South Yarra Metro Station
SYM

Option type
New assets

Location
Melbourne central subregion

Sector
Transport

Certainty of evidence
Medium

Direct option cost
$1 billion–$3 billion

Option lead time
1–5 years

Contribution to meeting the need (assumes instantaneous implementation)

Need 1: Address infrastructure demands in areas with high population growth; and

Need 10: Meet growing demand for access to economic activity in central Melbourne

0-5 yrs 5-10 yrs 10-15 yrs 15-30 yrs

What is this option?
Provide a new station in the proximity of the existing South Yarra Station, on the alignment of the Melbourne Metro Rail Project. The additional station would increase the number of journeys for which people could travel to and from South Yarra without interchanging, increase the number of trains stopping at South Yarra, and allow interchanges to occur at South Yarra which would otherwise occur elsewhere in the network.

What is the level of community support?
There was limited to no discussion of this option during public consultation.

What do we think of this option and why?
This option was not recommended in the draft strategy because of the high cost for a very low contribution. While there would be localised benefits to some users, the economic, social and environmental assessment found no net benefits overall.

Previous analysis by Public Transport Victoria (PTV) in preparing the Melbourne Metro (MM) business case found that the benefit cost ratio for this project ranged between 0.1 to 0.4. Infrastructure Victoria reviewed alternative evidence prepared by the City of Stonnington and found that the differences in assumptions would not lead to a material change in the benefit-cost ratio. As a result, we view the benefit cost analysis undertaken by PTV to be a reliable assessment of the economic performance of this option.

Without the construction of the South Yarra Metro Station, rail passengers will be able to access the Melbourne Metro by changing trains at Caulfield or Flinders Street/CBD South stations. Infrastructure Victoria recognises that the existing South Yarra station will need upgrading to meet patronage growth with better access and transfer facilities. These upgrades should be considered for delivery under option Metropolitan rail station interchange upgrades (MRI).
How does this option relate to current state land use planning strategies?

<table>
<thead>
<tr>
<th>Plan Melbourne 2014</th>
<th>Contributes to implementing policy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plan Melbourne refresh 2015</td>
<td>N/A</td>
</tr>
<tr>
<td>Regional Growth Plans</td>
<td>N/A</td>
</tr>
</tbody>
</table>

How does this option work with others?
No key relations with other options have been identified.

How does this option perform under different scenarios?

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>SuperCity</td>
<td>+</td>
</tr>
<tr>
<td>Westside Story</td>
<td>Neutral</td>
</tr>
<tr>
<td>Regional Cities</td>
<td>+</td>
</tr>
<tr>
<td>Accelerated Climate Change</td>
<td>Neutral</td>
</tr>
<tr>
<td>Prolonged/Severe Economic Downturn</td>
<td>Neutral</td>
</tr>
<tr>
<td>Biosecurity Threat</td>
<td>Neutral</td>
</tr>
</tbody>
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What are the social, environmental and economic impacts of this option?

Commentary:
This option is associated with localised benefits to access for those in the catchment area of the station. While these benefits are positive for those in the catchment area, they are considered to be marginal resulting in neutral overall ratings.
Risks and opportunities

This is a risk of significant disruption to traders and locals in this highly populated and trafficked area during the construction of this additional station at South Yarra.

This option would provide an opportunity for over-site development above the new station.

Additional notes

Benefit-cost ratio (BCR) discussion

In the preparation of advice on this option, we assessed both the PTV and City of Stonnington (CoS) assumptions and analysis. The findings by PTV in the Melbourne Metro (MM) business case were queried by CoS.

CoS has queried both the construction cost and the station patronage forecasts (which would influence the public transport consumer surplus benefits), so it is instructive to consider what scale of change in those figures would be required in order for the additional station to achieve a BCR of 1.0. The most optimistic assessment in the PTV analysis assumed slower travel times for public transport users who would benefit from running express through South Yarra could be disregarded (a non-standard cost benefit analysis approach). Building off this figure, a BCR of 1.0 could be achieved by either:

- Costs reducing to be only one-third of current estimate (noting that the assessment is already based on the a lower end cost of $700 million, where a much better passenger interchange outcome has been estimated to cost $970 million, and the benefits are based on the latter); or

- Public transport user benefits increasing to be 7–8 times greater than PTV’s projections (noting that the majority of the benefits included in the BCR did not relate to public transport users); or

- Some lesser combination of the above.

CoS analysis challenged the cost estimate for a new station and identified scope changes which they initially believed could reduce the cost by up to $300 million. It was unclear from the CoS analysis that the identified reduction in cost could be applied to the $700 million figure or only to the higher cost estimate option of $970 million. Later evidence tendered during the Melbourne Metro Rail Enquiry into the environmental effects of the project did not suggest that a substantial cost saving could be made from the alternative track arrangements proposed. It is also noted that a potential saving of $200-300 million proposed by CoS did not include major rail works required elsewhere to support a simpler track configuration at South Yarra. Overall, we do not have cause to think a metro station could be constructed at South Yarra for substantially less than $700 million.

In April, CoS released projected patronage figures that differed significantly from PTV figures. The PTV projected daily patronage of 23,000 appeared very unfavourably with the CoS projection of 40,000 in 2031 as the later included Dandenong services stopping at South Yarra. The PTV projection assumes that South Yarra is bypassed by Dandenong services operating in the new MM tunnel. A more appropriate figure for comparison would have been the PTV projection that included a metro station at South Yarra in 2031 which has a projected daily patronage of 34,000. While this is lower than the CoS projection, we do not think that the higher CoS patronage figures would materially increase the BCR from the PTV analysis. When comparing both existing and projected patronage numbers we do not believe that an appropriate comparison had been made between the PTV and the CoS figures.

In August, during the environmental effects hearings, CoS tendered evidence showing that the PTV and CoS estimates of forecast patronage for the station in 2031 without the removal of Dandenong services into the MM tunnel were very similar (PTV estimated 39,000 and CoS estimated 41,000 daily entries and exits). Both of these comparisons suggest that there is no material difference in patronage that could significantly increase the user benefits.
Overall, the alternative design solutions and patronage projections put forward by CoS have been reviewed and do not give Infrastructure Victoria cause to doubt the cost benefit analysis undertaken by PTV.

The MM project is at an advanced stage of the planning and approvals process with early works contracts awarded in June 2016 and the tunnelling and station works tenderers shortlisted in August 2016. We understand that even if a decision was taken immediately to include the additional underground metro station in the scope of the project, it would lead to material project delays, which could further reduce the BCR.

While achieving a benefit cost ratio greater than 1.0 at a 7 per cent discount rate is by no means the sole criteria for assessing investment merit, this method is well suited to assessing major transport infrastructure projects, and covers a wide range of economic, social and environmental factors. With core results from PTV indicating the additional station has a BCR of 0.2 and Net Present Value of -$535 million, Infrastructure Victoria has not recommended this option in the draft strategy.

Evidence base

AECOM/PwC, Assessment 3: Technical report to support Infrastructure Victoria’s draft 30-year infrastructure strategy, 2016

City of Stonnington, South Yarra station patronage, 2016

McDougall, W. Effect of Melbourne metro project at South Yarra, 2016