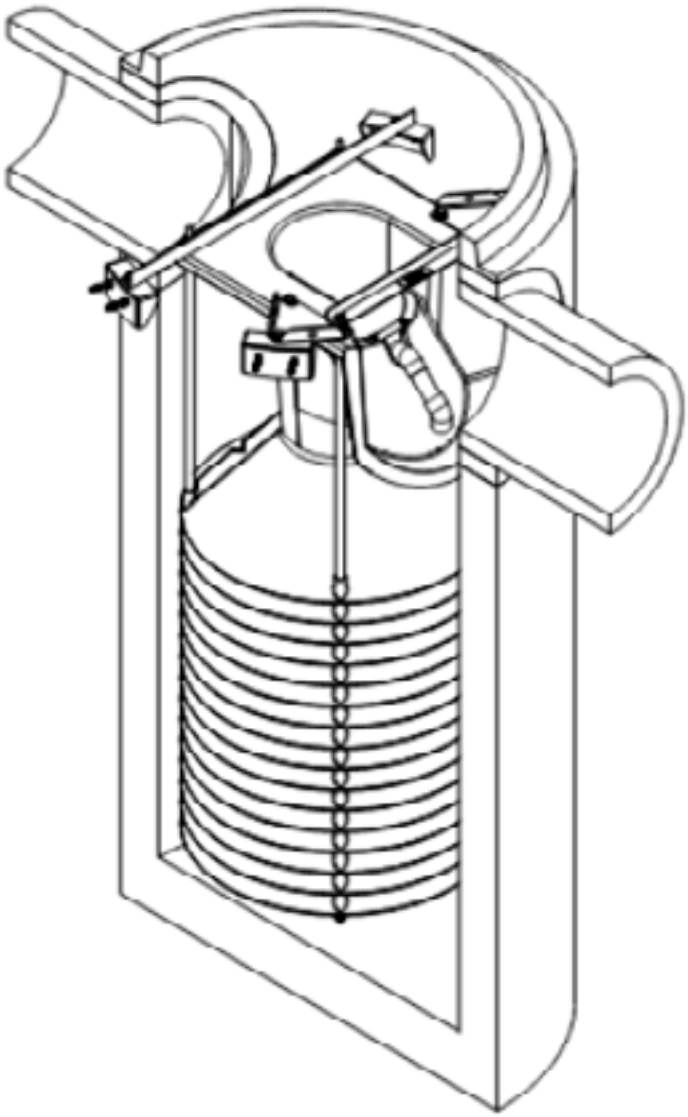
Hydro Shield Advance™

Pre-Assembly Instructions

Assembly Guide



Oldcastle Infrastructure™
A CRH COMPANY

Hydro Shield Advance™

Pre-Assembly Instructions

Assembly Guide

Materials Supplied By Oldcastle Infrastructure

5-gallon pail containing hardware

- A-304 SS 1/2 in.-13 UNC x 3 3/4 in. Expansion Anchor*
- A-304 SS 1/2 in. I.D. Flat Washer
- A-304 SS 1/2 in.-13 UNC Hex Nut
- 8 QTY.

Support Frame Ledger Angles

Fully assembled Hydro Shield Advance secured on a pallet.

DO NOT UNPACK/ UNSTRAP THIS ASSEMBLY. This will ship with the completed structure as is.

Size of assembly and packing material may vary.

*** Minimum embedment depth of the 3 3/4 in expansion anchors is 2 1/2 in.**

Materials Supplied By Precaster

Top Slab

Applicable Riser(s)

Bottom Riser/Base

Precast Concrete Manhole:

- Top slab cored for corresponding frames and covers
- Risers with cored inlet and outlet
- Joint Sealant
- Pipe boots (in required locations)

Joint Sealant

Required Tools and Equipment

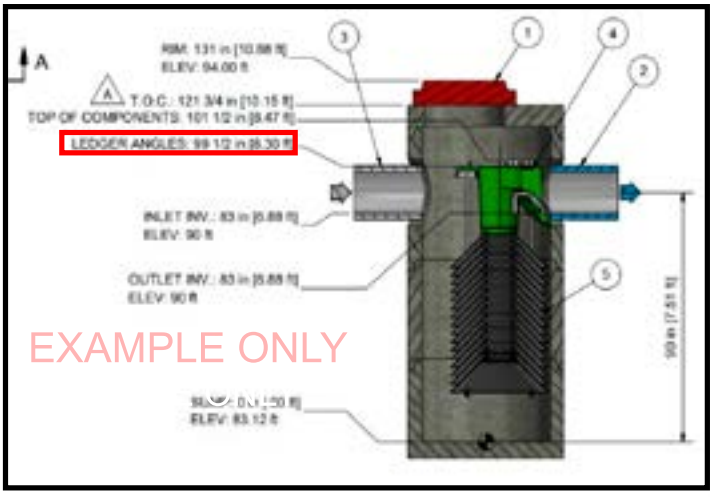
- Measuring Tape
- Ladder
- Hammer
- Hammer Drill and Concrete Bits
- Adjustable Wrench or Ratchet with Deep Sockets
- Permanent Marker or Grease Pen
- **Approved Submittal and Shop Drawings for the Hydro Shield Advance™**

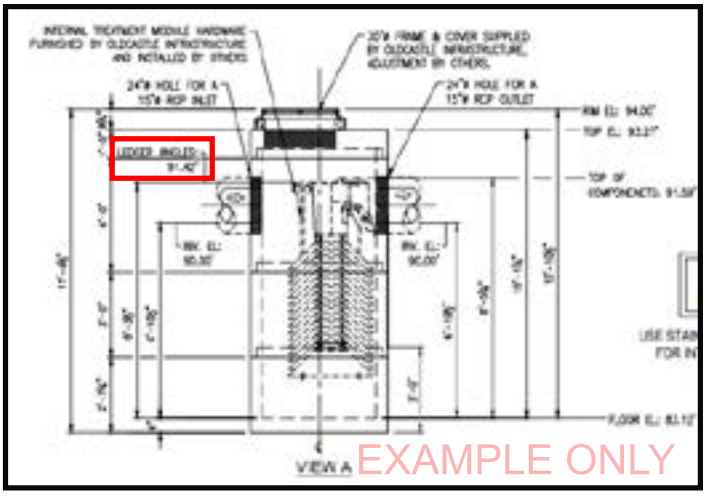
Installing the Ledger Angle Support Brackets

The specified elevation for the ledger angle support brackets must be identified prior to installation. This information can be found in one of the following locations:

- Production Drawings
- Product Submittal Drawings

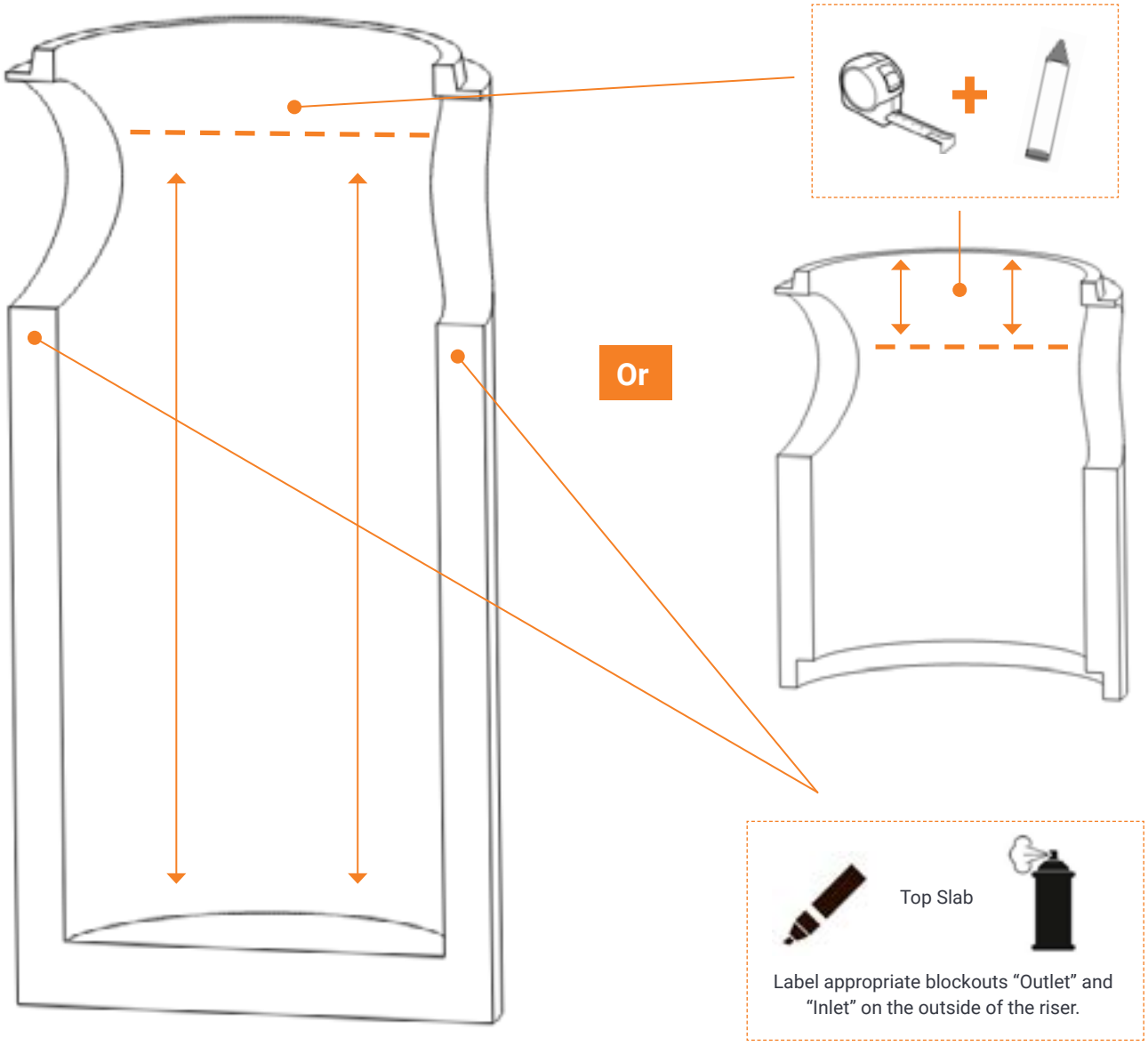
See the examples below for guidance on where to find the elevation markings on the relevant drawings.





Step 1

1. Label the corresponding blockouts “Outlet” and “Inlet” on the outside of the riser. This will assist contractor during installation in the field.
2. Using the Ledger Angles elevation noted on the submittal and production drawings, measure up from the sump or down from the top of the riser (which ever is more accurate) and mark several locations on the inside of the riser wall. These marks will serve as reference points for where the top of the Ledger Angles should be when anchoring them to the manhole. Ensure measurements are consistent and align with the specified elevation for accurate installation.



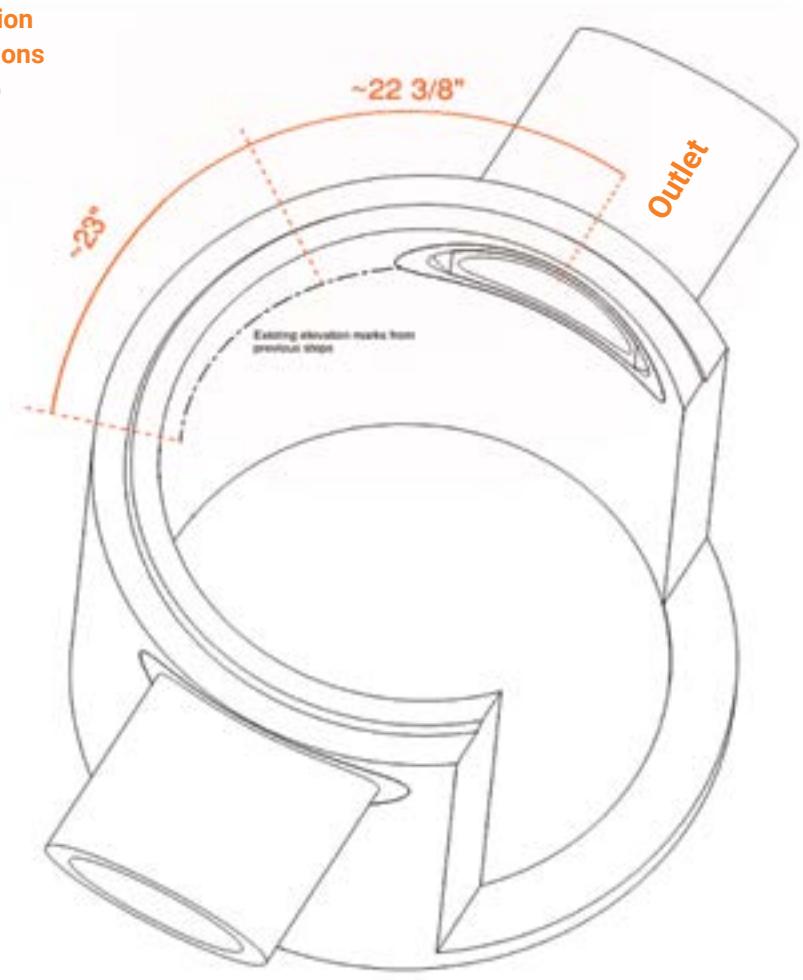
Step 2

With the elevation of the Ledger Angles identified, the next step is to determine their positions along the inside circumference of the manhole. To do this, refer to the submittal and/or shop drawings for the arc measurements. These measurements are as follows:

1. From the centerline of the outlet blockout to the centerline of the nearest bracket.
2. From that bracket to the next bracket along the circumference.

These dimensions will mirror in both directions from the outlet blockout. Refer to the example diagram below for clarification

These are approximate dimension shown. Please confirm dimensions on production drawings prior to installing Ledger Angles.



Step 3

With the elevation and inside diameter dimensions established, it's time to securely anchor the Ledger Angles in their designated positions. Follow these steps to ensure proper installation:

1. **Position and Mark:**

Place each ledger angle in its corresponding location. For added accuracy, mark a full outline around the bracket to use as a visual reference during installation.

2. **Prepare for Anchors:**

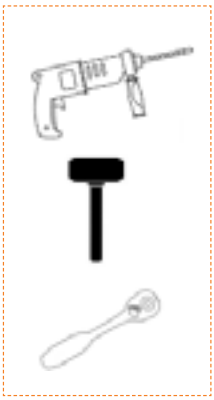
Each bracket requires two 1/2" x 3.75" stainless steel wedge anchors. The minimum embedment depth for these anchors is 2 1/2 inches. Use a 1/2" SDS-fit hammer drill to create the necessary holes at the marked locations.

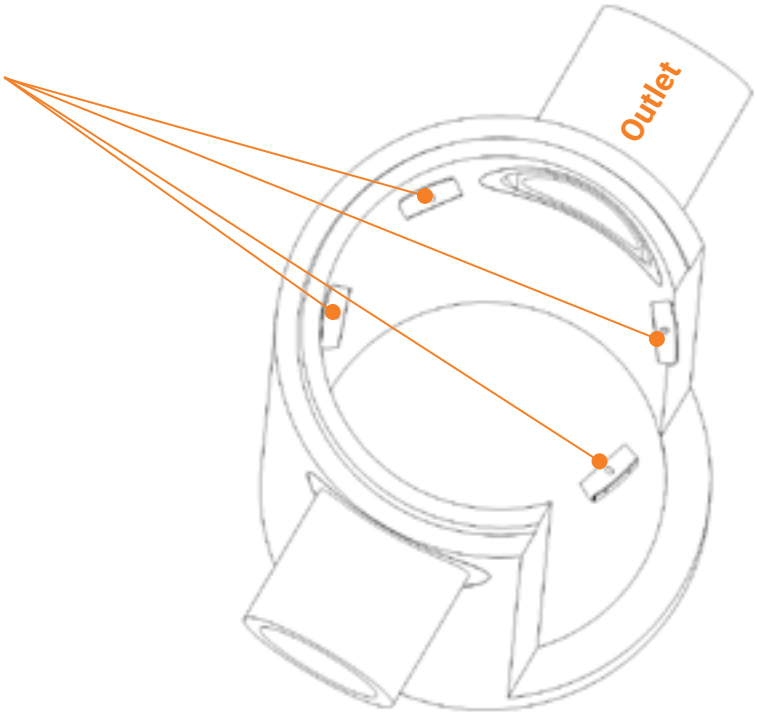
3. **Set the Anchors:**

- Insert the wedge anchor thought the ledger angle and into the drilled hole.
- Install washer and thread the nut onto the anchor bolt, flush with the top of the bolt.
- Use a mallet to strike the top of the bolt and nut to properly seat the anchor into the hole.

4. **Secure the Anchors:**

Once the anchor bolt is seated, tighten the nut and washer to the manufacturer's specifications using a 3/4" socket or wrench.





Step 4

With the Ledger Angles securely anchored and all components in place, conduct a thorough inspection to confirm the following:

1. **Leger Angle Positioning:**

Verify that all Ledger Angles are aligned correctly according to the submittal or shop drawings. Double-check the measurements to ensure the angles are evenly spaced and positioned as planned.

2. **Anchor Security:**

Confirm that each wedge anchor is properly seated and tightened to the manufacturer's specifications. There should be no visible movement or looseness in the angles.

3. **Overall Alignment:**

Ensure the Ledger Angles sit flush against the inside of the manhole and align with the intended design specifications.

4. **Worksite Cleanup:**

Clear any debris from drilling or installation to leave a clean and safe work area.

Once all these steps are verified, the manhole is ready to be prepared for shipment to the project site.

Quality Checklist

1. General Inspection

- ☐ Verify that all required components have been installed according to the approved production drawings.
- ☐ Check that the Hydro Shield Advance™ assembly remains strapped and secured to the pallet for shipment.

2. Ledger Angle Installation

- ☐ Check that each anchor is properly seated and tightened to manufacturer specifications (no movement or looseness).
- ☐ Confirm that all ledger angles are installed at the correct elevation per submittal and production drawings.
- ☐ Ensure ledger angles are properly aligned inside the manhole and site flush against the inside wall.

3. Blockout Labeling

- ☐ Ensure that “Outlet” and “Inlet” labels are correctly marked on the exterior of the riser for field installation reference.

4. Cleanup

- ☐ Ensure that the structure is clean and free of loose materials before shipment.

5. Final Verification & Documentation

- ☐ Take photos of the completed installation for documentation before shipping.
- ☐ Sign off on the QC checklist before release for transport.

Notes:

Notes:

Notes:

Oldcastle Infrastructure™
A CRH COMPANY

www.oldcastleinfrastructure.com | (888) 965-3227

Trusted partnerships.
Full scale solutions.