



Bruce Highway Managed Motorways project

Overview

A suite of smart technologies will soon start operating on a section of the Bruce Highway aimed at optimising the performance of the highway and maximising its existing capacity during peak periods.

The Bruce Highway Managed Motorways Project will deliver technology on the Bruce Highway southbound between Caboolture and the Gateway Motorway.

The project aims to manage the flow of traffic entering the highway at key congestion points that will help delay the onset of congestion, reduce 'stop-start' travel, improve travel-time reliability, and enhance safety for merging traffic.

The \$34.8 million project is jointly funded by the Australian and Queensland Governments.



Project deliverables

- Ramp signals and vehicle detection sensors installed on the Dohles Rocks Road, Anzac Avenue, Boundary Road, Deception Bay Road and Uhlmann Road southbound on-ramps to manage the rate at which vehicles merge onto the highway.
- Additional traffic lanes on the on-ramps constructed to provide extra vehicle storage capacity.
- Below surface vehicle detection loops installed on the highway to measure and calculate traffic flow, speed and occupancy levels.
- 54 Variable Speed Limit Signs (VSLs) installed to display reduced speed limits in response to congestion, incidents or bad weather.
- 33 Closed Circuit Television (CCTV) cameras installed to monitor the network and adjust ramp signals where necessary to respond to network conditions.
- Installation of the ramp signals and electronic communication technology began in April 2014 and the system is expected to begin operation by late September 2015.

Main image: Anzac Avenue

Left: Boundary Road



Australian Government

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Queensland Government



Deception Bay Road

What motorists can expect

There are two things that you'll need to look out for when using on-ramps onto the highway at this section. The first is an illuminated electronic sign that warns that the ramp traffic signals are in use, and the second is the ramp signals themselves.

As you approach the on-ramp onto the highway:

- Keep an eye out for the electronic signs that warn if the ramp signals are in operation.
- If the sign is illuminated, prepare to stop when a red light is displayed ahead at the ramp signals.

As you enter the highway on-ramp:

- You will notice a pair of ramp signals at the entrance to the highway.
- These signals operate like standard traffic signals with red, yellow and green phases.
- If the ramp signal is red, motorists will need to come to a complete stop and wait for the signal to turn green before proceeding.
- When the light turns green, one car in each lane should proceed along the on-ramp and safely merge onto the highway.
- At locations where there are two traffic lanes at ramp signals, normal road rules apply for merging.

During the first few months of the signals operating, some modifications may need to be made. This may include changes to the ramp signal timing and coordination to ensure the system is working to effectively control the rate of vehicles entering the highway, and endeavouring to delay the onset of congestion on the motorway. Your patience is appreciated during this initial settling-in period.



Uhlmann Road

How the technology works

The ramp signals use smart technology to communicate with traffic detectors embedded in the road surface. As traffic conditions approach congestion, the ramp signals communicate with each other and moderate signal timings at on-ramps. This is to manage the flow of traffic onto the highway at specific locations to keep highway traffic flowing at an optimal rate for as long as possible.

For example, an on-ramp experiencing large volumes of traffic will communicate with other nearby on-ramps requesting they change the timing of their signals to reduce the flow of traffic onto the highway. This will allow the busy on-ramp to increase its flow onto the highway. Should traffic conditions allow the ramp to clear, the other nearby ramp signals will automatically adjust to their original settings.

The ramp signals will generally only operate during high-demand periods, such as the morning peak period when traffic flow on the highway approaches its maximum capacity, or in response to an incident or bad weather. At all other times when there are free-flowing conditions on the highway, the ramp signals will not operate and will remain unlit. At these times, motorists can drive straight through the ramp signals without stopping and follow normal merge and give way rules to enter the highway.



Dohles Rocks Road

For more information

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* Free call from anywhere in Australia, call charges apply for mobile phones and payphones. Check with your service provider for call costs.