

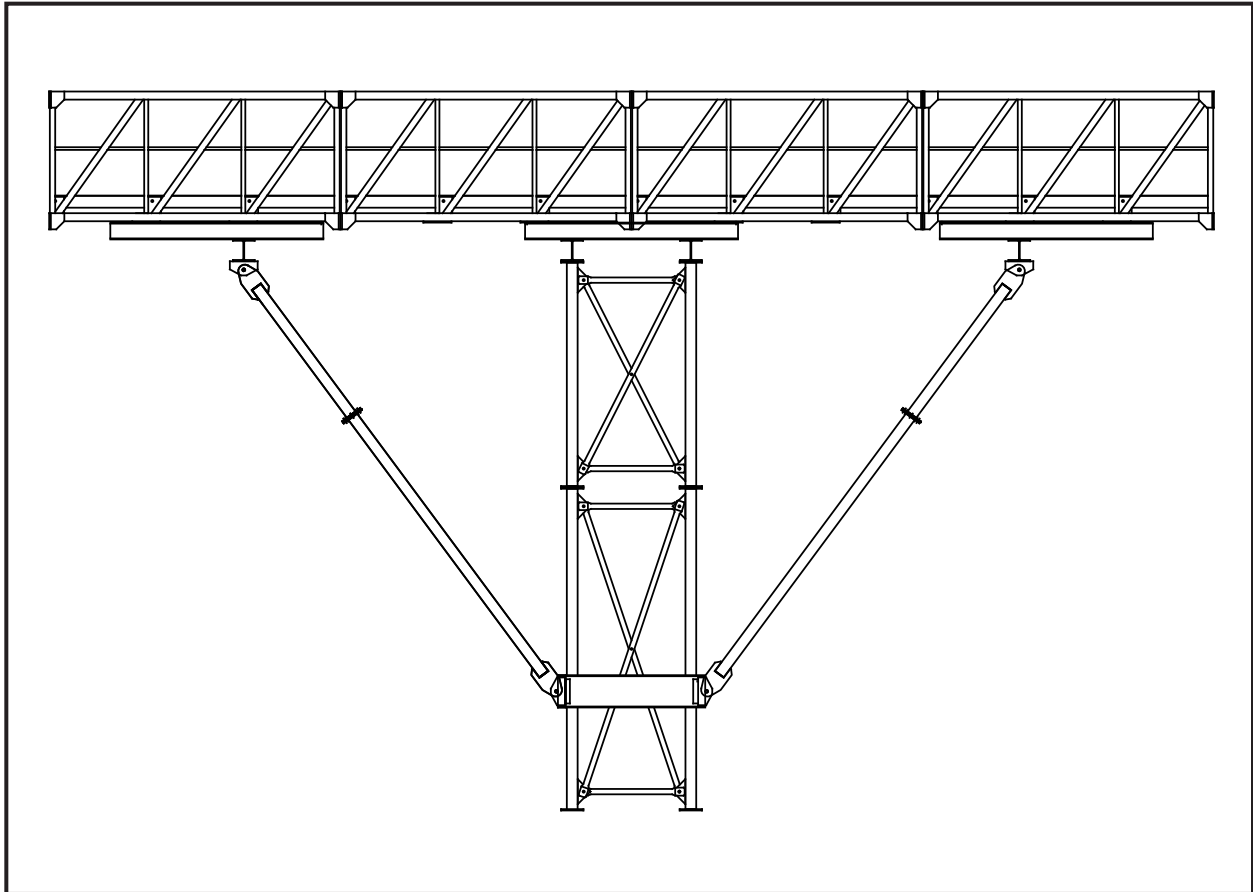


Brownie **SYSTEMS**

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

Kneebrace Support

CONSTRUCTION AND OWNER'S MANUAL



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 4000022 when requesting additional copies.

Please Contact MFS/YORK/STORMOR or Your Dealer
If You Have Any Questions Concerning This Manual

Keep This Manual In A Safe Place Available For Future Reference



PREFACE

You have purchased the finest Kneebrace Support manufactured today. The following is intended as a guide for: Kneebrace Support pre-assembly, proper construction of your Kneebrace Support, and safe and proper use of your kneebrace support once constructed.



General Safety Statement

Your safety and the safety of others associated with grain system equipment is of prime concern to us at BROWNIE SYSTEMS. We wrote this manual to help you to better understand how to safely build and use your Kneebrace Support.

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 Manual before starting Kneebrace Support construction!

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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.



Safety

Safety Introduction

This Brownie Systems Construction and Owners Manual is written to assist and instruct those who are responsible for kneebrace support assembly, and for anyone using the kneebrace support once assembled.

Global Industries Inc. assumes no liability with respect to proper construction, inspection, assembly, and installation, 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.

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 kneebrace support.

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.



WARNING! Watch for this Symbol! It Points Out Important Safety Precautions. In 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 be made free of sharp edges.

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.

Product and Construction Safety

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 on kneebrace supports or catwalks, take care to prevent falling. 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 the kneebrace support.
- B** Field modification of the kneebrace support or auxiliary equipment without the authorization of the manufacturer may present unknown dangers to the operator and must be avoided.



WARNING! IMPORTANT: Make certain all persons on the kneebrace support during construction are properly fastened to safety cables to prevent injury or death due to falling!



WARNING! Installation of additional accessories or equipment in or on a kneebrace 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 Brownie Systems before installing any such appurtenances or equipment.

2

Pre-Assembly

INTRODUCTION

Brownie Systems Kneebrace Supports are available in different sizes. Kneebrace Supports follow the same basic construction guidelines.

The instructions in this manual offer what should be the easiest construction methods developed for these products.



WARNING! IMPORTANT: Make certain that all persons on ladders, lifts, scaffolds, or the like are secure and not in danger of falling when working on the kneebrace support! Also make certain that the work surfaces are clean and free of clutter!



WARNING! Make certain all kneebrace support components are safe and structurally secure during construction! Do not stand on or under kneebrace supports that are not yet structurally secure! Not heeding this warning could result in severe injury or death!

CHECK DELIVERY




Your kneebrace support has been carefully checked before shipment. However, you should check your shipment upon arrival using the provided Packing List to insure it is complete.


CAUTION: All galvanized steel is subject to oxidation, sometimes called “white rust” when exposed to moisture from any source. Plenty of care should be taken to protect all galvanized parts. **INSIDE STORAGE IS ADVISABLE.** When on the job site, parts should be placed on edge far enough apart to allow air to circulate freely.

NOTE THE FOLLOWING BEFORE BEGINNING ASSEMBLY


If you have any problems with installation, contact the factory.
 Phone: 1 - 800 - 228 - 4285

HARDWARE TORQUE VALUES

Bolt Size	Torque (ft-lbs)			Bolt Head Identification
	Grade 2	Grade 5	Grade 8	
3/8" - 16	20	---	---	Grade 2 (no marking) 
7/16" - 14	32	---	---	
1/2" - 13	49	---	---	
5/8" - 11	---	170	---	Grade 5 
3/4" - 10	---	307	382	Grade 8 
7/8" - 9	---	465	605	



WARNING! Any alterations to kneebrace supports, alterations to Brownie products, or deviation from instructed assembly and installation procedures, without authorization of Brownie Systems, is prohibited.



WARNING! IMPORTANT: Before construction of the kneebrace support is started: Understand your layout drawing provided with your kneebrace support. Predetermine the correct location of your kneebrace support.



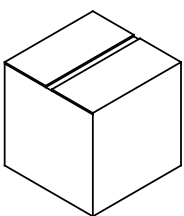
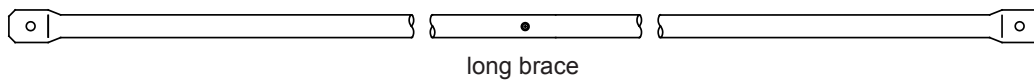
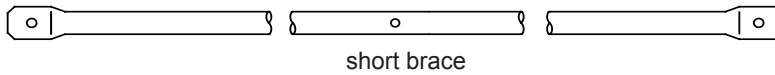
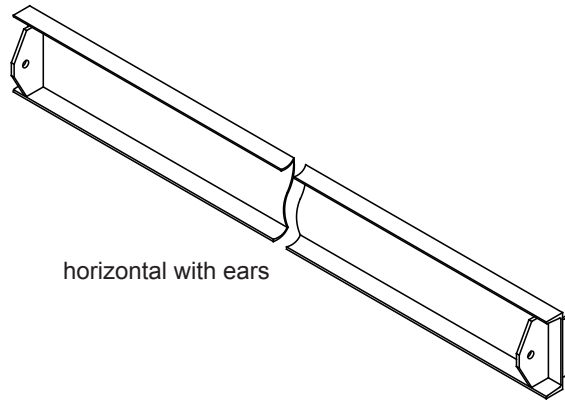
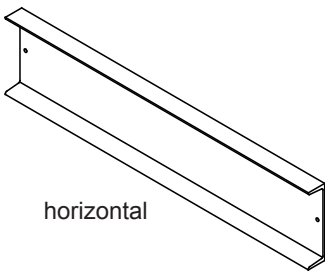
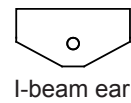
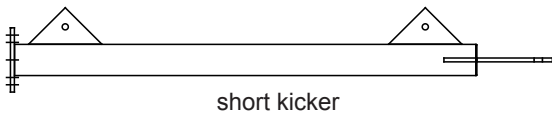
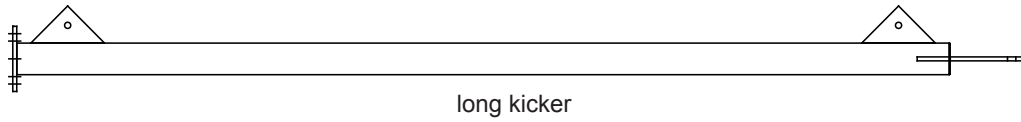
WARNING! Read and understand this entire construction manual and all product instructions before starting kneebrace support construction!



WARNING! Local codes supercede the guidelines provided in this manual and should be strictly adhered to. Contact the manufacturer if you have questions.

3

Parts Identification



Note: Parts are not drawn to scale. Your kneebrace parts could differ from example parts shown here.

4

Assembly

General Assembly Instructions

All kneebraces must be installed before the tension is removed from the crane rigging to the catwalk/conveyor system. Successful installation is dependent upon following the sequence of steps below.

- 1** Install all support towers.
- 2** Lift catwalk/conveyor system into place. Do NOT release rigging.
- 3** Lift kneebrace into place. Center the kneebrace on the tower face. Field weld the kneebrace to the tower and catwalk spreaders. Apply a 3/8" fillet weld at all contact points. The kneebrace may be hoisted from the catwalk under structure.
- 4** Release the rigging from the catwalk.

Following is information specific according to tower type.



WARNING! During construction, build your kneebrace support in accordance with the Brownie Systems layout drawing provided for your kneebrace support!



WARNING! If you have any problems with construction or if additional wind loading will be added to the kneebrace support system, contact the Brownie Systems Engineering Department immediately!

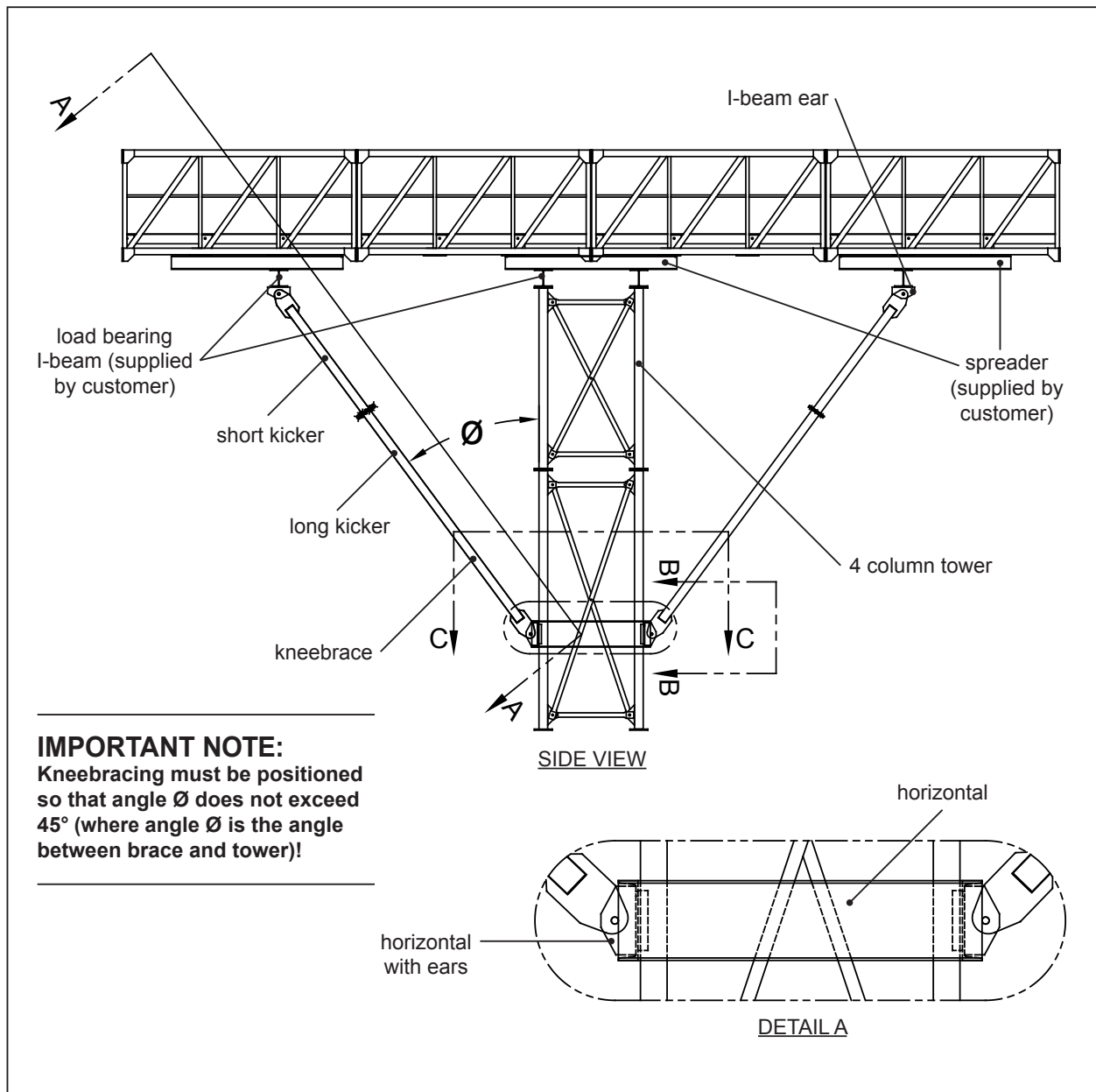


WARNING! Do not attempt kneebrace support construction when the weather makes it unsafe. Especially, when wind conditions are not favorable!

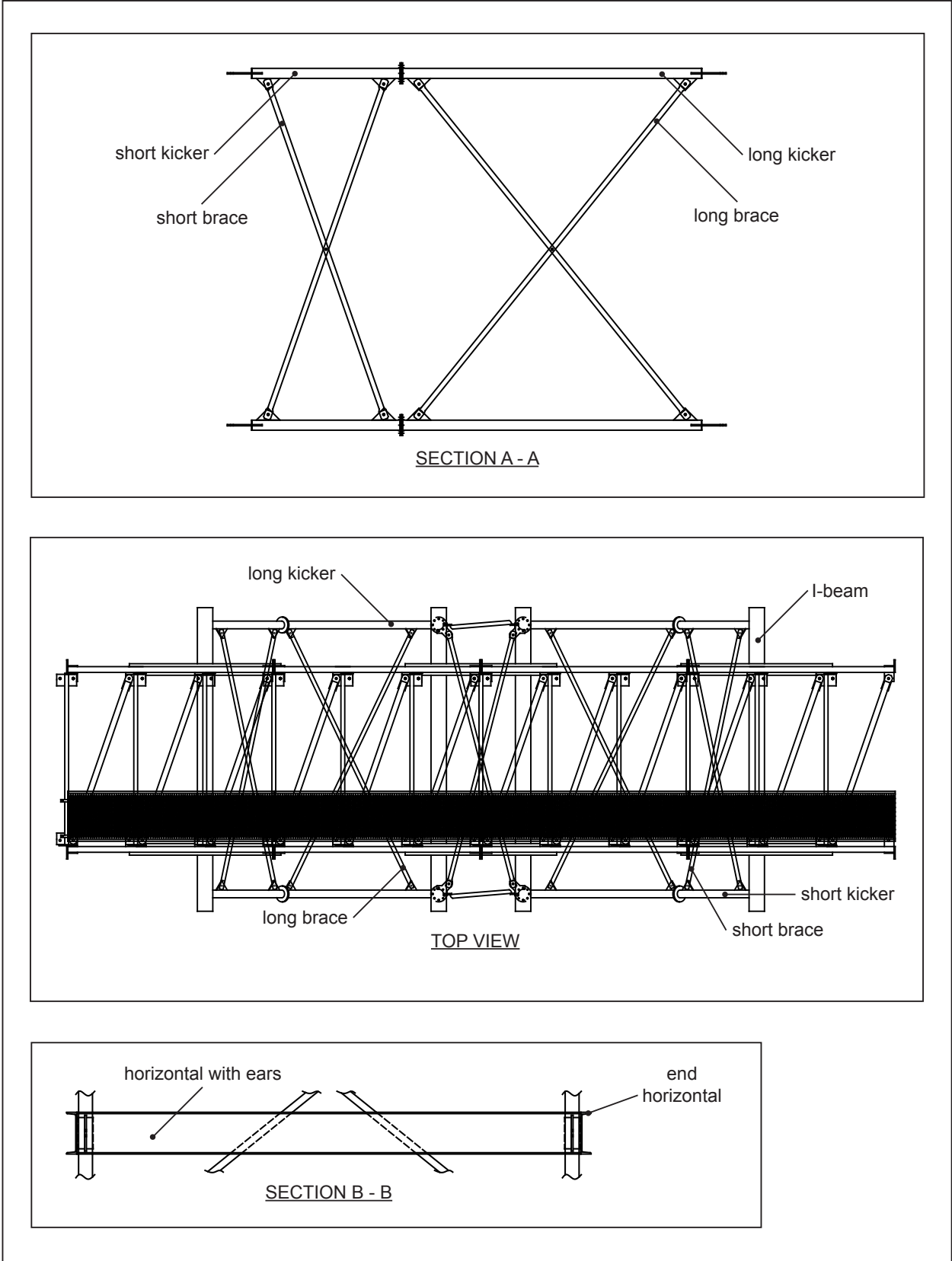


4 Column Towers

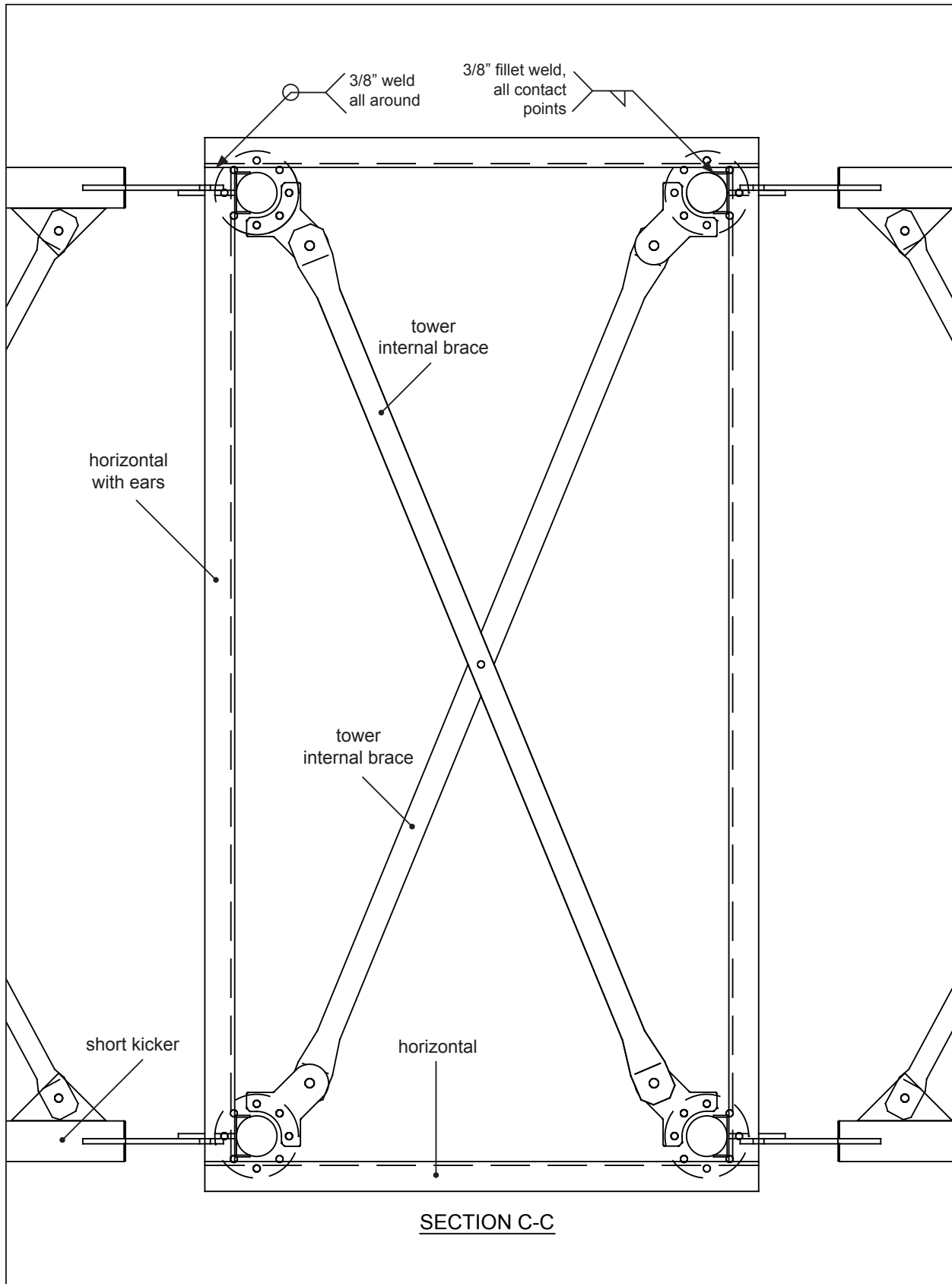
- 1 On (4) column towers, (2) kneebraces are required on opposing tower faces. Prepare kneebrace tower connections. Install (2) horizontals and (2) horizontals with ears to the tower at the position where the kneebrace kickers will connect with the tower. See examples on [this page](#) and the next (2) pages. The horizontals will bridge the kneebraces together. Install tower horizontals onto the correct tower faces.
- 2 Field weld a 3/8" fillet weld at all contact points.



a 4 COLUMN TOWER KNEEBRACE INSTALLATION, DRAWING 1



a 4 COLUMN TOWER KNEEBRACE INSTALLATION, DRAWING 2



a 4 COLUMN TOWER KNEEBRACE INSTALLATION, DRAWING 3 (C-C)



WARNING! IMPORTANT: Make certain all persons on the kneebrace support during construction are properly fastened to safety cables to prevent injury or death due to falling!

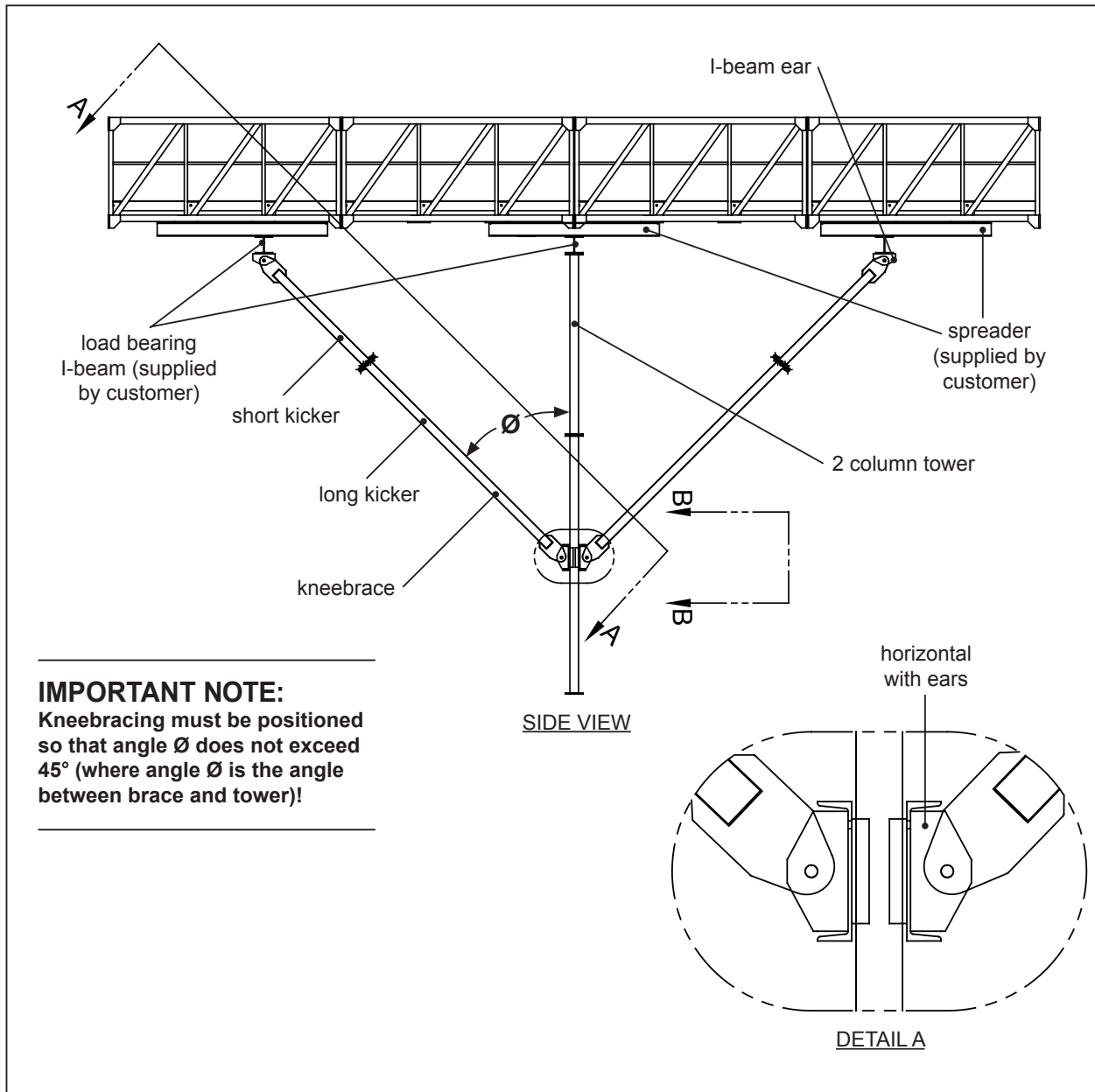


WARNING! IMPORTANT: Make certain that all persons on ladders, lifts, scaffolds, or the like are secure and not in danger of falling when working on the kneebrace support! Also make certain that the work surfaces are clean and free of clutter!

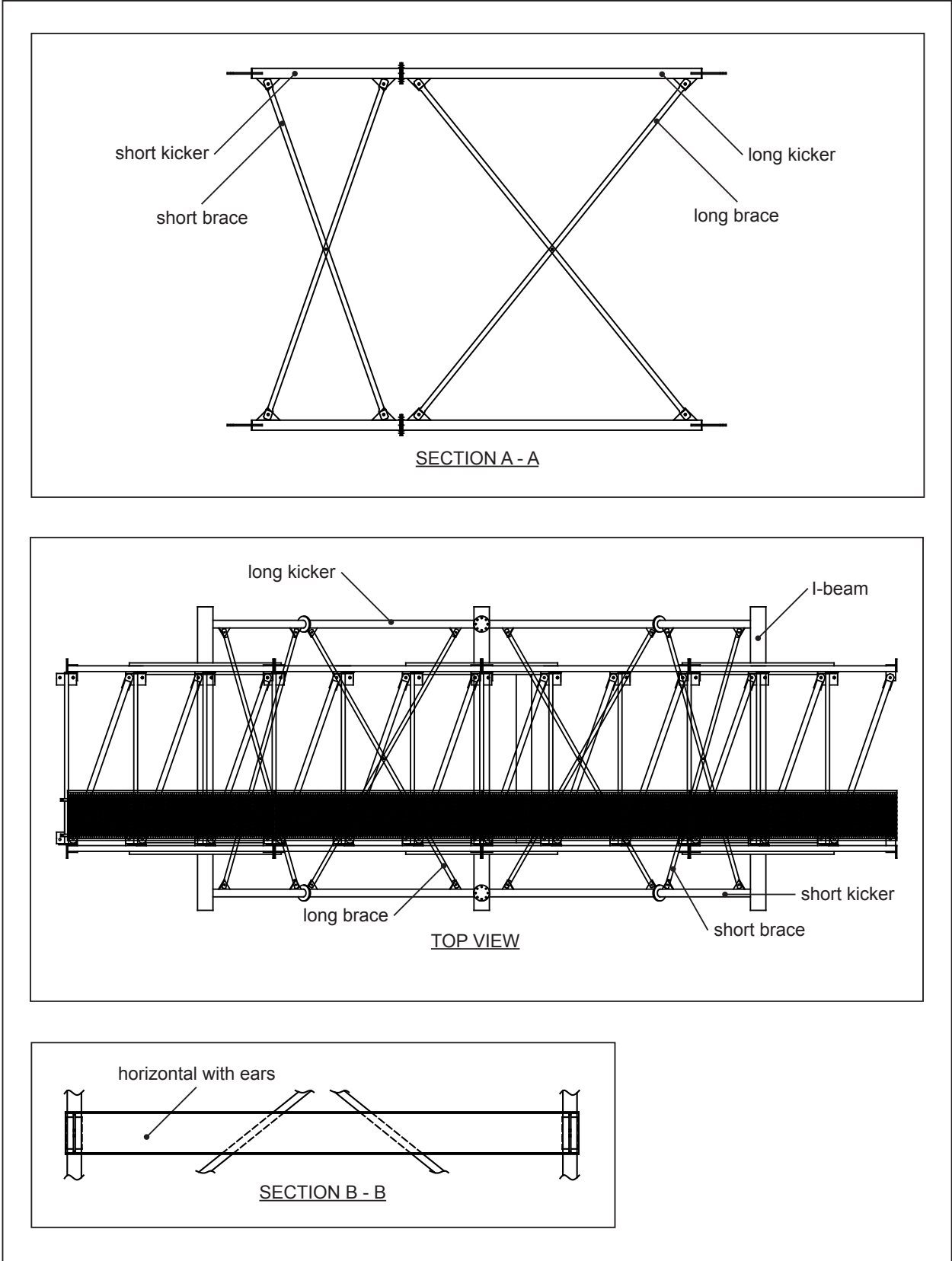


2 Column Towers

- 1 Install a kneebrace on each side of the (2) column tower. (See the following examples.)
- 2 Connect your kneebraces to the tower at the same elevation on both sides of the tower. Kneebraces must connect to the tower at the same elevation!
- 3 Field weld a 3/8" fillet weld at all contact points.



a 2 COLUMN TOWER KNEEBRACE INSTALLATION, DRAWING 1



a 2 COLUMN TOWER KNEEBRACE INSTALLATION, DRAWING 2

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Recent Significant Manual Changes:

6-07 Version Changes

- 1** Safety information was added.
- 2** The Parts Identification was updated.
- 3** Drawings show new kneebrace design.
- 4** Horizontals replace the old intermediate support angle.
- 5** The entire manual was revised.



GLOBAL INDUSTRIES, INC.

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