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(Front cover) Flemington Racecourse signal box was opened on 31 October 1885 - just prior to the Spring Racing Carnival - as part of an expansion of facilities for race traffic. One hundred and twenty eight years later it is the oldest operational signal box in Victoria (and, indeed, Australia). However, it has probably worked its last Melbourne Cup as the new computerised signalling should be commissioned in 2014. In view of the impending resignalling, the society visited all the boxes on the Flemington Racecourse line during our 2013 Showday tour. Flemington Showgrounds box contains a 61 lever McKenzie and Holland Rocker frame - probably the original frame extended by 2 levers in 1888. The yard layout remained largely unchanged for 100 years, however it was simplified in 1985 to allow for wider track centres. A significant number of levers, particularly at the left hand end of the frame, were removed at this time. A small panel can be seen on the block shelf. This was provided in 2006 to work motorised derails. Curiously, Flemington Racecourse box is busier now than it has ever been before. Over the past decade Flemington Racecourse yard has been used to stable EMUs, requiring the box to be staffed every weekday. (Photo Andrew Waugh)

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MINUTES OF MEETING HELD FRIDAY 20 SEPTEMBER, 2013, AT THE SURREY HILLS NEIGHBOURHOOD CENTRE, 1 BEDFORD AVENUE, SURREY HILLS

- Present: – Ken Ashman, Brett Cleak, Ross Cropley, Glenn Cumming, John Dennis, Graeme Dunn, Michael Formaini, Ray Gomerski, Chris Gordon, Judy Gordon, David Jones, Chris King, Tony Kociuba, Keith Lambert, David Langley, Andrew McLean, Trevor Penn, Alex Ratcliffe, Brian Sherry, Rod Smith, David Stosser and Andrew Wheatland.
- Apologies: – Wilfrid Brook, Steven Dunne, Bill Johnston, Steve Malpass, Tom Murray, Greg O'Flynn, Laurie Savage, Peter Silva, Stuart Turnbull and Bob Whitehead.
- Visitors: – Bruce Bennett and Neil Lewis.
- The President, Mr. David Langley, took the chair & opened the meeting at 20:05 hours.
- Minutes of the July 2013 Meeting: – Accepted as read. Rod Smith / Alex Ratcliffe. Carried.
- Business Arising: – Nil.
- Correspondence: –Letter to Trevor Wyatt at Metro Trains seeking permission for the Signal Box tour on Saturday 14 September 2013.
- Tony Kociuba / Ray Gomerski. Carried.
- Reports: – Glenn Cumming reported that the tour held on Saturday 14 September 2013 was successful. Ken Ashman moved a vote of thanks to Keith Lambert for his assistance on the day. Seconded by David Stosser. Carried with acclamation.
- General Business: – Keith Lambert provided details about various works in the Metropolitan District. A summary of the discussion follows: –
- * Package "C" of works for Regional Rail Link commences on 3 October 2013 and will include the abolition of West Footscray Signal Box.
 - * Platforms 15 and 16 at Spencer Street Station will be brought into use on 20 October 2013.
 - * The grade separation works at Springvale Road, Springvale, have commenced.
 - * There will be a shutdown between Blackburn – Ringwood during January 2014 for works associated with the grade separation at Mitcham.
 - * Additional signals will be provided between Aircraft – Williams Landing in March 2014.
 - * The pedestrian gates at New Street, Brighton, will close on 20 October 2014 and boom barriers will be commissioned one month later.
 - * Tenders have been called for the signalling works associated with the new station at Grovedale.
 - * The tramway catch points at Riversdale will be removed on 20 October 2013 and replaced by traffic lights.
- Chris Gordon advised that the SSI at Spencer Street will be replaced by a "Smartlock" system in early October 2013.
- Brett Cleak noted that the contract had been let for ARTC Passing Lane 1 between McIntyre Loop –

Tullamarine Loop.

Keith Lambert advised that the curves on the Burnley Lines at Richmond will be laid on concrete sleepers during October 2013.

Chris King discussed his observations of aspects on Down signals between Fawkner – Gowrie.

Syllabus Item: - The President introduced Member Ken Ashman from Hamilton, New Zealand, to present the Syllabus Item.

Ken gave a presentation on the electrification and re-signalling of the Auckland rail system. This is a project that Ken has been closely associated with.

Ken displayed a variety of images showing the various works that are taking place around Auckland.

The presentation was thoroughly enjoyed by those present.

At the completion of the Syllabus Item, Ken was thanked for the entertainment & this was followed by acclamation from those present.

Meeting closed at 23:15 hours.

The next meeting will be on Friday 15 November, 2013 at the Surrey Hills Neighbourhood Centre, Bedford Avenue, Surrey Hill, commencing at 20:00 hours (8.00pm).

SIGNALLING ALTERATIONS

The following alterations were published in WN 33/13 to WN 40/13 and ETRB A circulars. The alterations have been edited to conserve space. Dates in parenthesis are the dates of publication, which may not be the date of the alteration.

- | | | |
|---------------------|---|--|
| 17.06.2013 | Flinders St | (SW 279/13, WN 38) |
| | On 17.6., No 1 West Track was booked out of use due to track condition. Points 45 are secured reverse, and Points 40 and 48 are secured normal. | |
| 11.08.2013 | Southern Cross - South Kensington | (SW 177/13, WN 33) |
| | From 2359 hours, Sunday, 14.7., the signalling on the Up and Down RRL lines between Southern Cross and South Kensington was taken out of use. Absolute Occupation of Platforms 15 & 16, the Up and Down RRL lines, and the Arrival Sidings was instituted. The signalling for the Through Siding (as shown in SW 130/13) will remain in service to permit train movements between the Bypass Tracks and North Dynon Yard. SW173/13 & 235/13 were cancelled. | |
| 14.08.2013 | Elsternwick | (SW 248/13, WN 33) |
| | On Wednesday, 14.8., the emergency crossover was booked back into service. SW 232/13 is cancelled. | |
| 15.08.2013 | Warragul | (SW 181/13, TON 167/13, WN 33 & 34) |
| | On Thursday, 15.8., Nos 5 to 8 Roads and the sidings at the Up end of No 8 Road were abolished and will be removed. No 2 Road remains available for use, and No 3 Road is only available for storing track machines. The Car Dock/Loop sidings and No 4 Road were placed out of service. Amend Diagram 24/12 (Warragul - Yarragon). | |
| 18.08.2013 | Mathoura | (TON 168/13, WN 34) |
| | On Sunday, 18.8., the siding was booked out of service due to sleeper condition. | |
| (20.08.2013) | Heathcote Junction - Kilmore | (SW 179/13, WN 33) |
| | Diagram 66/13 (Heathcote Junction - Kilmore) replaced 10/09 as in service. | |
| (20.08.2013) | Mooroopna - Shepparton | (SW 180/13, WN 33) |
| | Diagram 60/13 (Mooroopna - Shepparton) replaced 64/12 as in service. | |
| 26.08.2013 | Springvale | (SW 237/13, WN 33) |
| | On Monday, 26.8., the following alterations took place due to construction work for the grade separation at Springvale Road. | |
| | * Home WTL794 was replaced by a ground mast and co-acting signal WTL794P was abolished. The new Home WTL794 is a tilt mast but must not be lowered unless full track force protection or absolute occupation is in force. | |
| | * The Down side boom barrier mast located in the centre of Springvale road was removed. The remaining boom barrier on the Down side of the line was replaced by a boom of 12.2 metres, and the mechanism was replaced by an S40 mechanism. | |
| | * The Up end of the Down platform was reduced in length by 2.2 metres. | |
| | Amend Diagram 7/12 (Clayton - Springvale). | |
| (27.08.2013) | Goornong - Elmore | (SW 182/13, WN 34) |
| | Diagram 38/13 (Goornong - Elmore) replaced 32/12 as in service. | |
| (27.08.2013) | Shepparton | (SW 183/13, WN 34) |
| | Operating Procedure 110 (Shepparton) has been reissued and SW 54/12 is cancelled. The new procedure clarifies that the medium speed aspect on SHP10 need only be observed until the train clears the points. | |

- 03.09.2013 Ballarat - West Siding** (TON 188/13, WN 37)
On Tuesday, 3.9., Ballarat West siding was booked out of service due to sleeper condition. Points 9 were secured normal.
- 04.09.2013 Sheep Hills** (TON 182/13, WN 36)
On Wednesday, 4.9., the Up end of the siding will be temporarily booked back into service to allow Goods 9784 to pick up two wagons placed in the siding after a derailment last month. After the wagons have been picked up the siding will be booked out again.
- 09.09.2013 Springvale** (SW 257/13, WN 35)
On Monday, 9.9., the connections to the Westall sidings at the Down end were removed. Sidings A and B have been temporarily reduced in length and baulks and buffer lights provided. Siding A is now 190 metres long, and Siding B is 350 metres in length. The dead end extension of Siding A was removed. The loop in the Hansen (Apex) Siding was extended 180 metres in the Down direction to give 320 metres standing room in the loop.
Points 647 and Derail 698 were removed. Dwarfs WTL746, WTL748, WTL751, and WTL798 were removed. Dwarf WTL769 was secured at Stop.
Diagram 59/13 (Clayton - Springvale) replaced 7/12.
- 09.09.2013 Dandenong** (SW 262/13 & 268/13, WN 35 & 36)
On Monday, 9.9., Homes DNG719 and DNG729 were converted to TC2 LED signals. Large type shelf relays were also changed over. Diagram 85/13 (Dandenong - Hallam) was a non-issue.
- (10.09.2013) Book of Rules Section 15 - Track Warrants** (SW 189/13, WN 36)
When a Track Force Co-ordinator requests the issue of a Track Warrant, the boundaries must be specified by 1) the distance (km), 2) a signal post, 3) system signage, or 4) other defined point.
- (10.09.2013) Williams Landing** (WTT 2007/13, WN 36)
Add to System Description (Addenda): 'Williams Landing', 23.477 km, not staffed, Up platform 175m & Down platform 161m..
- (10.09.2013) South Morang** (WTT 2007/13, WN 36)
Add to System Description (Addenda): 'South Morang', 26.053 km, staffed from first to last train, Up and Down platforms 174m.
- (10.09.2013) Cardinia Road** (WTT 2007/13, WN 36)
Amend System Description (Addenda) to read 'Cardinia Road', 53.796 km, not staffed, Up and Down platforms 160m.
- (10.09.2013) Lynbrook** (WTT 2007/13, WN 36)
Amend System Description (Addenda) to read 'Lynbrook', 39.585 km, not staffed, Up and Down platforms 160m.
- (10.09.2013) Mordialloc** (SW 273/13, WN 36)
Commencing forthwith, all Down Long Island steel trains are to be routed via No 1A Road (the straight road).
- (17.09.2013) Warrnambool - West Vic Siding** (SW 193/13, WN 37)
Diagram 2/13 (Warrnambool - West Vic Siding) replaced 26/12 as in service.
- (17.09.2013) Traralgon - Sale** (SW 194/13, WN 37)
Diagrams 46/13 (Traralgon) and 24/13 (Rosedale - Sale) replaced 14/12 & 40/12 as in service.
- 19.09.2013 Dunolly** (SW 191/13, WN 37)
On Thursday, 19.9., new location boards, situated 2500 metres from the home signals, replaced the existing location boards on all three approaches. The boards are reflective and have a yellow triangle with black text. Location clearance signs will be provided on the rear of all location boards. Amend Diagram 136/11 (Dunolly).
- (24.09.2013) South Kensington** (SW 278/13, WN 38)
Instructions were issued to cover the failure of Home signals and Points at South Kensington. SW 166/13 is cancelled.
- (24.09.2013) Pyramid - Kerang** (SW 197/13, WN 38)
Diagram 54/13 (Pyramid - Kerang) replaced 30/13 as in service.
- 24.09.2013 Mildura** (TON 201/13, WN 40)
On Tuesday, 24.9., the Mildura Car Shed/Turntable Rd intermediate siding was booked back into service for track machine use only. Baulks have been provided in the siding at 609.600 km. TON 314/11 is cancelled.
- 24.09.2013 Mathoura** (TON 202/13, WN 40)
On Tuesday, 24.9., siding was booked back into use for track machine use only. TON 168/13 was cancelled.
- 27.09.2013 Epsom** (SW 195/13 & 198/13, WN 38)
On Friday, 27.9., boom barriers were provided at the existing flashing lights at Golf Course Road (168.905 km). Operation will continue to be by axle counters. Healthy state indicators, yellow whistle

boards, and remote monitoring have been provided. Diagram 58/13 (Goornong - Elmore) replaced 38/13.

27.09.2013 Mitcham (SW 283/13, WN 38)

On Friday, 27.9., the overhead wiring over Crossover 19 was removed. This crossover is no longer available for electric traction.

29.09.2013 Metrol (SW 284/13, WN 38)

Between 0300 hours Sunday, 29.9., and 0300 hours Monday, 30.9., Metrol was temporarily transferred to the new TCMS facility.

(01.10.2013) Toolamba (SW 200/13, WN 39)

Operating Procedure 109 (Toolamba) was reissued and SW 1125/01 was cancelled.

The changes reflect the upgrading of signage (see SW 199/13) and altered instructions for the issue of Train Orders.

When a Down train from Seymour is to proceed to Echuca, the train will be issued with a Train Order to Toolamba BP. On arrival at the Toolamba, a Train Order will be issued to Echuca when the Train Controller has confirmed with the Signaller that the junction points have been reversed. The suggested wording of the Train Order is "Toolamba Block Point Proceed to Echuca".

An Up train from Echuca will be issued with a Train Order to Toolamba Junction. On arrival at the Toolamba, a Train Order will be issued towards Seymour or Shepparton when the Train Controller has confirmed with the Signaller that the junction points have been reversed. The suggested wording of the Train Order is "Issued at Toolamba Junction Proceed to..."

When a Train Order has been issued for a train from Echuca to proceed to Shepparton, a Train Order may be issued for a second Down train to proceed to Murchison East. When a Train Order has been issued for a train from Echuca to proceed towards Seymour, no Train Order can be issued for an Up train from Shepparton until the first train has departed complete from Toolamba Block Point.

When a Down Train Order has been issued for a train on the primary corridor for the Echuca line, no Train Order can be issued for an Up train beyond Shepparton. When a Down Train Order has been issued for a train to Shepparton, an Up train from the Echuca line can be issued with a Train Order towards Shepparton when the Signaller at Toolamba has confirmed that the Down train has passed the Up location board at Toolamba complete and is proceeding towards Shepparton.

Through Train Orders between Seymour and Echuca (and vice versa) are permitted provided the Signaller is in attendance at Toolamba prior to the issue of the Train Order and has confirmed that the points are reverse for the movement. The Signaller must remain in attendance, and the points kept reverse, until the passage of the train. On approaching Toolamba the Driver must contact the Signaller to confirm that the points are lying reverse for the movement. If the Signaller cannot be contacted, the train must be brought to a stand at the Block Point (Down trains) or Stop Board (Up trains).

Through Train Orders between Shepparton and Echuca (and vice versa) are NOT permitted.

03.10.2013 West Footscray (SW 285/13, WN 39)

Between Thursday, 3.10., and Friday, 12.10., the new West Footscray station was brought into use.

The existing station buildings and platforms were demolished. The Up and Down lines were slewed to a new alignment between 6.980 km and 7.765 km. The new island platform (160 metres long), station buildings, and footbridge were brought into use (about 200 metres west of the old station). The footbridge is at 7.186 km and the station is at 7.325 km.

West Footscray signalbox was abolished (and demolished). Homes 2 & 35, Dwarf V2, and Automatics M277 & M280 was abolished. Automatics M283 (7.120 km) and M286 (7.220 km) were provided. Both are LED signals. Automatic M303 was relocated 34 metres in the Up direction to 7.720 km and upgraded to LED. Automatics M269, M322, & M304 were upgraded to LED.

Diagrams 89/13 (Footscray - Spotswood) & 51/13 (West Footscray - Tottenham) replaced 69/13 & 26/13.

03.10.2013 Toolamba - Echuca (TON 198/13 & 203/13, WN 40)

On Thursday, 3.10., the line between Toolamba and Echuca was booked back into service and reopened for traffic. The line is worked by the Train Order System with the section Toolamba - Echuca.

The baulks on the line at Echuca (on the Up side of the Murray Valley Highway) have been removed.

The level crossing protection at Mooroopna - Murchison Rd (168.493 km), Casey St (177.394 km), Hogan St (177.551 km), Park St (177.967 km), Ross St (178.336 km), Midland Hwy (181.694 km), Kyabram Rd (189.150 km), Allen St (198.943), Albion St (199.350 km), Church St (199.851 km), Kyabram Rd (210.674 km), and Cornella Creek Rd (230.793 km) were booked into service.

TON 313/11 is cancelled.

04.10.2013 Macaulay - Stabling Sidings (SW 298/13, WN 41)

On Friday, 4.10., Sidings 5, 6, and 7 were booked out due to a WorkSafe issue. The points were secured to lie for Sidings 3 & 4. Two Hitachi 6 car sets are stabled in Sidings 6 & 7.

06.10.2013 Southern Cross (SW 206/13, WN 40)

On Sunday, 6.10., the Southern Cross No 1 Signal box North and South SSI units located at Southern Cross SERB will be transferred to new virtual interlockings within the SmartLock system located at Dudley St SER.

BLOODSTOCK AND LIVESTOCK THE FLEMINGTON RACECOURSE LINE, PART 2

In the previous part of this article, the history of the Flemington Racecourse line up to the mid 1890s was presented. This section will take the story up to 1919, just prior to the installation of two position automatic signalling. Unlike the previous section, which had very little signalling interest, there is a great deal more signalling information available for the period covered by this article. This is not to say, however, that the answers to all questions are known!

During this period official Departmental publications largely ignored the line - it is not listed in the WTT, for example. However, where it was mentioned the line was consistently referred to as the 'Flemington Racecourse line'. The stock sidings were referred to as the 'Newmarket Cattle Yards (1897 GA)', 'Cattle Sidings' (1908 GA) and the 'Cattle Siding' (1917 Grades Book). The show grounds platform was referred to with some variation of 'Show Grounds platform'. The various editions of the 'Book of Signals' consistently used the names 'Show Grounds Box' and 'Racecourse Box'. In this article, I will use the names 'Newmarket Cattle Siding', 'Show Grounds platform', 'Show Grounds Box', and 'Flemington Racecourse'.

A review in 1897

The diagram on the next page is a reconstruction of the probable layout of the line in 1897. It is based on information in later diagrams, Weekly Notices, and MMBW plans.

Starting from Newmarket, Dalgety's siding was located immediately on the inside of the curve and extended from the end of the Down Newmarket platform to a set of trailing points in the Down Racecourse line. At this date the siding consisted of a platform line, serving the loading platforms, and a loop line. An intermediate crossover was provided between the two lines.

Slightly further in the Down direction, roughly where the Racecourse line straightens out, was the entrance to the Newmarket Cattle Siding. The MMBW plans, and also survey plans, are clear that at this time there was only one track serving the livestock pens. Trailing connections were provided to the Up line at the Up end and the Down line at the Down end. The (fire)wood siding was a dead end extension of the livestock siding at the Up end, but this had its own trailing connection to the Down line. There was definitely a trailing main line crossover near Ascot Vale Road, and the trailing connection to the Up line at the Up end probably also included a trailing crossover. The Register of Signals at Non-interlocked places is clear that 'Newmarket Cattle Siding' had a home and distant signal; these were almost certainly Down signals with the distant on Post 26 at the junction and the home on Post 49. They would have been worked from quadrants near the yard office, and this is likely to have been at the Up end of the livestock sidings (where they were in later years). Post 50 was the Up Distant for Newmarket. No signalling was provided at Ascot Vale Road gates, nor did the livestock sidings extend on the Down side of these gates.

Operation of the sidings in the Newmarket area was probably reasonably simple. Livestock would have been tripped to Newmarket from Melbourne Yard by pilots. These would arrive on the Down line, and shunt to the livestock siding from the Down line beyond Ascot Vale Rd. Empty trucks would be picked up from the Up end and worked back to Melbourne Yard by the returning pilots. Trains from the North East would directly drop off trucks at Newmarket. Whole trains could be shunted back from

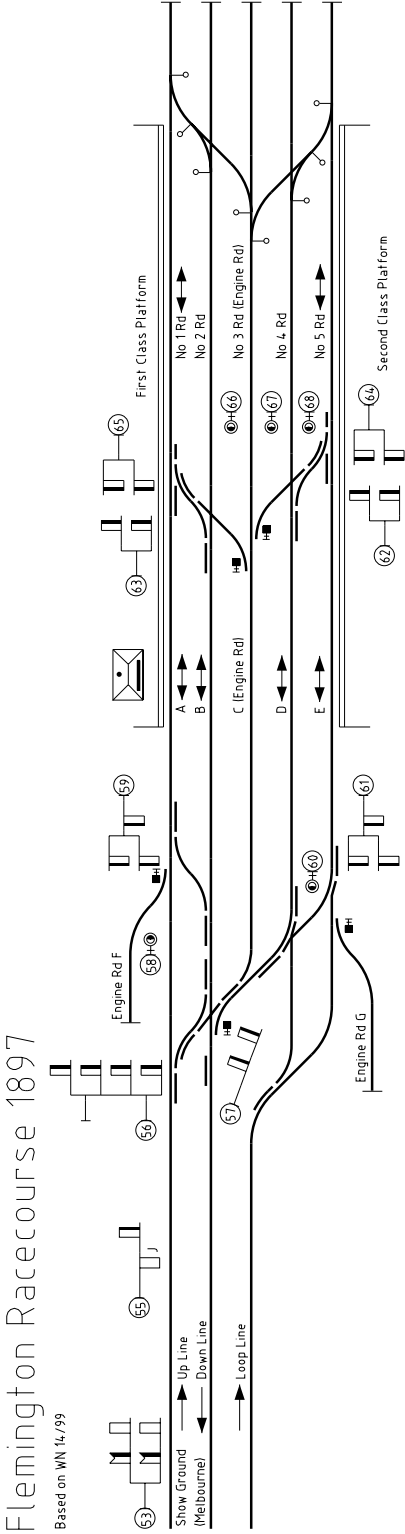
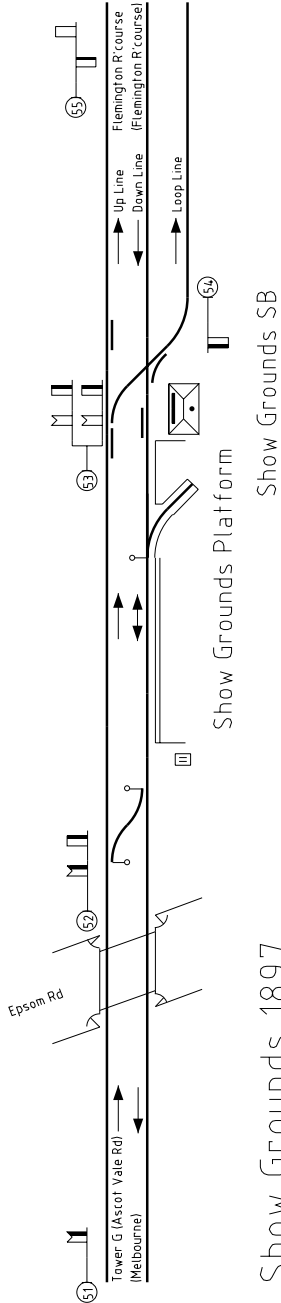
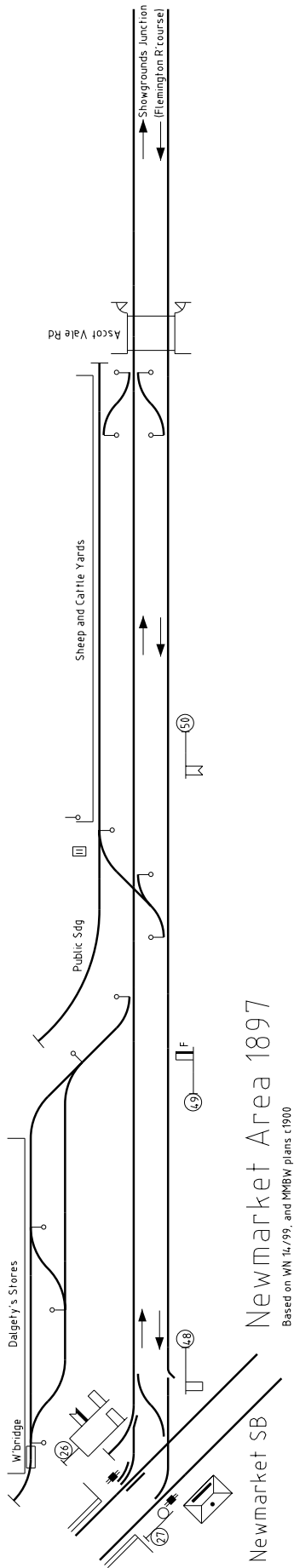
the Up line, either directly into the livestock siding or pushed back onto the Down Racecourse line. Dalgety's siding, and the wood siding would have been shunted from the Down line.

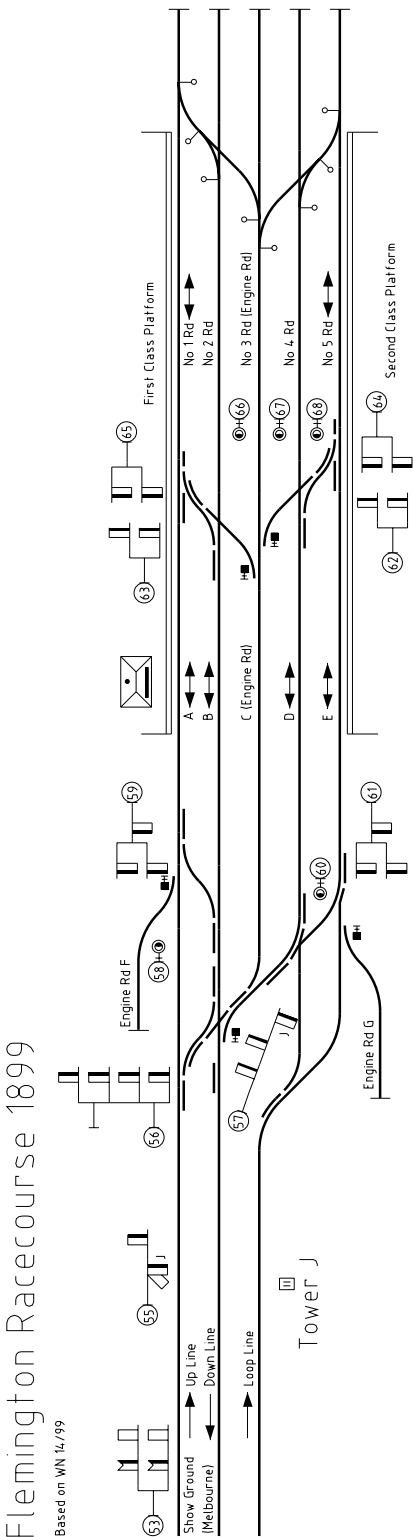
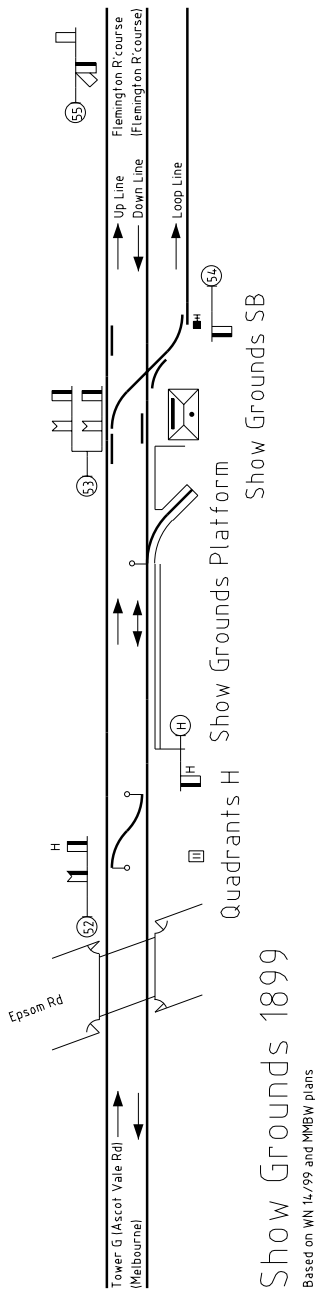
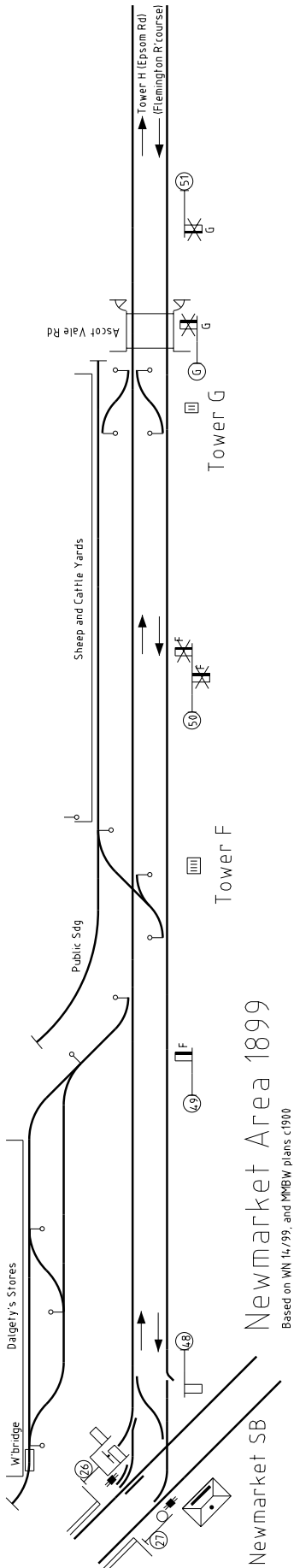
At this time, Show Grounds platform had a curious layout. The platform was situated on the Up side of the line adjacent to the showgrounds (where it is today). The odd feature was a dock siding situated about two thirds of the way along the platform. The distance from the ramp at the Up end of the platform to the toe of the dock points was just over 6 chains or around 400 feet. The four and six wheeled passenger carriages were around 30 feet long, and so the Up end of the platform could accommodate around 13 vehicles. The down end of the platform was less than half that in length. Consequently, it is likely that the Up end of the platform was used for the passenger trains, and the Down end and Dock for exhibits. The dock, incidentally, was around 170 feet long.

A hand worked facing crossover was provided at the Up end of the Show Grounds platform to allow arriving trains access to the platform. This was protected by a Down distant and Home, probably worked from quadrants adjacent to the Epsom Road gates and the crossover. The facing crossover was only used for show traffic, and would have been secured normal for race traffic (and possibly even had the point blades removed). It is quite possible that the Show Grounds Box was not opened for Show traffic. If the show service was sufficiently frequent, the platform could have been worked by drop on engines. A Down train would arrive through the crossover into the platform. The engine would cut off, and a fresh engine would drop onto the Up end of the train. The train could then depart directly for Melbourne on the Up line. The first engine would follow the departing train and come to a stand on the Up line beyond the crossover, ready for the next train.

At the Down end of the Show Grounds platform was Show Grounds Box. At this box Down second class trains for the Racecourse could be diverted onto the Loop Line, while first class trains continued down the Down Line. The second class trains, of necessity, crossed the Up Line, and it appears that an Up Outer Home signal was provided to hold Up trains well back from the point of conflict.

Flemington Racecourse was a complex layout designed to handle a large number of terminating or originating trains in a short time. Two platforms were provided, each of which could hold two trains. The platform on the Down side, closest to the grandstand and racecourse, was used for first class passengers, while the other platform was used for second class passengers. Engine sidings were provided at the Up end of each platform. Operation in peak periods was probably as follows. Two trains of a single class would arrive into the platform. While the passengers disembarked, the engine of the first train would cut off and run forward. The engine of the second train would likewise cut off, and run forward to couple up to the rear of the first train. In the meantime, a spare locomotive standing in the engine siding would run out and couple to the rear of the second train. The trains would then depart for Melbourne, with the locomotive off the first train following behind and into the engine road to wait for the next pair of trains to arrive. When things were working well, trains would have probably arrived and departed from each platform alternately; this would have helped crossing the Down second class trains across





the Up trains at Show Ground Box. By-pass roads (A and D) were provided to allow trains from the lower platform to run-around trains in the upper platform in case of delay. The middle road (C) was often referred to as an Engine Road, while the bottom roads would have been used to store rakes of carriages between the morning arrivals and the evening departures from the Racecourse. This would have allowed the railways to quickly put on a couple of trains in the event of sudden inclement weather. Flemington Racecourse was fully interlocked from a large signal box.

Safeworking during passenger traffic were by flag signalmen stationed at regular intervals along the line. These would have displayed a green hand signal when the line was clear to the next flagman, and a red hand signal otherwise.

Signal towers

On 31 October 1899 the safeworking for passenger traffic on the Racecourse was upgraded (it is interesting to note just how many signalling alterations on the Racecourse line were brought into service at the end of October - just before the start of the Spring racing carnival). The hand signalmen were largely dispensed with and permanent 'Signal Towers' were provided to work fixed signals. None of the Towers contained an interlocking frame and the signals were worked by ordinary levers.

Safeworking continued to be by visual observation of the occupancy of the line and block instruments were not provided. In 1908 the instructions for working the line were quite simple "When a Show train is on this Section [Newmarket to Racecourse] the Signal protecting it must be kept at "Danger" till a following train has nearly approached and its speed has been reduced to 4 miles per hour, after which a Green Hand-signal may be given and the "Danger" Signal lowered; this will authorise the Driver to proceed as far as the Line is clear, but not past the next "Danger" signal."

Signal Tower F was provided at the Up end connections to the Newmarket Cattle Siding and worked the Down Home on Post 49, together with new Up and Down Homes on Post 50. The Newmarket Up Distant was abolished, together with the Down Distant for the Cattle Siding. The Weekly Notice does not mention whether the existing quadrant that worked the Down Home for the Cattle Yards was retained. It is quite likely, as Tower F was only used during special traffic and the quadrant would have continued to be necessary to protect the sidings during working of the cattle sidings.

(As an aside, Signal Towers 'A' to 'E' were located between Spencer Street and Newmarket.)

Signal Tower G was located on the Up side of Ascot Vale Road. This worked new Down and Up Home signals, which also protected the hand gates. The Down Home was on a new Post G, while the Up Home replaced the Show Grounds Down Distant on Post 51.

It appears that the existing quadrants at Epsom Road were simply renamed 'Quadrants H'. A new Up Home was provided on a new Post H.

The situation between Show Grounds and Flemington Racecourse is slightly obscure. Signal Tower J was provided about half way between these two locations, and it initially worked two Up Homes only. These were a new Up Home on Post 57 at the exit of Flemington Racecourse yard, the existing Up Home on Post 55 (which continued to be controlled by Show Grounds Box). The provision of Tower J allowed the movement of Up trains on the bank up to Show Grounds to be directly controlled by a dedicated

Signalman. At some later date, at or before 6 June 1904, Signal Tower K was provided at the foot of Post 57 to work the Up Home on that Post. Tower J then only controlled the Up Home on Post 55.

In August 1904 the GST suggested that the 'Signalman's Temporary Posts' between Spencer St and Flemington Racecourse be distinguished by a particular mark. This probably referred to actually painting the identifying letter on the Towers. The work was completed in August.

At least in the first decade of the twentieth century, it was noted that on some occasions when passenger trains ran, hand signalman continued to be used to divide the sections on the Up line between Tower H (Epsom Rd) and Tower G (Ascot Vale Rd). For the Royal Review on 10 May 1901 (held as part of the establishment of the Commonwealth), additional block posts using hand signalmen were established on the Up line between Show Grounds signal box and Epsom Rd, and between Epsom Rd and Ascot Vale Rd.

Alterations at Newmarket Cattle Yards

WN 23/04 notes that Diagram 375/04 was issued on 6 June 1904 in conjunction with track alterations at Newmarket Cattle Siding. I have not sighted a copy of the diagram, and the Weekly Notice does not detail the alterations. However, it would appear that this marks the provision of the second siding (later known as the 'Independent Road') at the Cattle Yards. Given the cost of altering the livestock platforms, it is likely that necessary space for the new siding was obtained by relocating the main lines (with Towers F and G) further northwards. The connections between the cattle sidings and the main lines were extensively altered, and a lengthy head shunt was provided on the Down side of Ascot Vale Rd. The track layout shown in this diagram is based on that in existence in 1908.

From a signalling perspective, the only real change was a minor alteration at Tower G (Ascot Vale Rd) where Post G was abolished, and Post 51 was relocated to the Up side of Ascot Vale Road. The Down Home formerly on Post G was placed on the relocated Post 51. The hand gates at Ascot Vale Rd were likely replaced by the long four track gates at this time.

The Epsom Road electric tramway

On 11 October 1906 a double track electric tramline was opened in Epsom Rd by the North Melbourne Electric Tramways and Lighting Co Ltd. This formed part of the line from the cable tram terminus at Flemington Bridge to the Saltwater (now Maribyrnong) River, and is now part of Route 59*. At Epsom Road, the new tramline crossed the Racecourse branch on the level.

This was the second location in Victoria where an electric tramline crossed the Victorian Railways on the level. The first electric tramway crossing was at Lydiard St, Ballarat. Electric services in Lydiard St had commenced on 30 August 1905, replacing an earlier horse line. At Lydiard St, no special protection was provided to protect the railway line from wayward trams beyond the normal interlocked gates. Indeed, no tramway signals or catch points were ever provided at Lydiard St.

When the tramway was built across Epsom Road things were different. Signal Tower H, containing an 8 le-

* *Time-Line History of Melbourne's Government cable and electric trams and buses*, George, Storey & Birch, *Electric Tramways of Essendon*, Richardson, Traction Publications, 1956

ver interlocking frame with 2 spaces, replaced Quadrants H on 4 September 1906 in preparation for the tramway. Tower H now worked the facing crossover at the Up end of the platform and associated signals during passenger traffic, but it did not work the Epsom Road gates which remained hand worked. When passenger traffic was not operating, the facing crossover was disconnected from the frame and worked by hand levers.

The two spare levers in the frame were brought into use on 10 October 1906, the day before the tram line was opened, to work the new signalling for the tram line. Protection from the trams generally followed later practice. Catch points were provided in each tramline to derail approaching trams if the gates were shut. Disc signals were provided adjacent to each catch point, and these were worked from the catch levers through escapement cranks. The only difference with later practice was that the Epsom Rd gates remained hand worked. Normally, the hand gates were secured across the line with the tramway catches closed. When it was necessary to work a good train to Show Grounds or the racecourse, a competent employee was sent from Newmarket to take charge of Tower H. During race or special traffic, the gates were normally kept across the roadway and operated by gatekeepers under the direction of the signalman in Tower H. The tramway company, incidentally, was responsible for the lighting of the lamps in the tramway discs. Given that the company was primarily interested in selling electrical power, it is quite likely that the lamps were electrically lit.

On 27 August 1907, wicket gates were provided at Epsom Rd. To work the wickets, the interlocking frame was either replaced by a 10 lever frame, or the frame was extended to 10 levers.

It is not known exactly when the curious dock at Show Grounds platform was removed. It had been removed by 1908, as a signalling diagram exists from this time. In August 1897 there was a catch point with point indicator at the Up end of the Loop line, which indicates that the later dock siding off the Loop line did not exist at that time. The catch points were still listed in 1904, but not in the list of signals associated with the provision of the tramway crossing. It is possible that these alterations also mark the removal of the dock siding in the platform, and the provision of a new dock siding off the Loop line.

Finally, it appears that the Show Grounds Rostrum was provided in 1906. It is not known whether the Rostrum exercised any control over Tower H or Show Grounds signal box at this time.

By 1908 it was noted that the interlocked points at Show Grounds were only connected to the interlocking frames at Tower H and Show Grounds signal box during passenger traffic. At other times they were disconnected from the frames and worked by hand levers. Curiously, this did not appear to apply at Flemington Racecourse.

Crossing the signals

Some of the Home signals were crossed and out of use when passenger traffic was not being run. It is not clear, however, the extent of this practice.

Circulars from 1901 and 1908 indicate that signalmen opening and closing the block posts were required to remove/replace the crosses from the signals. This implies that all Homes were crossed.

However, the 1904 and 1906 lists of signals on the line (published in the WN) only refer to the Homes on Post 50 being crossed when passenger services weren't running.

The 1908 signalling diagram shows crosses on the Homes on Posts 50, 51, and 51A. It does not show any

crosses on the Homes at Epsom Road (unfortunately, the diagram is missing the Flemington Racecourse end). The 1908 Book of Signals only refers to the Down Home on Post 50 as being out of use except when passenger traffic is being run.

Extending Dalgety's Siding

In August 1906 Dalgety & Co notified the Department that they intended to extend their stores towards Newmarket and wanted their siding to be extended to suit. The Department offered to construct the extension for £744, which the company accepted on 5 September 1906. The company then asked for the work to be pushed on with as wool would be coming in considerable quantities at the end of the month. Instructions were consequently issued for the construction of the siding on 14 September, but construction was immediately postponed when the architects informed the Department that they wished to put the building up and finish the platform before placing the filling for the siding. It was not until 15 January 1907 that this work was completed and the architect informed the Department that construction of the siding could be recommenced. The retaining wall at the pedestrian underpass was completed on 20 February 1907, and the siding extension on 15 February 1907.

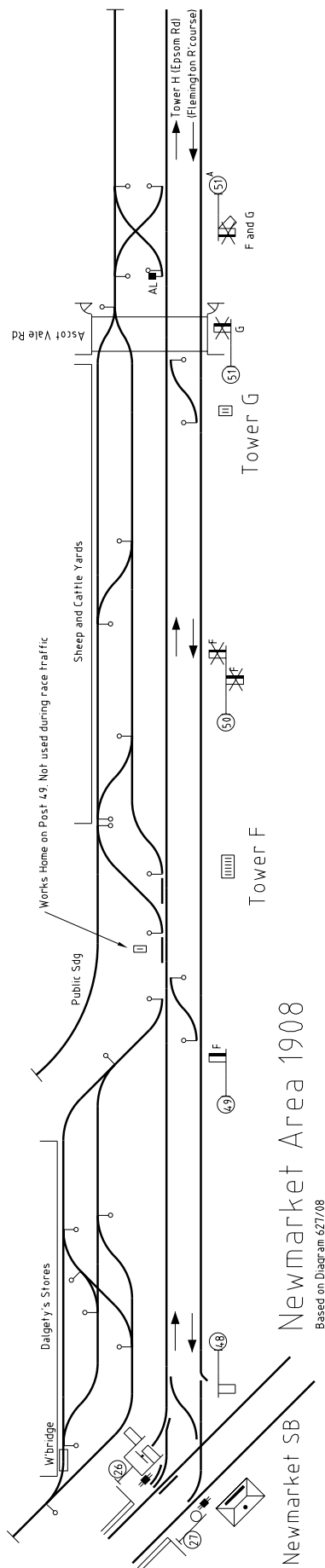
The layout of the extension was unusual, no doubt because of the constrained site between the main line, the stores, and the underpass. The existing siding head shunt was extended southwards right to the underpass. A loop siding was laid off this line, with a very short head shunt, which ran between the existing siding and the Racecourse line. This had connections to both the main siding and existing loop siding at the intermediate crossover.

The plans show an existing truck weighbridge at the southern end of the existing siding, and hydraulic capstans for moving trucks in the siding.

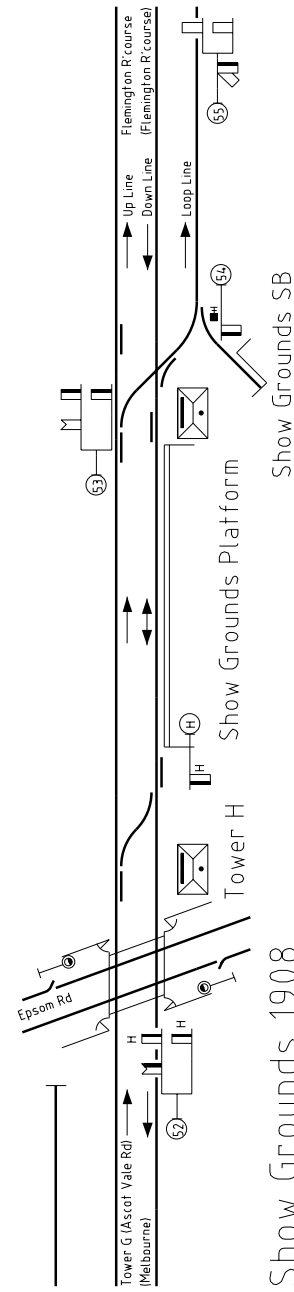
Further alterations at Tower F

By 10 October 1906, Tower F was controlling the Up home on Post 51. This gave Tower F two home signals in each direction. In addition, it was noted that two Home signals on Post 50 were crossed except when race or special traffic was running. Note that the home on Post 49 was not crossed, suggesting that it continued to be worked at all times to protect shunting moves at the cattle yards.

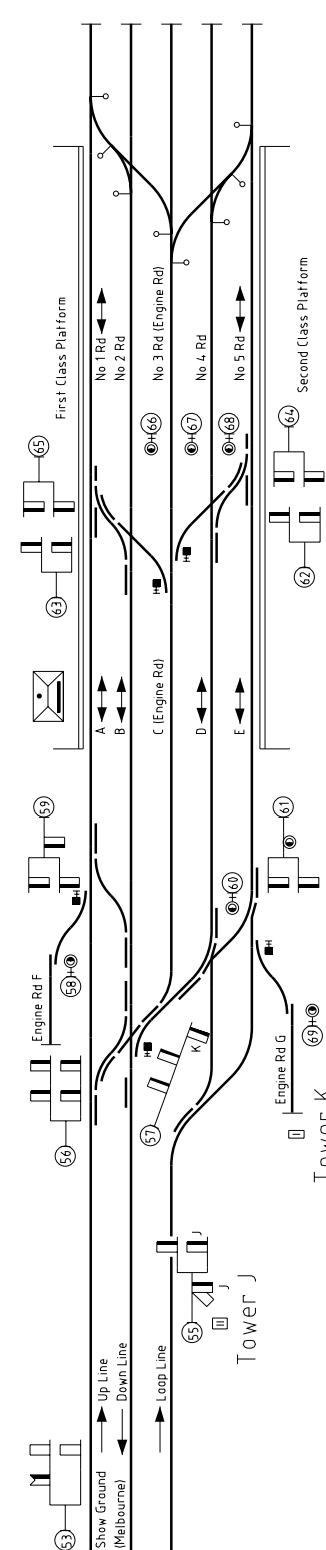
On 1 November 1907 additional protection was given to the facing hand points in the Down line, but only during passenger traffic. Lockbars (and plungers) were provided on the two facing points immediately opposite Tower F. These would have secured the points normal when operated (just as the similar lockbars did at Newport Workshops), and secured the Down home on Post 49 at stop when the points were free. Further down the line, the facing points to the Cattle Siding head shunt on the Down side of Ascot Vale Rd were secured by an Annett lock during passenger traffic. A duplicate lock was provided on the lever at Tower F working the Down home on Post 50. When passenger traffic was not being run, the Annett lock was disconnected and the points worked as required. It would appear that a six lever interlocking frame was provided in Tower F at this time to work the four signals and two lockbars. Special instructions were that the signalman at Tower F was to closely watch the Down home on Post 48 (worked by Newmarket and protecting the junction), and when it was at Danger, he had to keep the Down home on Post 50 at danger until the speed of any approaching train had been reduced to 4 mph.



Newmarket Area 1908
Based on Diagram 6271/08



Show Grounds 1908
Based on (part) Diagram 6271/08 & 1908 Book of Signals



Flemington Racecourse 1908
Based on WN 44/07 & 1908 Book of Signals

Flemington Racecourse and Towers J & K

On 10 October 1906 the Loop Line was divided into two sections when a Down Home signal worked by Tower J was provided. Post 55 was replaced by a bracket post on the Up side of the line with the new Home signal on the right hand doll. As the new Down Home was not worked or controlled by Racecourse box, the Down Loop Line Distant on Post 53 was abolished.

The second half of 1907 saw a number of changes at the Up end of Flemington Racecourse yard. In mid-September the 'junction' of the Racecourse yard was relaid - probably this means the connections at the Up end of the yard. The four doll home arrival signal, Post 56, was replaced by a new bracket post further out with the four arms arranged on two dolls. Post 57 was also relocated further out. At the beginning of November 1907 catch points were provided in Engine Roads F and G. Ground Disc Post 69 was provided to control moves from Engine Road G, and the short siding signal under the bracket on Post 61 was replaced by a disc.

Around this time, and certainly by August 1908, Lever K was replaced by a new Tower K situated on the Up side of the Loop Line roughly opposite Post 57.

In early January 1909, control of the left hand Down Home on Post 55 (for the Down line) was transferred to Tower J. The Down Distant for the main line on Post 53 was abolished at the same time. Tower J now worked all three arms on Post 55, although the Up Home continued to be controlled by Showgrounds Box.

The Great White Fleet

During 1908 a US fleet of 16 battleships circumnavigated the world. Known as the "Great White Fleet", the ships arrived in Melbourne on 29 August 1908 and departed on 5 September. Apart from shore leave, the time in port was occupied with various entertainments and functions. The VRC put on a complimentary race meeting at Flemington Racecourse on Wednesday 2 September, which was followed by a military Review at the Racecourse on Thursday, 3 September. These events coincided with the Royal Agricultural Society's show which was being held between Friday, 28 August, and Saturday, 5 September, 1908 (but not on Sunday 30 August). The relevant S circulars survive and show how race and show traffic was dealt with in steam days.

Dealing with the Show first, the Show Grounds Platform was staffed from 21 August until 10 September - the period before and after the Show proper was to handle exhibits. Box 'H' (Epsom Road) was staffed by a signalman to work the signals and gates during this period.

Except for the Wednesday and Thursday, when the events were on at Flemington Racecourse, the Show trains were made up with six first and six second class carriages with a van at each end (the first class carriages were at the Melbourne end of each set). The trains were to be a uniform length if possible, but were not to exceed 415 feet in length. Engines were to be equipped with a screw coupling at each end and were to run funnel first to Show Grounds. O class engines were not to be used.

At Spencer St, Show trains departed from the Main Departure platform, and returned into the old Coburg (No 10), old Essendon (No 9), or Main Arrival platforms (as convenient). The Show Grounds platform was divided into 1st and 2nd class sections by a barrier; and discs were provided to indicate where the engines were to stop so that the carriages were on the correct side of the barrier.

On the first day of the Show, Friday 28 August, three train sets were used. Outwards traffic to the Show commenced at 0900 and trains ran every 20 minutes until 1500 (they ran more frequently if required, and could run later if required). The first return journey commenced at 0950 and then trains returned as required. The last Up train was the 1730 departure from the Showgrounds.

On Saturday, 29 August, the service was similar except six train sets were used. Forward traffic commenced at 0930 and then ran as required to 1500 (or later if required). Return trains were to run until Show traffic ceased. In addition, there was a service train at 0900 to the Show Grounds which conveyed attendants, departmental employees, and a breakdown van. A 'standby' engine left Spencer St at about 0925.

On the remaining days of the Show (except the Wednesday and Thursday), six train sets were used for the forward traffic with an additional two for the return traffic. Outwards traffic commenced at 0900 and then a 15 minute service was provided until 1500. Interestingly, no details were given for the return traffic. The service train departed Spencer St at 0845 and the stand-by engine at 0840. It was recorded that on Monday, 31 August, 54 return trips were run to the Show. Incidentally, the Show public holiday in 1908 was Tuesday, 1 Sept.

Goods trains or pilot engines were not allowed to work at Newmarket during the running of the passenger traffic, except as authorised by the Metropolitan Superintendent. The Independent Road at the Cattle Yards had to be kept clear while the passenger traffic was running.

From a signalling perspective, the block sections were Newmarket Junction - Box F - Box G - Box H. The interlocking at Box F and Box H was brought into use each day before the Show Traffic commenced each day, and taken out of use after the traffic ceased. All these boxes were staffed by signalmen, and gatekeepers were provided at Box G and Box H to operate the gates. Show Grounds box was not staffed, except on the Wednesday and Thursday, and the points were disconnected from the frame and worked by hand levers. Telephones were to be provided between Show Grounds Platform and Box H, and a telegraph line between Show Grounds Platform and No 1 Box, Spencer Street.

The catch points in the Up line at Newmarket were to be disconnected from the signal box and secured from 0830 until the Show traffic was over. The signalmen at each special block post were to remove the crosses from the signals before Show traffic commenced and restore them when traffic ceased. The Signalman at Box F had the additional responsibility of ensuring that all points and scotch blocks at Newmarket Cattle Yards were secured for passenger traffic.

The Signalmen at Box G and H were not to clear the signals until the gates were closed against road traffic. The gates were actually operated by Gatemen (who were to be the same each day). They operated under the instructions of the Signalmen, but were cautioned to check that the Home signals were at stop before opening the gates to road traffic. Electric tram traffic over the level crossing at Epsom Road was suspended for the return traffic - on Saturday and Monday this was 1530 - 1745, Tuesday 1030 - 1745, and on Friday and Saturday 1300 - 1800.

On Wednesday, 2 September, the VRC hosted a 'complimentary' race meeting for the visiting Americans at Flemington Racecourse. The races rejoiced in such names as the Squadron Hurdle Race, Roosevelt Handicap, Washington Steeplechase, America Cup, Fleet Trotting Cup, and the USA Handicap. The first race was scheduled at

1300, and the last at 1630. As the Show was also on, services on the line commenced at 0845 running just to the Show Platform. The 1115 departure from Spencer St was the last to the Show Platform, and from the 1120 departure the service was extended to Flemington Racecourse for the outwards race traffic. The last outwards Race service departed Spencer St at 1400, and from the next departure, at 1405, the service was cut back again to the Show Grounds Platform. After the 1600 departure to the Show Grounds, trains were once again extended to Flemington Racecourse to handle the return traffic. Officers and men from the fleet were carried by special trains from Williamstown to arrive at Spencer St between 1036 and 1117 from where they caught the Race specials.

Twelve trains were used to provide the service on the Flemington Racecourse line, six first class trains, and six second class trains. Each was made up to be equal to 14 (four/six wheeled) vehicles, but was not to exceed 415 feet in length. Like the Show traffic, engines were to run funnel first to the Racecourse.

At Spencer St, first class trains departed from No 1 Platform (the southern end of what is now No 2 Platform), and second class trains departed from No 2 Platform (the northern end of the same platform - second class passengers had a longer walk). First class trains were to arrive at the Racecourse on the Down line to No 1 Platform, while second class trains were to arrive on the Loop line to either No 3 or 4 Platforms. Trains were to draw well down the platform to the marks provided. Enginemen were not to uncouple their engine until directed to by the yardsman, and the Guard was to keep the hand brake on until all the passengers had detrained. The Guard did not flag the train away, instead the Driver departed as soon as the signal was cleared. All Up trains used the Up line. Enginemen were specially instructed to take great care in preventing smoking or priming at either Spencer St or Flemington Racecourse, and the Rolling Stock Branch was instructed to ensure that only the best quality coal was used. The journey time between Spencer Street and Flemington Racecourse was 11 minutes in each direction, and it appears the trains did not stop at any intermediate stations.

As already mentioned, outbound passenger traffic to the Show commenced at 0845. Alternate first and second class trains were run to the Show Grounds Platform, however, second class passengers could ride in the first class trains (and vice versa). The service train (with employees, attendants, and breakdown van) departed Spencer St at 0835. Due to limited accommodation at Show Grounds, the breakdown car was left at Show Grounds, and the train returned immediately to Spencer St. The stand-by engine departed Spencer St at 0840 for the Show Grounds. The first train to the Racecourse left Spencer St at 1030 to place staff. The last train to the Show Grounds departed at 1115. The trains ran to and from the Racecourse and did not stop at the Show Grounds platform. Show patrons could travel on the race trains - at the lower Show fares - but were required to walk the quarter mile from the Racecourse to the Show Grounds. Two stand-by engines were provided at Spencer St, and two at Flemington Racecourse. One of the Racecourse stand-by engines was the stand-by engine at Show Grounds which relocated itself (and the breakdown van) before the passenger service was extended to the Racecourse.

Essendon line suburban trains did not stop at Kensington or Newmarket while the trains to the Racecourse were being run. Periodical ticket holders to these stations were allowed to travel to South Kensington, Macaulay, Flemington Bridge, or Ascot Vale. Once the outbound

"busy first class race traffic" was over, one or two race trains were run empty from the Racecourse and picked up passengers at Newmarket (and Kensington if required). These ran through to Flinders Street, and did not stop at North Melbourne. To ensure correct routing of these trains at Franklin St, they were signalled by a special bell code (1 short 1 long 1 short) and the number of the train was sent.

Outwards race traffic ceased shortly after the running of the first race. From the 1405 departure from Spencer St, the trains were cut back to serve the Show Grounds Platform again. Trains continued to terminate at the Show Grounds Platform until 1600. After this, the trains were once again extended to Flemington Racecourse to handle the return Race traffic. The trains continued to run to the racecourse until the Race and Show traffic ceased for the day.

One final mention must be made of the horses. Country horses had to arrive at Flemington the previous night. However, a horse special was run from Mordialloc which also picked up horse boxes at Spencer St. This arrived at Flemington Racecourse at 1112 (just prior to the first passenger train) and the horses were unloaded at the second class platform. Clearly navigating around any puddles or deposits on the platform was a privilege of second class ticket holders. The special was then stowed in the sidings at Flemington and the engine returned to Spencer St. After the races, the suburban horses were reloaded at the second class platform "as soon as the bulk of the second class passenger traffic is over."

The instructions for signalmen were similar to those for the Show Traffic, except that Show Grounds box, Box J, Box K, and the Flemington Racecourse box were also staffed. Trains to be signalled by bell signal between Spencer St and Racecourse. At Box H (Epsom Road) the facing crossover to the platform was secured normal while traffic was being worked to the Racecourse. The points at Show Grounds were connected to the interlocking frame all day. The electric tram service over the level crossing at Epsom Road was suspended from 0900 to 1800. Four police constables were rostered for duty between Show Grounds and Flemington Racecourse between 1500 and the finish of Race traffic, and another two at Epsom Road level crossing from 1000 to 1800. Traffic Inspector Mathieson was to supervise all signalling arrangements.

On Thursday, 3 September, a military review was held at Flemington Racecourse. It was initially estimated that 2,500 American officers, sailors, and marines, 6000 Commonwealth naval and military forces, and 8,000 cadets would take part - in addition to the public who would view the spectacular. The Americans arrived and departed from Footscray, marching to the Racecourse from there. The Commonwealth forces marched to and from the Racecourse from various points in the North and West Melbourne suburbs to avoid congestion and provide 'demonstrations' to the locals. The cadets were taken by train to Newmarket where they marched to the Racecourse. After the review, they marched to Footscray station where they joined special trains to Melbourne. Spencer Street was so congested that these specials ran to Northern and North-Western Goods loading platforms in Melbourne Yard.

The traffic arrangements were almost identical to that of the previous day. The Show trains commenced at 0800 (with the block posts staffed at 0745) in order to carry the Cadets to Newmarket. These trains ran empty to the Show Grounds Platform to reverse. Public service to the Show Grounds Platform commenced at 0900, and was extended to the Racecourse at 1030. It was planned to cut the serv-

ice back to the Show Grounds Platform from the 1400 departure, and resume running to the Racecourse at 1520 and continue until the Show and Review traffic ceased. However, it was recorded afterwards that nearly all the trains ran to and from Flemington Racecourse as it was too busy to stop at the Show Grounds Platform. Despite the Circular only calling for 12 trains, it appears that either 19 or 21 trains were used (reports differ). Either 154 or 176 return trips were made (the difference may be accounted by the trains used to carry the Cadets to Newmarket) - it was recorded that No 1 Box handled 917 trains in the day. Traffic handled on the Racecourse line that day was the largest up to that time: 28,747 passengers travelled to Flemington Racecourse, and 23,175 travelled to the Show, giving a grand total of 51,922 passengers. The previous record had been Cup Day 1888 when 44,720 passengers were booked. This was claimed as an Australasian record for any one line.

With the alternative attractions, it appears that the Show traffic were lighter than usual with only 76,183 over the eight days. This was compared with 82,549 in 1907 for 5 days when the weather each day was bad, and 99,689 in 1906 when the weather was very favourable. Normally, around 8,000 country passengers were brought to Melbourne for the Royal Agricultural Show.

Further alterations at Newmarket Cattle Siding

A minor alteration took place in late August 1908 at Ascot Vale Road when the Up Home on Post 51 was relocated to a new post, Post 51A, situated on the Down side of the Ascot Vale Road level crossing.

It would appear that the connections at the Up end of Newmarket Cattle Siding were rationalised in October 1909. A single lead was provided from the Up line to the road serving the livestock pens. This included a double compound in the Down line, and replaced the existing trailing main line crossover and the facing points that led to the Independent Road. The connection to the Wood Siding was altered to lead from the Independent Road, and crossover in the sidings was removed. (An additional siding off the Wood Siding, had been added by 1912, but it is not known when this was provided.) The lockbar on the points to the Independent Road was removed on 26 October 1909, and this may mark provision of the remainder of the alterations.

At Ascot Vale Road, a second Annett locked crossover was provided in August 1910 from the Down line to the sidings. This was situated on the Up side of the level crossing and the Annett key was normally kept in a lock on the lever working the Down Home on Post 51. The provision of this crossover probably marks the provision of the extended livestock sidings on the Down side of Ascot Vale Road. By 1912 a loop siding had been provided to service additional stock pens, and connections to the Down line had been provided near Epsom Road. Like the existing Annett lock, the new lock was only connected during passenger traffic.

Jumping ahead slightly in our story, the working in the vicinity of Ascot Vale Road was upgraded on 31 October 1912 when an interlocking frame was installed in Tower G. The frame contained a five lever frame working signals and a point lever. The point lever worked a new trailing crossover in the main line.

Track locking

The Racecourse branch was track locked in October 1910 - again just in time for the Spring Racing Carnival. All of

the Home signals on the Racecourse line up to (but not including) the arrival homes on Posts 61 & 64 at Flemington Racecourse were equipped with reversers controlled by track circuits. The yard at Flemington Racecourse itself was not track circuited. The provision of track locking was a major leap forward for safety on the line, replacing the old 'sight block'. Indeed, the subsequent provision of automatic signalling in 1919 added little to safety.

Track locking resulted in significant alterations to Show Grounds box. It now only worked three signals - the two Down Homes on Post 53 and the Up Home on Post 54. The former Down Distant on Post 52 was removed, as was the control on the Up Home on Post 55. It appears that two clearance bars were provided - one in the Down line and one in the Up line. This is somewhat curious as, of course, the track circuits should have made clearance bars unnecessary. However, they are definitely shown in the 1912 diagram.

The interlocking register records that one signal lever was removed from the frame at Flemington Racecourse at this time, and one point lever added. This probably reflected the transfer of working of the Down Home on Post 55 to Tower J in 1909 (which had not previously been recorded in the interlocking register). It is not known what the additional point lever represented.

Refuge Sidings

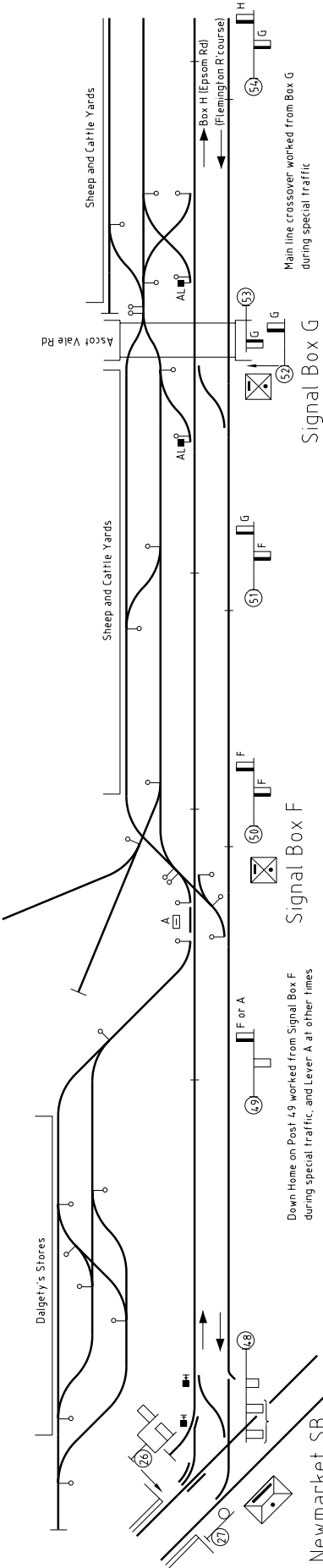
Two sidings were provided in the vicinity of the Showgrounds on 31 October 1914 for the storage of empty trains (the magic of the first Tuesday in November again!)

A lengthy 'Refuge Siding' (actually a loop) was provided on the Up side of the line between Epsom Road and Ascot Vale Road. The entrance to this loop was worked from Tower H, and the exit from Tower G - the loop was only available for Up moves unless specially authorised by the supervising Block and Signal Inspector. At Ascot Vale Road this required relocation of Tower G, and the provision of a new (or extended?) seven lever frame. At Tower H, the frame was similarly either replaced or extended to 16 levers. Disc signals were provided to control the entrance and exit of trains from the loop. Operation of this siding was probably straightforward. Empty trains would arrive on the Up line from the Racecourse and be signalled into the Refuge Siding (if the Refuge was already occupied by a train, subsequent trains had to be brought to a stand at Post 56 and warned by the Signaller). Trains returning into traffic would leave at the Ascot Vale Rd end, and reverse onto the Down line to return to the Racecourse.

A second siding, Siding A, was provided on the Down side of the line opposite the Showgrounds platform. This siding was only accessible from the Down end, and direct connections were provided from the Up and Down lines. Signals were provided to control moves into and out of the siding. Special instructions ensured that trains were not to be signalled from the siding onto the Down line until the line was clear to Post 61 (Temporary Box J). The alterations for this siding meant that all levers were in use at Showgrounds Junction.

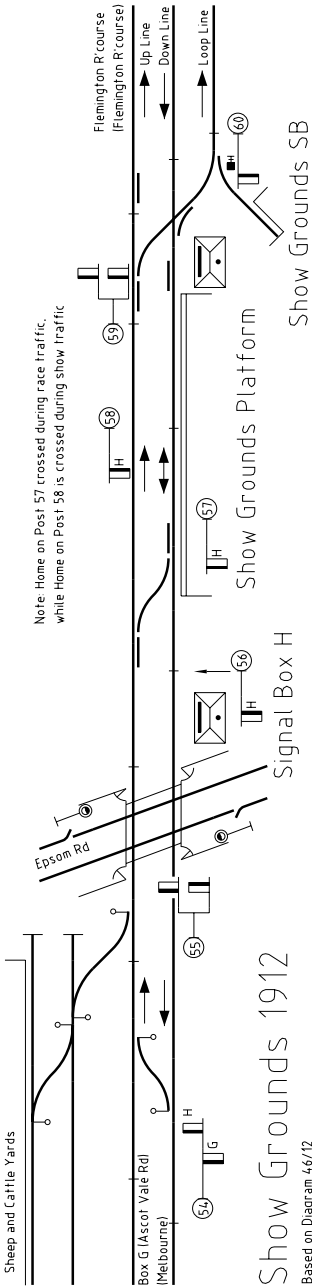
Minor alterations

By the issue of Diagram 35/15 the straight masts between Newmarket and Showgrounds, each carrying an Up and a Down Home signal, had been replaced by bracket posts. This, of course, brought the Down Homes closer to the Down track. It is not known when this alteration occurred, although it was after 1912, but it is possible that the altera-



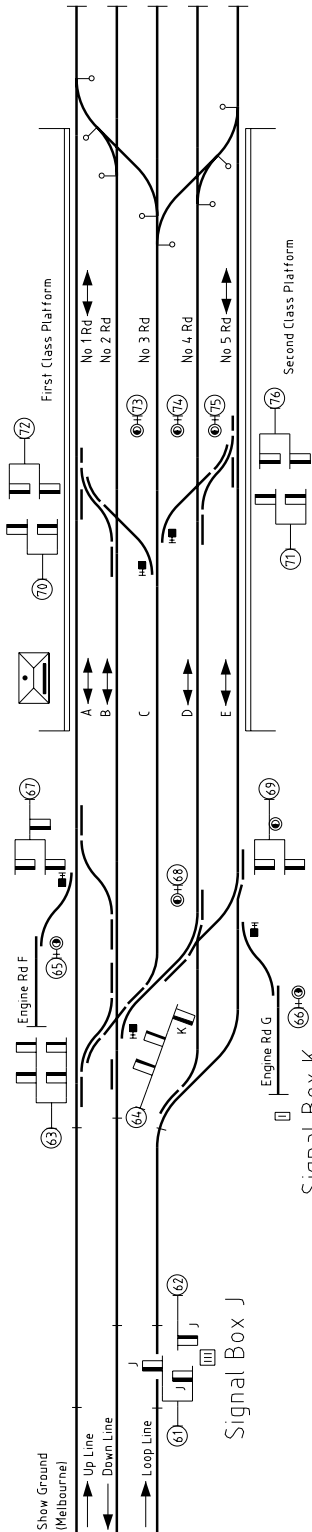
Newmarket Area 1912

Based on Diagram 46/12



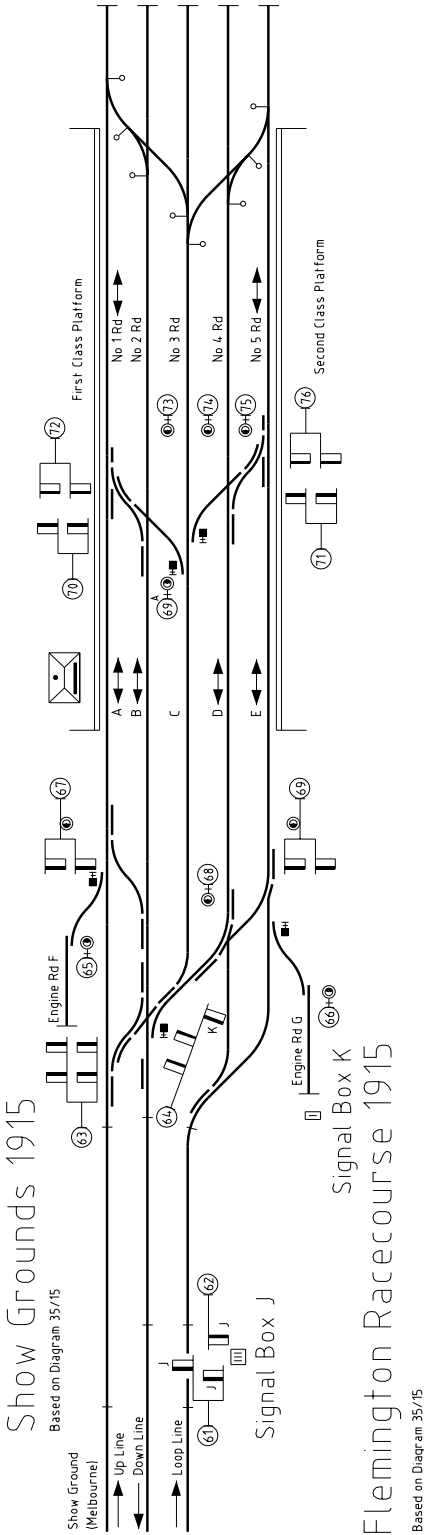
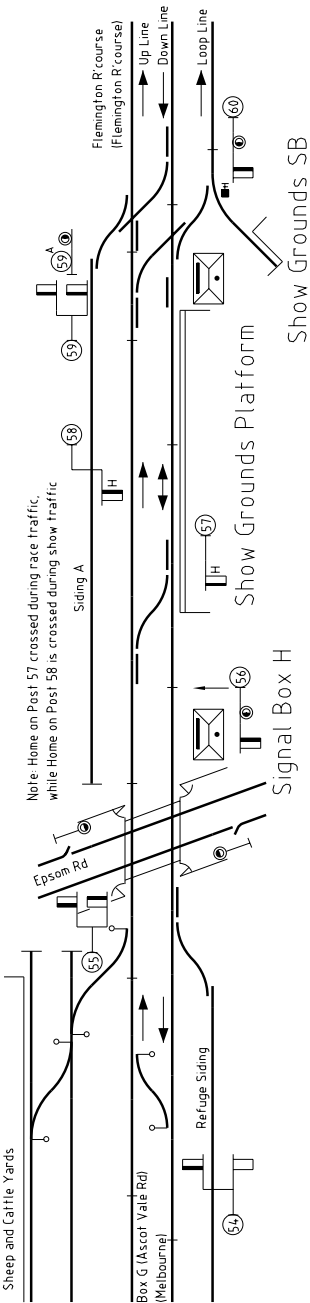
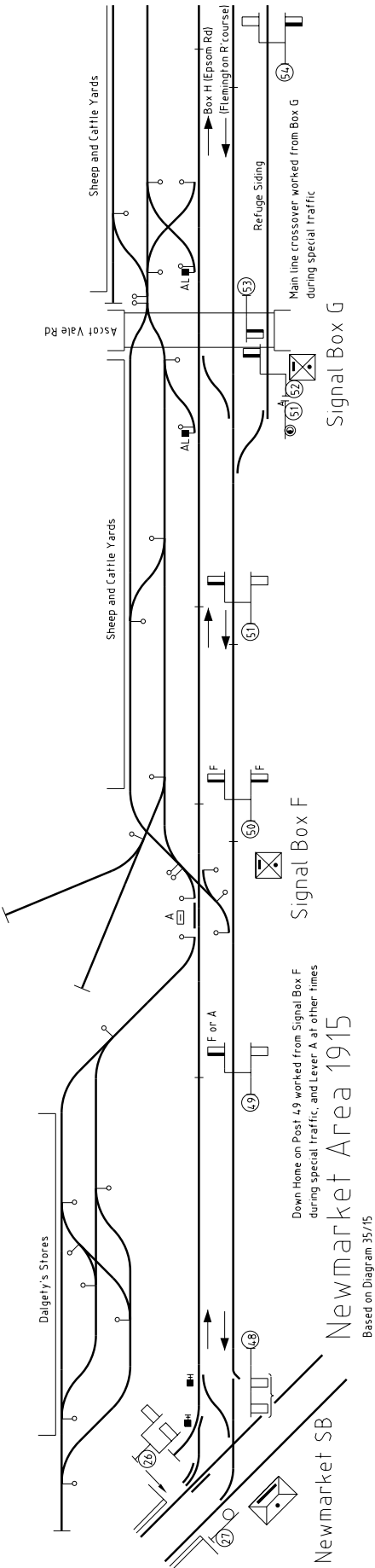
Show Grounds 1912

Based on Diagram 46/12



Flemington Racecourse 1912

Based on Diagram 46/12



tion took place in conjunction with the provision of the refuge siding.

On 1 November 1915, Ground Disc 69A (lever 14) was provided to control moves from 'C' to Nos 1 or 5 Roads. The interlocking register suggests a number of other alterations were made at this time to the frame. An additional control lever was provided - probably No 61 control with Showgrounds Junction. Two point levers were removed, and one lockbar lever added. There were now no spaces in the frame.

Electrification

As is well known, the first movement of an electric train under its own power in the Melbourne electrification was on the Racecourse branch. The branch was then used for training staff.

The WN warned staff on 2 October 1918 that the overhead had been energised. On Sunday, 6 October 1918, a milestone was reached when power was put on from the Newport power station to the No 1 Rotary at Newmarket substation from which the overhead equipment on the Racecourse line was charged. A six car Tait train was then electrically operated for the first time. The results were considered entirely satisfactory.

While training was underway, Tower G, Tower H, and Flemington Racecourse signal box were staffed by signalmen from 10 am until training ceased for the day. Gate-

keepers were stationed at Ascot Vale Road and Epsom Road over the same period. Show Grounds Box, Tower J and Tower K were not mentioned in the instructions, suggesting that they were not staffed. The Weekly Notice implied that the electric trains were stabled on the refuge siding between Ascot Vale and Epsom Roads.

A new Down Home, Post 55B, was provided in mid-October and was only to be used for electric trains. Unfortunately, it is not known where this post was located or its purpose. Given the post number it was probably located on the Up side of Epsom Road.

On Sunday, 10 November, 1918, a six car Tait train was operated between Newmarket and Essendon, and training runs were subsequently extended to operate between Essendon and Flemington Racecourse. This continued through January and February 1919, however by late February 1919 it was noted that testing of trains would be shortly transferred to the Sandringham end of the line to allow completion of the Newmarket and Jolimont substations.

A restricted electric service commenced on the Sandringham - Essendon line on 28 May 1919, and the full service on 14 September 1919. This did not, however, mark commencement of electric services to the Racecourse. The basic issue appears to be the capacity of the substations to provide power for such an intensive service. Specific issues mentioned were the incomplete nature of Newmarket substation (especially the circuit breakers), and the capacity of the Jolimont substation. It appears that the first electrically served race meeting was the New Year's Day race meeting on 1 January 1921. However, this really belongs in the next part of this series.



Show Grounds Junction signal box (right) contains a 15 lever A pattern cam and tappet frame. It was installed on 5 July 1919 in conjunction with the provision of power signalling on the Flemington Racecourse line. Above the frame is a short block shelf with two time releases (for Up and Down signals) and a telephone concentrator. Like all the boxes on this line, the 'block' shelf has never hosted block instruments. Safeworking on this line was originally by means of flagmen that showed a green hand signal if the line was clear to the next flagman. In 1899 the hand signals were largely replaced by fixed signals, but otherwise the working remained the same. In 1910 the line was track locked, and each home signal was controlled by a track circuit to prove the line was clear. The mechanical signalling was replaced on 5 July 1919 by two position automatic signalling (using light signal heads). Show Grounds Junction spends most of its time unstaffed. Interestingly, no closing switch or lever is provided. Instead the running signals will work automatically so long as the controlling lever is left reverse. This is a very unusual provision in Victoria, normally home signals are 'stick' signals - that is when passed by a train they return to stop and stay at stop until the controlling signal lever is restored to normal and reversed again.



Showgrounds is worked from two signal boxes. The box at the Melbourne end of the platform is Epsom Road, and that at the Flemington Racecourse end is 'Show Grounds Junction'. (These are the current names on the box diagrams.) Show Grounds Junction box (left) is the older, and dates from 2 November 1888. It is possible that the box is second hand from elsewhere, as this style of box (with the scalloped bargeboards) had ceased being constructed around 1886. Epsom Road (above) was provided on 5 June 1925, at the same time as the adjacent level crossing was being replaced by an underpass. Epsom Road is a far more suitable design for the Australian climate than Show Grounds Junction - the deep eaves on four sides provide shade for the box and make it much cooler. Note the provision of an inground water tank fed from the down pipes - a reversion to a very old idea as in ground tanks was common on the VR in the 1880s. The large shutters on the windows of both boxes were provided - a long time ago - to reduce vandalism as the boxes have spent most of their life unstaffed.



Epsom Road box (above) contains a 15 lever Type A Cam and Tappet frame dating from June 1925 when the underline bridge was provided. Interestingly, levers 1 to 5 have never been used and were originally intended to work the tramway crossing and wickets at Epsom Road. Mounted on the back of the machine timbers are two D2 circuit controllers (with the covers off) and two J3 latch contact boxes. By way of contrast, Flemington Racecourse (below) contains a 61 lever frame McKenzie and Holland No 6 Pattern Rocker frame dating from 1888. The much greater metal content in a Rocker frame is very apparent!

