

Monash Freeway UPGRADE



Getting you home sooner and safer

The Victorian Government is widening and upgrading the Monash Freeway to help cut traffic congestion and get you home sooner and safer.

Supporting growth and reducing congestion

The Monash Freeway Upgrade forms an important part of the \$5.5 billion Western Distributor Project, a partnership between the Victorian Government and Transurban. The network-wide solution will reduce congestion, improve safety and reliability, and streamline the M1 from Geelong to Pakenham.

The M1 is critical to supporting Victoria's growth. The corridor is where more than half

of the Melbourne workforce is employed, three quarters of students study and a third of Melburnians live.

Two of the most congested areas on the Monash are the Hallam Bypass and the EastLink Interchange. Increasing the freeway's capacity at these choke points is a key focus of the Monash Freeway Upgrade.

What's involved?

The upgrade includes:

- Adding approximately 30 kilometres of extra traffic lanes:
 - Widening from four to five lanes in each direction between EastLink Interchange and South Gippsland Freeway.
 - Widening from two to three lanes in each direction from South Gippsland Freeway to Clyde Road in Berwick.
- New and upgraded ramp signals, and extra space for more cars on ramps from Chadstone to Pakenham. That's 44 kilometres of managed motorway, extending what is already the longest stretch in Australia.
- Overhead Lane Use Management Signs (LUMS) added between Warrigal Road and South Gippsland Freeway. The overhead electronic signs allow a more efficient response to changing traffic conditions

by giving drivers advance notice of lane closures and variable speed limits.

- Automatic Incident Detection will be installed along with the LUMS to provide real time alerts to the traffic control centre and make the system's response times even quicker, further improving the effectiveness of the freeway during an incident.
- Widening and strengthening of bridges to carry the new lanes.
- A new concrete median barrier between EastLink and the Princes Highway.
- Improved street lighting at various interchanges.

The upgrade works will all occur within the existing road reserve, which means no homes will be impacted. There will be no new tolls introduced on the Monash Freeway.



Key benefits

- More reliable trips for 200,000 daily motorists.
- Room for an extra 2,000 vehicles per hour during the peak.
- Reduced travel times by 10 minutes a day.
- Peak hour capacity on the Hallam Bypass will grow by 50 per cent.
- Capacity for 20 per cent more vehicles on the busiest section of the freeway, from EastLink to the South Gippsland Freeway.
- A 20 per cent reduction in crashes that cause serious injury.
- Overall economic benefit to the State of around \$100 million a year.
- Up to \$30 million a year in savings on freight costs.
- Stronger links between key employment and education precincts along the M1 corridor.
- Up to 5,600 jobs as part of the overall Western Distributor Project.

A closer look at the improvements

What you'll see

The Upgrade involves a range of physical changes at different points along the freeway, including:

- Additional lanes.
- New ramp signals.
- Overhead variable signage (LUMS).
- New safety barriers.
- Noise wall replacements and upgrades.
- Improved lighting and drainage.
- Widened bridges at eight locations.

A lot of technology is needed behind the scenes to make the coordinated freeway management system work. The improvements include:

- New and upgraded ramp technology.
- New centrally coordinated LUMS.
- Automatic Incident Detection (AID) technology.
- New and upgraded data stations that gather real time traffic data to feed into the freeway management system.

Did you know?

In the past 10 years, the number of cars using the Hallam Bypass has increased by 50 per cent. The freeway has been at capacity during peak periods since 2010.

Increasing safety and reliability

When the Upgrade is complete, the M1 will be a managed motorway from Werribee right through to Pakenham. This provides smoother, safer driving conditions for commuters and freight vehicles over this 90 kilometre stretch.

Ramp signals help prevent stop-start driving conditions and sudden braking on the freeway. New and upgraded ramp signals and extra space for more cars on the ramps will help to prevent traffic from banking up and spilling onto connecting roads.

Overhead LUMS will be mounted on gantries at regular intervals along the freeway, alerting drivers to upcoming lane closures and variable speed limits when traffic incidents or other disruptions occur. These will be made more effective with the addition of AID technology, which constantly monitors the road and can speed up response rates in the event of an incident.

Timing

Construction on the Monash Freeway Upgrade will begin in late September 2016, with completion scheduled for 2018. Construction on the Western Distributor begins in late 2017 and the full project will be completed by 2022.



How do ramp signals and LUMS work together to manage traffic?

The problems

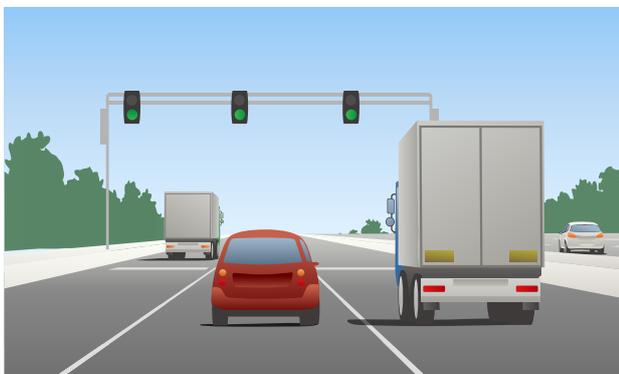
During peak times, traffic trying to enter the freeway can queue back along the entry ramps and cause congestion on other roads. Cars surging onto the freeway in groups compounds the stop-start driving conditions we all prefer to avoid.

Freeway incidents can cause delays at points far from the incident site. Without prior warning that a lane is blocked, or advice to travel at a slower speed, cars can bank up and take many hours to clear.

The solution: ramp signals

Freeway ramp signals balance the number and timing of vehicles entering the freeway along the whole route. Part of a centrally coordinated system, ramp signals generally operate during peak hours and at any time when freeway conditions are heavy.

Sometimes it may seem that the signals are operating at your ramp despite smooth traffic conditions nearby. That means the congestion is elsewhere on the route and your entry is being regulated to improve overall flow. This will benefit you and all motorists along the freeway.



Freeway ramp signals

The solution: Lane Use Management Signs

LUMS consist of overhead signage mounted on gantries at regular intervals along the freeway. Easily updated from a central coordination point, LUMS enable efficient responses to changing traffic conditions. When traffic incidents or other disruptions occur, controllers can use LUMS to coordinate lane closures and variable speed limits. Drivers receive advanced warning about upcoming traffic disruptions, allowing them to make informed decisions about their travel.

The addition of AID to this system enables automatic detection of an incident or breakdown, flagging with the traffic management centre the need for attention and potential action in the form of quickly reducing speeds or closing lanes.

Benefits of a managed motorway

Ramp signals (metering) and LUMS are common features along the M1 corridor and other freeways. A managed motorway means:

- Easier and safer merging into freeway traffic.
- Reduced congestion and improved traffic flow on the freeway, as well as the surrounding roads.
- Smoother driving and more reliable travel times.
- Reduced emissions from vehicles.