

Solution Series

Steelbridge XT / SensorComm

SteelBridge Scales Keep Trucks Moving Across Busy International Toll Bridge

Problem: *Lack of a reliable system to accurately weigh trucks crossing the Ambassador Bridge creating congestion and loss of revenue.*

Solution: *Installation of multiple Avery Weigh-Tronix SteelBridge IMXT scales relieves truck congestion and raises revenue.*



The Ambassador Bridge between Detroit, Michigan and Windsor, Ontario is one of the busiest international crossings in North America—more than 14,000 trucks cross over the bridge each day. Obtaining fast and accurate weighments is critical to the success of the toll bridge.

In the past, several pit-type truck scales had been used at the Ambassador Bridge. But the scales utilized massive check rods that frequently went out of adjustment due to the shear volume of truck traffic. Consequently, trucks were being charged a fee based on the declared truck weight rather than an actual weighment and the bridge

company was losing revenue because truckers were under-declaring their weights.

The Design Makes the Difference

Back in 2000, Standard Scale & Supply Co., distributor for Weigh-Tronix in Detroit, installed a pitless Weigh-Tronix SteelBridge FCXT series truck scale for the city of Detroit. Standard Scale invited key management personnel of the Detroit International Bridge Company to visit the site to view first hand how the scale was designed and how easy it was to install, according to David Wright, salesman for Standard Scale.

“They were impressed by the lack of check rods, the floating design and the Weigh Bar® weight sensor’s reputation for reliability,” he explained.

Soon thereafter, Wright sold six SteelBridge IMXT8012-100T truck scales with WI-127 indicators to

the general contractor working for the Detroit International Bridge Company at the Ambassador Bridge site. After clearing customs, trucks pull onto the scales, payment is made by cash, credit card or direct billing for large customers, and the entire weight transaction is captured by a computer in the toll booth and RF broadcasted to an antenna mounted on the bridge, explained Wright. Then all the information is sent to a host accounting computer.

A seventh scale was purchased at about the same time directly by the Detroit International Bridge Company—an IMXT10012-100T with a WPI-135 weight indicator. “This 100-foot-long scale was chosen for the purpose of in-motion weighing, something never done before on a motor truck scale to my knowledge,” said Wright. When the in-motion system is implemented, trucks will move at about 5 mph across the scale and



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weighments will be obtained in a few seconds as the trucks roll across the scale.

This is another example of how the owners of the Ambassador Bridge (the Detroit International Bridge Company and its sister company, the Canadian Transit Company) are gearing up to move more truck traffic between the U.S. and Canada.

More Truck Scales Mean More Business

Last fall the Detroit International Bridge Company bought two more Weigh-Tronix SteelBridge IMXT10012-100T scales with the WPI-135 weight indicators and SensorComm, as well as remote displays and traffic lights. And the Canadian Transit Company bought six IMXT8012-100T scales for static use and three IMXT10012-100T scales for in-motion use. All

of these units have WPI-135 weight indicators, SensorComm and remote displays. Installation of the new scales for the Canadian side of the bridge is awaiting government funding for road and access changes to the area which will further relieve truck congestion.

SensorComm Simplifies Calibration

SensorComm is a microprocessor-based digital J-Box that converts the analog signal from the scale's weight sensors into digital data that can be processed by the WPI-135 indicator. One SensorComm can serve four sensors.

"Our service department loves the SensorComm," said Wright. "It makes calibration faster. You don't have to open analog junction boxes and tweak potentiometers."

Opening junction boxes takes time and exposes the box to potentially damaging moisture. With SensorComm, calibration, including section adjustments, is done at the weight indicator, he explains.

Once all 18 Weigh-Tronix SteelBridge truck scales are up and running at the Ambassador Bridge, it may very well become the busiest international truck toll crossing in North America. And the bridge companies are counting on the SteelBridge scales to hold up for the long haul. Not a single part had to be replaced on the Weigh-Tronix truck scales in the first year after an estimated 2,400,000 weighments.

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