

BACKGROUND

How Stay Cables Are Installed

The Gordie Howe International Bridge requires the installation of 216 stay cables. The installation process for each pair can take two-to-five days and involves multiple steps as described below.

Step 1: White weather-resistant, high-density polyethylene (HDPE) plastic pipes are lifted from their crates on the ground up to the road deck and are welded together before any strand can be fed through.



Step 2: Once welded, the first strand – referred to as the “reference strand” – is inserted into the pipe.

Step 3: With the reference strand in place, one end of the pipe is lifted into position on the tower by a crane with support from workers on the mast climber which is steel scaffolding attached to the tower.



Step 4: Workers stationed on the mast climber take the reference strand and feed it into the anchor box inside the tower. Another crew of workers stationed inside the anchor box takes the reference strand, anchors it, and secures it with a steel wedge.

Step 5: Workers on the deck bring the other end of the pipe to its location on the edge girder and secure the reference strand using the same technique detailed in step four.





Step 6: Once both ends of the reference strands are secured, the process is repeated for the rest of the metal strands in the pipe. Each stay cable has between 38 and 122 strands inside.

Step 7: When the reference strand is first installed, the HDPE pipe appears to sag. Every time a strand is added, the piping begins to straighten. Once all strands are inserted and anchored, the installation of one stay cable is complete.



Bridging North America has sourced the cables used in construction of the Gordie Howe International Bridge from North American sources. Stringent requirements for high standards of quality are applied to all steel components ensuring that the Gordie Howe International Bridge will be durable and safe for our future users.