

WALTERDALE BRIDGE REPLACEMENT PROJECT

2015 YEARBOOK



Construction on the new Walterdale Bridge, which began in 2013, made great strides in 2015, including the dramatic floating of the centre section of the bridge's twin arch ribs in November. Online streaming cameras show real-time progress on the bridge construction — view the footage at edmonton.ca/WalterdaleBridge.

When the project is fully completed in 2017, the new bridge will be a signature structure gracing the heart of the river valley. The area will be a

point of pride for Edmontonians, drawing people to the river valley and creating a landmark gateway to the city's downtown.

Designed as a through-arch-style bridge, it will include three northbound traffic lanes across the river. The bridge will feature a sidewalk on the west side, and a wider, multi-use trail for pedestrians and cyclists on the east side. The new bridge will serve more than 33,000 vehicles a day and is expected to open to traffic in 2016.

2015 CONSTRUCTION TIMELINE



JANUARY - APRIL

After a year-long delay, the first steel shipments arrived on site and the much-anticipated assembly of the arches began.

Construction of the thrust block foundations was completed, and reinforcing steel was installed as part of the construction for the concrete support legs connecting the steel arch to the foundations.

MAY - AUGUST

The barges that would later float the arches were built, and river dredging took place. The river was dredged to ensure it was deep enough to float the steel arches. The material dredged from the river was used as backfill for Queen Elizabeth Park.

Construction of the bridge support legs was completed, and the cofferdams were filled in.

? Cofferdams are temporary structures which keep water out of a construction area while workers construct bridge supports.

BRIDGE FACTS:

- The heaviest arch piece weighs 125 tonnes
- The project has moved about 130,000 m³ of excavated material
- Each upper arch connection includes over 1,500 bolts
- The thickest cable that supports the bridge will contain 27 individual high-strength steel strands in a 160 mm sleeve
- The twin arches contain 42 steel segments (21 on each side)



REINFORCED STEEL OF THE CONCRETE SUPPORT LEG



ARCH STEEL AND TEMPORARY SUPPORT TOWERS



ARCH STEEL AND TEMPORARY SUPPORT TOWERS

SEPTEMBER - DECEMBER

The central portion of the bridge's dual arch was assembled on the south part of the construction site, and the 950-tonne structure was floated across the North Saskatchewan River on barges. The complicated manoeuvre took place on Sunday, November 22, and the arches were successfully placed onto temporary supports. Now that the arches span the north and south banks of the river, they will be prepared for future heavy lifts to raise them into their final position.

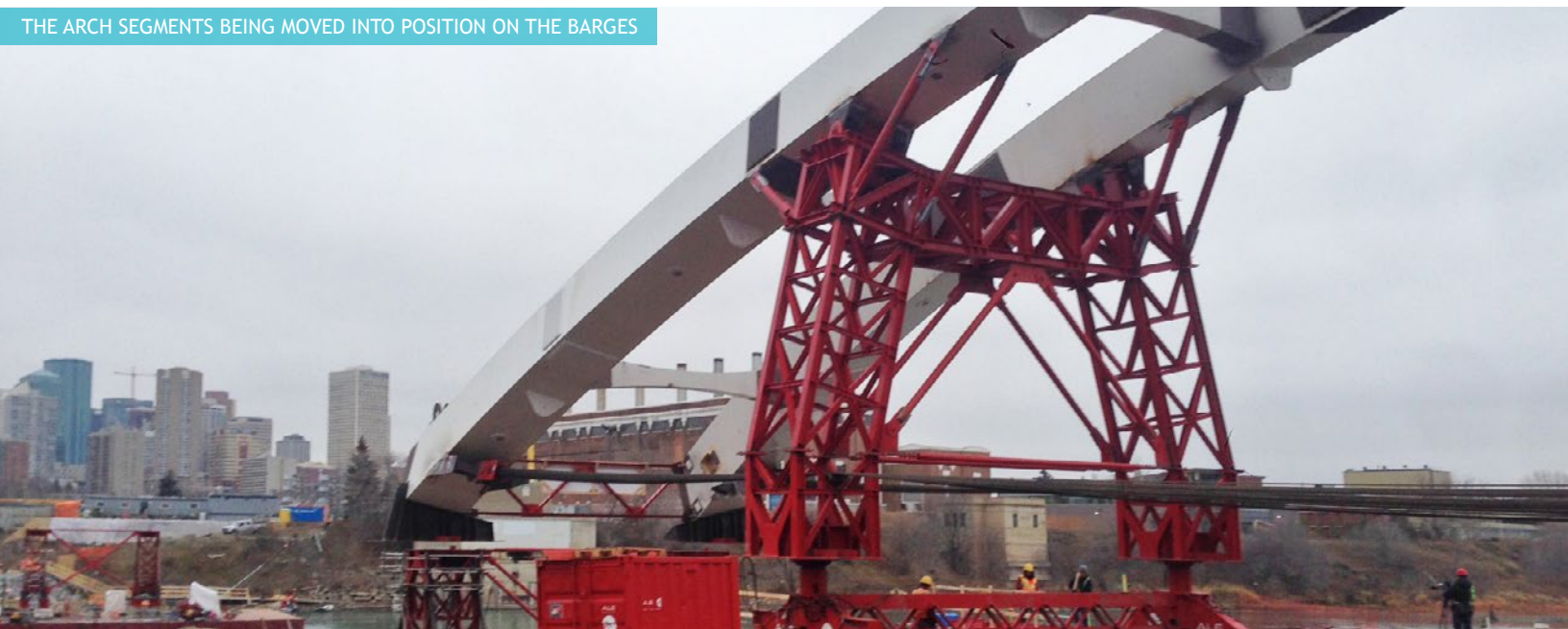
The remaining north and south segments of the arch are being installed on temporary red towers located on the construction berms in

the river. Large lifting jacks are installed on the top of the temporary towers to lift and connect the arch segments in two heavy lifts scheduled for spring of 2016.

The contractor also poured the north shared use path abutment and walls to prepare for the shared use path steel to arrive in the new year. The shared use path steel is currently being fabricated in Korea in preparation for painting and shipping.

Deck support steel for the bridge's concrete deck arrived on site.

THE ARCH SEGMENTS BEING MOVED INTO POSITION ON THE BARGES



ABORIGINAL CONSULTATION

The project has worked closely with the City's Aboriginal Relations Office to keep First Nations and Métis communities apprised of developments. The project team has complied with direction for Aboriginal consultation requirements for Historical Resource Act clearance currently set out by Alberta Culture.

Aboriginal groups were invited to carry out a ceremony prior to construction, and are monitoring pertinent excavation and in-river construction activities for the project.



BRIDGE THRUST BLOCKS



ONE OF THE BARGES BUILT FOR THE ARCH FLOAT



RIVER DREDGING

BUDGET

The \$155 million project, including removal of the existing Walterdale Bridge and realignment of nearby roads, is projected to be on budget. The old Walterdale Bridge remains open and will continue to serve Edmontonians until the new bridge is completed at the end of 2016.



THE CONCRETE LEGS WHICH CONNECT TO THE STEEL ARCHES CAN BE SEEN ON THE LEFT AND RIGHT