

REPORT FOR INFORMATION

COMMITTEE: Rail and Metrolink Network
DATE: 2nd October 2009
SUBJECT: Metrolink Service Performance
REPORT OF: Metrolink Director, GMPTE

PURPOSE OF REPORT

To inform Members of the service performance and developments which affect the Metrolink system over recent months.

RECOMMENDATIONS

Members are invited to consider the report and to:

- Note the performance of Metrolink services.

BACKGROUND DOCUMENTS

Report to Transport Network Committee – July 2009

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1. Introduction

- 1.1 This report contains Metrolink performance during each reporting Period. A reporting Period is a consecutive period of 28 days in line with the contract between GMPTC and Stagecoach. There are 13 Periods in a year and all performance charts will show a summary of the last 13 Periods along with the Moving Annual Average (MAA) for the year. A list of Period dates can be found in Appendix 3 of this report.
- 1.2 This report contains Metrolink performance summaries for Period 2 and 3 of Stagecoach operations (Monday 01 June 2009 – Sunday 26th July 2009). Also detailed are results for Metqual inspections for the same Periods.
- 1.3 This report also explains how performance is now being measured and recorded under the operating arrangements set out in the Stagecoach contract.
- 1.4 A report was submitted to the Policy and Resources Committee on September 11th 2009 informing members of the circumstances leading to the late completion of works to replace the Overhead Line equipment on the Altrincham Line, and the subsequent delay in reopening the tram stops at Navigation Road and Altrincham.

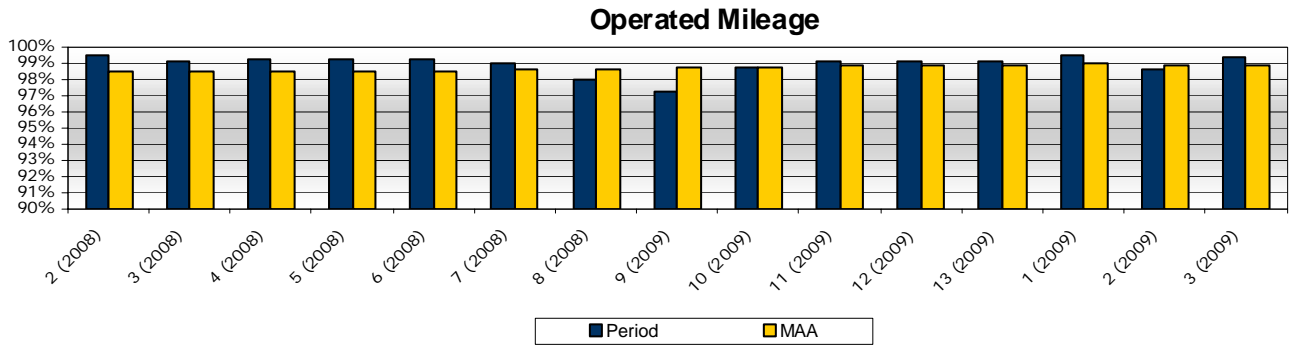
2. Executive Summary

- 2.1 Performance as measured by Operated Mileage was 98.63% in Period 2 and 99.39% in Period 3 (See Chart 1 in section 3). The Moving Annual Average of 98.91% has remained above 98% for the 26th consecutive Period. The majority of miles lost in Period 2 & 3 were due to vehicle reliability with trams on the Eccles line being affected by the hot weather. A modification is currently being developed to improve the cooling of the trams. In the interim, problem vehicles were migrated to the Bury line away from the slow running on the Eccles line which was inhibiting the cooling of the trams. This strategy has proved successful.
- 2.2 There were 9 major incidents during Periods 2 & 3 which caused delays in service of over 30 minutes which impacted on performance. These consisted of:-
 - June 1st - vehicle unable to get traction at Harbour City. Technicians were despatched from Queens Road Depot and rectified the issue after approximately 1 hour 20 minutes.
 - June 2nd – four vehicles failed with traction faults caused by overheating on the Eccles line. These were turned back to cool down when the faults were identified. A bus replacement service was put in place during the disruption.
 - June 4th – A fault on the OHLE caused the suspension of service on the Altrincham line south of Old Trafford. Repairs to the OHLE were completed after four hours. A bus replacement service was put in place during the disruption.

- June 8th – vehicle derailed at GMex. All relevant engineering disciplines were mobilised, and Incident Officer was appointed and all relevant agencies were informed. After approximately 7 hours the tram was re-railed, repairs to the track had been completed and the tram service resumed. A bus replacement service was put in place during the disruption.
- June 30th - driver unable to get traction on vehicle 1002. Technicians were despatched from Queens Road Depot and, after approximately 30 minutes, the vehicle was coupled to 1012 and services towards Eccles resumed.
- July 2nd – driver of vehicle 1015 reported an issue with the brakes. Technicians from Queens Road rectified the problem and service resumed after 50 minutes.
- July 3rd – vehicle 1005 lost all traction at Anchorage. Technicians were despatched from Queens Road to rectify the problem. After approximately 50 minutes, 1005 was coupled with the vehicle behind and resumed service.
- July 18th – vehicle 1005 failed at Exchange Quay with an Auxiliary Inverter fault. Technicians coupled it to 2006 and brought back to the depot for investigation. 1005 rejoined service approximately 47 minutes later. This was related to the incident on July 3rd and a part within the Auxiliary Inverter was changed on both occasions.
- July 22nd – at 12.42 vehicle 1007 hit a tree branch between Heaton Park and Prestwich outbound resulting in a damaged pantograph. Engineers were immediately contacted to visit the scene. At 12.48 the driver of the vehicle behind reported that the tree had fallen onto the overhead line. By 13.32 the tree had been removed and the vehicle was then coupled to another and moved towards Bury at low speed given the damaged pantograph. During time services were suspended and First bus service 135 was accepting Metrolink tickets. Service resumed after approximately 2 hours. On investigation the tree, some distance from the track, was found to be rotten at the base and the impact from when the vehicle hit the branch caused it to fall.

3. Service Performance

Chart 1 - Operated Mileage



Scheduled mileage	Mileage which Stagecoach Metrolink is contracted to operate to run the timetable.
Operated Mileage	Actual miles operated and as a percentage of scheduled mileage
MAA	Moving Annual Average over the last 13 Periods (The sum of operated mileage over the last 13 Periods, divided by 13 to obtain the rolling annual average for operated mileage).

3.1.2 Operated Mileage as shown in Chart 1 above, illustrates the actual miles operated as a proportion of the scheduled mileage and therefore better reflects the service delivered to passengers.

3.1.3 Operated Mileage for the past year has been consistently good. The MAA of 98.86% remains above 98% for the 26th consecutive Period. Period 2 operated mileage finished at 98.63%. Period 3 operated mileage finished at 99.39% which is a significant increase of 0.76%. Vehicle reliability was the main cause of lost mileage during these two Periods as highlighted in section 2.2.

3.2 Vehicle Availability

3.2.1 For the duration of the City Centre track renewals from the 6th April, the target availability for Mon – Fri morning peak operations have changed from 29 vehicles to 24.

During Period 2 the total vehicle availability against the morning peak target (24 vehicles) was 98.8% and 98.9% in Period 3; both are shown in Chart 2A & 2B below. During normal operations the target availability is lower on Saturday and Sunday. However, Duty Managers have been running extra vehicles and thus increasing the frequency of service at the weekend rather than have them stationary at platforms and risk vandalism. Track closures as a result of City Centre Track works have made it difficult to move vehicles back to the depot and therefore vehicles have been operational to avoid the occurrence of technical issues as a result of them remaining static.

Chart 2A Period 2 – Vehicle availability in the morning peak (07:30hrs)

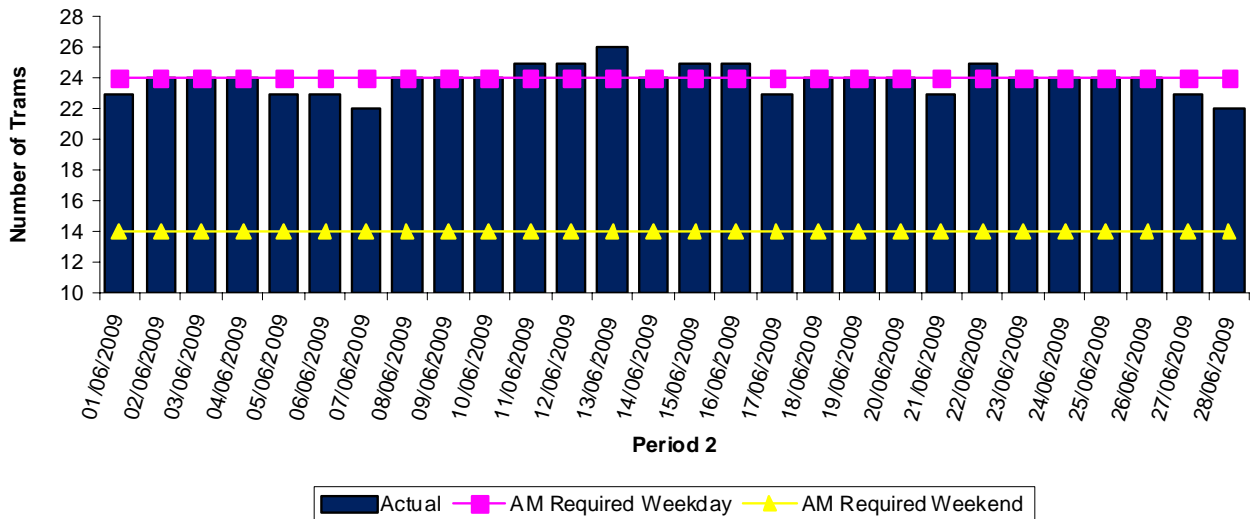
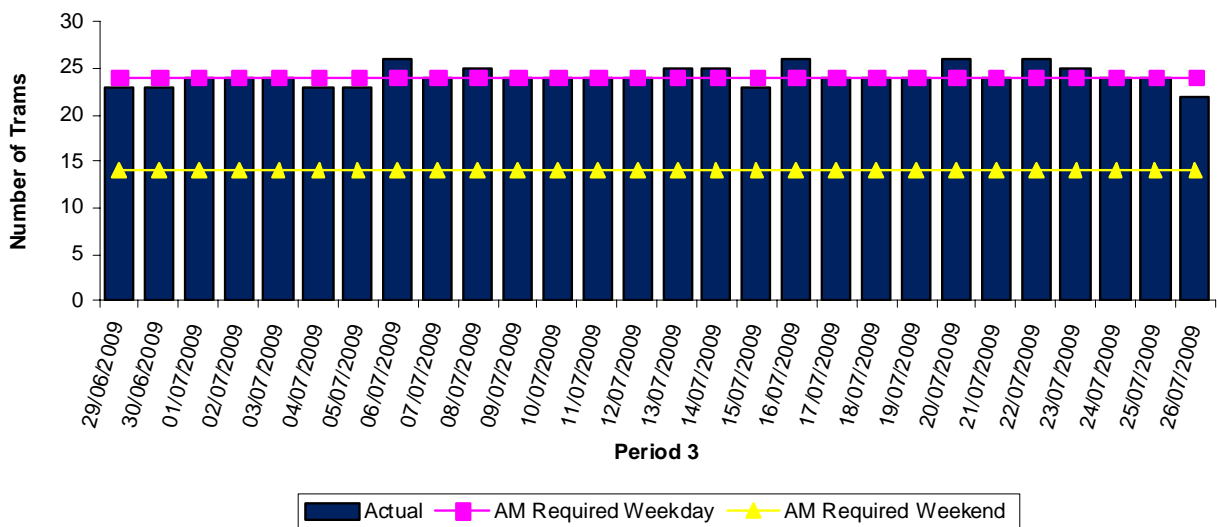


Chart 2B Period 3 – Vehicle availability in the morning peak (07:30hrs)



3.2.3 There are 4 vehicles that were out of service during Periods 2 & 3;

- 1012 was out of service for Period 2. Work continued on the articulation repair which was a major invasive repair. This vehicle is now back in service.
- 2001 has been out of service long term and is proving very difficult to identify the cause of the failure. The work continues to systematically rule out different issues to resolve the fault. External resource is being funding by the operator and used for fault finding.
- 1002 was taken out of service in Period 1 to be refitted with new bogies. This vehicle is back in service.
- 1025 has commenced special project modifications and is progressing well. This vehicle is due to be released back into service in October.

Vehicle reliability is being assessed and a number of initiatives continue to be rolled out across the fleet; these include: new speed probes, installation of on-tram LED displays, rear view CCTV modification to eliminate mirror failures and installation of new compressor units. Replacement auto-drain valves have now been fitted onto the entire fleet.

3.3 Complaints

- 3.3.1 There was an increase in complaints from 397 in Period 1 to 608 in Period 2. The majority of complaints in Period 2 were mainly due to two major disruptions; the suspension of the Altrincham service on June 4th and the derailment at GMex on June 8th. Hot weather in June contributed to an increase in complaints regarding delays on the Eccles line. An issue with the cooling fans on trams is currently being addressed by GMPTE and Stagecoach engineering teams.
- 3.3.2 Period 3 saw a significant decrease in complaints from 608 in Period 2 to 297 in Period 3. The majority of complaints in Period 3 were mainly due to service disruptions of over 30 minutes. There were two instances of trams suffering traction faults on the Eccles line resulting in delays of 30 minutes and 50 minutes respectively. Also a tree fell on the overhead line between Heaton Park and Prestwich on the Bury Line causing a delay of approximately 2 hours.
- 3.3.3 There had been an increase in Ticket Vending Machine complaints between Period 2 and 3. Complaints in Period 2 accounted for 38% of the total number of complaints, rising to 43% in Period 3 which are predominantly related to 'exact fare only' faults. Demand during two major special events lead to an increase in bank note use which contributed to "exact fare only" faults.

4 Metrolink Performance Monitoring

- 4.1 The contractual performance regime with the Operator measures several aspects of performance including reliability (headway between trams), capacity (number of trams run each service hour) and the punctuality of the first and last trams of the day.
- 4.2 The contract assumes that these elements will be accurately measureable. The ATRE (Automatic Tram Recording Equipment) does not have the capability to collect and analyse data accurately because of defects in the software that interrogates and sorts the data received from the detection points on the system.
- 4.3 A series of measures are currently in place to manage the performance of the Operator:
- 4.3.1 Until such time as headways can be accurately measured, payments due to the Operator for this performance measure are limited each Period. We will be able to measure headways when the Tram Operating System is implemented in spring 2010.
- 4.3.2 Capacity is calculated manually using mutually agreed assumptions and calculations based on mileage and conversion into points via the contractual performance regime. This system is calculated by the Operator and audited and agreed by GMPTE on a periodic basis.
- 4.3.3 The punctuality of the first and last tram is calculated manually. The Operator's Control Centre note the time of the first and last trams each day and this is then audited by GMPTE using CCTV footage. This is an entirely accurate measurement against the contractual performance regime.

- 4.4 These interim solutions will continue to operate until the implementation of TOS in early 2010 when the full automated measurement of all reliability elements of the performance regime will be in place.

5. Patronage

5.1 Background

Work has been undertaken to analyse revenues, yield and patronage in a detailed manner, using updated assumptions.

Initial work was focussed around patronage derived from sales via Ticket Vending Machines (TVM) and the range of season tickets offered from weekly to annual (ST). These are the highest patronage generating areas and most sensitive areas to change.

Work is continuing to develop and validate the methodology for measuring other patronage areas. This work is expected to be concluded in October.

5.2 Data

Monthly patronage 2008/09 using updated assumptions

Month	Actual 2008/09	
	TVM 000s	ST 000s
April	872	265
May	959	207
June	882	236
July	882	226
August	896	204
September	866	307
October	913	273
November	866	264
December	942	166
January	819	354
February	826	258
March	883	271
Total	10,606	3,031

Monthly patronage 2009/10 using updated assumptions

Month	Actual 2009/10	
	TVM 000s	ST 000s
April	746	222
May	730	187
June	759	208
July	717	152

5.3 Effects of City Centre Track work

City Centre track work commenced on 6 April 2009.

The effect on budgeted patronage numbers caused by the reduced services during the period of these works has been estimated as part of the 2009/10 budget process. Performance against this budget will be monitored and the effect of the works on patronage will be assessed on an ongoing basis, as data is collated.

6 Other Metrolink Issues

6.1 City Centre Track Renewals

6.1.1 The City Centre Track Renewals Programme commenced on the 6th April 2009. The service being operated is as follows:

- Altrincham to St Peter's Square, 12 minute frequency with double units;
- Eccles to St Peter's Square, 12 minute frequency; and Bury Line Service:
- Mondays – Fridays: Single trams every 7 minutes 7am – 10am and 4pm – 7pm, every 12 minutes at all other times. 1 double tram from Bury at 8.03am daily.
- Saturdays: Single trams every 7 minutes 10am – 5pm, every 12 minutes at all other times.
- Sundays: Single trams every 12 minutes.

BUS LINK: The bus link service was reviewed, and an improved operation commenced on Monday 18th May, whereby this service will now connect Victoria, Piccadilly Gardens, Piccadilly Station and St Peter's Square and will run in both directions. This service will run;

- Every 12 minutes until 7pm on Mondays to Saturdays
- Every 20 minutes after 7pm Mondays to Saturdays and all day on Sundays.

All forms of media have been used to distribute the information to our passengers prior to the work commencing. This is continually being assessed and updated as the work progresses based on passenger feedback and any changes to the service.

6.3 Special Events

6.3.1 Under the Stagecoach Metrolink contract GMPTE has more control over Special Events planning. GMPTE is working with Stagecoach to ensure that future special events are assessed and that an appropriate service is planned to handle the extra volume of passengers generated. This includes adapting services, lengthening hours of

operation and strengthening services by operating double units as appropriate.

6.3.2 GMPTE is working closely with major venues and organisations and has established a planning calendar which sets out special events which have now been scheduled for 2009.

6.3.3 During Period 2 there were 24 special events that took place, notably Take That at Lancashire County Cricket Club and Oasis at Heaton Park. During P3 there were 15.

6.4 The TSO review group met during Periods 2 and 3 to discuss improvement initiatives in TSO operations. The role of a TSO encompasses revenue protection, safety and customer service. Weekly revenue statistics are analysed and revenue losses subsequently identified drive the TSO deployment plan.

6.4.2 Work is underway for Bury, GMEX, Salford Quays and Timperley to be the next stations to achieve station accreditation. Passenger surveys and crime statistics have been gathered for review. Signage and station equipment at these selected stations will now be evaluated.

7 RAIB Report on Derailment at St. Peter's Square (29th June 2008)

7.1 The final version of the RAIB report into the derailment on the 29th June 2008 was received on the 16th September by letter (dated 15/9/2009) stating that the report would be published on the 17th September 2009.

7.2 It is considered that there are many fundamental errors contained within the report which are either misleading or incorrect, these include:-

7.2.1 Misleading statements on the timeliness of the city centre upgrades and financial provision.

7.2.2 Factually incorrect statements with regards to the failure to agree or put in place engineering standards between GMPTE and SML.

7.2.3 The failure of the report to state that it is the responsibility of the Operator/Maintainer to stop services if it becomes unsafe.

7.3 A response was sent to the RAIB shortly after receiving the final version, and before its publication, expressing our continued concerns of the inaccuracies in the final report and the misleading position this portrays in particular on the GMPTE's attitude towards its safety responsibilities.

7.4 It should be noted that many of the points that we made on the draft report during the "representations" process were rejected by the RAIB, but not advised on until 16th September.

7.5 In anticipation of the media interest statements were prepared, but the press coverage to date has been sparse.

7.6 The report is currently being evaluated in detail to determine if actions are required in addition to those already underway to meet the reports recommendations and any further representation that we can make to the RAIB.

7.7 The 5 recommendations are provided in full below: -

7.7.1 Recommendation 1

GMPTTE should work with SML to put in place processes to identify, manage and rectify any section of the operational track that becomes non-compliant to the agreed standards. It should put in place arrangements to ensure compliance with the processes. The processes should require time bound plans to renew or repair, as appropriate, and implementation of suitable mitigation measures to manage the derailment risk until the track is brought back within the standards.

Current position

Core track standards had been developed by SML prior to the incident and have subsequently been implemented.

7.7.2 Recommendation 2

GMPTTE should review its Metrolink organisation structure, policy and procedures to confirm that they are sufficient for it to exercise its responsibilities under the Health and Safety at Work Act. Its consideration should include the need for an identified head of safety, documentation describing the arrangements for management of safety (including, but not limited to, identification and management of risk, and audit arrangements to confirm implementation and compliance) and provision of sufficient competent resource.

Current position

Consultants were commissioned to undertake a review of the safety arrangements independent of this incident between GMPTTE/SML. The findings have been subject to detailed action plans and monitoring to ensure close out of the corrective actions identified, these are near completion and cover the recommendations in the RAIB report.

The GMPTTE SMS has been reviewed and actions are in place to implement appropriate management controls.

The unrelated appointment of the Safety and Compliance Manager addresses the recommendation to appoint a head of safety. Additional resources have been engaged to support the development of the SMS in respect of Metrolink activities.

7.7.3 Recommendation 3

SML shall review its arrangements for managing safety when assets are outside normal maintenance tolerances. If these require implementation of interim measures, for example removal of the keep, the arrangements should require demonstration that the interim measures are practical and will achieve the required risk mitigation. Additionally, the arrangements should require procedures to be developed to cover activities, taking consideration of the associated risks. SML should implement any changes identified as necessary.

Current position

GMPTE are and will continue to ensure that SML addresses this matter.

7.7.4 Recommendation 4

SML should carry out a review to check whether its SMS is suitable and sufficient to manage risks from its operations and make any necessary changes. Following this, it should ensure that all staff are aware of the SMS arrangements that apply to them, and that the arrangements are complied with.

Current position

The independent report commissioned by GMPTE (See recommendation 2 current position) reviewed the SML SMS and actions for improved compliance have been implemented. Further audits will take place in spring 2010 with audits of specific items prior to that date.

7.7.5 Recommendation 5

The ORR should review its processes, in light of the findings of this investigation, to satisfy itself that there is sufficient guidance as to the circumstances under which inspectors should verify the implementation of, and compliance with, a duty holder's submissions.

Current position

GMPTE will monitor emerging actions from the ORR.

8 August Blockade

- 8.1 A report was submitted to the Policy and Resources Committee on September 11th 2009 informing members of the circumstances leading to the late completion of works to replace the Overhead Line equipment on the Altrincham Line, and the subsequent delay in reopening the tram stops at Navigation Road and Altrincham.
- 8.2 During the last phase of the safety critical high voltage electrical testing an unexpected "soft earth" problem was detected, indicating that something was making intermittent contact with the live section of the overhead line causing loss of current to earth. The X5 and X6 tram replacement bus services operated on the Altrincham line on September 1st. The Eccles line and services from St. Peter's Square to Old Trafford did reopen as planned.
- 8.3 Further disruptions were experienced on the Altrincham line after it opened on the 2nd September. Due to entanglement of a tram pantograph with the overhead wire, services only operated to Timperley from Thursday 3rd September until Sunday 6th September. During this time the X5 ran at a reduced frequency 10 minutes (peak) and 20 minutes (off peak) and a shuttle bus of ran from Altrincham to Timperley every 5 minutes (peak) and 10 minutes (off peak).

9 Recommendations

9.1 Recommendations appear at the front of this report.

Philip Purdy
Metrolink Director

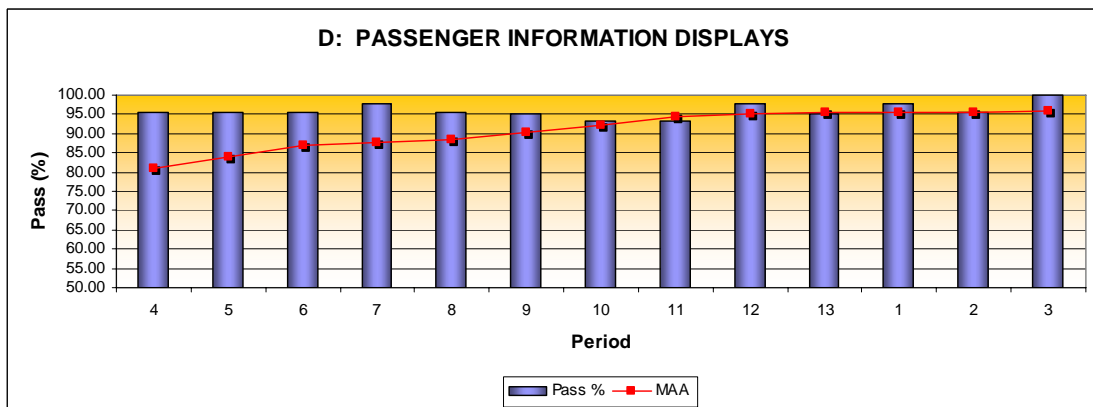
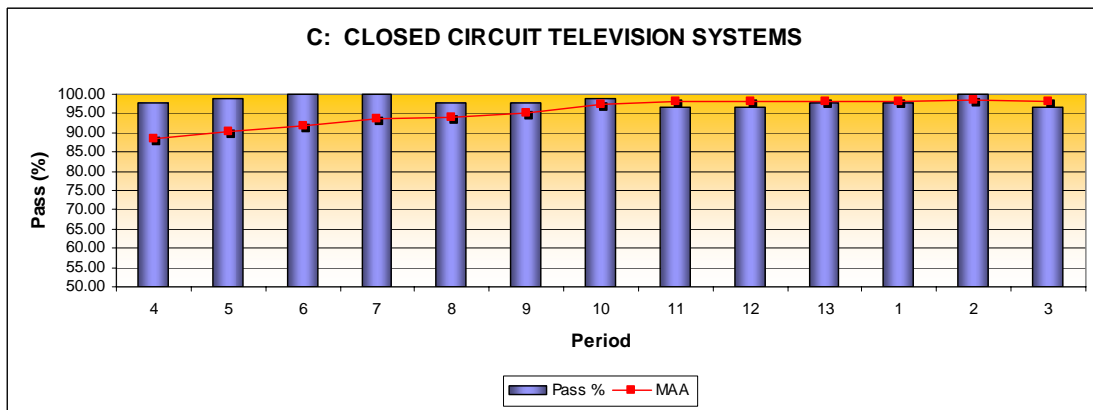
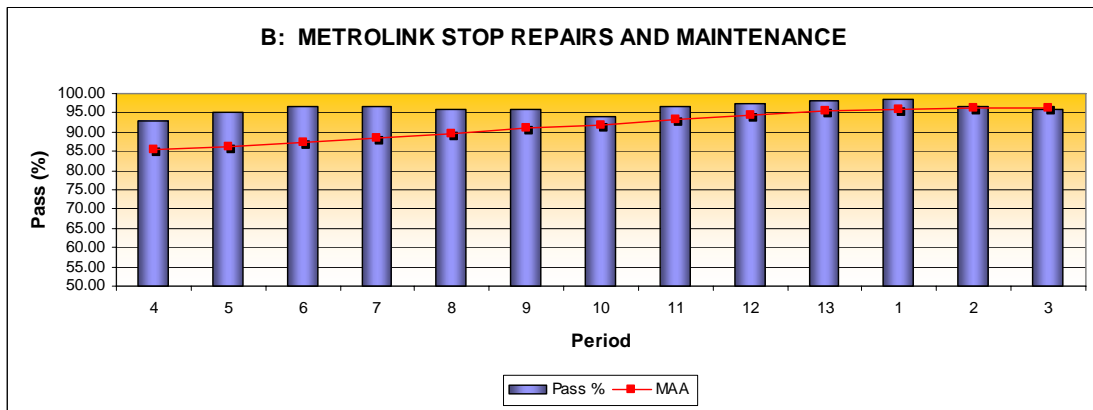
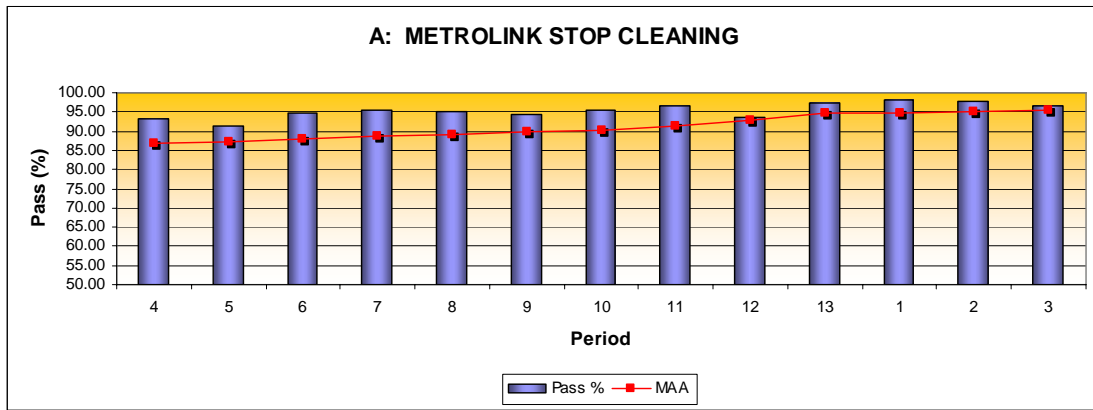
METQUAL PERFORMANCE BY SCHEDULE

Schedule A - Cleaning	Period 2	MAA %	Period 3	MAA %
Platform Canopies	100.00	90.38	95.45	90.38
Shelters, Seating & Waiting Room	98.08	97.19	94.23	97.34
Poster Cases & Signage	96.15	91.63	88.46	91.63
Lifts & Escalators	100.00	97.40	100.00	97.95
Embankments & Ramps	93.02	84.40	88.64	84.59
Stairs, Subways, Footbridges & Foyers	95.35	91.77	95.45	92.50
Platforms	88.46	91.41	90.38	91.72
Car Parks	100.00	91.52	100.00	92.00
Cycle Parking	100.00	99.30	100.00	99.30
Ticket Vending Machines(TVMs)	98.08	98.67	100.00	98.67
Public/Staff Phones	100.00	99.56	100.00	99.70
Rail Track	100.00	99.77	100.00	99.77
Platform Mirrors	100.00	100.00	100.00	100.00
Newspaper Dispensers	100.00	100.00	100.00	100.00

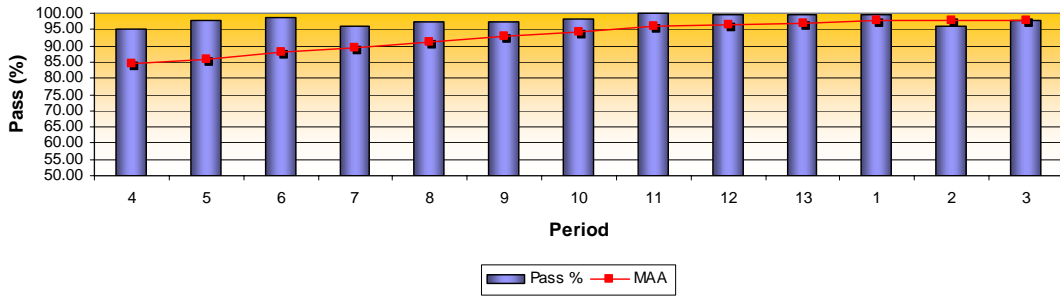
Schedule B - Maintenance	Period 2	MAA %	Period 3	MAA %
Platform Canopies	90.00	90.51	100.00	91.28
Shelters Seating	100.00	99.56	98.08	99.41
Lifts & Escalators – Maintenance/Repairs	100.00	99.49	93.33	98.97
Lifts & Escalators – Availability	80.00	78.79	80.00	79.30
Embankments & Ramps	97.67	94.99	97.73	95.17
Stairs, Subways, Footbridges & Foyers	97.67	95.53	95.45	96.07
Platforms	98.08	95.77	95.77	95.63
Car Parks	100.00	97.95	97.95	97.43
Cycle Parking	95.45	98.25	98.25	98.25
TVM Maintenance & Repairs	98.08	97.43	97.43	97.14
TVM Presentation	98.08	98.08	98.08	98.08
Public & Staff Phones – Operation	100.00	100.00	100.00	100.00
Public & Staff Phones – Presentation	100.00	100.00	100.00	100.00
Platform Mirrors	100.00	100.00	100.00	100.00

All Schedules C - K	Period 2	MAA %	Period 3	MAA %
Sched C – CCTV	100.00	98.36	96.63	98.18
Sched D - Pass Information Screens	95.45	94.71	100.00	95.44
Sched E – Fares & Timetables	100.00	100.00	100.00	100.00
Sched E – Other Information	98.08	99.56	100.00	99.56
Sched E – Poster Cases	90.38	94.63	94.23	94.62
Sched E - TVM Information	100.00	99.26	100.00	99.70
Sched E - Stop Signing	92.31	95.39	94.23	95.83
Sched F – Operation PA System	100.00	99.85	100.00	99.85
Sched G - Tram P.A.	90.64	94.38	93.40	94.09
Sched H - Tram Dest. Displays	100.00	97.35	100.00	97.95
Sched I - Tram Cleaning Internal	80.00	80.00	80.00	80.00
Sched I - Tram Cleaning External	76.36	81.97	82.85	82.22
Sched J - Tram Saloon Environment	94.00	93.61	95.00	93.37
Sched K - Line of Route Info	100.00	99.15	100.00	99.45

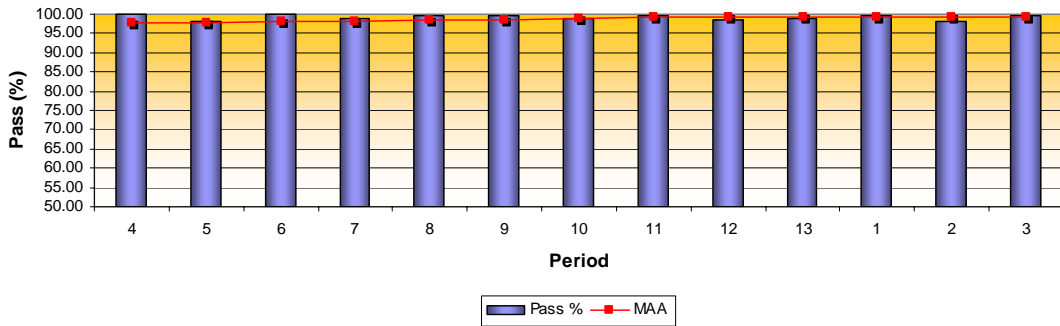
METQUAL BY SCHEDULE:



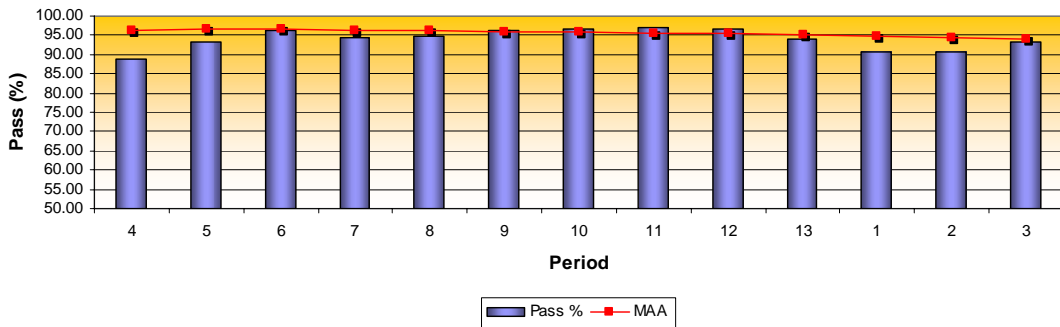
E: POSTER CASES, SIGNAGE AND PRINTED METROLINK SERVICE INFORMATION



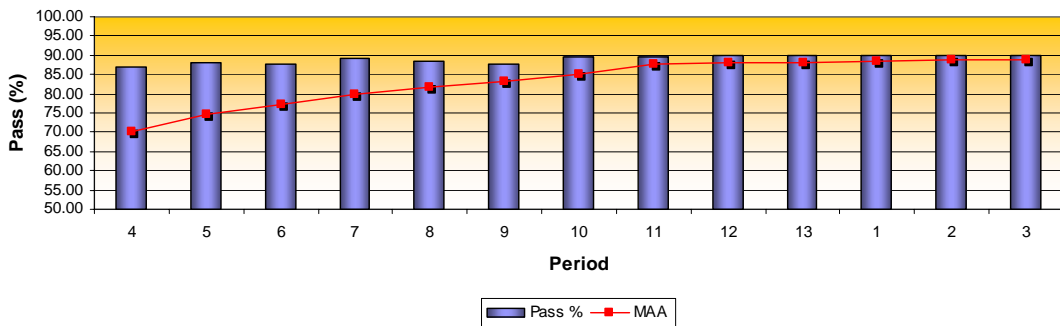
F: PUBLIC ADDRESS SYSTEM AND HELP POINTS AT METROLINK STOPS

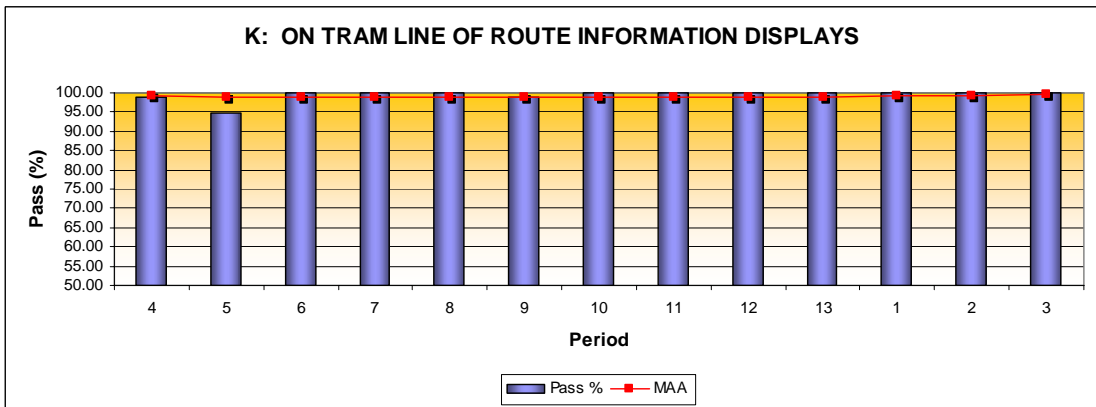
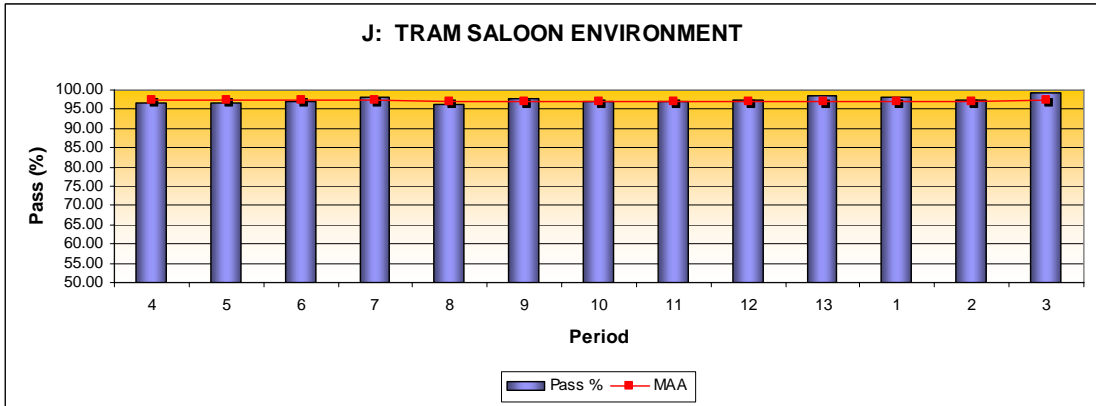
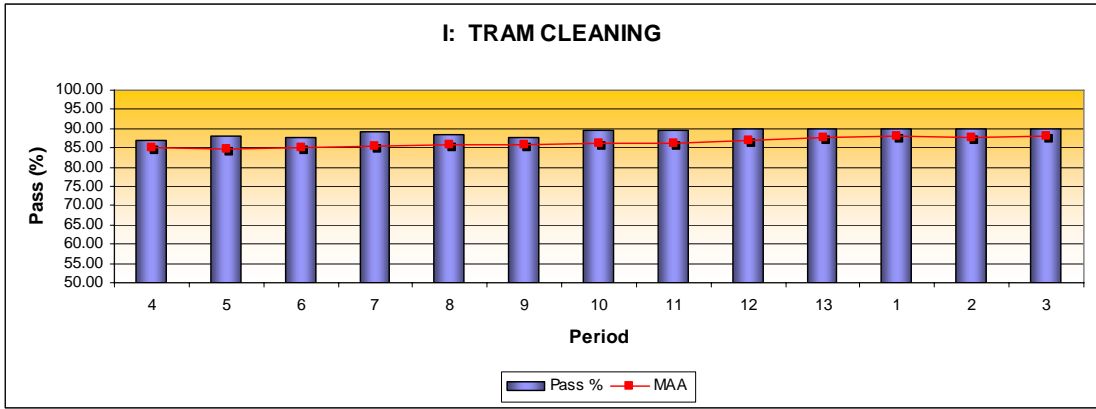


G: TRAM PUBLIC ADDRESS ANNOUNCEMENTS



H: DESTINATION AND STOPPING PATTERN DISPLAYS ON TRAM





PERIOD SCHEDULE:

Period	Start Date	End Date
1	04-May-09	31-May-09
2	01-Jun-09	28-Jun-09
3	29-Jun-09	26-Jul-09
4	27-Jul-09	23-Aug-09
5	24-Aug-09	20-Sep-09
6	21-Sep-09	18-Oct-09
7	19-Oct-09	15-Nov-09
8	16-Nov-09	13-Dec-09
9	14-Dec-09	10-Jan-10
10	11-Jan-10	07-Feb-10
11	08-Feb-10	07-Mar-10
12	08-Mar-10	04-Apr-10
13	05-Apr-10	02-May-10