





# **Pattullo Bridge Replacement Project**

## How we build it: Royal Avenue overpass deck replacement

#### Royal Ave. overpass rehabilitation work to date

Royal Avenue is a vital part of New Westminster's road network. The Royal Avenue overpass is an aging structure and as part of the Pattullo Bridge Replacement Project, the overpass is being rehabilitated to meet current design and safety standards. Work to date has focused on improving the underpass walls. In late April, the overpass deck will be fully replaced.

### Replacing the Royal Ave. overpass deck

Replacing the Royal Avenue overpass deck requires a weekend closure of Royal between McBride Boulevard and the Royal Avenue on-ramp, as well as the Bridge Connector. Crews will remove the old overpass deck and replace it with a new surface in a single weekend to minimize traffic impacts to the travelling public while work is underway.



Royal Avenue overpass crossing over the Bridge Connector

#### **Deck replacement process:**

- 1. Crews will remove the existing overpass deck surface using a self-propelled modular transporters (SPMT) system.
- 2. Once the overpass structure is ready for the new deck surface, crews will lift the new prefabricated deck surface using the same system.
- 3. The SPMT will then slowly move the new deck surface along the Bridge Connector from the loop-ramp area into place underneath Royal Avenue.
- 4. The new deck surface will then be shifted into place onto the overpass foundations using the SPMT's jacking system.

#### **Self-propelled modular transporter (SPMT):**

A SPMT is a large multi-axle platform that is computer operated. It can lift, carry, and install heavy loads, and can pivot up to 360 degrees. This system moves at walking speed.

SPMT's are most often used to lift, transport, and install large structural components of a bridge or overpass. These structural components are usually constructed either offsite, or adjacent to where they need to be installed.

For more information on the steps to replace the overpass, please see the following page.

#### **Contact the Project**









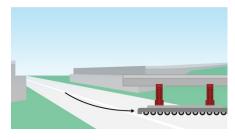
## Step by step: how the Royal Avenue overpass deck will be replaced



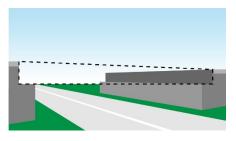
1. The SPMT will be positioned under the existing Royal Ave overpass deck.



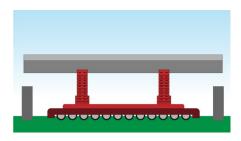
2. The SPMT will raise the existing deck above Royal Ave using its jacking system.



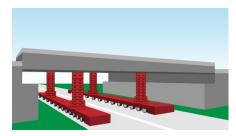
3. The SPMT will transport the old deck off site.



4. Royal Ave connections will be prepared for the arrival of the new overpass deck.



5. The SPMT will transport the new deck from the temporary laydown site.



6. The SPMT will lift the new deck above Royal Ave using its jacking system.



7. The SPMT will lower the new deck into place on the overpass foundations.



8. The new deck will be fixed into place and the SPMT will be removed.

For more information about this work, including detour routes, please visit pattullobridgereplacement.ca. We thank you for your patience as this work is completed.

#### **Contact the Project**

