Managing Competing Demands

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Managing Competing Demands

Conflicts/Competing demands can occur at both intersections and mid-block locations.

Traffic signals can be used to prioritise mobility and access for different transport modes.
Review of Whitehorse Road
Review of Whitehorse Road
– Land Use

Legend
- Hospitals
- Tram Priority
- Total Two Way Tram Services
- Arterial Roads
- Strip Shopping
- Schools

AITPM, 18th April 2007
Review of Whitehorse Road – Traffic Signal Configuration

Burke Rd - Cycle Length = 130 sec

Glenferrie Rd – Cycle Length = 90 sec

Balwyn Rd – Cycle Length = 100 sec
Review of Whitehorse Road – Projects Implemented

- Cotham/Charles – Bidirectional tram priority, include right turn early start
- Cotham/Glenferrie – Lagging right tram phase and vehicle right turn phase
- Burke/Cotham/Whitehorse – Bidirectional tram priority
- Whitehorse/Union – Implement an adaptive operation
- Reduce delays for pedestrians at Balwyn Rd

AITPM, 18th April 2007
Review of Whitehorse Road

Peak Strategy –
Reduce delays for public transport

Business Hours Strategy –
Reduce delays for pedestrians, while still maintaining public transport priority
Cotham Road / Glenferrie Road

DETECTOR MAP

* Transfer of demand from Cotham / Charles, 4323

Detectors 10, 11, 13 and 16 are tram detectors.
Detectors 14 is a back-up button for turning trams.
Detector 20 is a future back-up button for left turning trams.
Detectors 17 - 19 are pedestrian push buttons.

** Transfer of demand from Glenferrie / Wellington, 4328
Cotham Road / Glenferrie Road

Add a lagging right turn tram extension phase

Permanently demand the right turn phase during the PM peak
Cotham Road / Glenferrie Road
Cotham Road / Glenferrie Road
Pedestrians

A study was conducted at:
- Whitehorse Rd near Rochester Rd
- Whitehorse Rd / Balwyn Rd

Busy shopping strip in Boroondara:
- 20,000 vehicles & 1000 pedestrian movements / day at pedestrian signal.
Pedestrian crossing at
Whitehorse Rd near Rochester Rd
Delays to pedestrians

- Actions to reduce delays
  Limit the maximum cycle time to 70 secs during business hours (9:30 am to 3:30 pm). (Maximum cycle time is 100 secs during the peaks).

  Allow two introductions per cycle when cycle time is greater than 90 secs.
Pedestrians

• Pedestrian delays
• Before:
  Longest - 130 seconds
  Shortest - 6 seconds
  Average - 51 seconds
• After:
  Longest - 84 seconds
  Shortest - 4 seconds
  Average - 24 seconds

Overall reduction in pedestrian waiting time of 59%
Pedestrian delays

BEFORE

AFTER

 Activation Delay

Delay (sec.)

0 10 20 30 40 50 60 70 80

Time of Day

0.00 1.00 2.00 3.00 4.00 5.00 6.00 7.00 8.00 9.00 10.00 11.00 12.00 13.00 14.00 15.00 16.00 17.00 18.00 19.00 20.00 21.00 22.00 23.00 0.00

Whitehorse Rd near Rochester Rd, Balwyn

2/02/2007 11:51 am

Ped_0peration.xls

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Pedestrian compliance

Number of pedestrian demands increased by 32%.
Pedestrians (metro area)

• A proposal to retro fit pedestrian operated signals with PUFFIN (Pedestrian User Friendly Intelligent) detection.

• PUFFIN operation - The walk and/or clearance can vary depending on the number and speed of the pedestrians.

• Measure the delay for pedestrians (i.e. the time between push button activation and start of the pedestrian walk).
Tram Improvements in 2006/07

Legend
- Sites Tuned
- Tram Priority
- Total Two Way Tram Services
- MSE Roads
- Coast_Melb Area
Glenferrie Road / High Street

Add tram only extension phases

AITPM, 18th April 2007
Glenferrie Road / High Street
Summary

Traffic Signal operation can be configured to suit agreed strategies.

Provide more effective and safer operations for all road users.