

Metro Bus Service Performance Monitoring Process FY2009 Second Quarter Results

Westside/Central Service Sector
Council Meeting
March 11, 2009

CURRENT MEASURE

Route Performance Index

Calculation

- Consists of three variables
 - Boardings per Service Hour
 - Passenger Miles per Seat Mile
 - Subsidy per Passenger
- Individual line performance measures are normalized by service type and then averaged together
- Lines scoring less than 0.60 are deemed poor performers

Westside/Central Service Sector

- 1 line of 22 fell below 0.6
 - Line 220

System-Wide

- 38 lines of 160 fell below 0.6

PURPOSE OF THE NEW INDICATORS

- Provide a comprehensive set of measures to support decision making
- Systematic process for evaluating service from both the network and line perspective
- Balances customer's mobility needs with the need to be efficient
- Identifies specific line characteristics that need improvement

NEW INDICATORS

Availability

- Accessibility
- Connectivity

Quality

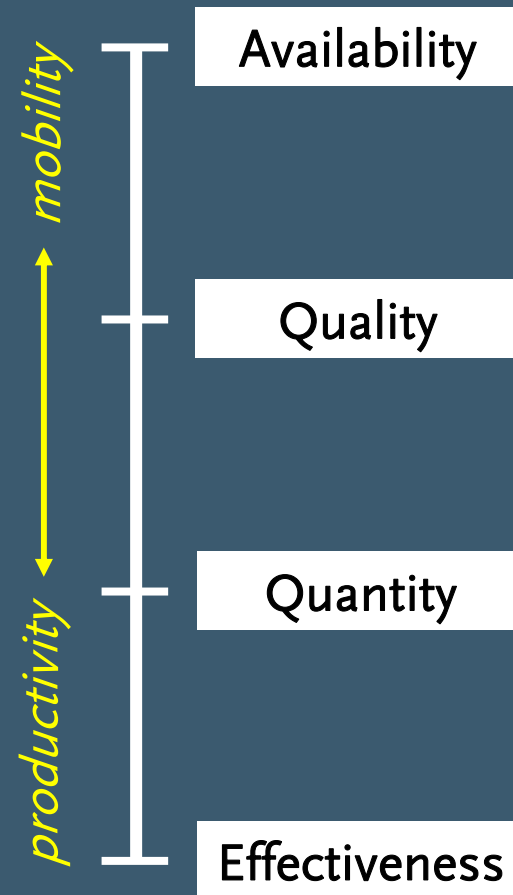
- In-Service On-Time Performance
- Headway Variability
- Customer Complaints

Quantity

- Frequency
- Load Factor

Effectiveness

- Boardings per Service Hour
- Cost per Passenger Mile
- Passenger Miles per Seat Mile
- Service Viability



AVAILABILITY INDICATORS

Accessibility

Standard

- Service to be provided to within a quarter-mile of all census tracts having at least 3 households per acre and/or 4 jobs per acre

Westside/Central Service Sector

- All Census tracts comply.

System-Wide Service

- All Census tracts comply.

AVAILABILITY INDICATORS

Connectivity

Standard

- Direct transfers should be available between all Rapid-to-Rapid and Tier 1 Local-to-Tier 1 Local connections

Westside/Central Service Not Meeting the Standard

- 6 Missing Rapid-to-Rapid connections
 - Involving Lines 720, 728 and 730
- No Missing Tier 1 Local-to-Tier 1 Local connections

System-Wide Service Not Meeting the Standard

- 12 Rapid-to-Rapid connections are missing
- 3 Tier 1 Local-to-Tier 1 Local connections are missing

QUALITY INDICATORS

In Service On Time Performance (ISOTP)

Standard

- At least 60% of trips in each time period should be no more than one minute early or five minutes late at all non-terminal time points

Westside/Central Service Not Meeting the Standard

- Weekday -
 - Early AM: Line 534
 - AM Peak: Lines 14, 33, 220, 534
 - Mid Day: Lines 2, 10, 14, 20, 28, 30, 33, 217, 220, 534
 - PM Peak: Lines 2, 4, 10, 14, 16, 20, 28, 30, 33, 35, 38, 217, 220, 534
 - Early Evening: Lines 2, 4, 10, 14, 16, 20, 30, 33, 217, 220, 534
 - Late Evening: Lines 2, 4, 10, 217
 - Owl Period: Lines 2, 4, 14, 16, 28, 38, 217
- Saturday: Lines 2, 4, 10, 14, 33, 217, 534
- Sunday: Lines 2, 10, 33, 217, 534

System-Wide Service Not Meeting the Standard

- Weekday: 73 of 111 measured bus lines
- Saturday: 33 of 93 measured bus lines
- Sunday: 19 of 90 measured bus lines



QUALITY INDICATORS

Headway Variability (Bus Bunching Indicator)

Standard

- For a time period where service operates every 12 minutes or better, there should be less than a 30% chance of seeing two or more buses together at a major stop location

Westside/Central Service Not Meeting the Standard

- Weekday -
 - Early AM: Lines 2, 720
 - AM Peak: Lines 2, 4, 10, 14, 16, 20, 28, 30, 33, 35, 534, 704, 720, 728, 730
 - Mid Day: Lines 2, 16, 20, 33, 720
 - PM Peak: Lines 2, 4, 10, 14, 16, 20, 28, 30, 33, 35, 217, 704, 714, 720, 728, 730, 920
 - Early Evening: Lines 2, 14, 16, 20, 30, 33, 720
 - Late Evening: Line 720
 - Owl Period: None
- Saturday: Lines 2, 16, 20, 28, 30, 33, 35, 217, 720
- Sunday: Lines 16, 20, 28, 30, 33, 720

System-Wide Service Not Meeting the Standard

- Weekday: 57 of 68 measured bus lines
- Saturday: 21 of 27 measured bus lines
- Sunday: 15 of 17 measured bus lines



QUALITY INDICATORS

Customer Complaints Per 100,000 Boardings

Standard

- Complaints per 100,000 boardings should be less than the ratio achieved by the poorest 15% of bus lines in each service type in FY2008

Westside/Central Service Not Meeting the Standard

- 4 of 22 bus lines
 - Lines 278, 220, 704, 728

System-Wide Service Not Meeting the Standard

- 25 of 159 bus lines

QUANTITY INDICATORS

Frequency

Standard

- Service is operated at least every 60 minutes. Rapid service is operated at least every 20 minutes between 6am – 6pm

Westside/Central Service Not Meeting the Standard

- All WSC Lines meet the Standard.

System-Wide Service Not Meeting the Standard

- 3 of 159 bus lines do not meet the Standard.

QUANTITY INDICATORS

Load Factor

Standard

- The ratio of passengers to seats is below 1.20 during any hour at the peak load point .

Westside/Central Service Not Meeting the Standard

- Weekday -
 - Early AM: None
 - AM Peak: None
 - Mid Day: None
 - PM Peak: Lines 14 and 920
 - Early Evening: None
 - Late Evening: Line 16
 - Owl Period: None
- Saturday: Lines 14, 16, 30, 33, 217, 534, 720
- Sunday: Lines 16, 534

System-Wide Service Not Meeting the Standard

- 12 of 159 Weekday bus lines
- 26 of 122 Saturday bus lines
- 8 of 112 Sunday bus lines

EFFECTIVENESS INDICATORS

Boardings Per Service Hour

Standard

- At or above the lowest 15% of bus lines in each service period during FY2008

Westside/Central Service Not Meeting the Standard

- Weekday -
 - Early AM: None
 - AM Peak: Lines 220 and 920
 - Mid Day: Lines 278, 220, 714
 - PM Peak: Lines 278, 220, 714, 920
 - Early Evening: Line 534
 - Late Evening: None
 - Owl Period: Lines 10 and 38
- Saturday: Line 220
- Sunday: Line 278
- System-Wide Service Not Meeting the Standard
- 56 of 159 Weekday bus lines
- 14 of 122 Saturday bus lines
- 14 of 112 Sunday bus lines

EFFECTIVENESS INDICATORS

Cost per Passenger Mile

Standard

- At or below the 15% of highest cost bus lines in each service period during FY2008

Westside/Central Service Not Meeting the Standard

- Weekday -
 - Early AM: None
 - AM Peak: Lines 220 and 730
 - Mid Day: Lines 220, 714, 730
 - PM Peak: Lines 220, 714, 730
 - Early Evening: Lines 714, 728, 730
 - Late Evening: Lines 35 and 38
 - Owl Period: Lines 10, 14, 30, 38
- Saturday: Lines 38, 278, 220
- Sunday: None

System-Wide Service Not Meeting the Standard

- 61 of 159 Weekday bus lines
- 21 of 122 Saturday bus lines
- 16 of 112 Sunday bus lines

EFFECTIVENESS INDICATORS

Passenger Miles per Seat Mile

Standard

- At or above the lowest 15% of bus lines in each service type during FY2008

Westside/Central Service Not Meeting the Standard

- Weekday -
 - Early AM: None
 - AM Peak: Line 220
 - Mid Day: Lines 220 and 714
 - PM Peak: Line 220
 - Early Evening: Lines 714 and 728
 - Late Evening: None
 - Owl Period: Lines 10 and 38
- Saturday: Line 220
- Sunday: None

System-Wide Service Not Meeting the Standard

- 56 of 159 Weekday bus lines
- 23 of 122 Saturday bus lines
- 23 of 112 Sunday bus lines

EFFECTIVENESS INDICATORS

Service Viability by Time Period

Standard

- Achieve at least 2 of the 3 previously described Effectiveness indicators

Westside/Central Service Not Meeting the Standard

- Weekday -
 - Early AM: Lines None
 - AM Peak: Line 220
 - Mid Day: Lines 220 and 714
 - PM Peak: Lines 220 and 714
 - Early Evening: Lines 714 and 728
 - Late Evening: None
 - Owl Period: Lines 10 and 38
- Saturday: Lines 278 and 220
- Sunday: None

System-Wide Service Not Meeting the Standard

- 53 of 159 Weekday bus lines
- 20 of 122 Saturday bus lines
- 19 of 112 Sunday bus lines

Discussion