Quarterly Service Performance Review
Fourth Quarter, FY 2018
April - June, 2018

Operations & Safety Committee
August 9, 2018
<table>
<thead>
<tr>
<th>PERFORMANCE INDICATORS</th>
<th>CURRENT QUARTER</th>
<th>PRIOR QTR ACTUALS</th>
<th>YEAR TO DATE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ACTUAL</td>
<td>STANDARD</td>
<td>STATUS</td>
</tr>
<tr>
<td>Average Ridership - Weekday</td>
<td>416,706</td>
<td>425,658</td>
<td>NOT MET</td>
</tr>
<tr>
<td>Customers on Time</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Peak</td>
<td>93.29%</td>
<td>95.00%</td>
<td>NOT MET</td>
</tr>
<tr>
<td>Daily</td>
<td>94.18%</td>
<td>95.00%</td>
<td>NOT MET</td>
</tr>
<tr>
<td>Trains on Time</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Peak</td>
<td>90.28%</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Daily</td>
<td>91.25%</td>
<td>92.00%</td>
<td>NOT MET</td>
</tr>
<tr>
<td>Peak Period Transbay Car Throughput</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AM Peak</td>
<td>95.95%</td>
<td>97.50%</td>
<td>NOT MET</td>
</tr>
<tr>
<td>PM Peak</td>
<td>96.56%</td>
<td>95.70%</td>
<td>NOT MET</td>
</tr>
<tr>
<td>Car Availability at 4 AM (0400)</td>
<td>559</td>
<td>595</td>
<td>NOT MET</td>
</tr>
<tr>
<td>Mean Time Between Service Delays</td>
<td>4,663</td>
<td>4,000</td>
<td>MET</td>
</tr>
<tr>
<td>Elevators in Service</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Station</td>
<td>98.40%</td>
<td>98.00%</td>
<td>MET</td>
</tr>
<tr>
<td>Garage</td>
<td>93.57%</td>
<td>98.00%</td>
<td>MET</td>
</tr>
<tr>
<td>Escalators in Service</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Street</td>
<td>86.70%</td>
<td>95.00%</td>
<td>NOT MET</td>
</tr>
<tr>
<td>Platform</td>
<td>95.33%</td>
<td>94.73%</td>
<td>MET</td>
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<tr>
<td>Automatic Fare Collection</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gates</td>
<td>99.57%</td>
<td>99.00%</td>
<td>MET</td>
</tr>
<tr>
<td>Vendors</td>
<td>98.22%</td>
<td>95.00%</td>
<td>MET</td>
</tr>
<tr>
<td>Wayside Train Control System</td>
<td>0.78</td>
<td>1.00</td>
<td>MET</td>
</tr>
<tr>
<td>Computer Control System</td>
<td>0.03</td>
<td>0.08</td>
<td>MET</td>
</tr>
<tr>
<td>Traction Power</td>
<td>0.06</td>
<td>0.20</td>
<td>MET</td>
</tr>
<tr>
<td>Track</td>
<td>0.01</td>
<td>0.30</td>
<td>MET</td>
</tr>
<tr>
<td>Transportation</td>
<td>0.54</td>
<td>0.50</td>
<td>MET</td>
</tr>
<tr>
<td>Environment Outside Stations</td>
<td>2.74</td>
<td>2.80</td>
<td>MET</td>
</tr>
<tr>
<td>Environment Inside Stations</td>
<td>2.55</td>
<td>3.00</td>
<td>MET</td>
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<tr>
<td>Station Vandalism</td>
<td>2.91</td>
<td>3.19</td>
<td>NOT MET</td>
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<tr>
<td>Station Services</td>
<td>2.84</td>
<td>3.06</td>
<td>MET</td>
</tr>
<tr>
<td>Train P.A. Announcements</td>
<td>3.10</td>
<td>3.17</td>
<td>NOT MET</td>
</tr>
<tr>
<td>Train Exterior Appearance</td>
<td>2.74</td>
<td>3.00</td>
<td>NOT MET</td>
</tr>
<tr>
<td>Train Interior Appearance</td>
<td>2.79</td>
<td>3.00</td>
<td>NOT MET</td>
</tr>
<tr>
<td>Train Temperature</td>
<td>3.11</td>
<td>3.12</td>
<td>NOT MET</td>
</tr>
<tr>
<td>Customer Complaints</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Complaints per 100,000 Passenger Trips</td>
<td>7.80</td>
<td>5.07</td>
<td>NOT MET</td>
</tr>
<tr>
<td>Safety</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Station Incidents/Million Patrons</td>
<td>1.20</td>
<td>5.50</td>
<td>MET</td>
</tr>
<tr>
<td>Vehicle Incidents/Million Patrons</td>
<td>0.36</td>
<td>1.30</td>
<td>MET</td>
</tr>
<tr>
<td>Lost Time Injuries/Illnesses/Per OSHA</td>
<td>NA</td>
<td>7.50</td>
<td>NOT MET</td>
</tr>
<tr>
<td>OSHA-Recordable Injuries/Illnesses/Per OSHA</td>
<td>NA</td>
<td>13.30</td>
<td>NOT MET</td>
</tr>
<tr>
<td>Unscheduled Door Openings/Million Car Miles</td>
<td>0.200</td>
<td>0.300</td>
<td>MET</td>
</tr>
<tr>
<td>Rule Violations Summary/Million Car Miles</td>
<td>0.200</td>
<td>0.500</td>
<td>MET</td>
</tr>
<tr>
<td>Police</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BART Police Presence</td>
<td>10%</td>
<td>12%</td>
<td>NOT MET</td>
</tr>
<tr>
<td>Quality of Life per million riders</td>
<td>44.59</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Crimes Against Persons per million riders</td>
<td>3.87</td>
<td>2.00</td>
<td>MET</td>
</tr>
<tr>
<td>Auto Burglaries per 1,000 parking spaces</td>
<td>5.88</td>
<td>8.00</td>
<td>MET</td>
</tr>
<tr>
<td>Auto Thefts per 1,000 parking spaces</td>
<td>1.95</td>
<td>6.00</td>
<td>MET</td>
</tr>
<tr>
<td>Police Response Time per Emergency Incident (Minutes)</td>
<td>4.36</td>
<td>5.00</td>
<td>MET</td>
</tr>
<tr>
<td>Bike Thefts (Quarterly Total and YTD Quarterly Average)</td>
<td>99</td>
<td>150.00</td>
<td>MET</td>
</tr>
</tbody>
</table>

**LEGEND:**
- **Goal met**
- **Goal not met but within 5%**
- **Goal not met by more than 5%**
Rate of ridership decline continues to lessen, weekday average only down by 0.7% compared to same quarter last year; peak period ridership increased by 1%

Steady improvement in train service reliability continues, customer on-time 94.2%

Equipment Reliability: Car, Track, Train Control, and Computer Control System all exceeded goal (thus the improvement in on-time performance)

Equipment Availability: Goal met for Vendors, Gates and Station Elevators. Goal not met but performance improved for Street and Platform Escalators. Goal not met for Cars and Garage Elevators

Passenger Environment: 2 of 4 Station indicators improved, 1 of 4 Train indicators improved. None met goal

Complaint numbers up from last quarter, down from last year. Significantly, complaints about Station Cleanliness, Quality of Life and Service Delays were down
Customer Ridership

- Total ridership decreased by 1.0% compared to same quarter last year
- Average weekday ridership (416,706) down by 0.7% from same quarter last year
- Core weekday ridership down by 0.6% from same quarter last year
- SFO Extension weekday ridership down by 1.7% from same quarter last year
- Average peak ridership up by 1.0% compared to same quarter last year
- During Q4 there were two Top 10 Ridership Days:
  - 6/12/2018: 493,927 – Warriors Championship Parade; A's vs. Houston (#7 Weekday)
  - 6/24/2018: 241,761 – SF Pride Celebration & Parade; Giants vs. San Diego (#8 Sunday)
- Saturday and Sunday down by 2.8% and 3.4%, respectively, from same quarter last year
On-Time Service - Customer

- Continued substantial improvement
- 94.2%, 95.00% goal not met, up .75% from prior quarter
- Goal met in May with 95.02%
- Delay events causing the most late trains:

<table>
<thead>
<tr>
<th></th>
<th>Date</th>
<th>Location</th>
<th>Event Description</th>
<th>Category</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>18-Jun-18</td>
<td>L.Merritt I-Lk</td>
<td>Train Struck A Person On Trackway</td>
<td>People</td>
<td>104</td>
</tr>
<tr>
<td>2</td>
<td>06-Apr-18</td>
<td>16th Street</td>
<td>BPD Hold (Patron Threatening Others/Knife Involved)</td>
<td>People</td>
<td>67</td>
</tr>
<tr>
<td>3</td>
<td>14-May-18</td>
<td>Systemwide</td>
<td>Earthquake</td>
<td>Earthquake</td>
<td>56</td>
</tr>
<tr>
<td>4</td>
<td>12-Jun-18</td>
<td>A,K,R-Lines</td>
<td>Warriors Parade Event</td>
<td>Event Cong.</td>
<td>52</td>
</tr>
<tr>
<td>5</td>
<td>30-Apr-18</td>
<td>Systemwide</td>
<td>Earthquake</td>
<td>Earthquake</td>
<td>34</td>
</tr>
<tr>
<td>6</td>
<td>13-Jun-18</td>
<td>Lake Merritt</td>
<td>MUX (False-Occupancy)</td>
<td>Equip</td>
<td>32</td>
</tr>
<tr>
<td>7</td>
<td>17-May-18</td>
<td>W.C. I-Lk-No.</td>
<td>Routing (Loss of Comms &amp; Control)</td>
<td>Equip</td>
<td>32</td>
</tr>
<tr>
<td>8</td>
<td>21-May-18</td>
<td>Orinda</td>
<td>Inverter (Multiple Cars/Smoke)</td>
<td>Vehicle</td>
<td>31</td>
</tr>
<tr>
<td>9</td>
<td>07-Apr-18</td>
<td>Coliseum</td>
<td>BPD Hold (Weapon Assault Invest./Stabbing Suspect)</td>
<td>People</td>
<td>28</td>
</tr>
<tr>
<td>10</td>
<td>25-May-18</td>
<td>San Leandro</td>
<td>BPD Hold (Disorderly Patron/Fight)</td>
<td>People</td>
<td>27</td>
</tr>
</tbody>
</table>
On-Time Service - Train

- Continued substantial improvement
- 91.3%, 92.00% goal not met; up 2.5% from prior quarter
- Goal met in May with 92.2%
- 36.9% of late trains were late due to multiple small delays, each under 5 minutes
- Categorization of late trains due to a known delay event of 5 minutes or greater:
  - POLICE ACTIONS: 30.2% of delayed trains
  - TRAIN CONTROL: 10.3% of delayed trains
  - RAIL CAR: 8.2% of delayed trains
  - CONGESTION: 7.5% of delayed trains
  - OPERATIONS: 7.1% of delayed trains
  - MEDICAL EMERGENCY: 7.0% of delayed trains
  - VANDALISM: 6.5% of delayed trains
  - PERSON ON TRACKWAY: 2.9% of delayed trains
  - TRAIN STRUCK PATRON: 2.4% of delayed trains
  - MULTIPLE CAUSE: 2.2% of delayed trains
Wayside Train Control System

Includes False Occupancy & Routing, Delays Per 100 Train Runs

- Goal met – Actual .79 / Goal 1.00
- Best performance since FY13 Q1
- Reallocation of labor has result in higher PM completion rate (95%)
- Maintenance & Engineering focused on root cause analysis and quality fixes
Goal met – Actual 0.03 / Goal 0.08
- Engineering provided Maintenance with a new “NOC – Network Operation Center which allows for real time monitoring
  - Maintenance able to respond before OCC reports a problem
  - Enhancements underway will allow for detection of deteriorating conditions allowing for predictive maintenance.
Traction Power

Includes Coverboards, Insulators, Third Rail Trips, Substations, Delays Per 100 Train Runs

- Goal met – Actual .06 / Goal .2
- Number of incidents continue to drop from last quarter
- RR Bond Projects continue to provide much needed reliability boost for Traction Power System
- 34.5kv cable replacement Washington Street, Oakland to Coliseum Substation under construction. Will complete next quarter.
Transportation

Includes Late Dispatches, Controller-Train Operator-Tower Procedures and Other Operational Delays Per 100 Train Runs

- Goal not met – Actual .54 / Goal .5
- Lack of Train Operator availability primary cause of goal not being met
Goal met – Actual .01 / Goal .30

- Improved coordination between Maintenance and Operations Control Center has allowed for more work with less service impacts
Car Equipment - Reliability

Goal met – MTBSD 4,663 hours / Goal 4,000 hours

June impacted by heat, causing increase in propulsion, HVAC and inverter failures
Goal not met – 589 Actual vs. 595 Required
✓ Hot weather impacted availability
✓ 6 cars in SVBX testing.
Goal 98%. Goal met – Actual 98.4%

✓ Improved over last quarter
Goal 98%. Goal not met - Actual 93.6%
Decline from last quarter due to:
- Four different garage elevators suffered electronic malfunctions, plus one vandalism and one motor failure
- Station elevator repair a higher priority than garage elevators
Goal 95%. Goal not met - Actual 86.7%
Improved by 2.5% over last quarter
Four Street Escalator chain jobs – Two at Civic Center, one each at Embarcadero and 19th Street
Goal 96%. Goal not met - Actual 95.33%
✓ Slight improvement over last quarter
✓ Three Fujitec Escalator chain replacements.
✓ Fujitec Escalator material deficiency and our first Fujitec chain replacement (learning curve) resulted in excessive OOS time.
Goal met - Actual 99.6% / Goal 99.0%
Early “bugs” from Asset Refresh Project have been resolved
Goal met  - Actual 98.2% / Goal 95.0%

- Parking Validation Machines Availability – 98.7%
- Maintenance & Engineering have worked to enhance real time remote visibility of failure data to enable faster response times
- Improved data collection system allowing for earlier identification of systemic issues
Composite rating of:
- Walkways & Entry Plaza Cleanliness (50%) 2.62↑
- BART Parking Lot Cleanliness (25%) 2.96↑
- Appearance of BART Landscaping (25%) 2.77↑

- Goal not met, rating improved, highest in a year
- Cleanliness ratings of either Excellent or Good:
  - Walkways/Entry Plazas: 59.8%
  - Parking Lots: 74.2%
  - Landscaping Appearance: 67.0%

↑ indicates a statistically significant increase from the prior quarter
Goal not met but progress continues, particularly in addressing “hot spots”

Cleanliness ratings of either Excellent or Good:
- Station Platform: 63.3%
- Other Station Areas: 54.5%
- Restrooms: 35.2%
- Elevators: 42.8%
Station Vandalism

Goal not met, slight improvement
74.2% of those surveyed ranked this category as either Good or Excellent
Station Services

Composite rating of:
- Station Agent Availability (65%) 2.82
- Brochures Availability (35%) 2.88

- Goal not met
- Availability ratings of either Excellent or Good:
  - Station Agents: 68.6%
  - Brochures: 72.5%
Train P.A. Announcements

Goal not met

Announcement ratings of either Excellent or Good:
- Arrivals: 79.0%
- Transfers: 78.0%
- Destinations: 83.0%

Composite rating of:
- P.A. Arrival Announcements (33%) 3.08
- P.A. Transfer Announcements (33%) 3.04
- P.A. Destination Announcements (33%) 3.19

Ratings guide:
- 4 = Excellent
- 3.17 = Goal
- 3 = Good
- 2 = Only Fair
- 1 = Poor
Goal not met

67.2% of those surveyed ranked this category as either Excellent or Good
Train Interior Cleanliness:

- Composite rating of:
  - Train interior cleanliness (60%) 2.51
  - Train interior kept free of graffiti (40%) 3.22

- Goal not met but slight improvement in FY18 Q1
- Reallocated resources from mid-line window washing pilot to providing a rapid response to customer reports of bio-hazards
- Train Interior ratings of either Excellent or Good:
  - Train Interior Cleanliness: 53.5%; Graffiti-free: 87.1%

Ratings guide:
4 = Excellent
3 = Good
3.00 = Goal
2 = Only Fair
1 = Poor
Train Temperature

Comfortable Temperature Onboard Train

✓ Goal not met
✓ 82.9% of those surveyed rated this category as either Excellent or Good
Total complaints increased 318 (15.3%) from last quarter, but decreased 367 (13.3%) compared with fourth quarter FY17.

With the notable exceptions of Station Cleanliness, Quality of Life and Policies; complaints increased in all categories.

Complaints about Service Delays (a sub-category of “Service”) were also substantially lower this quarter.

“Compliments” number 137, up from 109 last quarter and 127 a year ago.
Patron Safety:
Station Incidents per Million Patrons

Goal met
Patron Safety
Vehicle Incidents per Million Patrons

✔ Goal met
Employee Safety: Lost Time Injuries/Illnesses per OSHA Incidence Rate

Data not available for Q4
Employee Safety:
OSHA-Recordable Injuries/Illnesses
per OSHA Incidence Rate

Data not available for Q4
SERVICE: How are we doing?  

✓ Operating Safety: Unscheduled Door Openings per Million Car Miles

✓ Goal met
Operating Safety:
Rule Violations per Million Car Miles

Goal met
**BART Police Presence**

**Goal not met**

- Police seen on train: 5.4%
- Police seen outside the station: 14.6%
- Police seen in the station: 11.0%
- Police seen on train after 7:00PM: 3.3%
- Police seen outside the station after 7:00PM: 15.7%
- Police seen in the station after 7:00PM: 13.9%
Quality of Life incidents are down from the last quarter and from the corresponding quarter of the prior fiscal year.

*Quality of Life Violations include: Disturbing the Peace, Vagrancy, Public Urination, Fare Evasion, Loud Music/Radios, Smoking, Eating/Drinking and Expectoration
Crimes Against Persons
(Homicide, Rape, Robbery, and Aggravated Assault)

Goal not met
Crimes against persons are up from the last quarter and up from the corresponding quarter of the prior fiscal year.
Goal met

The number of incidents per thousand parking spaces are up from last quarter and up from the corresponding quarter of the prior fiscal year.
The number of incidents per thousand parking spaces are down from last quarter and down from the corresponding quarter of the prior fiscal year.
✓ Goal met
✓ The average Emergency Response Time was better than the prior quarter but slightly up from the corresponding quarter of the prior fiscal year.
Goal met

99 bike thefts for current quarter, up 11 from last quarter.