

# M4 Smart Motorway Stage 1



The M4 Smart Motorway project, due for completion in 2020 will be delivered in stages, which will help limit disruption along the motorway, and ensure we keep people moving. From June 2019, Roads and Maritime will be installing 29 overhead gantries along the M4 Motorway between Mays Hills and St Clair.

When the project is complete, the gantries will provide motorists with information on current or alternate speed limits and lane status.

The M4 is a 35 kilometre motorway which extends from Concord in Sydney's inner west to Lapstone at the foothills of the Blue Mountains.

The M4 Smart Motorway project will introduce intelligent technology, known as a Smart Motorway system, to the Motorway between Pitt Street, Mays Hill and Russell Street, Lapstone.

The project is being delivered in five stages, with Stages 1, 2 and 3 already awarded.

Smart Motorways, also known as 'managed motorways' use complementary technologies to monitor traffic conditions, manage congestion and respond to incidents in real-time.

## Features of the Project Include:

- traffic sensors located at about 500 metre intervals on the motorway, and on entry and exit ramps, to detect changes in traffic flow in real time;
- coordinated, quick-changing entry ramp signals to keep traffic flowing on the motorway and make merging easier and safer;

- new lane use management gantries to open and close lanes in response to incidents;
- more variable message and speed limit signs – particularly before exit points; and
- new electronic signs on approach roads to warn of traffic conditions and travel times.

The project would connect with the WestConnex project at Mays Hill. The detailed design tender was awarded to Arup and UK Amey, and the project will be delivered through five stages and is expected to be complete by 2020. Submissions for the Request for Tender for Stage 1 closed in May 2017. In July 2017 Fulton Hogan were awarded the Stage 1 contract. Work started in the first half of 2018 and is expected to be completed in 2019.

In April 2018, Stages 2 and 3 of the \$470 million M4 motorway project were awarded to Seymour Whyte Constructions. Work on the Stages started on April 16 and is expected to be completed by 2020.

The 2017-18 NSW Budget allocated \$400 million in funds to the projects, a majority of which is sourced from the Restart NSW fund.

The project is included under the broader M4 Motorway Upgrade, which Infrastructure Australia identifies as a High Priority Project on its Infrastructure Priority List.

## Stage 1 – Mamre Road to Reservoir Road

Work has started upgrading the M4 Motorway between Mamre Road and Reservoir Road as part of the M4 Smart Motorway project.

The NSW Government is upgrading the M4 Motorway to



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build the State's first smart motorway. Stage 1 will start with building an additional lane in each direction between Roper Road and the M7 Motorway. This will be the first step to provide more capacity on the motorway to ease congestion, and improve journey times for road users.

We will also be introducing intelligent transport systems such as ramp meters, close circuit television (CCTV) and vehicle detection loops that will monitor and manage the flow of traffic travelling along the M4 Motorway.

### Key features of Stage 1

- Widening the M4 Motorway from three to four lanes in each direction between Roper Road and the M7 Motorway
- Building new maintenance bays along the M4 Motorway between Mamre Road and Reservoir Road
- Installing new emergency phones which will be connected to the incident management system
- Building three new noise walls and extending one existing noise wall
- Upgrading three interchanges at Reservoir Road, Wallgrove Road and Roper Road, including the installation of ramp meters and ramp control signs, as well as widening and realigning entry ramps
- Upgrading communications and power infrastructure to improve reliability of the corridor and support the rollout of additional electronic messaging, video surveillance cameras, vehicle detection devices and ramp metering
- Installing vehicle detection loops and CCTV cameras at each interchange to better manage traffic flow onto and along the motorway. Project benefits The M4 Smart motorway project will deliver:
  - more reliable trips – controlling the flow of traffic onto the motorway reduces congestion and keeps traffic moving providing a more predictable journey
  - improved traffic safety – real time monitoring and remote traffic control reduces crash rates and improves incident response
  - less vehicle emissions – free flowing traffic conditions result in improved fuel efficiency and reduced emissions compared to 'stop start' traffic
  - better decision making – real time information about travel times, incidents and other relevant information will allow motorway users to plan their journeys.

### Key Features of the Proposed M4 Smart Motorway

The M4 Smart Motorway would be the first smart motorway in NSW and would bring together intelligent traffic technologies in one place to maximise the performance of the motorway.

#### Key features

- Variable Message Signs on the motorway and approach roads. These electronic signs would inform drivers about expected travel times and traffic conditions ahead, allowing drivers to better plan their journey or choose an alternative route.
- Ramp metering on entry ramps helps to smooth traffic flow onto the motorway. These are quick change traffic lights that will manage the flow of vehicles entering the motorway. They will make merging safer and easier and reduce the risk of drivers having to brake suddenly. They will operate in peak periods or in heavy traffic.

- Lane use signs to open and close lanes in response to incidents.
- Variable speed limit signs to vary speed limits if there is heavy traffic, an incident or bad weather.
- Additional traffic sensors and CCTV cameras to continually monitor traffic conditions.
- Additional emergency telephones and maintenance bays to provide drivers with improved safety when their vehicle breaks down or if there is an emergency stop required.

### Improvements to Interchanges:

- Entry ramps at key interchanges will be realigned, extended and widened to smooth traffic flow onto the motorway
- Some exit ramps will also be realigned, extended and widened to reduce queuing onto the motorway
- Traffic signalling improvements and minor adjustments will be made at some intersections.

Widening the motorway between the M7 Motorway and Roper Road interchanges to four lanes in each direction to improve traffic flow.

### Project Benefits

The M4 Smart motorway project will deliver:

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- better decision making – real time information about travel times, incidents and other relevant information will allow motorway users to plan their journeys.

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