Macdonald Bridge Suspended Span Redecking Project
Frequently Asked Questions

For more information go to [www.hdbc.ca](http://www.hdbc.ca) or e-mail bridges@hdbc.ns.ca.

**Why is this project needed now?**
The bridge remains safe but after 60 years the deck is wearing out and needs to be replaced. The project will extend the life of the bridge and reduce maintenance.

Once complete, much of the bridge infrastructure will be new, leaving the original towers, main cables and anchorages on the suspended spans.

**What exactly is being done?**
The project includes replacement of the road deck, floor beams, stiffening trusses and suspender ropes on the suspended spans (2,500 ft of the overall 4,418 ft length) of the Macdonald Bridge.

**When does the project begin?**
The engineering work has been ongoing since 2010. The on-site work will begin in earnest in 2015 with the first panel being replaced sometime in March, 2015.

**Has this project ever been done before?**
This is only the second time the suspended span of a suspension bridge has been replaced at night and open during the day in the world. The first time was on the Lions Gate Bridge in Vancouver in the late 1990s.

The Lions Gate Bridge is the sister bridge to the Macdonald Bridge, also designed by P.L. Pratley. HHB is working with the same bridge engineering firm, Buckland and Taylor, as was used on the Lions Gate redecking project.

**Wasn’t the deck replaced when the third lane was added?**
Some may assume the suspended spans road deck was replaced when the third lane was added, but this is not the case. We kept the old deck (25 ft wide) and replaced the old sidewalk and ductway (5ft wide each) with new road deck to create three traffic lanes. We added the bike lane and sidewalk on the outside of the old bridge.
During the third lane project we knew the suspended spans would have to be replaced in the subsequent 12-15 years and as such the project was put in the long term planning. We have reached the point where the deck of the suspended spans must be replaced.

**How much will the project cost?**
The construction cost is estimated at $150 million.

**How will the project be funded?**
The main reason HHB requested from the Nova Scotia Utility and Review Board (NSUARB) and was subsequently granted a toll increase in 2011 and 2012 was to help fund this project. HHB will also need to borrow money to fund this project.

**Will there be another toll increase?**
No further toll increases are planned to fund this project.

**Will the bridge be closed for the entire project?**
The Macdonald Bridge is very important to the transportation network in HRM and the province. The project is being conducted largely at night to minimize impacts to transportation.

The bridge will remain open during weekdays to vehicular traffic.

The bridge will close weekdays from 7:00 pm until 5:30 am and several full weekend closures will be needed.

**How will the work be done?**
Starting near the Dartmouth shore the bridge deck panels (in either 20 or 10 metre lengths) will be replaced overnight.

A lifting gantry will be positioned on the suspender ropes, and the existing panel will be lowered to a barge in the harbour. A new panel will be lifted into position in the same manner. One deck panel will be replaced every three or four working nights. Weather, particularly wind, will be a concern for lowering and raising panels.

On the Halifax side the bridge deck panels will be replaced in 10 m lengths over land because they will be brought in by truck rather than on a barge.

Where the removal and installation work is complicated at the cable bents and towers, the work will be done with weekend closures.
**Why does the sidewalk and bike lane need to be removed prior to the start of the project?**

There are several reasons, but the key reason is safety. The new deck is much lighter than the existing deck. To carry out the project the loads on the existing bridge deck must be reduced to account for construction equipment and temporary connections at the construction face.

This is necessary to safely execute this project.

A new sidewalk and bike lane are added as the new panels are installed and will be open when the project is complete.

**How will you accommodate active transportation during the project?**

HHB recognizes the important role the Macdonald Bridge plays in active transportation across Halifax harbour.

HHB will provide a 24-hour a day shuttle service that will accommodate active transportation. This service will be free of charge to the users.

There will be a pick up and drop off location with shelters on each approach to the bridge.

Details, such as service frequency (load and go or on a schedule), are being determined based on data that will be collected about uses of the bike lane and sidewalk over the next several months.

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