

RAIL FUTURES INSTITUTE

Response to IV's draft 30-year infrastructure strategy – April 2025.

Rail Futures Institute (RFI) congratulates Infrastructure Victoria on the broad thrust and direction of its latest 30-year draft infrastructure strategy. IV's approach is progressive and its draft recommendations, when finalised, demand serious consideration by government.

RFI has chosen to selectively respond to IV's draft strategy on subjects aligned with our advocacy and experience. We reference IV's specific transport related recommendations and proposed future options.

In doing so, we note that IV's strong focus on infrastructure planning and investment in some cases exposes an imbalance against questions of how both new and existing infrastructure should be utilised. This particularly applies to the sunk investment in existing fixed rail and tram infrastructure and rolling stock (including buses) which, in most cases, is significantly under-utilised outside of weekday peak periods. A strong case exists to improve productivity of existing infrastructure by increasing service frequency and the span of operating hours on much of the public transport network. We return to this issue later in this submission.

Our comments on specific numbered recommendations follow.

Recommendation 6: Make government infrastructure more accessible.

This recommendation is fully supported especially for public transport modes. An accelerated program of compliance is required for all modes of public transport in Victoria and particularly for Melbourne's tram network, the world's largest. This issue is unique to Melbourne. The existing program of around 6 to 8 tram stops per annum to achieve level boarding needs to increase to well over 100 stops per annum to meet the state's compliance obligations. In this context, the state should seek a minimum 50% Commonwealth funding contribution to the program to assist having all tram stops and trams in service fully DDA compliant with Commonwealth law by late 2032.

An urgent priority is to re-assess potential to rationalize closely spaced tram stops in conjunction with the accelerated provision of level boarding stops. This can help facilitate resolution of competing demands for road space, especially in Melbourne's congested strip shopping streets such as Sydney Road, Chapel Street and Smith Street. Tram priority should be an important objective in this context given that road space occupancy per passenger is many times more efficient for trams (and buses) than for private vehicles.

Recommendation 7: Rezone locations near existing infrastructure for more home choices

RFI endorses this recommendation where locations are already served by good quality public transport services by way of existing routes and mode choice, combined with extended hours of service and good service frequencies.

Recommendation 8: Extend Melbourne's trams to encourage more homes nearby

This recommendation is generally supported with the highest priorities in our view being extension of tram services into both the Fishermans Bend precinct (2 routes), and Arden precinct (2 routes).

The other IV extension proposals need more detailed investigation along with other potential extensions put forward by RFI, VTAG and the PTUA. However, the alternative of serving Chadstone Shopping Centre and Monash University by faster elevated Light Rail (in the median of the Princes Highway) from Caulfield station, rather than extension of the slower existing East Malvern tram should be considered in detail.

IV needs to also consider, as a short term priority, the low cost provision of 750m of missing twin tram track in Victoria Street between Latrobe and Swanston Streets, Melbourne. This will allow better use of existing CBD track infrastructure by providing an East – West tram route across the north of the CBD from Victoria Gardens via North Richmond, St.Vincent's Plaza and Victoria Market to the Arden Precinct. Such a route would connect with no less than 15 other tram routes and 5 train stations.

Similarly, provision of 250m of missing twin tram track in Park Street, South Melbourne will allow trams from Anzac to also enter the Melbourne CBD via Park, Clarendon and Spencer Streets. (This previously committed work as part of Metro 1 ancillary tram works was recently quietly “descoped” by Government.)

Recommendation 9: Run faster buses, more often, in Victoria’s largest cities

RFI fully supports this recommendation especially in Victoria’s three largest regional cities. Route re-structuring is required coupled with extended hours of operation and increased service frequencies better matched to existing train services linking Geelong, Ballarat and Bendigo to Melbourne. The same applies to town bus services in Colac, Warrnambool, Castlemaine, Seymour, Shepparton, Wangaratta, Albury/Wodonga and Latrobe Valley.

Recommendation 10: Build a new bus rapid transit network

RFI supports this recommendation in principle. Our studies indicate many opportunities for the application of medium capacity transit (MCT) in the greater Melbourne region. In all cases, success will depend upon services being on dedicated corridors largely segregated from normal traffic. This can be applied using a variety of technologies including, but not limited to, bus rapid transit. Selection of the most appropriate system should largely depend upon the required capacity of the corridor for the foreseeable future. This should not exclude options of genuine light rail and trackless trams, as well as BRT.

We are inclined to argue with the generalization that “*BRT infrastructure can be delivered at a fraction of the cost of trams*” as so much depends on the actual type of infrastructure which is proposed. Much of this infrastructure will have to be provided within a largely fully built environment and require solutions which are not necessarily at-grade. Where they exist, existing wide medians in arterial roads will offer relatively low cost solutions in which to install rapid transit infrastructure, but elsewhere, elevated structures will be necessary to create the essential segregation from traffic, especially at busy intersections.

Buses may lack the required capacity on some routes with light rail options being the more appropriate solution. Alternatively, buses might provide the service in the early years but operate on infrastructure future-proofed to be the precursor to higher capacity, longer term solutions. This accords with experience in many other cities.

We strongly recommend that IV also include these considerations in this part of the final plan.

Recommendation 11: Extend metropolitan trains and run more services in Melbourne’s west

RFI supports the general thrust of this recommendation.

However, the apparent assumption for the proposed extension of electrification to Melton is that, when combined with the Melbourne Airport Rail Link (6 tph¹) and the Watergardens/Sunbury line (12 tph peak hours), the Metro 1 tunnel can adequately accommodate trains serving the three lines. Importantly, the Melton line when added at a maximum of 5 tph will utilise the full capacity of the Metro 1 tunnel. This is likely to prove inadequate within a few years of opening.

Analysis by RFI indicates the best longer term solution for both Wyndham Vale and Melton is the staged development of MM2. This would provide 12 tph capacity when needed for each line. Stage one would be in tunnel from Docklands via Fishermans Bend to near Spotswood, then on the surface via Brooklyn, Sunshine and Deer Park to Melton as a 25kV dedicated automated railway.

A second stage of MM2 would extend the same technology from Sunshine and Deer Park to Werribee via Wyndham Vale, effectively creating the western component of the Government’s Suburban Rail Loop. Later stages would extend MM2 through the CBD to Flagstaff, Parkville and Fitzroy to ultimately link to the Mernda line at Northcote. (Further comment re MM2 is at Recommendation 43, below).

Quadruplicated track will be required between Sunshine and Caroline Springs and between Deer Park Junction and Wyndham Vale to accommodate fast regional trains on the Ballarat and Geelong lines. A separate third express track with bi-directional signalling will also be required between Caroline Springs and the western end of Melton station to enable Ballarat trains to operate independently of metro stopping services.

¹ tph – trains per hour in each direction.

Recommendation 12: Run more coach and bus services in regional Victoria

Provision of additional town bus services in Victorian regional cities is supported as proposed.

Top priorities for improved regional coach services are an additional day return service from Hamilton to Ballarat connecting with existing trains to/from Melbourne, and a middle of the day coach service in each direction between Maryborough and Ballarat, again connecting with existing trains to/from Melbourne at Ballarat.

The combined populations of Geelong and Ballarat will exceed 500,000 in the short term. As such, detailed consideration should be given to a low cost rail shuttle service between Ballarat and Geelong. This could be initially operated using a single two car V/Line Sprinter train set operating 4 return services on Weekdays and 3 on Weekends. Some of these railcars are becoming surplus to V/Line requirements as additional VLocity sets are delivered.

Recommendation 13: Make off-peak public transport cheaper and simplify regional fare zones

While we generally support the simplification of public transport fare structures and the universal application of an improved myki ticketing system, we believe that IV's push for cheaper fares is a somewhat misguided method of encouraging increased patronage, especially at off-peak times. In particular, we oppose any fare structure such as mode-specific pricing which could impede the present system of multi-mode ticketing, this being an attractive feature of Melbourne's public transport and a key element in driving toward a more integrated public transport system.

By Australian and international standards our fares are already relatively low, particularly in the regional network following fare capping in March 2023. Fares are also low for concession holders including pensioners, students and disabled persons. RFI believes the key to increasing non-peak travel on buses, trams and trains is the progressive implementation of improved service frequency and extended hours of service which will also help to provide a connected and integrated public transport network. We further detail this approach later in this submission.

Recommendation 15: build safe cycling networks in Melbourne and regional cities

While we support this recommendation in pursuit of active transport growth, we would emphasize its importance on the principal roads and streets that are typically used to access railway stations. Stations increasingly provide facilities for the safe storage of bicycles using a very small area and at low cost compared with car park spaces.

Recommendation 40: Use modern traffic control technology for efficient and safe journeys

RFI supports this recommendation especially for signalised intersections in the Melbourne CBD and on tram and bus routes generally. Selective re-programming of existing traffic signals is needed to prioritize and speed up tram and bus services carrying far more passengers and therefore using road space much more efficiently than private cars carrying on average 1.1 persons.

Future Option: Charge people fairly to use roads

The proposed longer term option of charging people fairly to use roads is supported. This needs to be phased in to replace existing fuel excise duties and to help incentivise the use of public transport where such services are a reasonable substitute for private car use. This particularly applies to peak period journeys to and from the Melbourne CBD where congestion pricing should be adopted. Elsewhere, distance/mass-based road user charging should become the norm, with heavy vehicles being charged according to their relative contribution to road damage.

Recommendation 41: Make rail freight competitive, reliable and efficient

The recommendations to develop a long term freight network plan, develop and fund a 10-year rail freight network maintenance plan and provide predictable access for freight trains on passenger lines are strongly supported. The initial priority should be to bring all freight-only lines to an agreed standard and then allocate sufficient funds annually to maintain the freight-only network to those standards.

However, we would like to elaborate on the issue of access for rail freight on the passenger network. It manifests in three ways:

- Reluctance of DTP to agree to or facilitate provision or retention of infrastructure on the passenger network to accommodate freight train operation. This problem is not completely new as evidenced by previous removal of potentially useful infrastructure to support freight services at key locations such as Dandenong and/or Warragul on the Gippsland corridor and currently, on retention of critically needed connections to the Tottenham goods lines at Sunshine.
- Disinclination to agree to specific freight train paths on passenger lines during non-peak periods. This issue has effectively stymied introduction of port-rail shuttle trains between a proposed major intermodal terminal at Dandenong South and the Port of Melbourne, notwithstanding multiple party negotiations undertaken over several years and government outlays on rail connections at Dandenong South.
- Frequency, duration and, on some occasions, lack of adequate notice of track closures on passenger lines which prevent scheduled freight services from operating. No compensation is offered to rail customers who are required to obtain more costly road transport in such circumstances. Advocacy by RFI and others to re-open two cross-country lines to provide alternative routes for some of these services have been declined. This issue has been directly responsible for the permanent loss of rail freight to road on one corridor and is jeopardising retention of remaining traffic on the Gippsland and Warrnambool lines

Other important issues which we would like to see discussed in the final version of the 30-year Plan are:

- **Gauge standardization and network connectivity:** If Victorian rail freight is to meet its maximum carrying potential in future, the majority of existing freight-only broad gauge lines medium term will need to progressively be converted to standard gauge. This includes two presently unused trans-regional lines between Inglewood and Eaglehawk and between Toolamba and Echuca which will be critical for network connectivity and resilience. Both provide alternative routes when planned and unplanned maintenance or incidents occur and also provide additional train pathing options to accommodate freight on passenger lines.

The ongoing disinclination by Victoria to use gauge convertible concrete sleepers (at marginal extra cost) to provide sensible future-proofing when upgrading existing regional broad gauge freight lines in the North West, North and Goulburn Valley has locked in substantially higher future conversion cost and longer conversion times. This will also entail much greater disruption to services when most of the broad gauge regional freight lines are inevitably converted to standard gauge.

Currently the relatively small size of the Victorian broad gauge freight task (relative to the regional and interstate standard gauge freight task), requires a separate fleet of ageing broad gauge locomotives and wagons. This dictates a medium term need for a more extensive Victorian standard gauge freight network to access the existing much larger available standard gauge fleet of locos and rollingstock and for rail to become competitive for a greater diversity of freight opportunities, both within Victoria and between regional Victoria and interstate.

- **Melbourne - Adelaide strategic rail corridor:** The east-west national rail network between Melbourne and Adelaide operates well below optimal efficiency due to inadequate infrastructure. Apart from trainloads of export bulk grain and (potentially) mineral sands, its major traffic is domestic (mostly containerised) freight to Western Australia and Darwin. Because of the corridor's physical limitations, these trains have to be converted from single to double stack load configuration in Adelaide westbound and vice versa eastbound.

Within IV's 30-year timeframe, its inefficiency can be improved by having double stacked, 1800 metre long freight trains operating between WIFT, BIFT (via the OMR – see recommendation 43) and the corresponding Intermodal Freight Terminals in Adelaide. This will result in higher rail freight volumes, reduced logistics costs and improved community impacts including road safety on the National Highway Network such as the Western Highway.

On 16 March 2025 Infrastructure SA released South Australia's 20-Year State Infrastructure Strategy 2025 in which a discussion on Strategic Freight Corridors, although heavily focused on road transport, includes the following comment :- *"Any planning for freight corridors should be mode agnostic and consider where rail may be best suited for the freight task. Decisions should be made on the basis of rigorous business cases."*

We acknowledge that the Victorian section of this corridor is controlled by ARTC under long term lease however it remains an asset of the State of Victoria and should therefore still be of interest to IV. Accordingly, RFI recommends that development of a Melbourne-Adelaide Strategic Rail Freight Corridor Plan be progressed in coordination with the Australian Rail Track Corporation, Australian Government and the South Australian Government.

- **Cross Border Regional Rail Lines with South Australia:** Two additional rail lines cross the Victorian/South Australian border: between Murrayville and Pinnaroo and between Heywood and Mount Gambier, both serving areas with significant freight tasks. Reinstatement of these cross border railways would enable the resumption of rail freight services that link to the national rail network enabling reduced freight logistics costs and community impacts from heavy road transport. =-

On 16 March 2025 Infrastructure SA released *South Australia's 20-Year State Infrastructure Strategy 2025* which included the following statement:

"As we aspire to grow our exports and seek economies of scale, there is a need to use the existing rail network and ports more. This includes further investigation on the choice of mode appropriate to the task required and potentially re-vitalising existing rail options that are either no longer being used or have been retired. There are opportunities to re-purpose these retired rail lines into operational freight networks in south eastern South Australia. For example, the rail line at Pinnaroo and further south in the Mount Gambier region. Several entities have expressed interest over the years in re-purposing these old routes, and whilst there are many constraints, continuing to remain open to options that may improve productivity and enable further economic activity is paramount."

Issues relating to cross border railways pose particular institutional and political challenges as individual jurisdictions rarely wish to assume responsibility on a whole of corridor basis. RFI has undertaken extensive study with support from Regional Development Australia Limestone Coast (RDALC) regarding the potential for re-opening the Glenburnie (Mount Gambier) to Heywood line and has concluded that its prospects are encouraging. Its attributes are such that the Commonwealth could decide to become involved.

Approximately 80% of this corridor lies within Victoria, with the balance, including the proposed Glenburnie intermodal terminal, in South Australia. In support of this proposal is an attached draft business case for consultation on the Glenburnie (Mount Gambier) to Heywood rail line.

It is recommended that Infrastructure Victoria include a similar statement to that contained in the Infrastructure SA report for the two cross border railways. Coordination with the South Australian and Australian Governments is also recommended.

Recommendation 43: Create and preserve opportunities for future major infrastructure projects

- **City Loop Reconfiguration:** This project is strongly supported. The earlier it is undertaken, the sooner that dormant rail capacity of around 30,000 pphpd² between North Melbourne and Richmond can be unlocked at a fraction of the cost of creating similar additional capacity by any other means. Conversely, the longer the project is delayed the more costly and disruptive it will be to existing services.

City Loop Reconfiguration will effectively create an additional twin track pair through the CBD between North Melbourne and Richmond enabling cross linking of lines from Wallan/Craigieburn/Broadmeadows/Essendon to Frankston and Craigieburn/Upfield to Glen Waverley.

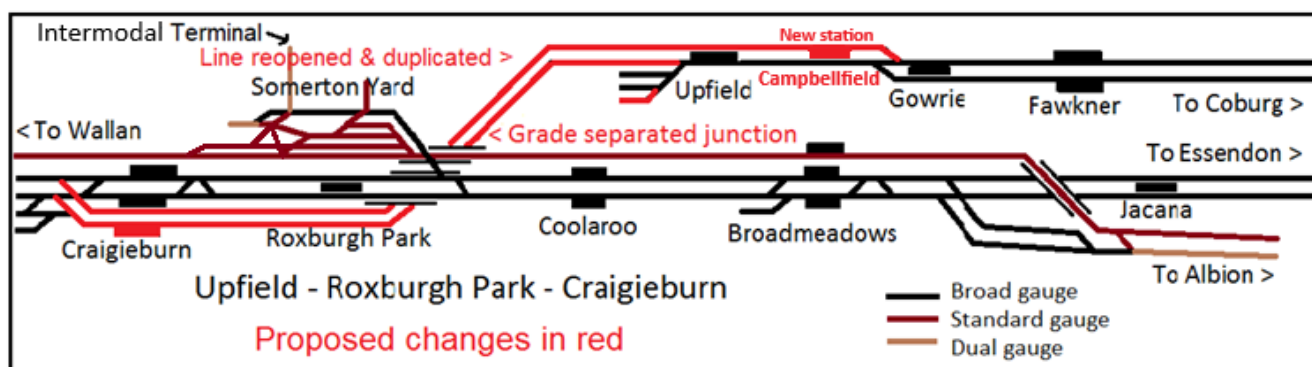
- **Extend metropolitan trains to growth areas in Melbourne's North and South East:** The recommendations here are mostly supported with priority extensions being first to Clyde, and secondly beyond Craigieburn. However, we disagree that these proposals should be treated as future options as there is ample evidence to indicate the short term urgency of progressing these projects. We also disagree with initially extending metro services to Kalkallo (Cloverton), but only medium term to Wallan. Instead, we believe the burgeoning residential growth in the corridor through to Wallan already justifies the entirety of this extension. Official population forecasts for the Kalkallo/Donnybrook area from 2024 to 2044 indicate growth from 15,636 to

² Pphpd – passengers per hour per direction

67,048 persons while forecasts for the Beveridge/Wallan area from 2024 to 2041 show projected growth from 28,843 to 124,359 persons.

Existing road and rail capacity north of Craigieburn is already under significant pressure. Considering practical lead times, extension of rail electrification to Wallan should be operational no later than 2032.

A pre-requisite for any extension of metro services beyond Craigieburn is the upgrading of the Upfield line beyond Gowrie and its extension via Roxburgh Park to Craigieburn, as shown in the schematic below.



We note that government funding has recently been provided “toward planning for Melbourne Northern Suburbs rail upgrades”³, with specific reference to the Upfield and Craigieburn lines. IV, in its final plan document, should recommend that such planning work encompasses the full package of these projects.

- **Melbourne Metro 2 (MM2)** running from Werribee via Wyndham Vale and Melton in the west via Sunshine, Spotswood, Fishermans Bend, Docklands, Flagstaff, Parkville and Fitzroy to Epping, Mernda and Wollert in Melbourne’s north is the medium term plan for an additional high capacity cross-town corridor that strongly complements Melbourne Metro 1. (See Map below).

As mentioned under Recommendation 11 above, MM2 should be suitably staged with priority to its western component extending from Docklands (or Flagstaff) via Fishermans Bend to Sunshine and Melton, followed by a second stage from Sunshine to Werribee via Wyndham Vale. Its initial stage will be pivotal for comprehensive development of the Fishermans Bend precinct.

MM2 provides the opportunity to introduce advanced technology to Melbourne’s rail network through the use of automation, related signalling and systems. The outcome will be safer, faster and more reliable services.

RFI recommends that planning for MM2 proceed at an early date having regard to the long lead time involved in finalising a preferred alignment and undertaking the range of precursor studies required in advance of preparing a detailed business case. Suitable actions need to also be taken soon in terms of acquiring and giving notice of intention to acquire any specific land packages and imposing a Public Acquisition Overlay on the proposed rail corridor from Lalor to Wollert.

³ See <https://www.pm.gov.au/media/albanese-labor-government-building-victorias-future>

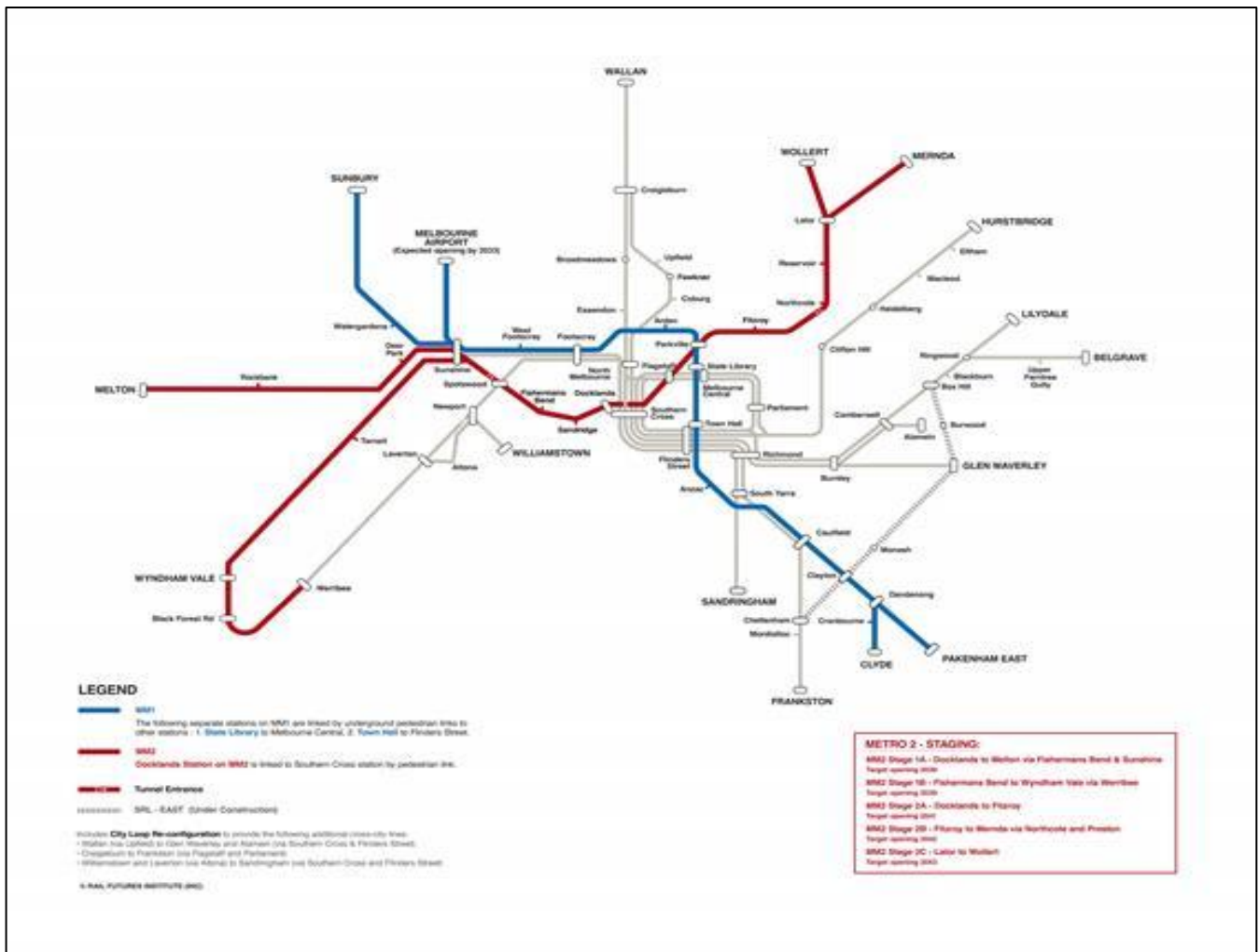


Diagram of MM1, MM2, SRL East and other metropolitan lines.

- **Bay West** is a long-term concept to replace much of the existing Port of Melbourne infrastructure, either when it becomes life-expired or because it is no longer fit for purpose. Bay West's proposed location involves the creation of a large artificial island south of the Werribee area linked by rail and road bridges to the mainland. It is important that these connections are identified and included in Precinct Structure Plans and other relevant planning instruments.
- **OMR (Outer Metropolitan Ring)** is the reserved road and rail corridor extending some 75 km from Beveridge in Melbourne's north to Little River in the west. From a rail perspective, its construction is pre-requisite for access to the proposed Western Intermodal Freight Terminal (WIFT) at Truganina and other western suburbs freight generators. Until at least the rail component is built, other freight terminals at Beveridge and Somerton will have poor rail connectivity for westbound freight to Adelaide, Perth and Darwin and no possibility of operating double stack trains in that direction. Lack of access to WIFT will also prevent full functionality and competitiveness being achieved for the Melbourne-Brisbane Inland Railway.

RFI recognizes that the Commonwealth Government has deferred both OMR and WIFT to the longer term in favour of developing the BIFT terminal at Beveridge. Fortunately, the corridor is subject to a Public Acquisition Overlay which provides it with effective protection. However, the WIFT land is understood to lack such protection. We therefore ask IV to highlight the critical role that both OMR and WIFT will play in Victoria's future transport and logistics networks and to ensure the necessary legal protection for the WIFT precinct.

OTHER ISSUES for Infrastructure Victoria's consideration:

- **A Core Public Transport Network must be developed for Melbourne:** This is essential in realising a genuine link with land use, meshing with housing, jobs and density not only for buses, but most importantly also with the existing heavy rail and tram networks.

A core principal public transport network of heavy rail, trams, MCT and buses should be aiming overall for 10 minute frequency 7 days a week over wide hours of service complementing other policies such as housing and activity centre planning.

Planning should aim for corridors and interchange points that increase the proportion of people and jobs within 10 minutes walk of the frequent core public transport network.

- **A multi-tier service layer should be defined for Public Transport:** In the case of both train and tram networks with high sunk costs the objective should be to progressively increase existing service frequencies through better fleet utilization, and full utilization of existing paid driver hours. Service frequency and hours of service are key issues in getting more people out of cars onto trains and trams.

Highest priority for these changes should be trunk train, tram and bus routes and other corridors where demand and infrastructure will support more intensive services as defined below.

The Victorian State Budget Office has previously identified that the annual additional operating costs of increasing hours of service and service frequency are not excessive - in the hundreds of \$ millions and to a large degree offset by increased revenue from increased ridership.

Service frequency can be dramatically improved through better utilization of both the existing train and tram fleets. (Currently a substantial proportion of both Melbourne's train and tram fleets sit idle in depots for the larger part of the day.) Additionally, maximization of existing paid driving hours can to a large degree cover staff requirements for services operating more frequently.

To a large degree this is simply a case of working the existing heavy rail and tram networks harder.

- **Melbourne's Public Transport service improvement should be implemented over three stages:**

FIRSTLY, the objective over train, tram and bus routes should be to get all modes to a minimum 20 minute frequency 7 days a week between 0600 and Midnight. (N.B: Melbourne currently has the worst service frequencies of all Australian capital cities.)

SECONDLY, the network should then move to a maximum 10 minute wait as far as practical across the train and tram networks 7 days a week from 0700 till at least 2200.

THIRDLY, Metro rail speeds in Melbourne are very slow by world standards. Low cost initiatives such as running all Werribee trains direct, straightening track, station and junction track layouts to increase train speeds, renewal of slow speed turnouts with 65 and 80 km/h turnouts, selective re-signalling of some locations and track sections and rationalising train stations where these are closely spaced, together all need to be reviewed to progressively realize higher average train network speeds across Melbourne.

Similarly on the tram network, there are opportunities to progressively increase tram speeds and reduce travel times as outlined earlier in recommendations 8, 10 and 40.

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