

**BENETECH**<sup>®</sup> 

**BENETECH**  
**MaxZone**<sup>®</sup> *PLUS*

Patent Pending

**INSTALLATION GUIDE**

**! IMPORTANT !****BENETECH, INC. HEREBY DISCLAIMS ANY LIABILITY FOR, BUT NOT LIMITED TO:**

- IMPROPER INSTALLATION OF EQUIPMENT
- IMPROPER SIZING OF EQUIPMENT
- DAMAGE DUE TO CONTAMINATION OF MATERIAL
- USER'S FAILURE TO INSPECT EQUIPMENT
- USER'S FAILURE TO MAINTAIN EQUIPMENT
- USER'S FAILURE TO TAKE REASONABLE CARE OF THE EQUIPMENT
- INJURIES OR DAMAGE RESULTING FROM USE OR APPLICATION OF THIS PRODUCT CONTRARY TO INSTRUCTIONS AND SPECIFICATIONS CONTAINED HEREIN.

**BENETECH, INC.'S LIABILITY SHALL BE LIMITED TO REPAIR OR REPLACEMENT OF EQUIPMENT SHOWN TO BE DEFECTIVE.**

**! SAFETY !**

Review and understand all safety rules given herein along with local and Governmental standards and regulations. Know and understand the American National Standards Institute (ANSI) z244.1-1982 lockout/tagout procedures, the American National Standard for Personnel Protection - Lockout/Tagout of Energy Sources - Minimum Safety Requirements and the Occupational Safety and Health Administration (OSHA) Federal Register, Part IV, 29 CFR Part 1910, Control of Hazardous Energy Source (Lockout/Tagout); Final Rule.

Also observe all local and Governmental regulations concerning entry into confined spaces, welding, cutting, grinding, wash-down procedures and all Personal Protective Equipment (PPE) regulations.

*The following notations are used throughout in this manual.*

**! DANGER !**

**Danger:** Denotes immediate hazards that will result in severe personal injury or death.

**! WARNING !**

**Warning:** Denotes hazards or unsafe practices that could result in personal injury.

**! IMPORTANT !**

**Important:** Denotes instructions that must be followed for proper installation and/or operation of equipment.

**NOTE**

**Note:** Denotes general items to assist the reader/ installer/ operator.

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**Please pay close attention to all of these items and warnings.**  
**They have been included here for your safety and for ease of installation.**

All safety rules defined in this document and all owner/employer as well as State and Federal safety rules must be strictly adhered to when working on/with this, or any, conveyor plow system.



**! DANGER !**

*Do not touch or go near the conveyor belt or conveyor accessories when the belt is running. Your body or clothing can get caught and you can be pulled into the conveyor, resulting in severe injury or death*

**! DANGER !**

*Before installing, servicing, or adjusting the MaxZone Plus, turn off AND lock out/tag out all energy sources to the conveyor and conveyor accessories according to ANSI standards. Failure to do so could result in serious injury or death.*

**! DANGER !**

*If this equipment is to be installed in an enclosed area, observe all confined space entry regulations and test the atmosphere for gas levels and dust content levels before using a cutting torch, welding equipment or electric hand tools. Using a torch, welding, grinding or drilling in an area with gas or dust may cause an explosion and/or fire resulting in serious injury or death.*

**! WARNING !**

*Before using a cutting torch, welders, or grinding equipment, cover the conveyor belt with a fire retardant/resistant cover. Make sure a water source/fire hose is readily available AND OPERATIONAL. Failure to do so can allow the belt to catch fire.*

**! WARNING !**

*Conveyor plows are heavy and may require two people to lift. Attempting to lift the plow without assistance could result in injuries or damage to the equipment.*

# Table of Contents

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Safety/Warnings.....2-3

Provided Components..... 5

Pre-Install Safety..... 6

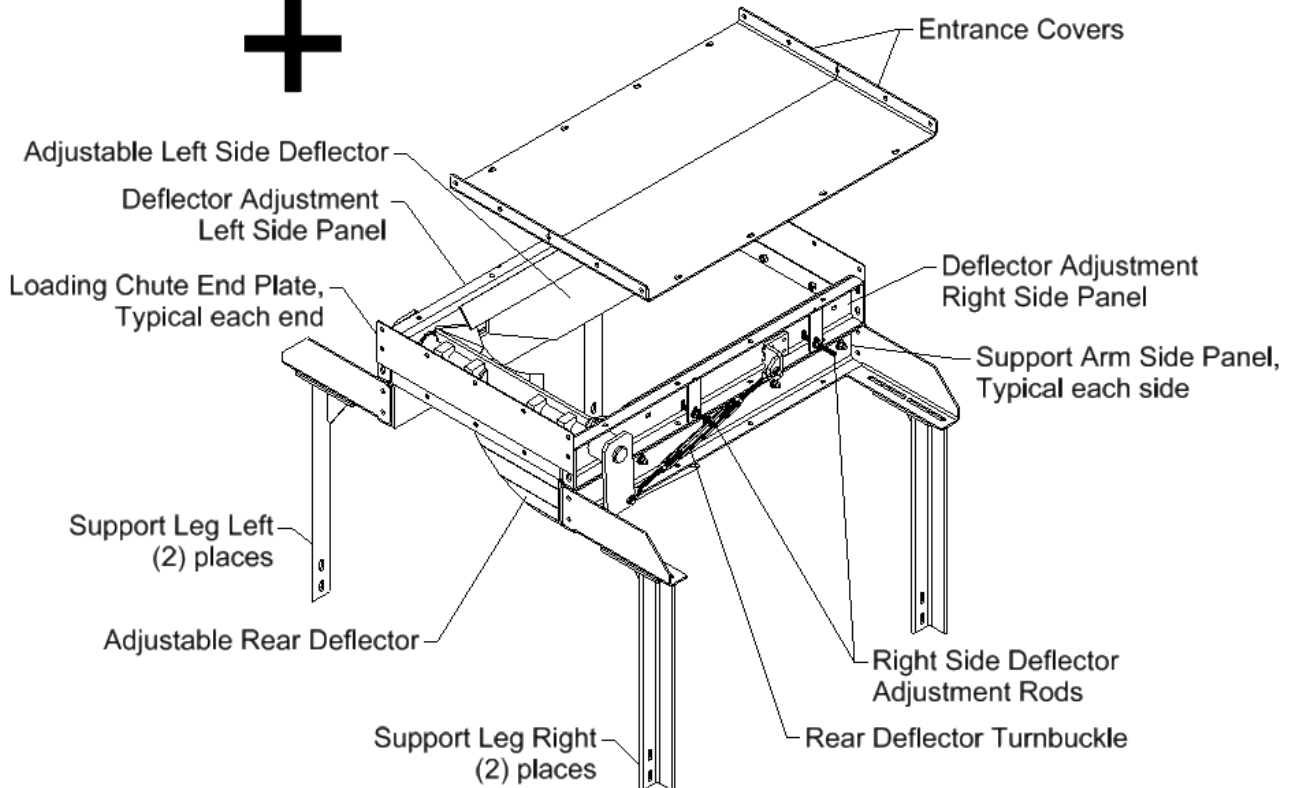
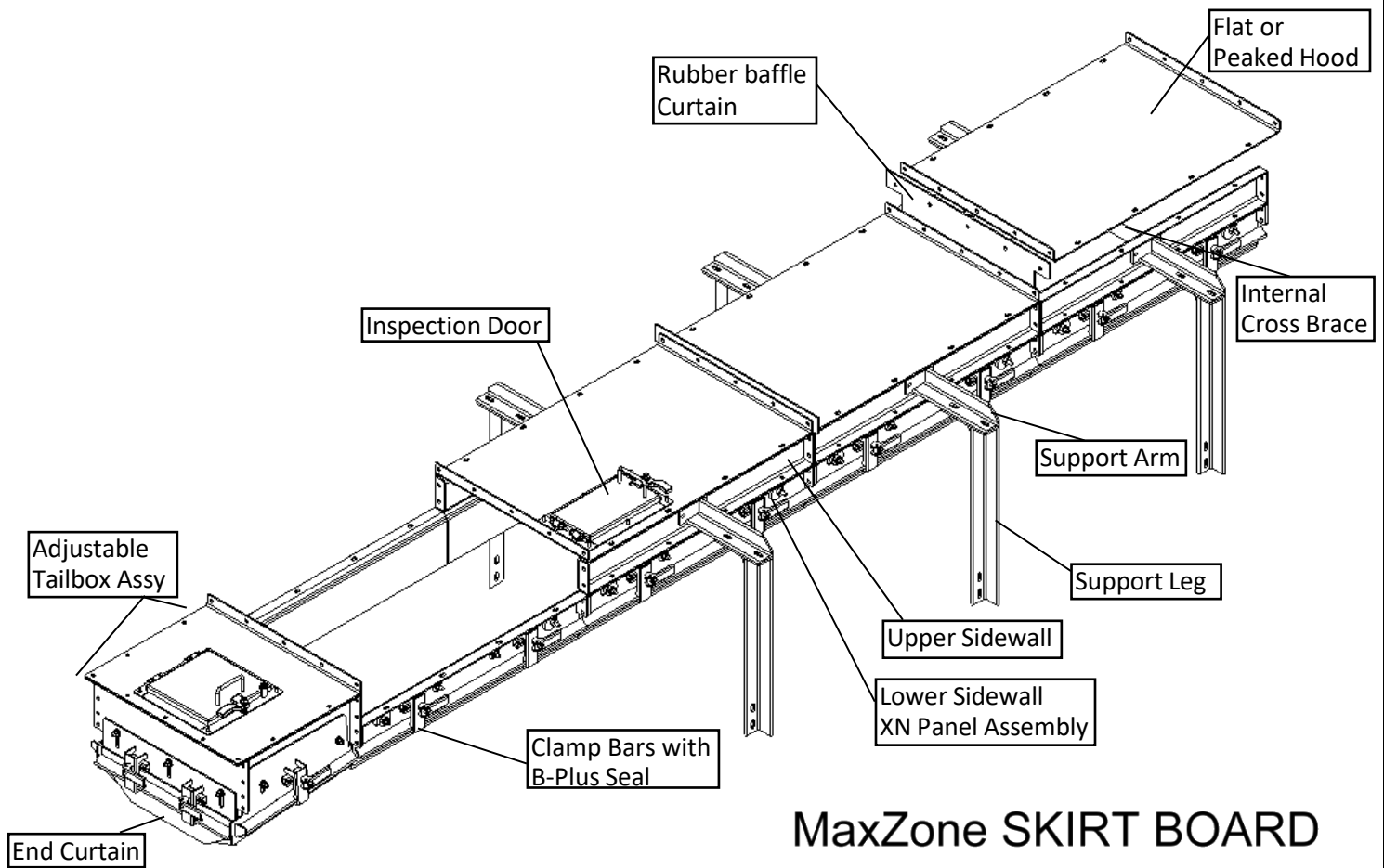
Installation Instructions.....7-20

APPENDIX:

A. DRAWING SHEET MP-S STANDARD MAXZONE PLUS PARTS ASSEMBLY

B. DRAWING 30606: CHUTE PENETRATION COVER SEAL KIT

C. DRAWING 30607: PIPE SEAL RUBBER COMPONENTS



# Before Installing the MaxZone Plus

1. Inspect ALL shipping containers for damage and correct number of items (skids, pallets, cartons, boxes, etc.) being delivered. Report damage and/or shortages to delivery service immediately and fill out delivery service's claim form. Keep ALL damaged goods for examination. Benetech Inc is NOT responsible for damage occurring during transit.
2. All Benetech Inc. MaxZones and MaxZone Plus' are shipped from our facilities in parts. Care should be taken while unpacking to ensure no parts are lost or damaged as the equipment is moved to its desired location. Dispose of shipping containers in an approved manner
3. If any items are missing, IMMEDIATELY contact BENETECH, INC. or an authorized representative.
4. Gather tools. Minimum tools required for installation are:
  - Tape measure/ String
  - Torch/Hole Saw
  - Level/Straight Edge
  - Welder/Drill
  - Open/Box End Wrenches
  - Socket Set
  - Marker/Soapstone (Welders chalk)
5. If using a cutting torch or welding, test atmosphere for gas level or dust content. Cover conveyor belt with fire retardant cover. Verify locations of fire extinguishers and operational water hoses prior to begin cutting/welding operations.



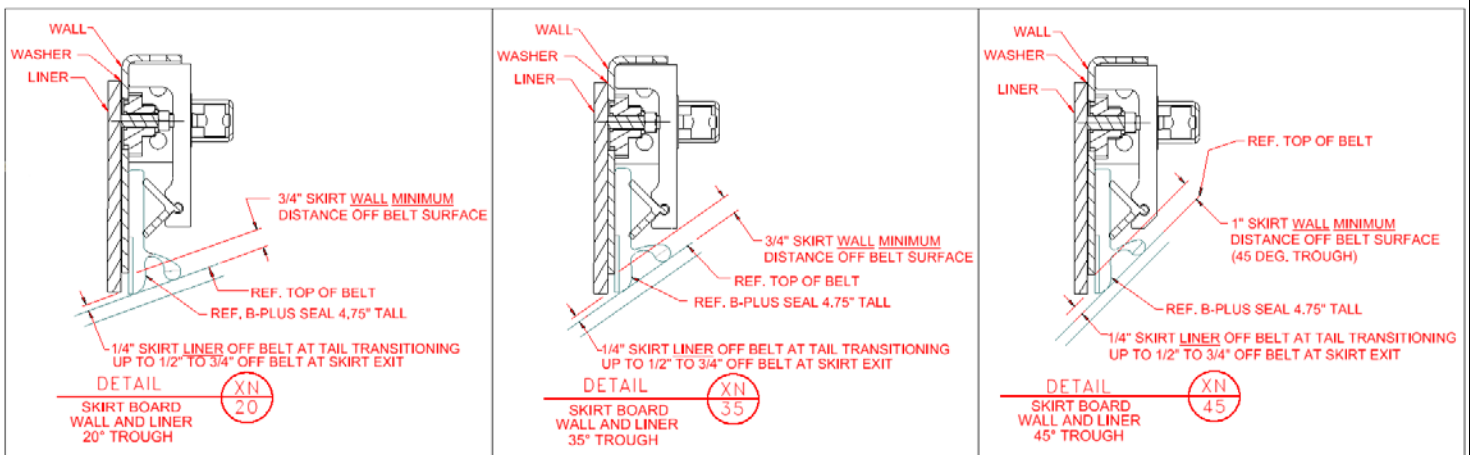
## **! WARNING !**

***Before installing equipment, turn off AND lock out/tag out all energy sources to the conveyor and conveyor accessories according to ANSI standards and local plant regulations. Failure to do so could result in serious injury or death.***

***If equipment will be installed in an enclosed area, the atmosphere in the structure/area must be tested for gas levels and dust content levels before using a cutting torch, welding equipment, grinding equipment or electric powered tools. Using a cutting torch, welding, drilling or grinding in an area with gas or dust may cause an explosion.***

# Installing the MaxZone Plus

- 6) Work this MaxZone *Plus* Installation Guide in tandem with the MaxZone Installation Guide and the XN Wear Liner Installation Guide.
- IF the XN panel assembly parts are not fully assembled, THEN use the “Provided Components” section of the XN Wear Liner Installation Guide to put together any loose shipped portions of the XN Wear Liner panels. These are the lowest level panels on both the Maxzone *Plus* assembly and the MaxZone assembly. (Then return to this document as the angle component and installation portion of the XN Wear Liner Installation Guide only apply if they are being attached to an existing skirtboard)
  - Use the MaxZone Installation Guide in all areas except the load zone area directly around the existing loading chute. The installation for this load zone area for a MaxZone *Plus* is described by this MaxZone *Plus* Installation Guide.
- 7) After the existing skirt system is removed, with the existing loading chute left in place, align the XN Panel Skirt WALL (the wall the skirt liners attach to) spaced as shown below from the top of the belt surface to the bottom of the skirt wall .
- As shown in Elevation View 1 and Section B-B on the next pages, mark *the height of the new flat cover, as determined by the skirt wall settings below, plus the remaining height to the cover level, onto the existing discharge chute* (this will be approximately 1’- 8 1/4” from skirt wall panel bottom. This will be approximately 1’-9 5/16” (as shown in Section B-B on sheet 9) from the belt surface at the width of the XN Panel skirt walls (See Note 1 below). Use the toolbox assembly or an internal stiffener support to set the skirt walls at the proper width to start the MaxZone Plus assembly installation around the existing chute.

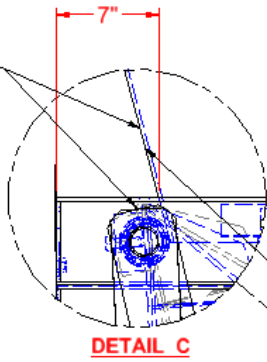


- Start the install of the sides a 7 inches from the rear of the loading chute as measured at the height of the flat cover, as shown in DETAIL C of ELEVATION VIEW 1. IF a site specific, job specific drawing is provided with this dimension shown, THEN use that job specific dimension instead of 7 inches.

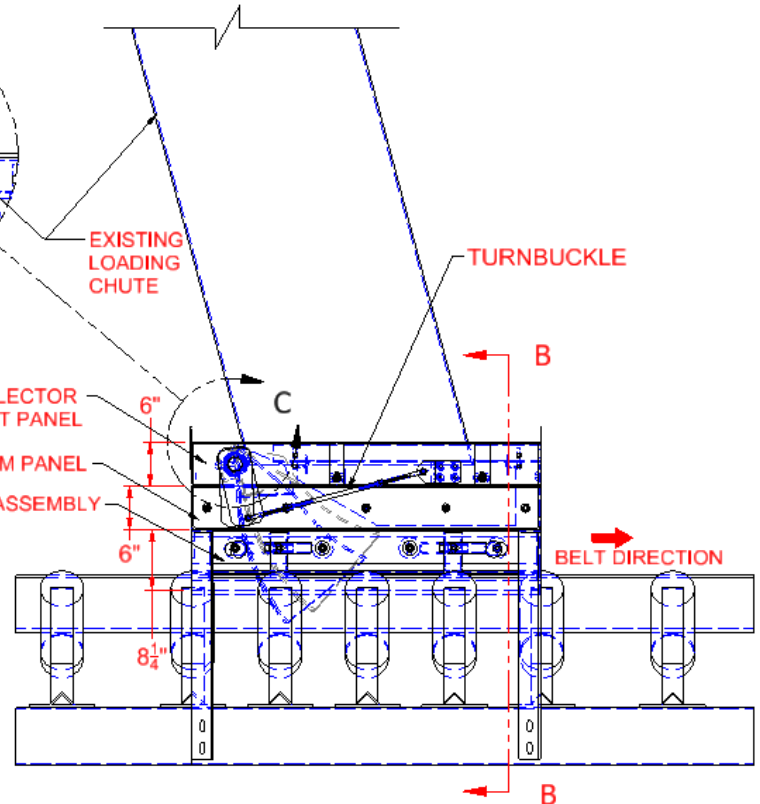
NOTE 1: Assembly shown has the Deflector Adjustment Side Panels directly above the Support Arm Side Panels for two total panels above the XN Panel Assembly on each side. Job specific requirements may add additional 6 inch tall side panels between the Support Arm Side Panel and Deflector Adjustment Panel to increase the height of the Deflector Adjustment Side Panels. See job specific drawing for job specific assembly.

TO START, USE TURNBUCKLE TO ALIGN UPPER STRAIGHT PIVOTING BACK PARALLEL WITH EXISTING LOADING CHUTE BACK.

NOTE: SIDE DEFLECTORS MAY NEED TO BE MOVED INWARD TO ALLOW PIVOTING REAR LOADING CHUTE BACK TO BE PARALLEL TO EXISTING LOADING CHUTE.

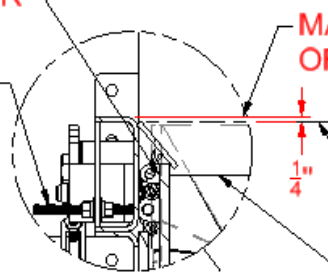


**DETAIL C**



**ELEVATION VIEW 1**

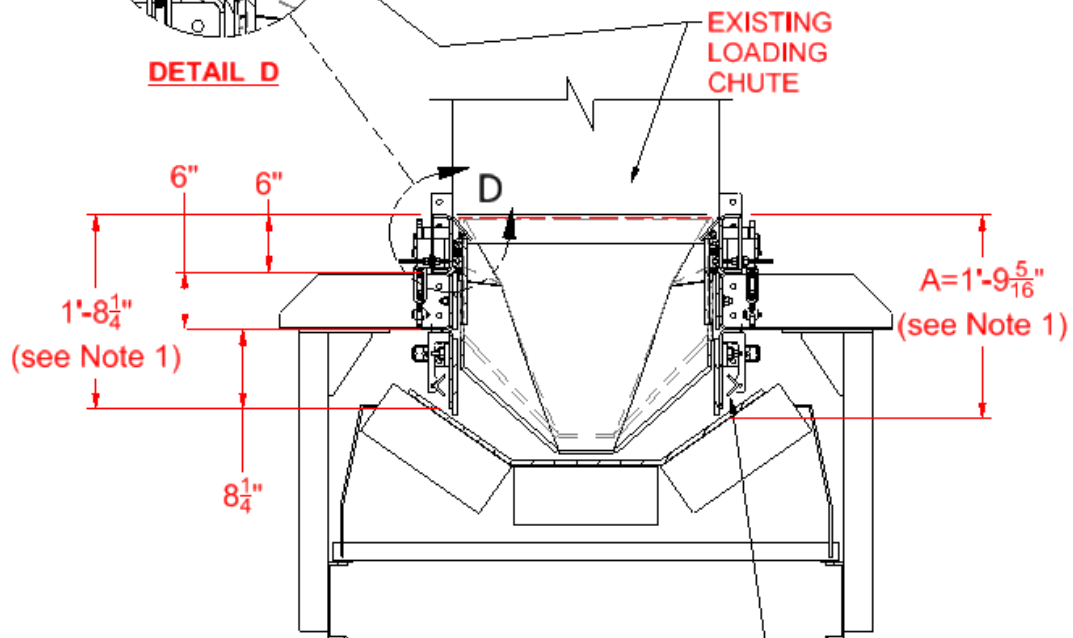
SIDE DEFLECTOR  
SIDE DEFLECTOR ADJUSTMENT ROD



**DETAIL D**

MARKED LINE, TOP FLANGE OF DEFLECTOR ADJUSTMENT PANEL

CUT LINE, REMOVE EXISTING LOADING CHUTE BELOW THIS LINE

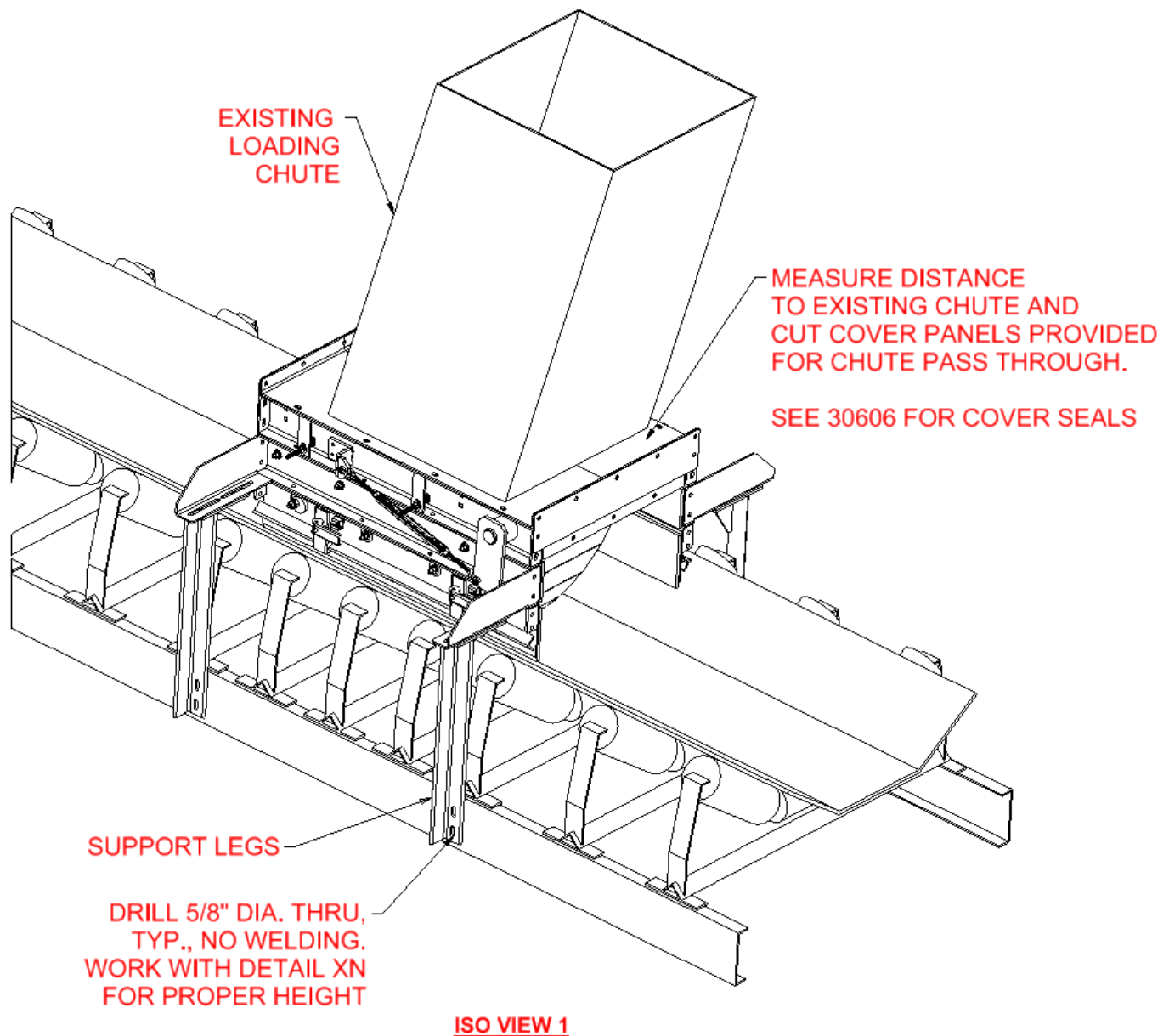


**SECTION B-B**

SEE DETAIL XN FOR EXISTING TROUGH



- 9) To install the sides to go along with the rear dimension mentioned in step 8, the existing loading chute may need to be trimmed. Per SECTION B-B, DETAIL D, the existing loading chute should be trimmed to  $\frac{1}{4}$ " lower than the top of the side panels / bottom of the covers.
- 10) Mount support legs and attach side wall/liner panels using  $\frac{1}{2}$ "-13 x 1- $\frac{1}{2}$ " long hex head cap screw with flat and lock washers. Double check the liner panel distance from the belt (shown in step 7, Detail XN).
- 11) Before putting covers on top of the MaxZone Plus assembly, adjust the upper straight portion of the Adjustable Rear Deflector to be parallel to the rear of the existing loading chute. See DETAIL C of ELEVATION VIEW 1. This may require moving inward the Side Deflector Adjustment Rods to tilt the internal Side Deflectors inward, thus clearing room to pivot the Adjustable Rear Deflector.
- 12) Cut opening on flat covers as need to allow existing chute to pass through as shown in ISO VIEW 1.
- 13) The cover(s) with Part No. 30606-XXBW are supplied in 2-4 FT. sections to permit trimming to fit. See drawing 30606 for cover details and seal details.



14) IF there was a known problem with material loading off-center with the existing loading chute, OR IF during the trimming of the existing loading chute, an internal kick plate/deflector had to be removed, THEN the installer may wish to further adjust the Side Deflector Adjustment Rods to adjust the Side Deflectors. Pushing the Side Deflector Adjustment Rods inward will tend to have material load further to the center of the belt, or away from that side of the belt, while pulling the Side Deflector Adjustment Rods outward will tend to promote material loading further to that side of the belt.

15) After the main MaxZone Plus subassembly is installed, Go to the MaxZone Installation Guide STEP 13 and continue with the installation of the regular Maxzone sections, THEN see STEP 16 in this manual.

**! WARNING !**

*Failure to remove tools from installation area and conveyor belt before turning on energy source can cause serious injury to personnel and damage to belt.*

**! WARNING !**

*Do not touch or go near conveyor belt or conveyor accessories when conveyor belt is running. Body or clothing can get caught and pull body into conveyor belt, causing severe injury or death.*

- 16) After the MaxZone Plus and Maxzone portions are installed and the system run, verify the belt is center loaded properly. If loading is off to one side, adjust the side deflectors per STEP 14.