ONE TRANSPORT AUTHORITY.

The Commission recommends that the determination of the scope of the various systems of transport and the regulation and preservation of their growth on proper lines should be governed by a central public authority which, whilst preserving the integrity of each system, would prevent wasteful competition, and aim at the creation of a more efficient transport service.

TRAFFIC CENSUS.

The only effective method of ascertaining the extent and direction of the several classes of road traffic is by thorough census over a period of hours under normal conditions.

Very little reliable data, and nothing of a comprehensive nature, was available to the Commission. Arrangements were therefore made, during April and May, 1924, through the courtesy of Sir James McCay, for the members of the Special Constabulary Force to conduct a series of traffic checks.

The principal census was taken on 29th April, 1924, from 7 a.m. to 8 p.m. of all wheeled traffic entering and leaving the city area bounded by Flinders, Spencer, Latrobe and Spring streets. Other similar counts were taken at a number of selected points.

Percentages of Classified Traffic.—The census showed that the total of Melbourne's normal traffic may be classified and distributed as under:

<table>
<thead>
<tr>
<th>Class</th>
<th>Total Vehicles</th>
<th>Exclusive of Trams</th>
<th>Including Trams</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>30,897</td>
<td>29.39</td>
<td></td>
</tr>
<tr>
<td>Automobiles</td>
<td>30,897</td>
<td>32.34</td>
<td></td>
</tr>
<tr>
<td>Commercial Trucks</td>
<td>12,158</td>
<td>11.56</td>
<td></td>
</tr>
<tr>
<td>Heavy Horsecarriage</td>
<td>11,980</td>
<td>11.09</td>
<td></td>
</tr>
<tr>
<td>Light Horsecarriage</td>
<td>11,116</td>
<td>10.57</td>
<td></td>
</tr>
<tr>
<td>Bicycles, Barrows, &amp;c.</td>
<td>5,331</td>
<td>5.68</td>
<td></td>
</tr>
<tr>
<td>Motor Cycles</td>
<td>630</td>
<td>0.65</td>
<td></td>
</tr>
<tr>
<td>Tramcars</td>
<td>9,557</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

It is noteworthy that over 33 per cent. of Melbourne's vehicular traffic is horsecarriage, and that only 9.09 per cent. is tramcar traffic.

Graphs showing all intersections are appended, and illustrate the hours of "peak" traffic for each direction separately and also combined.

Distribution of Traffic.—The two bridges, Prince's and Queen's, carried no less than 34.1 per cent. of the total vehicular traffic in the city proper, 18.1 per cent. being over Prince's-bridge and 16 per cent. over Queen's-bridge. At the intersection of Spencer and Flinders streets the traffic of wharves and Spencer-street railway goods yard produced the highest percentage of 12.1; 74 per cent. of the traffic at this intersection was horsecarriage.

There are only two outlets southwards from Flinders-street, viz., Prince's-bridge and Queen's-bridge. As has been stated, 34.1 per cent. of the vehicular traffic crosses these bridges.

There are nine outlets going north-west which cross Latrobe-street, and these intersections represent 36.4 per cent.

Easterly traffic crossing Spring-street, and including Wellington-parade South, amounts to 17.3 per cent.
PLATE XIII.

— Metropolitan Town Planning Commission Melbourne —

Graphs of Easterly Traffic — City of Melbourne —

Traffic Census — 28-4-1924 — 7 A.M. to 8 P.M.

<table>
<thead>
<tr>
<th>Legend</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inbound Traffic</td>
</tr>
</tbody>
</table>

EVELYN & ALBERT STREETS

SPRING & M'ARTHUR STREETS

WELLINGTON PARADE & SPRING STREET

WELLINGTON ST & FLINDERS ST

TOTAL EASTERLY TRAFFIC
There is no westerly traffic crossing Spencer-street to the city area except that from Flinders-street Extension, and a proportion of the 5.3 per cent. which crossed the intersection of Latrobe and Spencer streets.

Two southern outlets from Flinders-street carry 34.1 per cent., whereas nine northern outlets across Latrobe-street carry 36.4 per cent. of the total traffic. There was no sign of confusion or congestion, and not one policeman controlling the traffic crossing Latrobe-street, over which more traffic passed than crossed Prince’s and Queen’s bridges combined. The frequent delays and confusion at these points, and in Flinders and Swanston streets, is unquestionably due to insufficient southern outlets.

"Peak" Traffic.—In providing transportation facilities it is essential to allow for the hours of heaviest movement. In calculating the "peak" vehicular traffic to be provided for it is necessary constantly to bear in mind that all tramcar, motorbus, and pedestrian traffic reaches its maximum at about the same hours.

**Analysis of Prince’s-bridge Checks.**—The summary of the traffic which utilized Prince’s-bridge on the 29th April, 1924, between 7 a.m. and 8 p.m. is as under:

<table>
<thead>
<tr>
<th>Direction Proceeding</th>
<th>Light</th>
<th>Heavy</th>
<th>Auto-</th>
<th>Commercial</th>
<th>Buses and</th>
<th>Motor</th>
<th>Bicycles</th>
<th>Cable Trams</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>North</td>
<td>569</td>
<td>962</td>
<td>4,639</td>
<td>1,020</td>
<td>261</td>
<td>622</td>
<td>860</td>
<td>1,065</td>
<td>9,998</td>
</tr>
<tr>
<td>South</td>
<td>736</td>
<td>941</td>
<td>4,028</td>
<td>1,041</td>
<td>248</td>
<td>605</td>
<td>821</td>
<td>1,048</td>
<td>9,468</td>
</tr>
<tr>
<td>Total</td>
<td>1,305</td>
<td>1,903</td>
<td>8,667</td>
<td>2,061</td>
<td>509</td>
<td>1,227</td>
<td>1,681</td>
<td>2,113</td>
<td>19,466</td>
</tr>
<tr>
<td>Percentage</td>
<td>6.7</td>
<td>9.78</td>
<td>44.52</td>
<td>10.59</td>
<td>2.62</td>
<td>6.3</td>
<td>8.64</td>
<td>10.85</td>
<td>100</td>
</tr>
</tbody>
</table>

Reference to the graphs of Prince’s-bridge traffic (Plate XII.) shows the highest peak period to be the half hour ending 5.30 p.m.

5,738 vehicles (excluding trams), or 33 per cent. of the total vehicular traffic on this bridge, crossed it between the three hours 8.30 a.m. and 10 a.m. and 4.30 p.m. and 6 p.m.

The greatest number of vehicles proceeding in one direction in half an hour was 832 going south between 5.30 p.m. and 6 p.m. These vehicles were compelled to use a space opposite Prince’s-bridge station of only 19 feet. This represents an average of 28 vehicles a minute, but counting only the time during which the crossing was open, 41 vehicles passed per minute.

The urgency for more southern outlets from the city is obvious from these figures.

1917 **Comparison.**—In November, 1917, a series of counts were taken. Figures which the Railway Department has supplied show that the daily number of all vehicles passing Prince’s-bridge in twelve hours was only 9,573—the maximum being 11,331, and the largest number crossing it in any one hour being 1,468, from 5 to 6 p.m. The increase in the total daily traffic in under six years is therefore over 90 per cent., whilst the "peak" hour increase is nearly 50 per cent.

**Tramway Strike Comparison, 1924.**—During the tramway strike in May the Commission made a further check for twelve hours of the traffic crossing Prince’s-bridge from all directions. The following is the comparison of checks of Prince’s-bridge traffic exclusive of trams.

<table>
<thead>
<tr>
<th>Tramway Strike Check</th>
<th>Total Traffic (7 a.m. to 7 p.m.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>29th April</td>
<td>16,544</td>
</tr>
<tr>
<td>12th May</td>
<td>21,998</td>
</tr>
</tbody>
</table>

The total traffic, including 1,969 trams, on 29th April was 18,513; thus the absence of trams added to the traffic so many as 3,485 extra vehicles of various kinds, or an increase of 21 per cent.
PLATE XIV.

— METROPOLITAN TOWN PLANNING COMMISSION MELBOURNE —

1. Graphs of Northerly Traffic — City of Melbourne —

Traffic Census — 23-4 1924 — 7AM to 8PM —

Legend: [Legend details not visible]
Queen's-bridge.—A summary of the traffic which crossed Queen's-bridge on 29th April between 7 a.m. and 8 p.m. is as follows:

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>North</td>
<td>1,149</td>
<td>2,422</td>
<td>1,655</td>
<td>765</td>
<td>2</td>
<td>256</td>
<td>974</td>
<td>513</td>
<td>7,736</td>
</tr>
<tr>
<td>South</td>
<td>945</td>
<td>2,975</td>
<td>1,940</td>
<td>909</td>
<td>6</td>
<td>297</td>
<td>980</td>
<td>497</td>
<td>8,499</td>
</tr>
<tr>
<td>Total</td>
<td>2,094</td>
<td>5,397</td>
<td>3,595</td>
<td>1,674</td>
<td>8</td>
<td>553</td>
<td>1,954</td>
<td>1,010</td>
<td>16,285</td>
</tr>
</tbody>
</table>

Percentages  12.68  33.14  22.07  10.28  04  3.4  12  6.21  100

The graph of Queen's-bridge shows how the traffic was distributed, and indicates the peak periods as 9 to 9.30 a.m. and 5 to 5.30 p.m.

Sheep in the City Area.—The census officials reported that considerable congestion occurred between 5 and 6 p.m. due to 1,400 sheep crossing the bridge and mixing with the trams and vehicular traffic at the busiest hour of the day. The Commission will submit some proposals in its later Report dealing with the question of metropolitan meat supply and abattoirs which will prevent this movement of livestock in the city area. In the meantime it is considered that livestock should only be permitted to use this bridge and its approaches at an early hour of the morning, or at some other less busy hour.

Queen's-bridge—Comparison of Censuses.—In addition to the census of Queen's-bridge just referred to, which was taken on 29th April—a normal day when the cable trams were running—the Commission engaged the same staff to make a more detailed census as to turning points, &c., on the 6th May, when the trams were not running. The following is a comparison of the vehicular traffic on those days—a week apart:

<table>
<thead>
<tr>
<th></th>
<th>29th April, total traffic, 7 a.m. to 7 p.m. (excluding trams)</th>
<th>6th May, total traffic, 7 a.m. to 7 p.m.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>15,125</td>
<td>16,469</td>
</tr>
</tbody>
</table>

The number of trams which crossed Queen's-bridge on 29th April in the same hours was 1,010. The increase in vehicular traffic occasioned by the absence of trams in this instance is not as marked as Prince's-bridge. This is due to the passenger carrying vehicles for Port and South Melbourne using Prince's-bridge, instead of crossing at Queen's-bridge, which is the tram route.

1917 Census.—A census taken in November, 1917, at this bridge registered the average daily traffic, for twelve hours, at 9,621 vehicles, including 1,209 vehicles in the hour of heaviest loading, 5 p.m. and 6 p.m. In comparison with the census undertaken by this Commission there is an increase in the twelve hours' traffic of 57 per cent. and of 30 per cent. for the same "peak" hour.

Direction of Traffic.—On 6th May, 1924 (the day the trams were not running) the traffic on Queen's-bridge was distributed in the following directions:

<table>
<thead>
<tr>
<th>North Side of Bridge</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Flinders-street West (including via Queen's-wharf)</td>
<td>41.3 per cent.</td>
</tr>
<tr>
<td>Flinders-street East</td>
<td>39.7</td>
</tr>
<tr>
<td>Market-street</td>
<td>18.8</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>South side of Bridge</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Queen's-bridge street and Whiteman-street</td>
<td>65.8</td>
</tr>
<tr>
<td>South Wharf-road</td>
<td>18.6</td>
</tr>
<tr>
<td>Miller-street and Maffra-street</td>
<td>15.6</td>
</tr>
</tbody>
</table>

Comparison of Nature of Bridges' Traffic.—It is important to note that 49 per cent. of the vehicular traffic of Queen's-bridge is horsedrawn as against 18 per cent. at Prince's-bridge. On the other hand, in the case of Prince's-bridge the percentage of automobiles to total vehicular traffic is 50 per cent. as against only 23 per cent. in the case of Queen's-bridge. Tramcars constitute less than 11 per cent. of the traffic of Prince's-bridge, and less than 7 per cent. at Queen's-bridge.

It is therefore apparent that in any comparisons in regard to these bridges it will be necessary to pay attention to two conditions, viz.:

(a) the reduced speed necessitated by the horsedrawn traffic as against motor vehicles.
(b) that Prince's-bridge is more subject to severe peak loading conditions.
SPENCER-STREET BRIDGE.

The large percentage of turning traffic which converges on the approaches to Queen’s-bridge is worthy of special notice, as indicating the necessity for construction of the proposed Spencer-street bridge.

As has been previously pointed out, it is at the intersection of Spencer and Flinders streets where the traffic is the heaviest of any approach to the city proper other than Prince’s and Queen’s bridges. Further, at no point in the city is the proportion of heavy and horse-drawn traffic to the total traffic as great as at this point, where it represents 74 per cent.

It is obvious that the traffic at this intersection is in excess of the capacity of the existing facilities, and that the only way of giving relief is by building the bridge. As its erection will take a considerable time and the traffic will necessarily greatly increase in the meantime, the Commission is of opinion that the building of this bridge is the first in point of urgency of all the new metropolitan works awaiting commencement.

Approaches to the Bridge.—The southern approaches to the bridge, especially from Hanna-street, South Melbourne, also require immediate attention. There are several small areas in and around Hanna-street which are subject to inundation either by high tides or heavy rains. This flooding is a serious menace to business and health, and also hampers the use of the streets where it occurs. The raising and reconstruction of Hanna-street and the streets crossing it, as well as the filling of the adjacent low-lying land to allow of proper drainage, is necessary. The rehousing of the people gradually dispossessed is not considered a difficult matter.

At a later stage in this Report (page 30) the details of these works are defined; but as this bridge and its main approach are so vital its urgency cannot be stressed too much.

PORT AND HARBOUR DEVELOPMENT.

Too much importance cannot be attached to port and harbour development, both as regards berthage accommodation and accessibility. The plans supplied by the Melbourne Harbour Trust Commissioners for the future development of the port show that berthage accommodation can be gradually increased as demand warrants, for at least 50 years. As this period is greater than that embraced by the Commission’s plans, the wharfage scheme is accepted as being adequate.

A careful study of the accessibility of the docks and wharves and their co-ordination with other public utilities has been made. (See page 46.)

THE FUTURE PLAN.

This Commission regards the transportation plan as the primary step in proper civic development. Upon its effectiveness every citizen and every business is inevitably dependent. The plan should be co-ordinated with, and not subordinated to, other phases of the city plan.

In propounding schemes for any new civic development it is futile to regard the desired improvement from a local or parochial point of view. Every proposed amendment to the present order of things should be studied in its relationship to a comprehensive and adopted plan of development for the whole metropolis. In submitting the recommendations which follow, this fundamental principle has been consistently kept in view by the Commission.

When a definite plan for orderly development has been decided on, its accomplishment should be effected by systematic and gradual improvement determined by the urgency of execution of each particular phase.
RECOMMENDATIONS.

Before setting out the recommendations of works to be undertaken, it is well to refer briefly to the existing street system, layout, and general conditions of the inner metropolitan area.

That portion of the city proper bounded by Flinders, Spencer, Latrobe, and Spring streets, which forms the principal business area, whilst fortunate in having streets of ample width, is unfortunate in regard to outlets for traffic.

On the south there is the natural barrier of the river, over which only two bridges have been provided, and in the absence of diagonal streets these can be reached from most of the streets only by making one or more right-angled turns. The position on the east is somewhat the same. There are no direct outlets to the west.

Possibly the present bridges could carry more traffic if more direct lines of communication by diagonal streets were provided, but the city is now expensively built upon. This would render diagonal streets extremely expensive, and the Commission considers that the relief from them would be temporary and would only hinder and postpone other measures that will be proposed and which the Commission considers will be adequate.

"Bottlenecks."—The arterial roads leading to the city, although in some instances badly located, are for the most part adequate for present traffic. Certain portions of some of these avenues have been reduced in width to such an extent as to render them not only inadequate for the large and ever increasing volume of traffic but dangerous to the services utilizing them. As these "bottlenecks" are frequently congested, little imagination is required to visualize the conditions which would obtain when the inhabitants number 2,000,000, instead of 887,082 as at present. They are unfortunate errors of early planning which should be corrected without delay.

City Outlets and Bridges.—Most of the approaches south of the Yarra converge on one entrance to the city at Prince's-bridge. No matter how liberal the provision is outside the business area for this traffic, the latter will always be limited by the width of Swanston-street.

The northern approaches, being much more numerous, are satisfactory, as they allow for a distribution of the traffic.

Effective Distribution of Traffic.—Although the widening of busy thoroughfares such as Swanston-street has been undertaken in other parts of the world, and in Australia, the Commission considers there is no vital necessity for similar action in the city of Melbourne proper. Between Swanston-street and including Spencer-street there are five parallel streets of the liberal width of 99 feet, which could be continued across the river, and connected with the arterial system on the south, and thus aid the better through-routing of traffic.

The Commission recommends the following improvements for the reasons and advantages indicated in connexion with each. The order in which these recommendations appear is not the same as the suggested constructional order of the works the more urgent of which are shown on Map No. 6.

PROPOSED NEW ROAD VIA WELLINGTON-PARADE, JOLIMONT-ROAD, AND YARRA PARK TO RICHMOND, PRAHRAN, AND BEYOND.

Yarra Park Road,

A check recently taken shows that of 1,968 vehicles which crossed Prince's-bridge in one hour, 1,402 turned east before reaching St. Kilda-junction, 216 using Batman-avenue.

The Commission recommends the provision of a road through Yarra Park between the Melbourne and Richmond Cricket Grounds and the railway to connect Jolimont-road with Punt-road (see No. 3, Map No. 3). This new road, which can be formed about 72 feet wide, will be of easy grades, and in conjunction with Flinders-street, Wellington-parade South, and Punt-road would through-route a large proportion of the traffic between the city and the south-eastern and eastern suburbs and relieve Prince's-bridge.

Traffic for Prahran and the suburbs beyond, after gaining Punt-road, could reach its destination via a new bridge at Punt-road—which is recommended on page 28, or via Harcourt-parade and across Church-street bridge, as shown on Map No. 3.

Tramway Route.—The Yarra Park-road is recommended as a tramway route to connect the Flinders-street and Swan-street and future Punt-road services, and to provide facilities for the people who desire to travel to the recreation ovals and sports grounds along the route. Spur lines for parking trams will be necessary near the Metropolitan Cricket Ground to cater for heavy and intermittent crowds.

This route was included by the Tramways Board in its general scheme.

As no resumptions of private property are required to provide this road the cost would be small, and the relief that it would afford at the intersection at Swanston and Flinders streets by supplying a new and convenient route to the south-eastern suburbs, instead of that across Prince's-bridge, makes its early provision very desirable.
PUNT-ROAD.

It is recommended that Punt-road be widened on the west side to 100 feet from the Richmond railway-bridge to the river.

The Railway Commissioners are preparing plans for alterations to Richmond station, and for additional lines from that point to the city. The Commission considers that, when the structural additions and alterations are made, both the existing and the proposed new bridges over Punt-road should conform to a roadway width of 100 feet. The Commission informed the Railway Commissioners accordingly by letter on 7th October last.

HARCOURT-PARADE, RICHMOND.

When the proposed road through Yarra Park is constructed a considerable amount of traffic for the south of the Yarra will be diverted to Swan-street and the new Church-street bridge. It is undesirable that this extra traffic should be diverted into Swan-street and add to the congestion there, when it could reach the same point via Punt-road and along the north bank of the river (Harcourt-parade).

Yarra Improvement Scheme.—The Commission recommends that Harcourt-parade be treated so as to continue the Yarra Improvement Scheme to Church-street and thus provide for traffic to the south along the river banks.

The plan provides for a reserve of 110 feet from the future river alignment, including 50 feet set apart for roadway purposes, and corresponding with the adjoining portion of Batman-avenue.

Resumptions of Property.—This will require resumptions of private property and two allotments of Crown land, also alterations to the railway bridge to provide for a further widening of the river to the position shown by broken lines on the plan. This is the alignment fixed by the Public Works Department, with which all the widenings of the river yet undertaken have conformed. The resumptions of property would include one hotel, several small factories and yards, and 23 small cottages.

Street Closed.—A small street called Vickery-street would be eliminated in the improvement scheme.

Railway Bridge.—In view of the fact that the Railway Department is now planning for additional lines between Richmond and South Yarra, it is recommended that the new railway bridge, and eventually the complete bridge, should be so constructed as to conform to this highway, to enable the river widening scheme as far as the Church-street bridge to be effected.

Housing.—That portion of the resumed area now required for the roadway, and bounded by Punt-road, Gough-street, Cremorne-street, and Harcourt-parade could be subdivided into a number of allotments averaging 6,000 square feet and sufficient to house 100 people. 115 persons would be dispossessed by the resumptions recommended. Provision could be made in the remainder of the new frontages for many more people under good conditions.

Costs.—It has not been possible to estimate the cost of the proposed resumptions by reference to the books of the Richmond Council. Special valuations will have to be made to enable an estimate of the cost of the scheme to be prepared. After deducting resales, and the amount yielded by a betterment tax, it is not expected that the net cost would exceed that of road construction and incidental works.

Temporary Relief.—To give immediate relief, a temporary road, 30 feet wide, as indicated by hatched lines, could be constructed without interfering with any buildings or requiring alterations to the railway bridge.

CHURCH STREET BRIDGE.

When the Yarra Improvement Scheme is completed, the northern span of the Church-street bridge will be over the widened river instead of over an unmade track as at present. In due time the road along the north bank at this point must become an important thoroughfare. The Commission recommended to all authorities concerned, at the time the bridge was under construction, that an extra land span 50 feet wide should be built so as to make provision for a road along the Richmond bank passing underneath the bridge. When an alternative can be provided the volume of traffic in Church-street should not cross on the same level as the traffic which will use the future Yarra Bank-road. An inclined road, to enable traffic from the Yarra Bank-road to connect with Church-street and the bridge, is shown on Plate XVI.

The recommendation that this land span be provided was made in the hope that advantage would be taken of the uncompleted state of the bridge and approach at that time. The Public Works Department replied that this was a matter for the Melbourne and Metropolitan Board of Works, since it came within the provisions of the Metropolitan Drains and Streams Act. Nothing resulted. This is an instance where a comparatively small extra expense would have saved considerable future outlay.
Elate XVII.

ROAD

METROPOLITAN TOWN PLANNING COMMISSION

PROPOSED WIDENING OF

CHAPEL STREET NORTH

SCALE OF FEET

MEASURED IN FEET

DRAFTSMAN, M. Green
 METHODS OF RELIEVING CHAPEL-STREET, FROM THE CHURCH-STREET BRIDGE TO CARLISLE-STREET, HAVE RECEIVED EARNEST CONSIDERATION. IN THIS REPORT IT IS ONLY PROPOSED TO RECOMMEND THE WIDENING OF CHAPEL-STREET NORTH FROM THE CHURCH-STREET BRIDGE TO TOORAK-ROAD AS SHOWN ON PLATE XVII.

THE PRAHAN COUNCIL INTIMATED ITS DESIRE TO HAVE THIS PORTION OF CHAPEL-STREET WIDENED AS NOW RECOMMENDED.

THE FRONTAGES TO THIS PORTION OF CHAPEL-STREET CONSIST MAINLY OF VACANT LAND, AND AS THE ROAD IS A TRAMWAY AND IMPORTANT TRAFFIC ROUTE, THE COMMISSION RECOMMENDS THE WIDENING OF THIS 66 FEET ROADWAY TO 100 FEET ON THE EASTERN SIDE.

THE PRAHAN COUNCIL HAS RECENTLY ROUNDED THE SOUTHWESTERN CORNER OF THE INTERSECTION OF CHAPEL-STREET AND ALEXANDRA AVENUE.

THE WHOLE OF THE PROPERTY ON THE EASTERN FRONTAGE CONSISTS OF VACANT LAND, AND ITS ESTIMATED COST FOR RESUMPTION IS ABOUT £30,000. WITH A FRONTAGE OF 1,730 FEET THIS IS EQUIVALENT TO £17 7s. PER FOOT.

THE COMPLETION OF THE NEW BRIDGE AND TRAMWAY AND THE DECISION AS TO THE FUTURE OF THE ADJOINING LAND KNOWN AS FOREST HILL, HAVE ALREADY GREATLY ENHANCED THE VALUE OF THE LAND, BUT IT IS CONSIDERED THAT IT COULD BE OBTAINED NOW AT THE FIGURE QUOTED. UNLESS PROMPT ACTION IS TAKEN IT IS PROBABLE THAT THE LAND WILL BE SUBDIVIDED AND BUILT UPON.

THE COMMISSION THEREFORE URGES IMMEDIATE RESUMPTION OF THE EASTERN FRONTAGES AS SHOWN ON THE PLAN TO A DEPTH OF 200 FEET. THIS WOULD ENABLE 34 FEET TO BE MADE AVAILABLE FOR THE BENEFIT OF THE ROADWAY AS ALREADY RECOMMENDED, AND THE REMAINING 166 FEET TO BE SUBDIVIDED FOR RESALE. THE COMMISSION IS OF THE OPINION THAT NO LOSS WOULD OCCUR IN CARRYING OUT THIS IMPROVEMENT IF THE RESUMPTION IS NOT FURTHER DELAYED.

PUNT-ROAD, SOUTH YARRA—PUNT HILL DEVIATION.


- Epping-road .. Reservoir.
- High-street .. Preston and Northcote.
- Hoddle-street .. Collingwood and Richmond.
- Punt-road .. Richmond, South Yarra, and Prahran.
- Barkly-street .. St. Kilda.

THIS GREAT NORTH-SOUTH ARTERY INTERCEPTS SEVEN MUNICIPALITIES, BUT ITS USEFULNESS AS A MAIN ROAD HAS NEVER BEEN REALIZED, BECAUSE THERE IS NO CONNECTING BRIDGE OVER THE YARRA, AND BECAUSE OF THE STEEP GRADE AT PUNT HILL, IN SOUTH YARRA.

THE ONLY DIRECT NORTH-SOUTH ROUTES WHICH NOW CROSS THE YARRA ARE THOSE VIA PRINCE’S BRIDGE AND CHURCH-STREET BRIDGE, WHICH ARE OVER TWO MILES APART.

Anderson-street Bridge. —The bridge at Anderson-street is of little use because it is out of alignment with any through route, it is much too narrow, and the steep grade of the Anderson-street approach precludes its general use.

Seven Schemes Considered.—After carefully considering seven proposals the Commission recommends the scheme shown on Plate XVIII. as the best means of making this through route effective.

At present the only direct means of access between the northern suburbs and the suburban beaches on the south is by way of the city proper or a circuitous route involving several tram and train changes for passenger traffic. This adds to the traffic congestion in the city and at places of interchange, and is uneconomical from the points of view of distance and time. The scheme recommended overcomes these disadvantages and provides direct access to the Botanical Gardens.

The widening of Punt-road between the railway line at Richmond and the River Yarra is included in the scheme already dealt with for diverting traffic via a road through Yarra Park, and along Punt-road and Harcourt-parade to the Church-street bridge.

Route of Deviation.—The deviation commences at the widened portion of Punt-road, Richmond, about 300 feet south of Swan-street, passing thence through the Yarra Park, crossing the river at the proposed bridge as shown on Plate XVIII. After crossing over the river (and Alexandra-avenue) the road would pass through a corner of freehold property, then across Anderson-street, through the eastern end of the Botanical Gardens, thence via Leopold-street as shown widened on the plate, through Fawkner Park, to join Pasley-street (south) and Punt-road about 800 feet north of Commercial-road.
Road Widths.—The road is shown 84 feet wide from Punt-road to Anderson-street, and reduced to 66 feet through the Gardens and Fawkner Park, as no provision is necessary for standing vehicles. Only narrow footpaths are required in these sections. Convenient parking areas for pleasure vehicles could be made and footpaths through the parks and gardens will provide for pedestrians.

The widening of Leopold-street from 33 to 140 feet, by resuming the properties on the eastern side, will admit of a strip of parkway being made connecting the Botanical Gardens and Fawkner Park.

Pasley-street is already 99 feet wide, and Punt-road from Pasley-street to Commercial-road is shown widened on the western side to 84 feet.

Bridge.—The bridge across the Yarra should be of the high-level type and 84 feet wide to conform with the road approaches. The high bank on the south makes this type of bridge suitable. Special consideration has been given to the site proposed for the bridge.

Grades and Utility.—This deviation provides a road of easy gradient not exceeding 1 in 20 in any part, which is regarded as satisfactory for the purpose for which it would be used. The road would be used mostly by trams, automobiles, and pleasure traffic to and from the beaches, gardens, and other places of recreation.

There are no engineering difficulties in the scheme. The water supply for the Botanical Gardens would not be affected.

This deviation is only about 260 yards longer than the direct route.

Properties Affected.—The private property through which the proposed road would pass between the new bridge and Anderson-street comprises several homes and land not as yet built on. The resumptions suggested are sufficient to enable the road to be provided and new frontages to the several avenues to be made available for sale as a partial set-off against the cost of resumption.

The whole of the dwellings and property on the eastern side of Leopold-street are affected and would have to be resumed. No residue for resale is available, but the values of surrounding property would be considerably enhanced.

Estimated costs of these resumptions, and of the scheme generally, are given in the Appendix.

Tramway and Other Advantages.—It is recommended that an electric tramway be provided along the whole length of the route connecting with other tram services at both the northern and southern extremities of the scheme. This tramway, in addition to its utility, would command some of the most picturesque views in the metropolitan area, and by its extension beyond the limits of the scheme north and south, would intersect every tram route going east and west between Preston and Point Ormond.

It is regrettable that no public means of transport other than the cable tramway in Domain-road provides convenient access to the Botanical Gardens. When the Tramways Board's scheme of electrification is completed, the trams in Domain-road and Park-street will be abandoned. This will deprive the public of the only means of tramway access to the Botanical Gardens. Many visitors to Melbourne do not see these gardens because of inadequate facilities of reaching them, and many people who are unable to walk the necessary distance are denied this pleasure. The new tramway will bring the gardens within the reach of all.

The site for the tramway and road through these gardens has been carefully selected because it causes only slight interference with the gardens, and at the same time traverses the crest of the eastern hill, from which a magnificent view of the entire gardens is obtained.

The park road connecting the Botanical Gardens with Fawkner Park could easily be beautified, and in some measure replace the area resumed for the road.

This road would be part of a pleasure drive connecting the various parts of the metropolis. The adoption of the Commission's proposals would make it possible to drive from the Treasury and Fitzroy Gardens through Yarra Park, across the river, through the eastern portion of the Botanical Gardens, thence by a parkway drive to and through Fawkner Park, along Punt-road to St. Kilda, and back from St. Kilda via Albert Park and St. Kilda-road.

Access through Reserves.—It is the policy of the Commission jealously to guard all existing reserves and to create additional parks, wherever necessary. In the case of the municipality of the City of Melbourne, however, 24 per cent. of its total acreage is reserved for parks and gardens. Considering the amount of traffic which the business centres must attract in ever increasing volume, it is impossible to plan routes capable of carrying and spreading such a large number of vehicles and passengers without encroaching upon some of the reserved areas.

A road through a park does not detract from its value as an air space, but rather increases its utility by giving better access.

Tunnel Scheme.—Among the schemes which the Commission seriously considered was that of a tunnel under Punt Hill, in Punt-road, commencing near Alexandra-avenue and ending near Mona-place. This proposal would provide a direct route, but would cost about three times as much as the deviation, and would possess none of the aesthetic features of the favoured proposal. Moreover, the needful tramway access to the Botanical Gardens would be unprovided for.
Moreover, the needful tramway access to the Botanical Gardens would be unprovided for.
THE PROPOSED STREETS CONNECTING WITH THE SOUTH OF THE CITY.

(SEE MAP NO. 3 AND PLATE XVI.).

Reference has already been made in this Report to the lack of southern outlets from the city proper across Flinders-street, the railway lands and viaduct, and the river Yarra. This is the primary cause of the traffic congestion. It has been shown that the two existing bridges are already overloaded. The urgent need for additional communications across these barriers has been stated.

Many Schemes Considered.—Several schemes, designed by various citizens to provide relief for city traffic, and affecting this area, have been examined by the Commission. Some of them provide for the deviation of the river Yarra. These proposals, however, do not accord with the views of the Commission, either as regards the immediate necessity for straightening the Yarra or using this area for public buildings. The cost of several of these proposals would be out of all proportion to the benefits to be derived from their execution. It is in the interest of economy that improvement to the street system of any locality be governed by the existing streets comprised in and bordering it.

Existing Street System.—It will be observed from a reference to Plate XVI. that the major street system between St. Kilda-road and Clarendon-street, with the exception of Queen’s-bridge-street, was designed to give access to Prince’s-bridge only, thus contributing to the present congestion at that point. If any of the streets parallel to Swanston-street are continued across the river it is necessary that there should be a re-arrangement of the street system on the south. The railway embankment traversing this area in a diagonal direction forms an obstacle which makes it difficult to open up streets otherwise possible. (See special paragraph—page 32.)

Although some important amendments to the present layout of this area are proposed, there has been comparatively little interference with existing conditions.

Leased Properties.—The proposals for improving the better circulation of traffic involve the replanning of the area of South Melbourne nearest the city (Plate XVI.). This area is comprised mainly of Crown lands (see Map No. 2). Nearly all the leased Crown land is held for factory and business purposes. All the leases for the properties which are affected by the Commission’s scheme expire in or before 1935, so that the next few years afford a unique opportunity for replanning this area.

Most of the buildings are of a temporary nature, and should not be regarded as obstacles to the provision of an improved street system which is essential to the expansion of the city.

With improved communication with the city as proposed the enhanced land values in this area will induce a better class of building. The conditions of new leases should be such as will encourage and not restrict the building of permanent factories and stores.

All future leases and licences should provide that alignments will agree with the proposed street system.

As all the leases of the properties affected expire within about ten years, the strict enforcement of this condition would achieve the much improved street system and block arrangement at a minimum of expenditure.

Freehold Property.—In many cases where new streets are being provided or old streets widened the only practical and usual method in connexion with the resumption of land is for the controlling authority to purchase not only the amount sufficient for the road, but sufficient land in the neighbourhood of the improvement, so that when creating new frontages and providing new allotments and amenities, the planning may be economical, harmonious, and such as will enable all the land resumed to be put to its best use. There is an added advantage in that after the improvement is effected the increased value of the allotments is available towards the cost of the improvement. This is known as “excess condemnation,” and is in force in many countries as well as some Australian State legislation, but is not incorporated in the Victorian Local Government Acts. Such a power is essential to the carrying out of the proposals of the Commission.

A further enactment should provide that no added compensation shall be payable in respect of any improvements made after announcement by the authority that a scheme of improvement has been decided upon.
SPENCER-STREET BRIDGE.

A census taken at Queen's-bridge to ascertain the direction of approach of all traffic to that bridge over a period of twelve hours has proved that the provision of a new bridge west of Queen's-bridge would materially assist traffic.

41.3 per cent. of the traffic crossing Queen's-bridge from the city approaches from Flinders-street West, and 84.4 per cent. of the traffic on the south side utilizes the western and south-western routes. Moreover, as nearly half of the total traffic on this bridge is horse-drawn, it is clear that a great economy of transport time would be effected by the building of the Spencer-street bridge.

The Commission's plans for future industrial development are largely centred along the south side of the Yarra, and at Port Melbourne and Fisherman's Bend. Therefore a large proportion of the natural increase in traffic may be expected in this neighbourhood, and a bridge at Spencer-street will afford connexion between the South wharves and the railway yards.

With the improvement of Hanna-street this bridge will afford a direct route to St. Kilda road and Toorak-road for traffic to and from the west of the city and the docks.

It is urged that a Bill for the construction of the Spencer-street bridge be brought before Parliament without further delay, enabling a 99-feet bridge of fixed type being commenced immediately. 99 feet is the width of Spencer and Clarendon streets, and any lesser width would create congestion at the bridge.

SPENCER-STREET BRIDGE TO ST. KILDA-ROAD; VIA HANNA AND ROY STREETS.

A bridge at Spencer-street, when constructed, would not serve its full purpose until the western city traffic for St. Kilda-road and the south-eastern suburbs is given a more direct route. Hanna-street, which is 2 chains wide between Queen's-Bridge-street and Park-street, will form the major part of the required arterial road.

The Commission agrees with the Traffic Congestion Board of 1919 and the Board of Inquiry of 1922 in regard to the Spencer-street bridge—that the Hanna-street approach is an integral part of the bridge proposal, and it should be commenced simultaneously, or at an earlier date.

To complete Hanna-street as a direct artery a short connexion of new street to link with Clarendon-street is necessary at the northern end. Plate XVI. shows this street 99 feet wide commencing at the intersection of Clarendon and Whiteman streets and proceeding in a straight line to connect with Hanna-street at the junction of Moray-street, Queen's-Bridge-street, and City-road.

Widening, &c., of Roy-street. - The existing southern continuation of Hanna-street, after Park-street is reached, is narrowed to 66 feet to form Roy-street as far as Albert-road. This portion of Roy-street should be widened on its eastern side to 2 chains and an uniform width maintained as far as St Kilda-road. Plate XIX. shows this extension across the corner of the park lands between Albert-road and Bowen-crescent, to meet St. Kilda-road opposite its junction with Toorak-road.

Road Reconstruction. —The new main road thus formed would require reconstruction throughout, and raising above flood level, to provide a pavement suitable for the large volume of traffic it is destined to accommodate.

Tramway. —The provision of this road would materially assist the operation of the tramway services, as shown by the Tramways Board's General Scheme. This proposed tramway would be a valuable adjunct to the passenger transport services. Sufficient road space would be available for placing the lines in a central reserve, thus providing for one-way traffic roads on either side, as far as St. Kilda-road, from the circus planned at the intersection of Hanna, Queen's-Bridge and other streets.

Circus. —This distributing circus will enable the converging traffic to spread to three possible future bridges, and enter the business area at different points, and will act conversely for traffic proceeding in a southerly direction.

Improvement of Area Generally. —The streets and the adjacent low land, the buildings on which are subject to inundation with every extra heavy rain or specially high tide, should be raised above flood level to conform with the new level of Hanna-street.

By raising this area and giving it better avenues of communication, much freehold and about 100 acres of Crown lands must necessarily increase in value, probably returning much more than that expended on improvements.
Plate XIX.

ROY STREET WIDENING.
BANNA STREET TO ST KILDA ROAD
SCALE OF FEET

METROPOLITAN TOWN PLANNING COMMISSION.