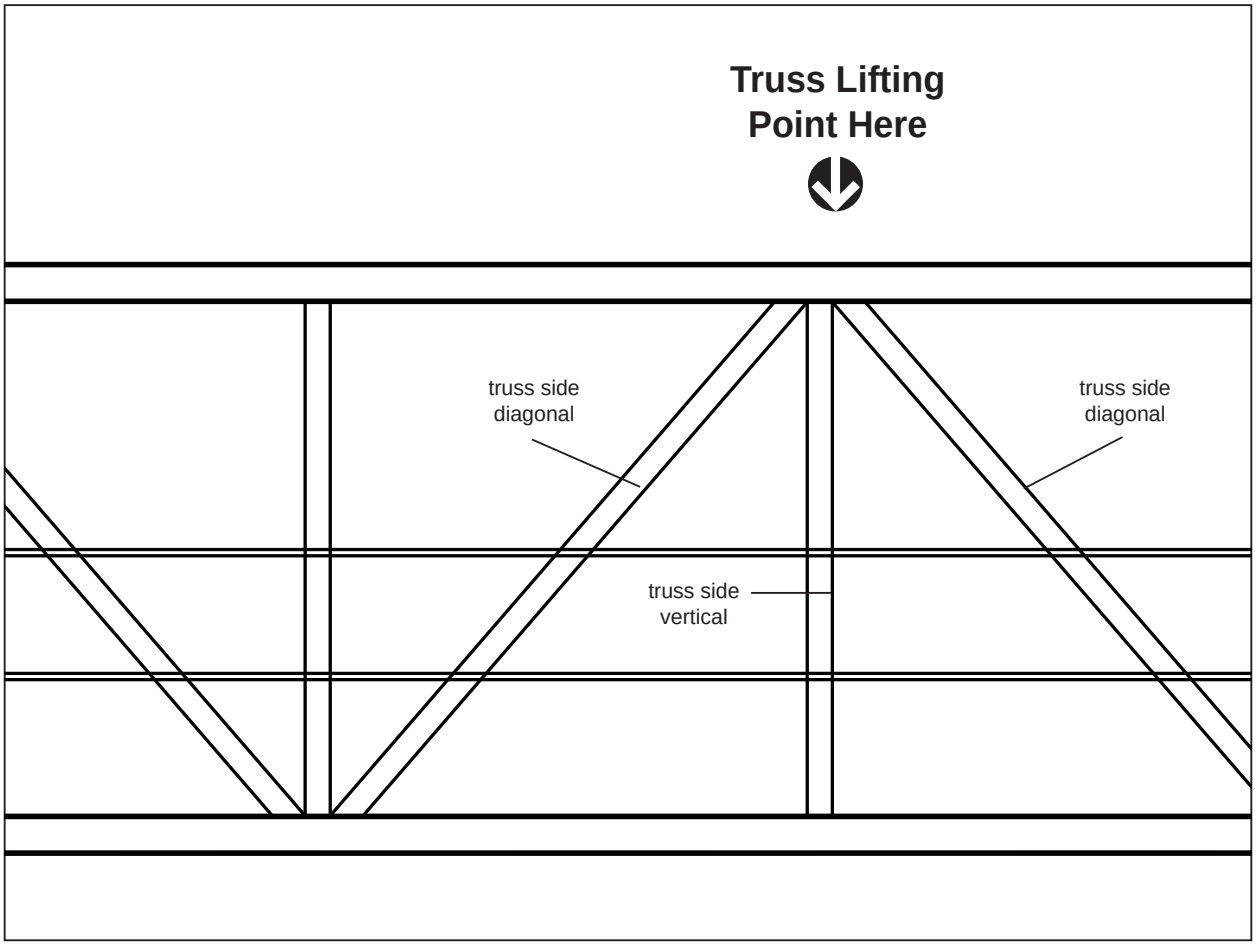
28 After all support structures (i.e. support tower, side wall brackets, knee bracing, and etc.) are assembled and properly secured, lift the connected Thru Truss Sections into position (fig.s a and b).

NOTE: The weight of the Thru Truss sections plus other loads such as the dead weights of the conveyor, spreaders, and etc. must be taken into account!



(a) LIFT THRU TRUSS ASSEMBLIES INTO LOCATION

WARNING! The number of truss sections joined together at one time is dependent on the capabilities of the crane lifting the unit into place. Do not lift more than (8) connected 20' truss sections at one time!



b **TRUSS LIFTING POINT**

Install Truss onto the Supporting System

29 Pre-read and understand the instructions on **pages 33 - 40** before installing the truss onto the supporting system.

30 Correctly position the truss over the supporting system. Position each spreader so that it fully spans across and over its support beams. Weld each spreader to the support beams that are below each spreader (fig.s a - b on **page 37** and fig.s a - c on **page 40 - 41**. Apply touch-up paint to all welded areas.

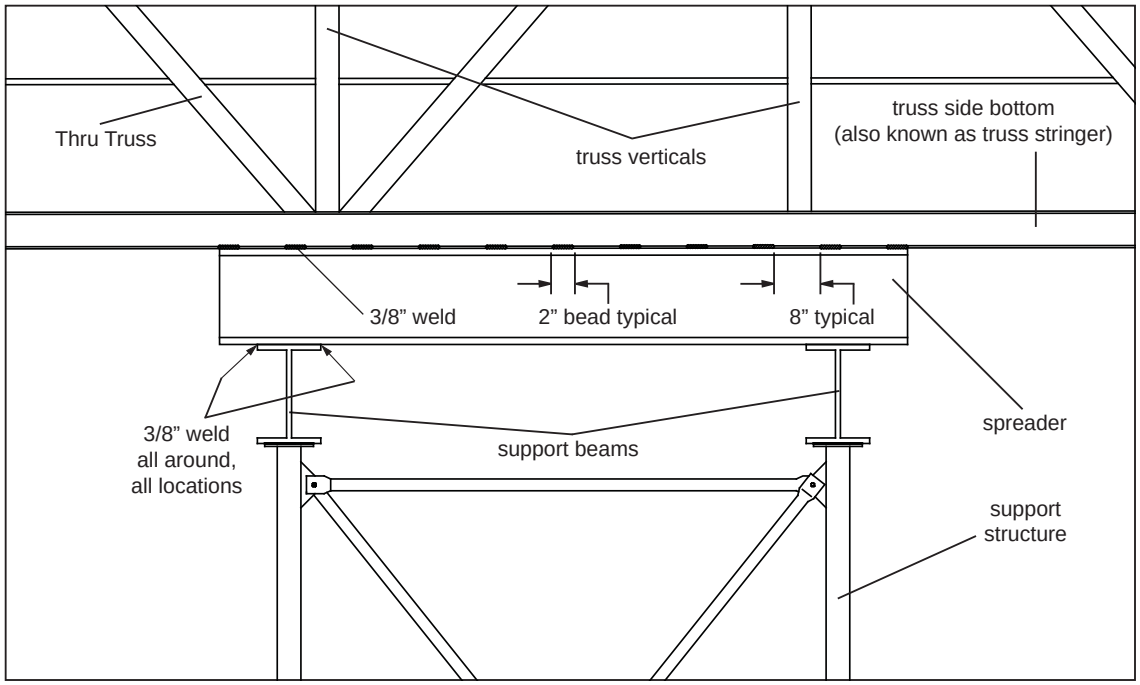
31 If knee bracing is a part of the support system, install the knee bracing at the same time that the truss is being installed onto the supporting system.

WARNING! Both opposing faces of a 4-column support structure share in the support responsibility of the truss/conveyor or truss system and need to be treated the same (sides perpendicular to the truss run).

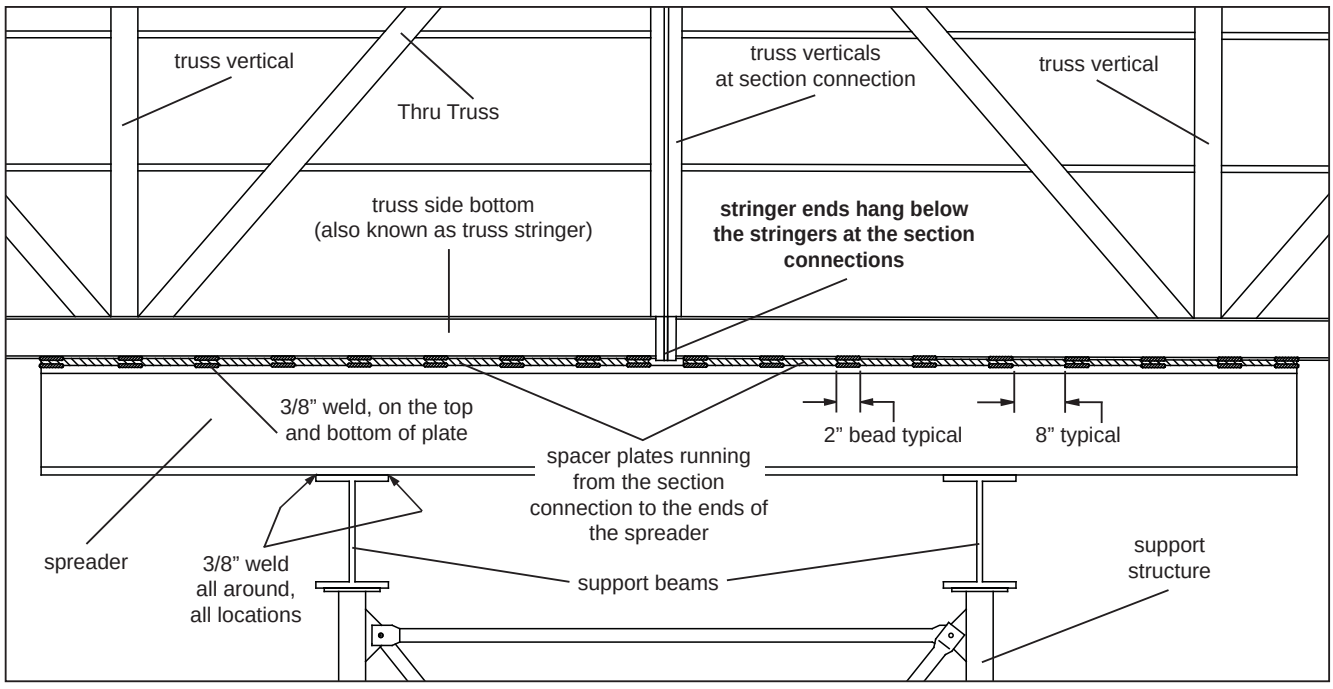
WARNING! Each spreader will need to fully span and fully cover the distance underneath at least two truss verticals and any diagonals that accompany them. Each spreader must span across the support beams to any nearest vertical member outside of the area covered by the support structure (see fig. a).

Note: Spreaders are supplied by Brownie Systems upon request only.

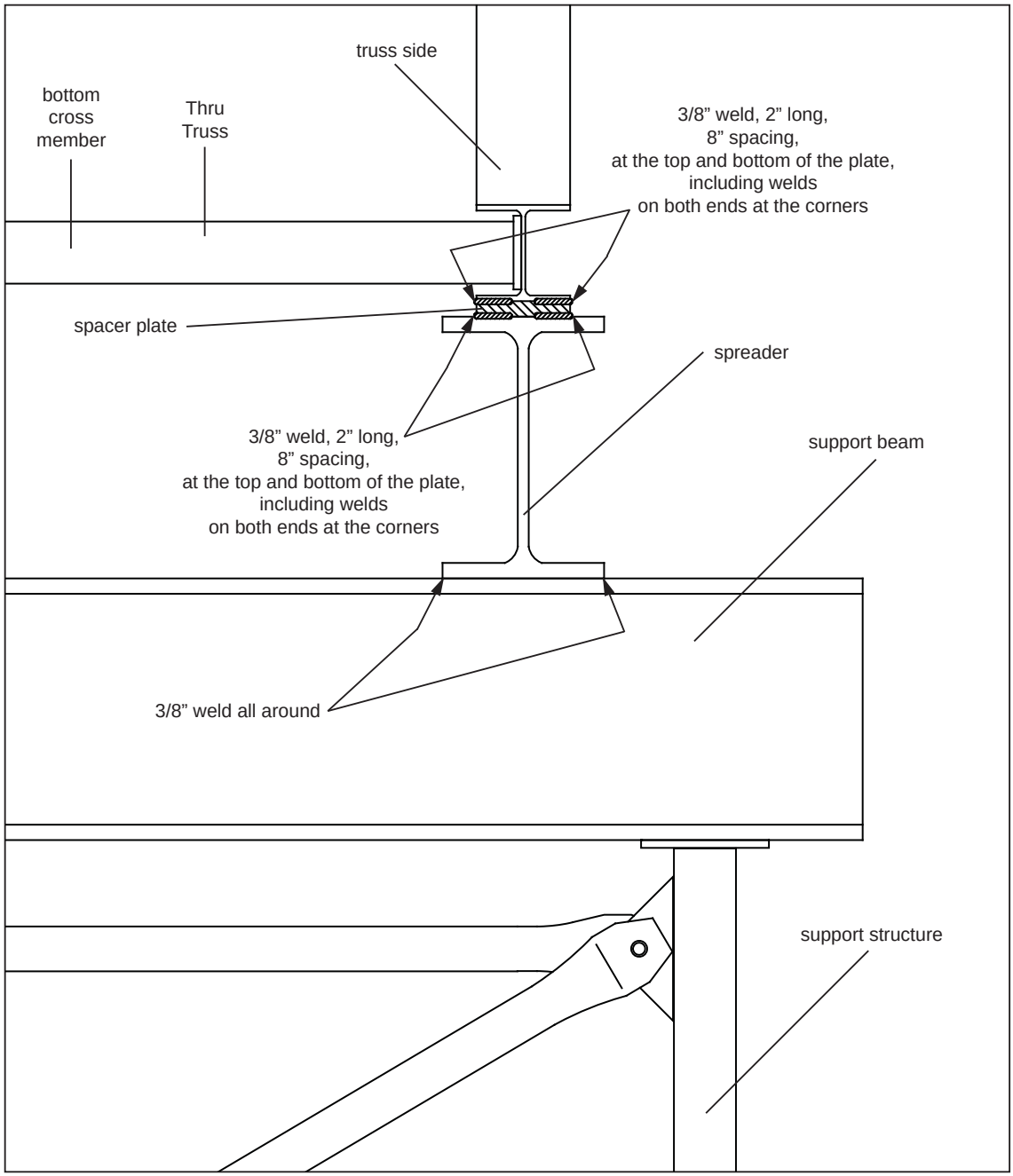
WARNING! If knee bracing is part of the support system, DO NOT load the truss until the knee bracing is correctly installed.



a **EXAMPLE OF A TYPICAL TRUSS INSTALLED TO A SPREADER AND SUPPORTING BEAMS**



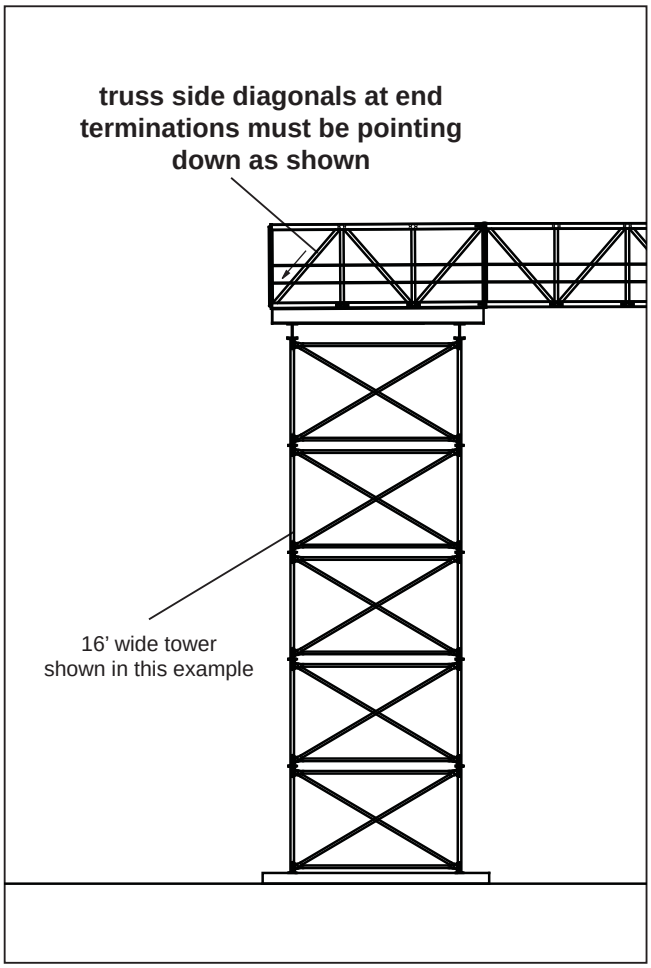
b **TYPICAL EXAMPLE OF A TRUSS INSTALLED TO A SPREADER AND SUPPORTING BEAMS AT A SECTION CONNECTION**



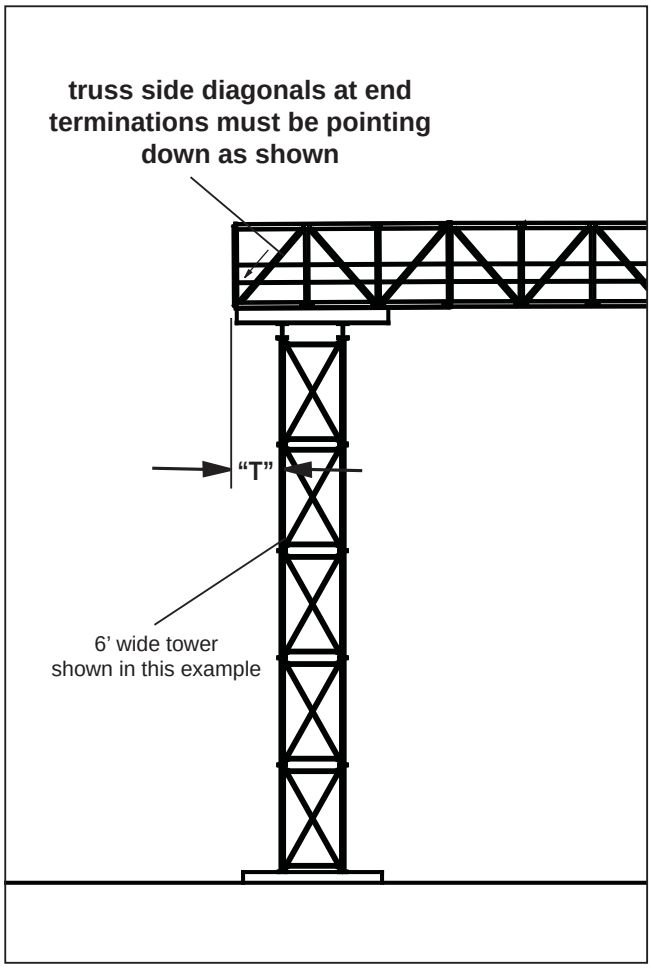
a **END VIEW, A TRUSS INSTALLED TO SUPPORTING STRUCTURE SECTION CONNECTION**

32 Make sure that the truss diagonals are pointing down at the end terminations (fig.s a and b). Also, be sure that the distance "**T**" from the tower to the terminating end does not exceed 80" as shown in fig. b.

WARNING! CORRECT END TERMINATION POSITIONING: It is required that truss side diagonals must be pointing down at the end terminations for each truss run (as shown in fig.s b and c).



b EXAMPLE OF A TYPICAL TERMINATING END



c EXAMPLE OF A TYPICAL TERMINATING END

33 Continue installing the truss sections and spreaders onto the support beams and knee braces of the supporting structure (if the support structure includes knee braces) until the entire truss run is installed into location.

Install any Knee Bracing with the Thru Truss

WARNING! **Each spreader connected to tower support beams, knee braces or any other such structures will need to fully span and fully cover the distance underneath at least two truss verticals and any diagonals that accompany them. Each spreader must span across the support beams to any nearest vertical member outside of the area covered by the support structure.**

Note: **Not all Thru Truss installations use knee braces at Thru Truss connections to the support structure. No knee brace drawings are shown in this version of the Thru Truss manual.**

Index

T

W

Notes:

Recent Significant Manual Changes:

7-09 [1] Version Changes

1. The general safety statement was added.
2. Page 9. New bolt torques were added.
3. Some changes were made to keep the pdf file size small.
4. The under review note was added to the front cover.
5. Page cross references links were added throughout the entire manual.
6. An index was added and other minor changes were made throughout the manual.

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