#### THE SWANSTON STREET SECTION

#### Horse Trams

The north end of Swanston Street was served by horse cars from 15 October, 1888 until 19 January, 1889. They plyed between Lonsdale and Queensberry Streets and then cable cars were installed and ran to the Cathedral (Flinders Street).

#### **CIRCA 1923**

The cables powered from the St Kilda Road engine house must have been the most heavily used on the entire system. With the volume of traffic in Swanston Street and St Kilda Road peak loadings called for every ounce of power from the engines and a great strain on both ropes. The Swanston Street cable passed UNDER those of Flinders, Collins and Bourke Streets thus the gripmen had to continually release and pick-up along the city's main thoroughfare - all this extra work added to the wear and tear of the cable. The city cable had to carry not only the Brighton Road - City cars but also those from Prahran, Toorak and North Carlton (to St Kilda Beach) thus a colourful array of domes of white, red, yellow and green with their counterpart lights at night presented quite a sight at peak hours along this section of track.

A journey along Swanston Street followed this pattern -Commencing from Queensberry Street terminal cars moved southbound along Swanston Street crossing Franklin and Latrobe Streets thence the Melbourne Public Library and Museum on the left until stopping on the near side of Lonsdale Street. After "throwing the rope" gripmen allowed their cars to coast across Lonsdale Street and then automatically picked-up the same cable to continue the journey along Swanston Street main shopping area. At this point (from Lonsdale Street on the left) cars from Carlton and North Carlton joined the line and followed the same procedure. A stop was made at Bourke Street and, upon signal, gripmen moved their cars forward - throw, coast, automatic pick-up to cross Bourke Street and then move on to the Melbourne Town Hall on the left hand corner of Collins Street. days of operations a flagman was employed at this point but after 1917 a signal box was constructed in Swanston Street a few feet from the corner on the southeastern side and from this point a signalman controlled a depression pulley (to hold the Collins Street cable down and also to operate a signal situated on a post on the corner.

The signal post at Collins/Swanston Street was situated on the southeastern corner. It consisted of an ornamental cast iron post about twelve feet high with a four bladed (about one foot square) disc with a red glass in the centre. The signalman operated the apparatus from his box in Swanston Street near Collins Street corner causing the red disc to turn thus showing a white background - this being the order to proceed either north/south or east/west. At the same time a whistle (operated by compressed air, either one or two blasts, was sounded, and trams proceeded.)

/Cars

# TRAFFIC SIGNALLING AT INTERSECTION

o f

## COLLINS AND SWANSTON STREETS

The following is the system to be followed by the Police when signalling for Trams to cross the intersection of Collins and Swanston Streets:-

DAY SIGNALLING - Hold up the two hands and with the fingers indicate the numbers of Trams to go over the crossing. One finger to be held up for one Tram, two for two, three for three, four for four, and five for five Trams.

Whilst the traffic was open for North and South Trams the extended fingers on the right hand would indicate the number of Trams to cross from the South, and the fingers on the left hand to indicate the number to cross from the North.

For East and West Trams the extended fingers on the right hand to indicate the number to go East, and those on the left hand for those going West.

NIGHT SIGNALLING - The arms to be held up over the shoulder, and the signal given by waves of the arms. One wave of the arm for one Tram, and so on. The same procedure as above to be observed by the arm waves as by the fingers for daylight use.

It is to be understood that these signals are only to show the signalman that the road will be held open by the Police for a sufficient time to allow the number of cars indicated by them to the signalman to be brought over. If there is a delay on the part of those in charge of the Trams to bring them over, they (the Trams) may be stopped, if necessary, by the Police.

The above information kindly made available by M.M.T.B. December '73.

S FOR SIGNALMEN AT TOWN HALL GROSSING

A. Never open signal for either direction until the track is quite clear and the Constable on duty has also signalled it as open.

2. Never open signal for Swanston Street cars, either way, until the Collins Street rope has been depressed.

3. Never open signal for Collins Street cars going east until the depression gear has been released.

4. Signalmen must observe the following order in their operations:-

## For Trains going North:

a. Depress Collins Street rope.

- c. Close signal when rear of Train has passed Collins Street Line, i.e., has passed so far that Signalman can clearly see the light post on opposite corner behind it.
- d. Release depression gear.

## For Trains going South:-

a. Depress Collins Street rope.

b. Open signal.

- c. Close signal when front of Train has reached South kerb, Collins Street.
- d. Release depression gear.

## For Trains going East:

a. See that depression gear is off.

c. Close signal when front of Dummy is on line of East kerb, b. Open signal.

Swanston Street. d. Never put on depression gear until rear of Train is on same line.

## For Trains going West:

a. See that depression gear is off.

b. Open signal.

c. Close signal when rear of Train has passed signal box.

# To pass over a second or more Trains in either direction:

a. Leave signal open.

b. Give a distinct signal to second car by flag in daylight. White for Swanston Street cars and Green for Collins Street cars, and by lamp at night, showing the same colours.
 If more than two cars are to be passed over, repeat signal to third or more cars as processory.

third or more cars as necessary.
c. Close signal, as hereinbefore described, for first Train.

5. Signalmen must always look carefully to see that signals are properly

observed and acted on by Gripmen. 6. If any Gripman starts to go over crossing contrary to signals, the Signalman must act instantly to stop him.

a. Give one long blast of the whistle.b. Show red hand lamp at night.c. Shout to Gripman to stop.

7. Signalmen must report every Gripman who fails to observe signals correctly or who neglects to give careful attention to and obedience of his rules.

J. G. ROBERTS, Manager Cable System

M. 4 M.T.B.

1st July, 1921.

No. 1474.

Cars crossed Collins Street by acceleration, throw, coast and then pickup automatically and proceeded to St Paul's Cathedral (on the left) where a stop was made before crossing the Richmond Line in Flinders Street. Again gripmen had to accelerate, throw, coast and pickup automatically to continue on across the Of course traffic was not very heavy railway bridge at Flinders Street station. compared to to-day's volume and at this point old pictures show many of Melbourne's famous fruit carts with their vendors plying for trade and also many horse drawn To the left just passing over the rail lines the electric cars operating along Batman Avenue terminated and passengers changed from the cabs awaiting patrons. cable cars if they wished to journey to Burwood or other routes serviced along The cable cars continued on crossing Prince's Bridge to the northern end of St Kilda Road and then commenced their journey along the very A crossover was negotiated just across the bridge famous tree lined boulevard. and this was often used when Swanston Street traffic was halted for some reason.

## ALONG ST KILDA ROAD ....

Many stories have been told of passengers enjoying a journey in the front of the dummy on a summer's evening whilst travelling along the St Kilda Beach. The race to obtain a front seat - proposals of marriage - and a (forbidden) chat to the gripman all part of the story of a 'ride to St Kilda'.

The trams glided along past the Homeopathic (Now Prince Henry's) hospital and Victoria Barracks on the right whilst to the left was the large area of the Domain where the Shrine of Remembrance now stands. (The Shrine was constructed in the late 1920s and early 1930s.) Trams continued on to Domain Road and came to a full stop. Those for Toorak and Prahran turned left whilst those for Brighton Road and St Kilda Beach continued straight on retaining the rope in the grip as they moved past Melbourne Grammar School on the left and so to the engine house at Bromby Street corner. Gripmen threw-the-rope passing the engine house so as to change cables and then after automatically picking up the suburban cable moved on towards Commercial Road setting down passengers there for the electric cars to Camberwell. On past Wesley College to High Street (electric cars to Glen Iris) and so to St Kilda Junction stopping just short of the Windsor line.

(Trams destined for the Esplanade (St Kilda Beach) from the city threw the St Kilda Road rope just before reaching the Junction. The Windsor rope was picked-up by hand at the points before the curve into Fitzroy Street and trams proceed around to the Esplanade line by holding the rope all the way. The operation was then as per cars on the Windsor/Esplanade line. On the return journey gripmen threw the Windsor rope at the approach to the points for curve into St Kilda Road threw the Dicked up the (Brighton Road) rope automatically to proceed to the city).

The cable operation at St Kilda Junction is described in the ST KILDA ESPLANADE story and relevant diagram.

To cross

To cross straight ahead into High Street (the bottleneck) St Kilda or Brighton Road conductors lifted a lever to set the points and gripmen retained the rope (which was ABOVE the crossing cable of the Windsor/Esplanade line and proceeded along the narrow shopping area (of High Street) until Alma Road was reached. Then on down a hill to Inkerman Road and so on to Carlisle Street. Here the road level was quite flat and trams proceeded past St Kilda City Hall (on the left) to their terminal at the corner of Brighton Road and Brunning Street where they shunted in readiness for the return journey.

After shunting cars were readied for the UP journey to the city, gripmen placed the cable into the grip whilst conductors moved the wire grills from one side of the trailer to the other. With the coupling peg in position and safety chain Cars moved away to Carlisle Street then attached all was ready for traffic. crossed into High Street, crossing Inkerman Road, up the slope to Alma Road and over To cross into St Kilda Road gripmen had the hill to glide to St Kilda Junction. to 'throw-the-rope' and coast across (the junction) until they could pickup the This action was necessary as the cable driven from the Wellington Street engine house was set in such a way that it acted as an auxiliary for cars turning from St Kilda Road into Fitzroy Street and consequently was ABOVE that of the UP suburban cable in St Kilda Road. Once the rope was regained, trams continued along St Kilda Road passing many stately homes to pick up passengers from High Street and Commercial Road electric cars. When nearing the engine house gripmen readied themselves to release the suburban cable and pickup the city cable to carry them for the remainder of the journey. This however was far from the final grip operation for the cable was to be released and picked up on no less than four occasions before the Queensberry Street terminal was reached. When trams reached Domain Road, it was necessary to stop and then upon starting again accelerate, release the cable and coast across the points of the joining Prahran and Toorak lines (from the right) to a point where the cable was automatically picked up (by ALL cars) to enable them to proceed to Prince's Bridge and Flinders Street. As on the outward journey gripmen had to throw-the-rope at Flinders, Collins and Bourke Streets and proceed to Lonsdale Street and a full stop.

Trams proceeding to Queensberry Street terminal retained the rope when crossing Lonsdale Street and this was carried right to the terminal; thus trams on the Queensberry Street to Brighton Road route, despite the number of times the rope had been 'thrown' on an almost straight journey had been propelled by only two ropes both driven by the same engine.

Trams (from Prahran for Johnston Street Bridge and from St Kilda Beach to North Carlton) turned right into Lonsdale Street and this was effected by throwing-the-rope approaching Lonsdale Street and coasting to a mark near the points. The conductor set the points and picked up the auxiliary rope which hauled the trams around the corner and along Lonsdale Street, around hauled the trams around the corner the auxiliary (driven off the sheave at the the corner into Russell Street where the auxiliary (driven off the sheave at the corner) was thrown and the Carlton rope picked up automatically. The auxiliary rope was ABOVE the Swanston Street DOWN rope.

/PART

PART CLOSURE OF CABLE LINES ... commencing in February, 1924, the cable line north of Lonsdale Street (in Swanston Street) was converted to electric traction to enable cars from Coburg to shunt nearer the city and at the same time a new section of cable track was installed in Lonsdale Street between Swanston and This section of line was connected to both Swanston and Elizabeth Streets lines and the cable used for propulsion was powered from the St Kilda Road engine house being diverted around a sheave (Lonsdale/Swanston Street to a turnback sheave near the Elizabeth Street corner.) Cars entering and leaving Lonsdale Street from Swanston Street coasted both ways but the strain on the cable was injurious and caused many breakdowns. There was an alteration Toorak cars now shunted in Lonsdale Street (outside the Myer Emporium) whilst the St Kilda line was throughrouted to North Melbourne to some routes .. viz: (this alteration reduced the number of trams shunting at the south end of Elizabeth The colour of the domes on the North Melbourne dummies was changed from green to white and West Melbourne from white to blue. Not long after the St Kilda/ North Melbourne route was discontinued and North Melbourne trams reverted to shunting at Elizabeth Street terminal once again - the route colour was reverted to green.

The St Kilda line was throughrouted to North Carlton with route colour showing green to the north and white to the south.

On 27th December, 1925 the curve from Swanston Street was cut and a straight line across in Lonsdale Street substituted. The auxiliary cable in Lonsdale Street was withdrawn and an additional length added to the Lygon Street rope to operate right through to Elizabeth Street. This operation continued until the closure of the Collingwood line, on 15th April, 1939.

GRIP MOVEMENT ON ST KILDA LINE ...... Grips were pushed forward on DOWN journey, consequently pulled back on "UP" journey. This applied to all trams using the line (Prahran, Toorak).

When Swanston Street was closed, southern cars shunted at Prince's Bridge, the rope having been cut at this point and this operation continued for about two weeks when Toorak and Prahran cars were cut back to shunt at Domain Road corner weeks when Toorak and Prahran cars were cut back to shunt at Domain Road corner being propelled only by the engine house at South Yarra. On 12th January, 1926 the St Kilda Road engine house ceased to operate.

CONVERSION: Rapid headway was made in converting the cable lines in St Kilda Road. During conversion, a temporary electric track was laid on the western side of the UP track and trams from the newly built St Kilda Beach line ran along this section to Park Street where it connected to still another newly ran along this section to Park Street where it connected to still another newly constructed (still operating 1972) line ran around Hanna Street into Sturt Street and so to the city. As a young boy I travelled from St Kilda Beach along the temporary track in St Kilda Road through the city and to North Coburg without changing cars.

/The

The first electric (four wheeled) car ran over Prince's Bridge at 4.20pm on 4th January, 1926. The line along St Kilda Road was soon constructed and the lines in Commercial Road and High Street (Prahran) linked to give through running to Camberwell and Glen Iris respectively. At St Kilda junction trams turned left along Wellington Street to East Malvern, to the right to St Kilda Beach and straight ahead to Brighton Road beyond the old cable terminus to link with Glenhuntly Road and so to Carnegie. A link was made with the UP track to the Carlisle Street DOWN track for through running to St Kilda Beach (from Elsternwick).

Not long after the conversion a signal box was installed on the south/ eastern corner of the junction so that motormen did not have to leave the cars to alter points .. a system of signals operated .. white for Fitzroy Street, amber for Wellington Street and green for High Street. (This signal box was removed during the big alterations made at the Junction in 1968 and was made available to the Tramway Museum Society. A message received during October, 1972 reported its destruction accidentally by fire.

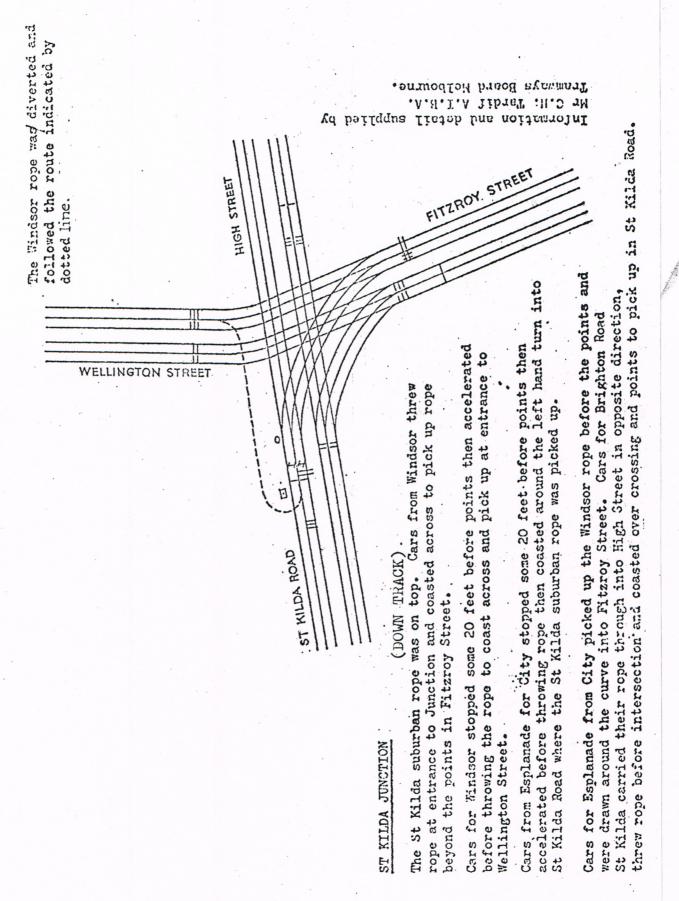
Following the conversion of St Kilda Road from cable to electric traction an excellent service, direct to the city, was now operating for the citizens of the southern suburbs.

Comment ... 1972 ... despite the growth of private motor vehicles as a medium of transport, Melbourne still possesses a great tramway system in this (and other) area which may prove one of its greatest assets in years to come.

# STATISTICS FROM JAMES DUNCAN'S RECORDS RE SWANSTON STREET ROUTES

Rope No.	<u>Rank</u> Weeks <u>Days</u>	Line	Total Trips	Length Miles	Train Miles	
1	14 3 To 20 Jan 89	St Kilda	23,119	2.594	59,970	Engine house to Flinders St commenced 11 Oct 88
		Prahran	21,484	2.191	47,071	Domain Rd Junction to Flinders St commenced 26 Oct 88
					107,041	on rope No. 1
2	34	St Kilda	48,437	2.594	125,646	Engine house to
		Prahran Toorak	54,102 8,876	2.191) 2.191)	137,985	Flinders Street No 2 rope extended to Queensberry St.
		Carlton cars ) North Carlton)	58,437 36,828	•782 •782		Between Flinders & Lonsdale Streets Com. 9 Feb 89
			95,265		74,495	
		Queensberry St.		1.838	45,421	Between Flinders & Queensberry Sts.
					383,547	Total on No2 rope
3	29	C+ Vala-	29,861	2 50/1	77 150)	
	To 6 Apr 90	St Kilda Prahran Toorak	38,833) 13,143) 51,976	2.191	77,459) ) 113,879)	14 Sep 89
		Carlton	39,232)	•782	)	to
		North Carlton	30,091) 69,323	.782	54 <b>,</b> 211)	23 Feb 90
		Queensberry St.	18,252		33,547	
		St Kilda	8,096	3.418	27 <b>,</b> 672)	23 Feb 90 Engine Hse to to Lonsdale
		Prahran	10,934	3.015	32 <b>,</b> 966)	6 Apr 90 St Kilda Rd Junc to Lonsdale St Domain Rd
		Toorak	3,587	4.071	14,603)	St Kilda Rd - Domain Rd Junc to Queensberry St.
					354,337	Total No. 3
						/4

Rope No.	Rank Weeks Days	Line	 Total Trips	Length Miles	Train Miles	
4	20	St Kilda & Nth Carlton	26,278	3.418	91,356	Dec 1889 -
		Prahran & Carlton	34,090	3.015	102,781	rope speed 10 m.p.h.
		Toorak	11,966	4.071	48,714	
					242,851	Total No. 4
5	Sun morning 24 Aug 90 to	St Kilda & Nth Carlton	45,344	3.418	154,986	
	Thu night 2 Apr 91	Carlton & Prahran	56,442	3.015	170,173	
		Toorak	18,924	4.071	70,039	
					395,198	Total No. 5



#### THE NORTH CARLTON LINE

Date of opening:

Saturday - 9th February, 1889

Round trip:

5.43 miles (from Park Street to Prince's Bridge)

Route colour:

Green - green light

Engine house:

At corner of Rathdown and Park Streets.

Originally steam propulsion, but on 19th October, 1919

an electric motor was installed.

Cables:

One only - 13,617 feet

Speeds:

10 m.p.h. thence 12 m.p.h. (May, 1891).

(On the North Carlton and St Kilda service in February,

1890 rope speeds were:

St Kilda 10 m.p.h. (from 28th September, 1889)

Johnston Street 9 m.p.h.

Rathdowne Street 10 m.p.h.

In May, 1891 Rathdowne Street rope was running at 12 m.p.h.

Time for the round trip was 1 hour 50 minutes including

nine minutes at shunts.

The Johnston Street rope speed was increased to 10 m.p.h.

on 16th January, 1892.

(Note:

Towards the end of the North Carlton service,

gripmen stated that the Rathdowne Street

cable was running at 14 m.p.h.)

Fares:

See separate schedule - FARES.

This line was operated in conjunction with the CARLTON line branching at Elgin Street where the cable (propelled from Abbotsford engine house) operated the service - thus the actual operation by the North Carlton engine house was very light (only 13,617 feet). Originally the engine house was designed to provide for two cables. It was intended to run another cable west for two blocks in Park Street then a right hand turn north into Lygon Street to terminate either at Blythe Street or Albion Street East Brunswick. This, of course, was never installed. A horse omnibus provided a service to the North Carlton terminus. The Lygon Street section of the route was later taken over by the Brunswick/Coburg electric tram.

/The

The line was amalgamated with St Kilda (Brighton Road) on 23 February, 1890 and then on 18 December, 1897 the service was throughrouted to Esplanade (St Kilda Beach). When the Swanston Street line was cut late December, 1925 the service ran (across the newly installed crossing at Swanston Street) to Elizabeth Street. Originally trams were housed at the engine house at North Carlton terminus but after 24 July, 1926 they were housed and serviced at the Abbotsford car shed) Collingwood. Except those running the evening service, they were run into the North Carlton shed until Rathdown Street was closed on 1 August, 1936.

## Along the North Carlton Branch

The North Carlton branch turned from Elgin Street, Carlton in a northerly direction into Rathdown Street and used the same tracks to and from the city as the Abbotsford line; i.e. Johnston Street, Collingwood to the intersection of Elgin and Rathdown Streets.

After coasting in Elgin Street from Lygon Street, the North Carlton cars stopped some twenty yards before the points which were set for "North Carlton". The car then rolled around the 90° turn into Rathdown Street and automatically picked-up the Rathdown Street rope which was carried to the engine house and car shed at the Park Street terminus.

At the top end of Rathdown Street, the roadway sloped south so that dummies and cars rolled back over separate crossovers for shunting purposes.

On the UP trip, the rope was carried to near the Elgin Street corner but the cars stopped well back. The conductor proceeded ahead on foot and signalled the gripman to follow when he had ascertained that it was safe to do so for, apart from other road traffic, Johnston Street cars were also crossing at the intersection.

The gripman attempted to gain the maximum speed before throwing-the-rope and coasting around the up grade curve into Elgin Street. Invaribally the car would just negotiate the curve and was then brought to a standstill beyond the points. Then the conductor would pick-up the Johnston Street (Collingwood) City rope by means of the drum pulley to allow the tram to continue its journey into the city ..... (the working from this point is covered in the description of the CARLTON (later Johnston Street Bridge then Collingwood line)).

Melbourne ARGUS .....

3rd AUG 1936

# POLICE GUARD ON LAST TRAM

so damped the "souveniring" ardour of companiment of cheers from hundreds revellers on the last cable tram on the of persons at the Park street terminus. North Carlton route early yesterday morn- A request by the conductor, Mr. Albert ing that only a few electric light globes, Rahilly, for fares was greeted with more the gripman's seat, one bell-strap, the cheers, and several youths asked him and time-tables, and a few advertising the gripman, Mr. Ernest Fitts, for their placards were appropriated, and not more identification

who lined both sides of and long before it had reached the ter-minus at Park street, North Carlton, revel-ford tramway sheds. lers were occupying every foot of space Motor-buses began running yesterday, on dummy and trailer, including the Their route is from Blyth street, East and other appropriate congs.

The presence of a strong police guard | Shunting was carried out to the acbadges. One than two or three windows were broken. | wrenched a metal button from Mr. Ra-There were more police on and follow- hilly's tunic, while another tore the griping the tram when it left the intersection of Lonsdale and Elizabeth streets at 12.14 a.m. than revellers. Crowds who lined both sides of Russell but was "souvenired" later. The revellers but was "souvenired" later. The revellers who lined both sides of Russell and Rathdown streets boarded the tram, remained on the tram while it made its

roofs. In the light of the headlamps of Brunswick, along Nicholson street, Park scores of following motor-cars the mourn- street, and the old tram route to Russell ers sang "Auld Lang Syne," "Roll Along," street and Lonsdale street, ending at Elizaboth street.

#### THE NORTH AND WEST MELBOURNE LINES

Date of opening: North Melbourne Friday, 3rd March, 1890 (at noon). West Melbourne Friday, 18th April, 1890. Round trip: North Melbourne 5.83 m (to Flemington Bridge) West Melbourne 4.10m (to Engine House) Route colours: North Melbourne Green - Green Light West Melbourne Chocolate - White Light Engine house:

Corner Queensberry and Abbotsford Streets.

North Melbourne.

Cables:

Three North Melbourne 12,919 feet

West Melbourne 17,422 feet City

10,889 feet (To Vic Mkt)

20,622 feet app (To Flinders St.)

Speeds:

#### NORTH MELBOURNE

	City		Suburban
10 18 11 22 10 27	September, 1900 October, 1900	10 1 11 2 10 2	3 March, 1890 8 September, 1892 2 September, 1900 7 October, 1900 5 April, 1903

#### WEST MELBOURNE

One cable only (Via Spencer and Lonsdale Streets)

18 April, 1890 18 September, 1892 10 11 22 September, 1900 10 27 October, 1900 11 25 April, 1903

Generally speeds were about 13m.p.h. towards the closure but the West Melbourne line remained at llm.p.h. using a smaller driving wheel.)

Fares:

ld Suburban Terminus to Queensberry and Errol Streets to 21 June, 1920 then increased to 1/2d on 7 March, 1921.

See separate schedule.

General:

See General Recordings.

/Extract

#### Extract From Chairman's Report - 19th August, 1892

"North and West Melbourne Lines. - At the time the last report was written, the construction of these lines was held in abeyance pending the settlement of the disputes in the labour and coal markets. In October, 1888, J. Cranston's tender for constructing these lines, amounting to £29,137 lls. ld., was accepted. The contract for erecting the engine house was let to J. Small for £10,742 7s. 10d. The building stands on a block of land at the corner of Abbotsford and Queensberry Streets, having a frontage of 132ft to the former by a depth of 165ft. The engines and machinery are generally similar to those of the Sydney Road engine house; the former were built and erected by Messrs. Hughes, Pye and Rigby at a cost of £2,300, and the machinery by Messrs. Wright and Edwards. The boilers, four in number, were made by the Langlands Co. and Messrs Johnson and Co., and cost £878 each. The North Melbourne line was opened for traffic on the 3rd March, 1890, the West Melbourne branch on the 18th April following."

#### From The Argus - 4th March, 1890

"The North Melbourne cable tramway was opened for traffic yesterday, and cars were run during the day from Flemington bridge to the terminus at Flinders street. The working of the points at the Victoria street crossing caused some delay at times, and threw the timetable on the Brunswick line into confusion, but it is expected that this trouble will soon disappear. Though the North Melbourne care are painted green, which is in strong contrast to the bright red of the Brunswick trams, a great many passengers intending to go to Brunswick yesterday failed to observe the difference, and had to change cars at Victoria street."

The North and West Melbourne lines were originally intended for horse traction but the success of the cable cars elsewhere caused the Company to alter plans. The routes were amended a few times before final decision and both had several curves. The North Melbourne line had five right-angled turns (two cables) and the West Melbourne line four (three after 1893) right-angled curves (three cables). Originally both services ran to Flemington Bridge terminal but after an early date - 16th August, 1893 - the West Melbourne service was terminated at the engine house with transfer tickets made available to through passengers. West Melbourne traffic was never very heavy and no real inconvenience was caused by the alteration to through running. On special occasions through running was effected and cars continued on to Flemington Bridge and the last cars each night ran through to the car shed.

When

When the Tramways Board decided to run electric cars from Essendon direct to the city, via Williams Street, the cable section along Flemington Road was discontinued. (This became effective on 19th July, 1925.) A dummy and car shunt was installed in Abbotsford St (Flemington Road corner) and the North Melbourne cars used this as their terminal until closure ten years later. As a result, the car shed at Flemington Bridge became redundant and an area was purchased in Howard Street, North Melbourne, just north of Victoria Street. Space for twenty-one trains was available, most of it in the open. An unslotted line led from the shed to the track in Victoria Street and both North and West Melbourne cars were housed. Upon closure of the lines all sets were transferred to Brunswick shed and the Howard Street property closed.

On 10th February, 1924 North Melbourne service was through-routed to St Kilda via the new section of track installed between Swanston and Elizabeth Streets in Lonsdale Street. This operation continued until the Flemington Road section of the North/West Melbourne services was cut and then North Melbourne traffic returned to the old terminal at Elizabeth/Flinders Streets. During the time of the through-routing the North Melbourne/St Kilda service operated under route colours of White with Amber light (West Melbourne changed to blue) but on resumption of the original route for North Melbourne service, the colours reverted to green. (Reference ROUTE COLOURS page 2).

A journey along the North Melbourne line - circa 1923 - was as follows:

Dummy and trailer were pushed from the car shed by hand and after coupling the rope was placed in the grip by hand operation. Upon signal, the tram proceeded along Flemington Road passing parkland on the left and residential area on the right. The track was in the centre of a very wide roadway and little traffic affected the running of the cars. Upon reaching Abbotsford Street, a stop was made and the conductor went forward to signal the gripman to proceed around (to the right) into Abbotsford Street. The rope was retained on the curve as the tram turned into Abbotsford Street. Trams now proceeded along Abbotsford Street picking-up and setting down many passengers until the engine house was reached at Queensberry Street. (The engine house was situated on the south/west corner).

/Just

Just before reaching the points at the corner, gripmen threw the suburban cable and came to a full stop. The city cable was picked-up by hand and retained whilst the tram turned into Queensberry Street and continued on to Errol Street (a very popular shopping area) where still another right-angled The cable was retained on this corner but at the next turn into turn was made. Victoria Street was released and the trams coasted around picking-up the same cable automatically. The journey now proceeded along Victoria Street (passing the site for the car shed in Howard Street en route - to the left) and then stopping before crossing the electric line in William Street. approached the wide area at the junction of Elizabeth Street with the huge Victoria Markets complex on the right. A full stop was made just before reaching Upon signal - from a flagman - the city bound North Melbourne Elizabeth Street. trams moved forward turning right into Elizabeth Street - accelerate, throw and coast then automatically picking-up to join the Brunswick service for the run through to the terminus at Flinders Street corner. Operation of grip movement was exactly the same as that described for Brunswick trams .. the cable being held all the way to the terminus.

FOR DESCRIPTION OF THE SHORT LIVED NORTH MELBOURNE - ST KILDA SERVICE see separate description under title "LONSDALE STREET EXTENSION - 1924).

On the return journey, trams proceeded across Collins, Bourke, Lonsdale to a point near Victoria Street. Upon signal from the flagman, North Melbourne trams moved forward, retaining the cable and turned left into Victoria Street. The points were always set for the turn as the cable was propelled from North There was usually a large number of passengers at this point mostly from shoppers at the markets. Across the electric line (William Street) then to Errol Street corner making the right hand turn (retaining the cable) and finally stopping just before Queensberry Street. To make the next turn, trams accelerated, threw the rope and coasted into Queensberry Street but gripmen did not collect the rope again as gravity carried the trams right to the Abbotsford Street corner and after turning right, the new short suburban cable was automatically collected. Only of necessity did trams stop before turning and if they had to gravitation still carried them around into Abbotsford Street. The journey continued on to Flemington Road (this was the terminal in July, 1925) and then the final turn was made to the left into Flemington Road. The cable was retained at this point and carried through to the terminus at Flemington Bridge. Thus a round journey of 5.83m had been completed by North Melbourne cars .. only two cables were used for the journey.

## A JOURNEY ON THE WEST MELBOURNE LINE - CIRCA 1923

As already mentioned, originally traffic on the West Melbourne line ran from Flinders Street to Flemington Bridge but was cut back shortly after the service began. At the peak of cable operation, the service was between Flinders Street/Elizabeth Street corner to the engine house viz:

As with Brunswick and North Melbourne services, the four cars operating the short and slower (about 11 mph) to West Melbourne shunted and then proceeded along Elizabeth Street crossing Collins and Bourke Streets and when a short distance from the facing points, gripmen threw the rope and immediately closed the jaws allowing the tram to glide to a stop just short of the turn. Whilst the conductor moved forward to alter the points and hold traffic to allow the tram to proceed, the gripman opened the jaws of the grip and the West Melbourne cable was inserted. The action of the grip was "pull-back" on the DOWN journey, consequently the gripman had to lean forward to complete the operation and he also moved the lever to one side to assist in picking-up the cable.

... continuing the West Melbourne journey, gripmen moved forward on signal and the cars were hauled around into Lonsdale Street proceeding up the incline to cross Queens Street and then stop at Williams Street outside the Law Courts on the left. After crossing the electric line, they proceeded downhill crossing King Street to stop at the right hand turn into Spencer Street. Accelerate, throw, coast and pick-up took the trams into the fairly wide Spencer Street and many warehouses and some residential areas were passed. The Stadium was to the left about half way along and when events were held there, additional cars from North Melbourne service and the long Brunswick bogie cars were diverted to assist to move the crowds. Apart from that, the traffic was light. The route followed a few slight turns until Abbotsford Street, when a right angled turn was effected and after ascending a slight incline, the terminus was almost reached.

/Just

COMMENT BY C.N. GOVETT: I insert the paragraph below in this MX COPY ONLY.

Full agreement could not be reached by my colleagues re the grip operation at the Lonsdale/Elizabeth Sts. corner so I wrote page 147 as above.

However notwithstanding I was too conversant with the movement to be overruled and following discussions with a former Chief Engineer, WM gripman, and MMTB officers plus my own knowledge am assured the paragraph below details the movement ....

(A description of the operation where two cables obviously ran parallel is described viz: North Melbourne and Brunswick cars which travelled straight ahead at this point retained the (NM powered) cable in their grips and continued their journey along Elizabeth Street. Both these services stopped well back from Lonsdale Street corner thus causing no interference to the West Melbourne pick-up nearer the turn. The West Melbourne gripmen threw the rope well back and as the pulleys were set further apart than the usual 33', the cable dropped well below that of the Lonsdale Street rope thus there was no chance of gripmen picking-up the wrong cable to make the turn. A movie film of this operation is to be seen on the Cable Tram Story 16mm film held by the MMTB.)

147

Just over the top of the incline the conductor released the trailer from the dummy and a long shunt effected. The dummy crossed to the UP line and the gripman collected the rope into the grip and then moved forward allowing the trailer to cross over the slotted shunt. The dummy was then eased back on to the trailer and all set for the return journey. This operation took place right outside the engine house which supplied the power for the journey by two cables ... one on the slower speed via Spencer Street then in Elizabeth Street when cars joined the North Melbourne and Brunswick cars in the city. On the journey into the city the cars moved along Abbotsford thence into Spencer Street (by coasting around the corner) and so to Lonsdale Street where again the rope was thrown to Along Lonsdale Street to a point about 70 yards from Elizabeth make the turn. Street when gripmen threw-the-rope and glided to a stop just near the right hand turn into Elizabeth Street. Upon signal the trams moved by gravity into Elizabeth Street and stopped about thirty yards around the corner. The grip jaws were open from the time of 'throw' in Lonsdale Street. At this point the cable was inserted into the grip by hand (drum) operation and the cars continued on to the terminus at Flinders Street - a round trip of 4.10m.

#### CLOSURE

After many years of successful operation, the North and West Melbourne services were closed on 20th July, 1935 and the following day MMTB buses commenced operation. As the Board had decided not to convert the West Melbourne section to electric traction, a permanent bus service was introduced. There were several letters to the press at the time with alternate suggestions, one being that a line be constructed across Elizabeth Street (at Lonsdale Street) to connect the West Melbourne service with the Collingwood line.

However, as the grip jaws of Carlton cars (Collingwood) opened facing north and those of West Melbourne cars opened south when travelling in Lonsdale Street, it was not possible to throughroute traffic without turning the grips.

It was also pointed out that two different engine houses supplied power for such lines and would not be practicable. This suggestion reflects the complete lack of knowledge of operating the system by most of the travelling public. Generally they had no idea of the mode of propulsion other than a cable ran under the road and rulled the tram along. How or where it was propelled meant little or nothing.

The last cars ran near midnight on Saturday 20th July, 1935 and regretably the usual vandalism that marked the termination of a cable service was in evidence. Several hundred spectators were on hand to see the final run and cheered the departure of the cars from the city terminal. At the North Melbourne terminal a large number of people gathered and as I had been associated with the services for the past three years, I was amongst them. With difficulty the North Melbourne tram was shunted and made ready for the final journey but it was not to be the last as a West Melbourne tram was shunted behind it having made its final run along Spencer Street and run straight through to Flemington Road terminus.

I well remember the young gripman shunting the car and trailer and then climbing on to the front of the dummy and carefully altering the destination blind from Flinders Street to Lonsdale Street and then moving to the rear and altering the destination blind from West Melbourne to depot. No doubt he was keen to be 'correct' right to the end. No alterations were made to the destination blinds on the North Melbourne tram. I was one of many passengers on the dummy of the North Melbourne tram and we slowly made our way along the old route for the last time, finally reaching the Victoria Markets where both trams were shunted and taken under propulsion to the Brunswick depot. So ended the services to North and West Melbourne .. both had given me much personal pleasure and a good insight into the system. Brunswick trams operated for some time along Elizabeth Street powered by the cable from North Melbourne.

## WEST MELBOURNE TRAMS

#### 'BUSES TO REPLACE THEM

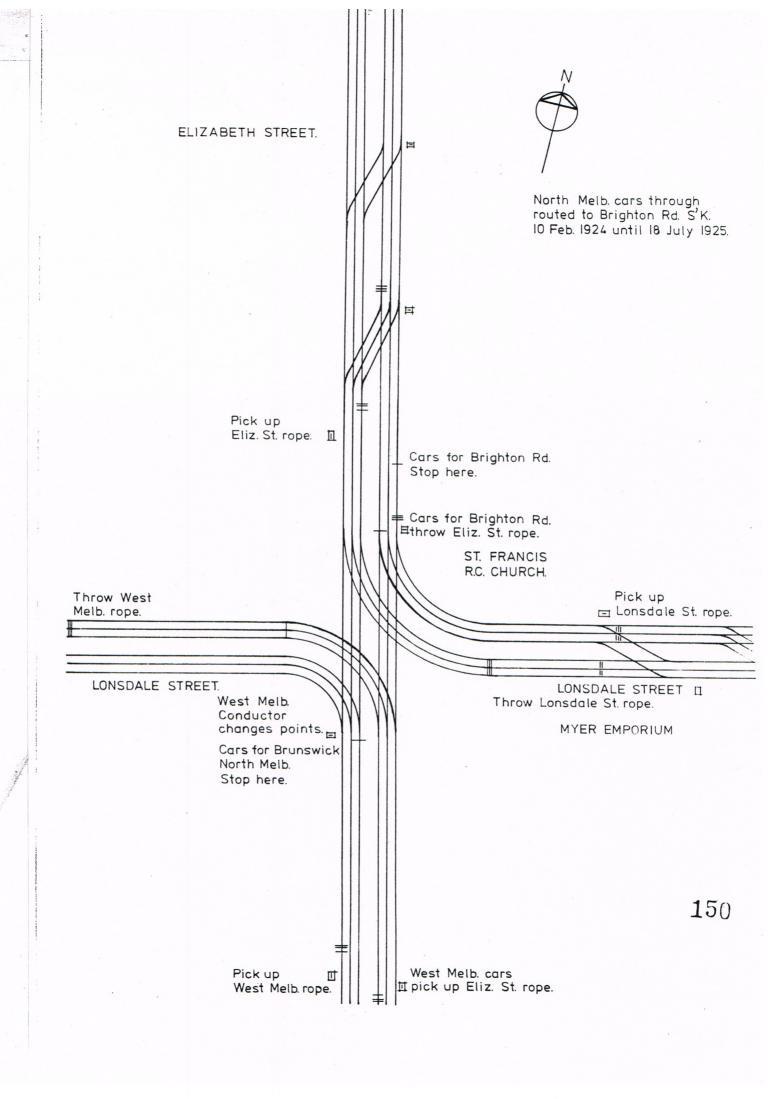
#### MAY RUN TO PRINCE'S BRIDGE

The Metropolitan Tramways Board decided yesterday to replace the West Melbourne cable trams with heavy oil 'buses. This decision was reached in view of the heavy loss which would be incurred if the West Melbourne cable service were continued after the North Melbourne cable line is converted to electric traction. It is probable that the 'buses will run down Queen street and along Flinders street, turning outside Prince's Bridge railway station.

station.

The West Melbourne line, which was opened in 1890, is two and a half miles in length. It is estimated that five 'buscs will be sufficient to accommodate the traffic on the route.

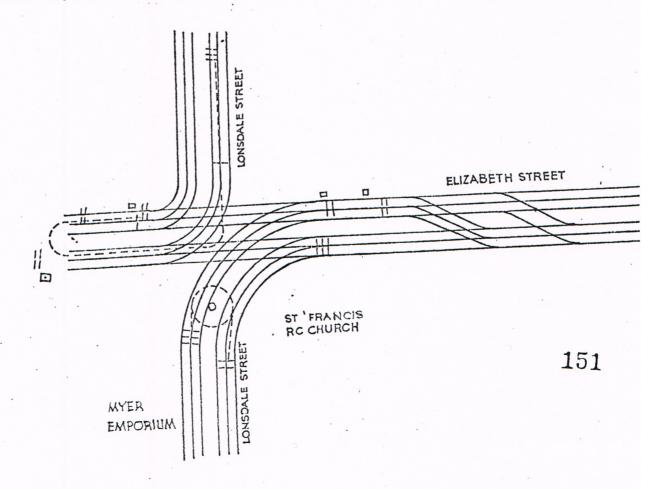
The board purchased recently two heavy oil bus chassis, which are now being fitted with bodies. It is probable that these buses will be used on the route.



## 12. Elizabeth and Lonsdale Streets

As cables were almost hidden from view, it could only be assumed what was happening underneath by observation from the streets. There was an ascending grade from Elizabeth Street into Lonsdale Street West. Cars were unable to coast but had to be hauled around. It was therefore necessary to bring the West Melbourne rope into Elizabeth Street some yards south of Lonsdale Street. After the rope was thrown some 70 yards from Elizabeth Street it would be held down to the bottom of the tunnel in order to pass under the outward Elizabeth Street rope, then it would be necessary to take it around a sheave to divert it south along Elizabeth Street to another sheave in order to turn it back into the Elizabeth Street "Down" tunnel where it was picked up before the left hand points into Lonsdale Street. West Melbourne cars stopped before entering Elizabeth Street on their way to Flinders Street and rolled around the corner. They did not stop until some distance along Elizabeth Street (about half way to Lt Bourke Street) where the rope for Flinders Street was picked up by hand.

There was also another operation at this intersection from February, 1924 until December, 1925. When North Melbourne cars through routed to Brighton Road, this was all done by coasting around; the sheave for the St Kilda - City rope was put in close to Elizabeth Street.



#### SOUTH AND PORT MELBOURNE LINES

Dates of opening: Sc

South Melbourne - Tuesday, 17th June, 1890 Port Melbourne - Friday, 20 June, 1890

Round trip:

South Melbourne 7.20m Port Melbourne 7.07m

Route colours:

South Melbourne - Green - Green light Port Melbourne - White - Amber light

Engine house:

In City Road about 200 yards from Clarendon Street corner. South Melbourne trams did NOT actually pass the engine house.

Cables:

Three - South Melbourne 22,626 ft
Port Melbourne 16,794 ft
City (Market Street) 10,815 ft

The South Melbourne cable ran in the city tunnel in City Road from the engine house to a sheave at the corner of Clarendon Street - thus two cables were in the one tunnel both up and down.

Speeds (in mph)

Both routes - City and Suburban

9 17th June, 1890 10 30th August, 1890 10.5 23rd September, 1902 12.5 29 November, 1913

Fares:

Through fares 2d. on both routes i.e. from terminal to Market Street corner.

See also separate schedule - FARES

General:

See General information

Both services were extended beyond the Market/Collins Streets' terminal - South Melbourne to North Fitzroy on 30th April, 1892 and Port Melbourne to Gisborne Street 21st April, 1893 Changes were effected later on occasions and when the Collins Street line was cut the services terminated again at Market Street and Collins Street.

The city cable length referred to above was from the engine house to Collins Street. The Fitzroy engine propelled the rope in Collins Street.

/This

This extract from the Chairman's report dated 19th August, 1892 gives a clear indication of the decision re the South and Port Melbourne lines - their construction, costs and linking with the Collins Street line.

"Port and South Melbourne Lines. --- On the completion of the Falls (now known as Queen's) Bridge it was discovered that it would be a very difficult and dangerous undertaking to bring the tramway along Queen Street, as it would entail crossing the Flinders Street line at an acute angle. An Act (No. 1031) was accordingly passed in November, 1889, allowing the tramway to be constructed along Market Street Provision was made in the Act that passengers should be instead. carried along the Collins Street line as far as Swanston Street for a single fare, but this necessitated the transfer of all traffic at Collins Street. Since the completion of the lines a connection has been made at this corner between the Collins Street and Market Street lines and an auxiliary cable laid to carry the cars round the sharp curve at this junction, which is situated at the apex of two steep gradients, and the South Melbourne cars are now run direct to North Fitzroy without any transfer. The Company has made a further concession by extending the terminus for the 3d. fare to Spring Street instead of Swanston Street, which is a great boom to passengers. The proposal to construct this junction created some opposition at the time, but after mature deliberation it was considered that it would be an improvement on the former arrangement. The following were the principal contracts in connection with this line:

- No. 120. Construction of South Melbourne Line T. Doran £14,566 7s. 9d.
- No. 121. Construction of Port Melbourne Line T. Doran £19,380 lls. 8d.

Unfortunately, Mr Doran died before the works were completed, and his executors carried on the work for some time; but this not proving satisfactory, the Trust eventually decided to let them complete contract No. 120 and to determine No. 121; and the contract for completing the latter work was accordingly let to J. Cranston for £13,357 13s. These changes occasioned considerable delay in completing the tramway. The engine house is situated on a block of land with a frontage of 122ft. to the Sandridge Road by an irregular depth of about 165 ft. The contract for erection was let to Messrs. Furneaux, Besley and Angel for £14,494. Not being situated exactly at the junction of the two lines, the South Melbourne cable had to be carried back in the rope tunnel to the Clarendon Street corner, a The engines and gearing are identical distance of some 1100 feet. with those of the North Melbourne engine house and supplied by the The boilers were made by Messrs. Forman and Co. and same makers.

/Robison

Robison Bros., Campbell and Sloss, and the machinery for this and the North Melbourne engine house was let to Messrs. Wright and Edwards for £21,581 5s. 2d.

Where the tramway passes over the railway at Park Street, the Railway Department, the South Melbourne Council, and the Trust agreed to combine to pay the cost of widening the bridge, which has been made 99ft. wide between the parapets."

The pits at the engine house on these lines were subject to much flooding especially if a high tide was in the Yarra River, causing obstruction to drainage. Bearings could not be properly greased at times and new cables suffered from water damage.

When the lines were constructed and ready for traffic, the following news item appeared in the Melbourne Argus ..

### 21st June, 1890

"The Tramway Company, by advertisement, announce the opening for traffic of their Port and South Melbourne lines. Although the terminus of both lines is at Market street, passengers can be transferred into Collins Street cars for the same fare, travelling as far as Swanston Street in the one direction, and Spencer Street in the other. On the return journey passengers can enter the Collins Street cars between Swanston Street and Spencer Street, going towards Market Street and be transferred at Market Street to either the Port or South Melbourne line for the same fare. The suburban terminus of the Port Melbourne line takes passengers to the piers, and that of the South Melbourne line to the beach and baths."

The city terminal of both lines was at the Market/Collins Streets corner but the Port Melbourne route was extended to turn into Collins Street and run through to Gisborne Street on 21st April, 1893. The destination boards carried the sign Spring Street and the route colour remained white with amber light.

The South Melbourne route underwent several changes - through routed to North Fitzroy on 30th April, 1892 (via Collins Street) only to be discontinued on 12th May, 1893. Commencing the next day, trams ran to Gisborne Street with destination board SPRING STREET. Through routing between South Melbourne and North Fitzroy was again effected between 4th December, 1920 until 13th July, 1929.

/PORT

#### PORT MELBOURNE LINE JOURNEY - CIRCA 1923

Commencing from the city terminal, trams traversed along Collins Street (see Collins Street line) until about twenty to thirty yards from Market Street corner stopping east of the points and curve into Market Street. Upon signal, gripmen accelerated, threw the rope and coasted to the left and, as a fairly steep incline was negotiated to Flinders Street, trams moved without propulsion to the foot of the hill stopping before again coasting across the Richmond line and automatically picking-up the (Port Melbourne propelled cable) just near the railway viaduct. (The Market Street cable was UNDER the Flinders Street cable at the crossing). Following a slight curve to the right, a slight incline was made over Queen's Bridge then with a slight decline to the south bank of the Yarra River another short curve took cars under the St Kilda railway viaduct. The route then followed Queen's Bridge Road and City Road to the Clarendon Street corner .. the South Melbourne line turned to the left and points were set for the curve so Port Melbourne conductors moved forward and held the points open for gripmen to proceed and carry the rope through to the engine house about three hundred yards further on in City Road. The engine house was situated on the left hand side of the road just before the St Kilda Railway line viaduct this being the second time trams had passed under the railway which curved to the left. At the engine house the city rope was thrown and trams coasted to automatically pick-up the Port Melbourne suburban rope. There was a slight deviation in the slot beams at this point. Trams then proceeded on along through shopping and residential areas, around several shallow turns and along Bay Street to the beach front.

The rope was thrown as trams turned to the right to run parallel with the beach and again picked-up automatically to carry trams past the car shed, on the right, about one block from the terminus. For shunting, the trailer was detached and the dummy ran around the crossover on a slight decline them, after the rope was picked-up, moved forward over the points allowing the trailer to roll around and the dummy moving back to be coupled.

On the UP journey the rope was thrown at the turn into Bay Street and then carried to the engine house. The city rope was collected automatically after passing the engine house and trams proceeded to the Clarendon Street corner stopping well back from the intersection. When ready to continue, the gripmen accelerated and threw the rope allowing the tram to coast over the trailing points (from South Melbourne) and then automatically collect the city cable again. Journey continued on crossing Queen's Bridge and a full stop was made under the railway viaduct. Upon signal, trams proceeded across Flinders Street following quick acceleration, throw, coast and pick-up (automatically) at the foot of the slope in Market Street.

/As

As the trams approached Collins Street, they were stopped some yards before the building line and conductors proceeded ahead on foot to signal the gripmen to make the turn into Collins Street. As the track ascended steeply to the curve, the maximum acceleration had to be obtained before releasing the cable and gripmen became very skilful in moving their trams (usually with many passengers aboard) around the corner (to the right) without the aid of propulsion. Upon straightening up, the Collins Street rope was automatically collected and the journey continued to Spring Street - the end of the line for Port Melbourne cars.

### THE SOUTH MELBOURNE LINE - CIRCA 1923

From the city end, South Melbourne bound trams followed exactly the same procedure as those for Port Melbourne turning left from Collins Street into Market Street and then proceeding to Clarendon Street corner. At the intersection (of City Road) trams stopped several yards back from the facing points (to the left): these points were set for the turn at all times. After acceleration, the rope was thrown and the tram entered the facing points at maximum speed and then made the turn into Clarendon Street which was slightly uphill. automatic pick-up for the South Melbourne rope was just around the curve. fact of entering the facing points on the curve at full speed was not an ideal arrangement and several nasty accidents took place at this point. The rope was carried along Clarendon Street (a wide shopping area) and around into Park Street. Just around the corner, a crossover for dummies had been installed. The rope was thrown at both the next two corners, Park into Montague and Montague into Bridport Streets. It was then carried to the terminus along Victoria Avenue where trams were shunted near the beach front. The car shed was on the right hand side of the road as the tram approached the terminus. The dummy went on to the end of the track and rolled back past the trailer which followed over its own crossover to be coupled for the UP journey to the city. Trailers were usually pushed by hand at the shunt although there was sufficient gravitation to allow it to move of its own accord. This is shown on a film taken at the terminus in 1937.

With the rope placed into the grip, the tram moved forward and gripmen carried the rope from Bridport Street into Montague Street but was thrown at the next two corners - Montague into Park and from Park into Clarendon. Before reaching City Road, the South Melbourne rope was finally thrown some distance before the corner and trams rolled down the slope to stop well back from the curve. The trams had to coast around the curve into City Road and pick-up the city cable automatically. The procedure was then as per the Port Melbourne cars operation into the city. South Melbourne cars continued on to North Fitzroy but when they were terminating in the city, the terminus was in Macarthur Place at the back of Parliament House. Two crossovers were used - dummies used the one furtherest from Spring Street.

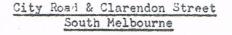
THE LATTER

## THE LATTER YEARS AND EVENTUAL CLOSURE OF THE PORT/SOUTH MELBOURNE SERVICES

When the Collins Street cable operation ceased on 12th Sept 1929, the Port and South Melbourne trams continued services by running to the original terminus at Market Street corner. Transfers were issued to passengers who had to change from cable/electric cars at this point. With through routing now not operative, fewer trams were required to maintain the services and the Port Melbourne shed was closed and all rolling stock housed at South Melbourne shed. This required a very early start for the first cars and Port Melbourne crews had to be on the road at 4.30a.m. to take their trams firstly to the city and then back to Port Melbourne. Consequently when the last services ran at night they were late 'signing off' having to run back to South Melbourne. Route colours were maintained as green and green light for South Melbourne Beach and white and amber light for The destination signs (blinds) read COLLINS STREET for city bound Port Melbourne. cars and SOUTH MELB. BEACH and PORT MELBOURNE for suburban destinations. As the time drew near for the closure of the services, it would appear the MMTB may have had ideas of continuing the Port Melbourne service for a time as points and rails were laid into the yard of W.G. Hicks Pty Ltd of City Road. However, the Port line closed at the same time as that of South Melbourne.

The lines closed on Saturday, 13th March, 1937. As usual there was a great deal of vandalism and the last cars were wrecked. At one stage on the South Melbourne line, the pin connecting the trailer and dummy was released and the two vehicles separated with many persons clinging to both. Police had difficulty in controlling the vandals. During the afternoon, horse drawn waggons took many of the dummies and trailers to northern depots for use on the remaining lines .. once the South and Port lines closed, all cable systems on the south side of the river ceased.

The South Melbourne line was converted to electric traction and the line followed over Spencer Street bridge and connected with the new Collins Street electric line. The Port Melbourne line was replaced by motor bus service and extended beyond the old cable terminus.



OUERILS ROAD

To Port Melbourne

ENGINE

The engine house drove 3 ropes -

one to Port Melbourne with a total length of 16794 feet;

one to Collins Street at top of Market Street with a total length of 10815 feet;

and the Clarendon Street to South Melbourn beach rope which left the engine house and used the same tunnel as the Market Street rope to the Clarendon Street junction.

Cars from South Melbourne for city

coasted around the corner.

South Melbourne for City

for Coasted around the corner.

To .. South Melbourne.

There was a large sheave pit approximately in the position as indicated by dotted line.

CITY ROAD

Oars bound for South Melbourne stopped about 20 feet before points.

When conductor signalled gripman to proceed he accelerated and threw rope just before reaching the points (normally set for the turn) and coasted around the curve to automatic pick-up at commencement of the straight.