



# Rail Fleet Services Monthly Report June 2017



**Metro**

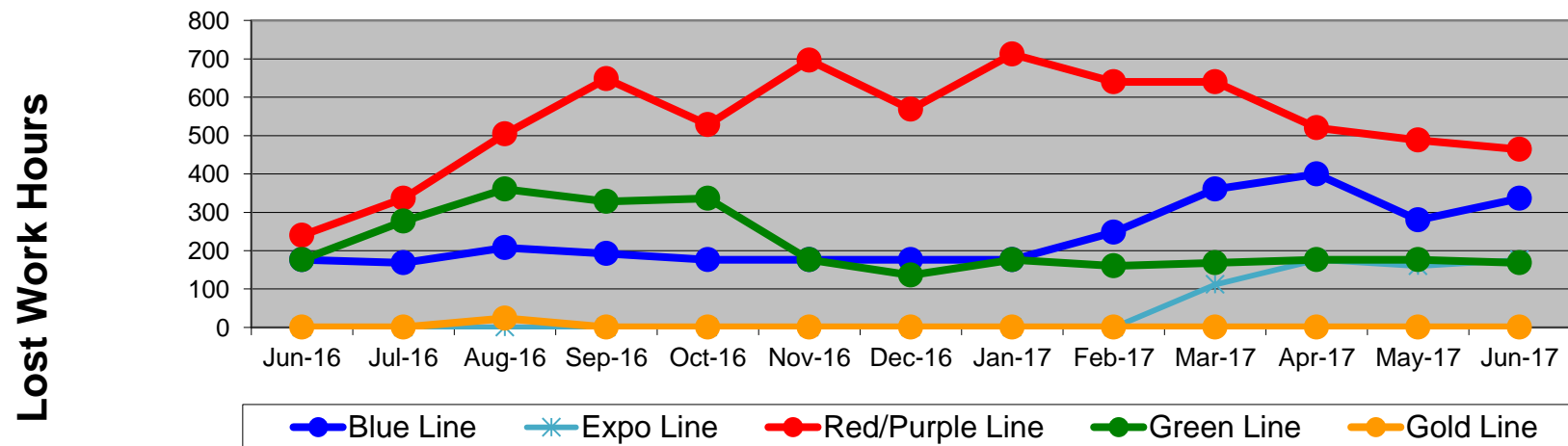
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# Industrial Injuries – Lost Work Hours June 2016-2017

|                 | Jun-16 | Jul-16 | Aug-16 | Sep-16 | Oct-16 | Nov-16 | Dec-16 | Jan-17 | Feb-17 | Mar-17 | Apr-17 | May-17 | Jun-17 | 13-Month Period |
|-----------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-----------------|
| Blue Line       | 176    | 168    | 208    | 192    | 176    | 176    | 176    | 176    | 248    | 360    | 400    | 280    | 336    | 3,072           |
| Expo Line       | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 112    | 176    | 160    | 176    | 624             |
| Red/Purple Line | 240    | 336    | 504    | 648    | 528    | 696    | 568    | 712    | 640    | 640    | 520    | 488    | 464    | 6,984           |
| Green Line      | 176    | 277    | 360    | 328    | 336    | 176    | 136    | 176    | 160    | 168    | 176    | 176    | 168    | 2,813           |
| Gold Line       | 0      | 0      | 24     | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 24              |
| Totals          | 592    | 781    | 1,096  | 1,168  | 1,040  | 1,048  | 880    | 1,064  | 1,048  | 1,280  | 1,272  | 1,104  | 1,144  | 13,517          |

**Industrial Injuries (lost work hours)**



# Rail Vehicle Accidents & Major Incidents

## June 2016-2017

| Repair Costs    | Jun-16          | Jul-16         | Aug-16          | Sep-16          | Oct-16          | Nov-16     | Dec-16         | Jan-17           | Feb-17          | Mar-17         | Apr-17         | May-17         | Jun-17          | 13-Month Period  |
|-----------------|-----------------|----------------|-----------------|-----------------|-----------------|------------|----------------|------------------|-----------------|----------------|----------------|----------------|-----------------|------------------|
| Blue Line       | \$0             | \$0            | \$3,211         | \$665           | \$28,089        | \$0        | \$2,352        | \$170,311        | \$0             | \$1,427        | \$2,586        | \$0            | \$15,084        | \$223,725        |
| Expo Line       | \$0             | \$576          | \$0             | \$12,921        | \$9,468         | \$0        | \$381          | \$763            | \$1,930         | \$0            | \$1,420        | \$0            | \$0             | \$27,459         |
| Red/Purple Line | \$1,932         | \$840          | \$552           | \$0             | \$0             | \$0        | \$0            | \$0              | \$1,032         | \$0            | \$0            | \$0            | \$0             | \$4,356          |
| Green Line      | \$0             | \$0            | \$51,535        | \$0             | \$0             | \$0        | \$0            | \$0              | \$0             | \$0            | \$334          | \$0            | \$0             | \$51,869         |
| Gold Line       | \$19,451        | \$564          | \$0             | \$0             | \$5,694         | \$0        | \$0            | \$3,789          | \$15,829        | \$1,871        | \$191          | \$2,692        | \$0             | \$50,081         |
| <b>Totals</b>   | <b>\$21,383</b> | <b>\$1,980</b> | <b>\$55,298</b> | <b>\$13,586</b> | <b>\$43,251</b> | <b>\$0</b> | <b>\$2,733</b> | <b>\$174,863</b> | <b>\$18,791</b> | <b>\$3,298</b> | <b>\$4,531</b> | <b>\$2,692</b> | <b>\$15,084</b> | <b>\$357,490</b> |

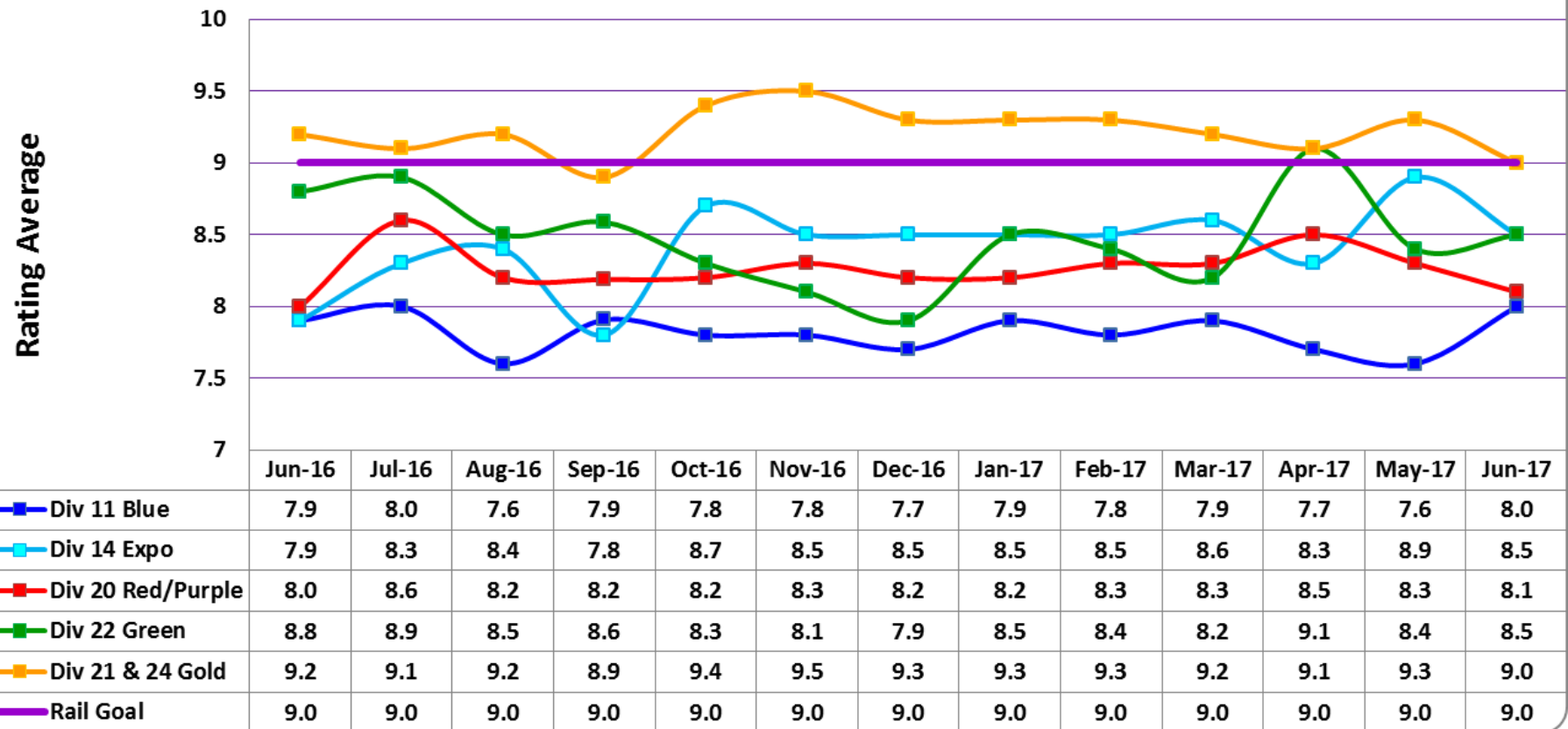
| Rail Vehicle Accident Costs - June 2017   |            |                   |   |                  |
|---|------------|-------------------|---|------------------|
| Date  | Incident # | Problem Code      | Incident Description  | Repair Cost      |
| <b>Metro Blue Line</b>  |            |                   |   |                  |
| 6/19/17   | 2878658    | Train vs. Vehicle | A 10-73 was reported at Grand Grade, Track 2, SB. Vehicle turned left in front of train.              | \$ 318           |
| 6/19/17   | 2878781    | Derailment        | A 10-75 was reported at North Loop Blue Line Yard.  | \$ 13,066        |
| 6/19/17   | 2878809    | Derailment        | A 10-75 was reported. Yard move to relocate two cars from Track 5 into Track 12 for a pull-out train. | \$ 1,700         |
| <b>Metro Blue Line Total</b>  |            |                   |   | <b>\$ 15,084</b> |
| <b>Metro Gold Line</b>  |            |                   |   |                  |
| 6/10/17   | 2875533    | Train vs. Object  | A 10-71 was reported. Train made contact with a bicycle at Little Tokyo Station, Track 2, SB.         | \$ -             |
| <b>Metro Gold Line Total</b>  |            |                   |   | <b>\$ -</b>      |
| <b>Grand Total</b>  |            |                   |   | <b>\$ 15,084</b> |
| <b>10-71 = Train vs. Object/ 10-72 = Train vs. Pedestrian/ 10-73 = Train vs. Vehicle/ 10-74 = Train vs. MTA Vehicle/ 10-75 = Derailment</b> |            |                   |   |                  |

**Note:** Repair costs are only the expenses captured during the time period of the report. Actual costs may be significantly higher, if repairs are spread out over several months.

# Rail Vehicle – Car Cleanliness

## June 2016-2017

### Car Cleanliness Monthly Report



# Service Delivery June 2017

## June 2017 - Service Delivery

### Blue Line Fleet Size: 95

| <u>Pull Out</u> | <u>Vehicles Required</u> | <u>Average Available</u> | <u>% Up (Down)</u> |
|-----------------|--------------------------|--------------------------|--------------------|
| *Weekday:       | 57                       | 59                       | 104%               |
| Weekend:        | 26                       | 50                       | 192%               |

\*Last week of June, Vehicles Required were 72 cars and Average Available were also 72.

**Monthly Mileage: 494,285**

### Expo Line Fleet Size: 56

| <u>Pull Out</u> | <u>Vehicles Required</u> | <u>Average Available</u> | <u>% Up (Down)</u> |
|-----------------|--------------------------|--------------------------|--------------------|
| Weekday:        | 42                       | 48                       | 114%               |
| Weekend:        | 30                       | 40                       | 133%               |

**Monthly Mileage: 273,484**

### Red/Purple Line Fleet Size: 104

| <u>Pull Out</u> | <u>Vehicles Required</u> | <u>Average Available</u> | <u>% Up (Down)</u> |
|-----------------|--------------------------|--------------------------|--------------------|
| Weekday:        | 64                       | 74                       | 116%               |
| Weekend:        | 40                       | 64                       | 160%               |

**Monthly Mileage: 606,564**

### Green Line Fleet Size: 29

| <u>Pull Out</u> | <u>Vehicles Required</u> | <u>Average Available</u> | <u>% Up (Down)</u> |
|-----------------|--------------------------|--------------------------|--------------------|
| Weekday:        | 22                       | 22                       | 100%               |
| Weekend:        | 14                       | 17                       | 121%               |

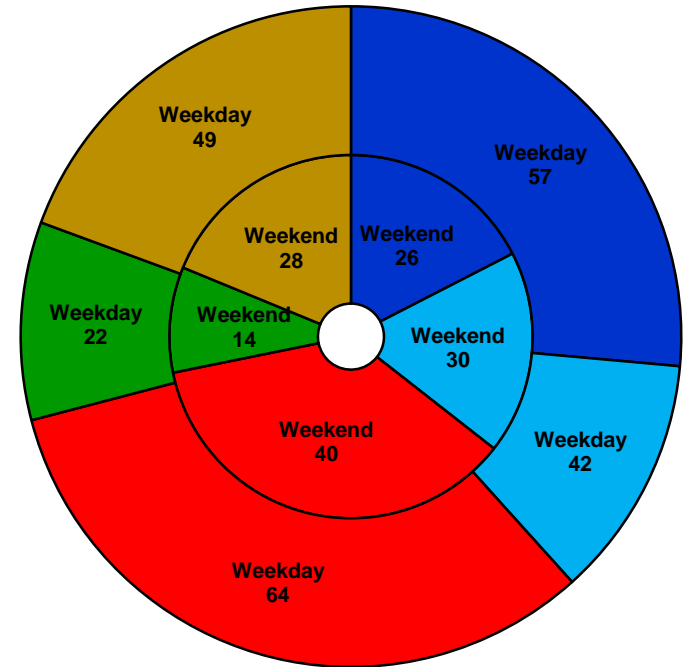
**Monthly Mileage: 233,547**

### Gold Line Fleet Size: 65

| <u>Pull Out</u>   | <u>Vehicles Required</u> | <u>Average Available</u> | <u>% Up (Down)</u> |
|-------------------|--------------------------|--------------------------|--------------------|
| Weekday (Div 21): | 10                       | 10                       | 100%               |
| Weekday (Div 24): | 39                       | 40                       | 103%               |
| Weekend (Div 24): | 28                       | 36                       | 129%               |

**\*Monthly Mileage: 559,512**

\* Gold Line monthly mileage includes Division 21 and 24.



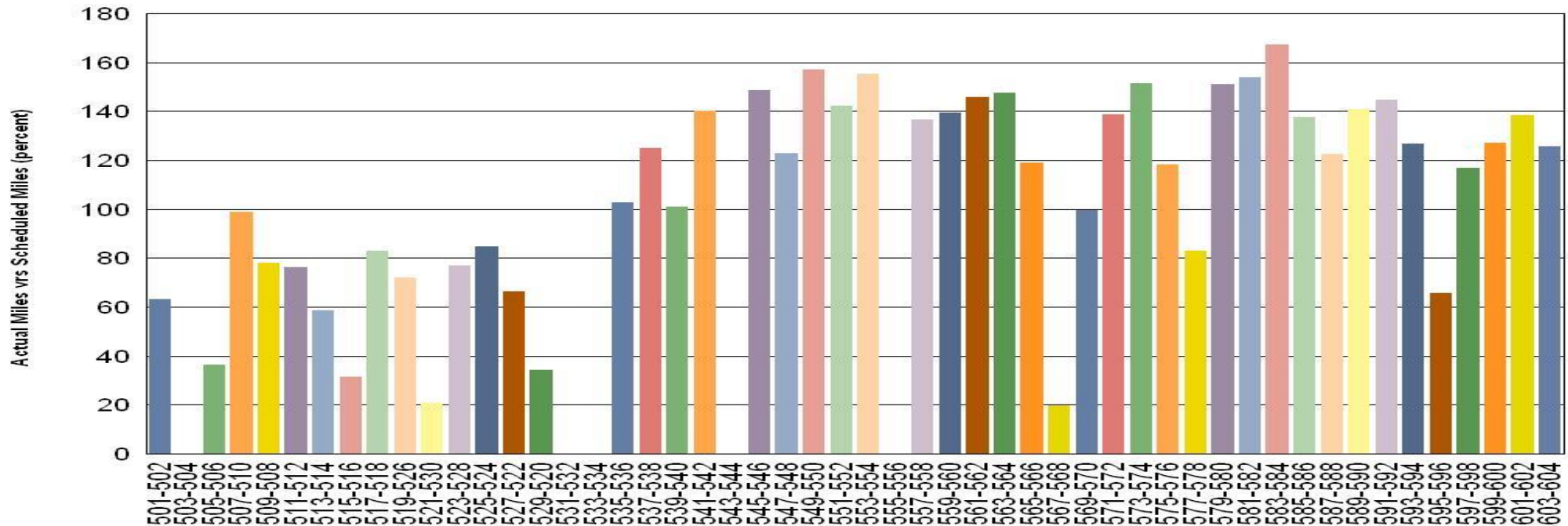
■ Blue Line
 ■ Expo Line
 ■ Red/Purple Line
 ■ Green Line
 ■ Gold Line

**NOTES: Standby trains not included in vehicle requirements**

# Vehicle Utilization

## June 2017

### Metro Red/Purple Line (104 Cars)



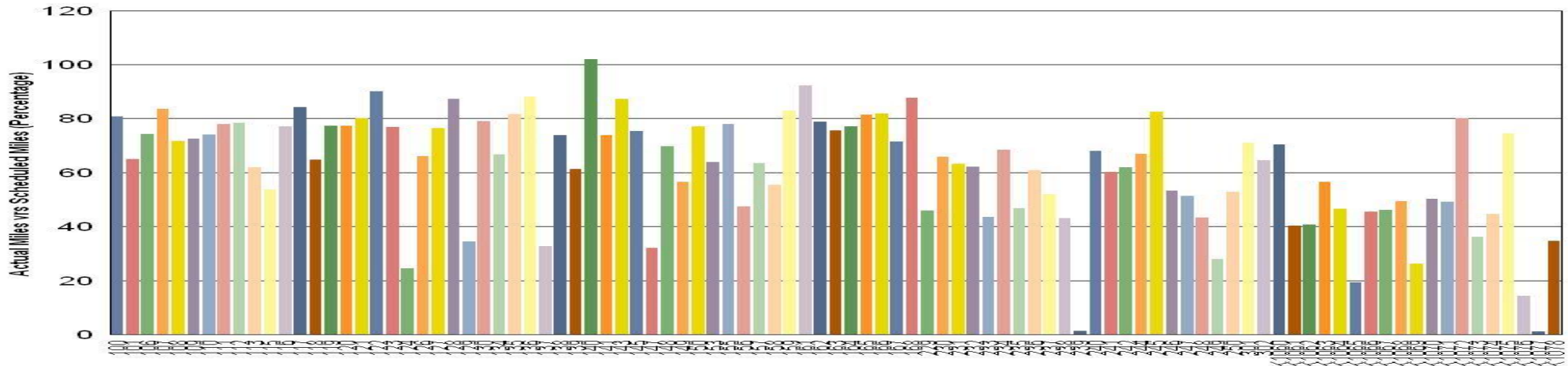
### Red/Purple Line:

The following cars were out of service due to:

- Car # 503-504 – Emergency Brake Application Issue
- Car # 505-506 – Propulsion Issue – CB1 Tripped
- Car # 515-516 – AC Evaporator Motor Campaign
- Car # 521-530 – Propulsion Issue – CB1 Tripped
- Car # 529-520 – Propulsion Issue – DC Motor Shorted
- Car # 531-532 – A650 Midlife Overhaul
- Car # 533-534 – Interior Renovation
- Car # 543-544 – GTO Shoot Through
- Car # 555-556 – GTO Shoot Through
- Car # 567-568 – Propulsion Issue

# Vehicle Utilization June 2017

## Metro Blue Line (95 Cars)



**Blue Line:** The following cars were out of service due to:

**Car # 124** – 60K Inspection/Air Hose Overhaul Campaign

**Car # 129** – Derailment/Decommissioning

**Car # 137\*** – Friction Brake Fault

**Car # 147\*** – Friction Brake Fault

**Car # 239** – Accident 10-73 Repairs

**Car # 249\*** – Flats on A & C Truck

**Car # K1065\*** – ATP/APS Fault

**Car # K1069** – B-end TWC/Door MVB Fault

**Car # K1073\*** – Pre 10K Inspection

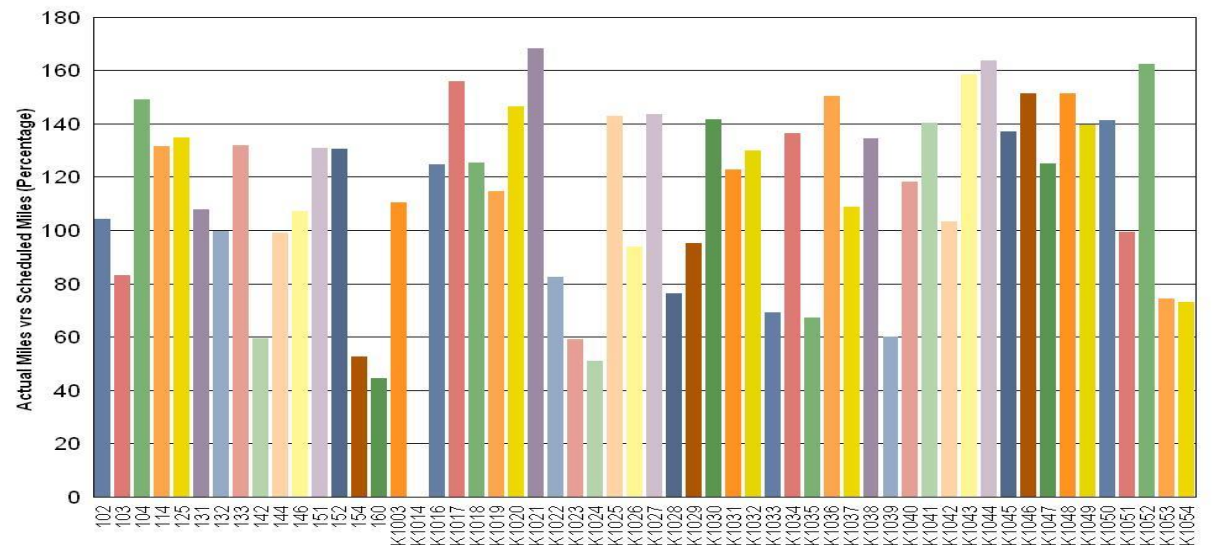
**Car # K1076\*** – Windshield Replacement

**Car # K1077\*** – Windshield Replacement/Body Damage

**Car # K1078\*** – B-end Coupler Damaged

**Notes\*** Expo Cars were transferred to Blue Line on June 24.

## Metro Expo Line (56 Cars)



**Expo Line:** The following cars were out of service due to:

**Car # K1014** – Burnt wiring KI repairing



**Metro**

*Note: Percentage includes an average 4% mileage deduction for yard mileage and vehicle testing.*



# Vehicle Utilization

## June 2017

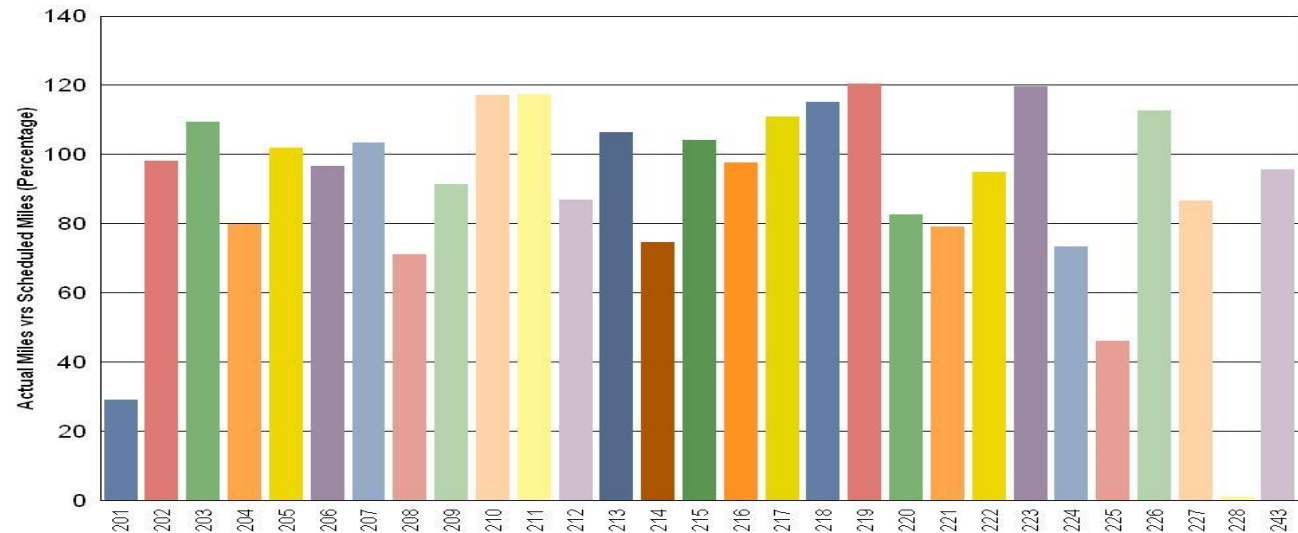
### Metro Green Line (29 Cars)

#### Green Line:

The following cars were out of service due to:

**Car # 201** – EMI/Propulsion Fault

**Car # 228** – Exterior & Interior Paint & Body Rehab



### Metro Gold Line (65 Cars)

#### Gold Line:

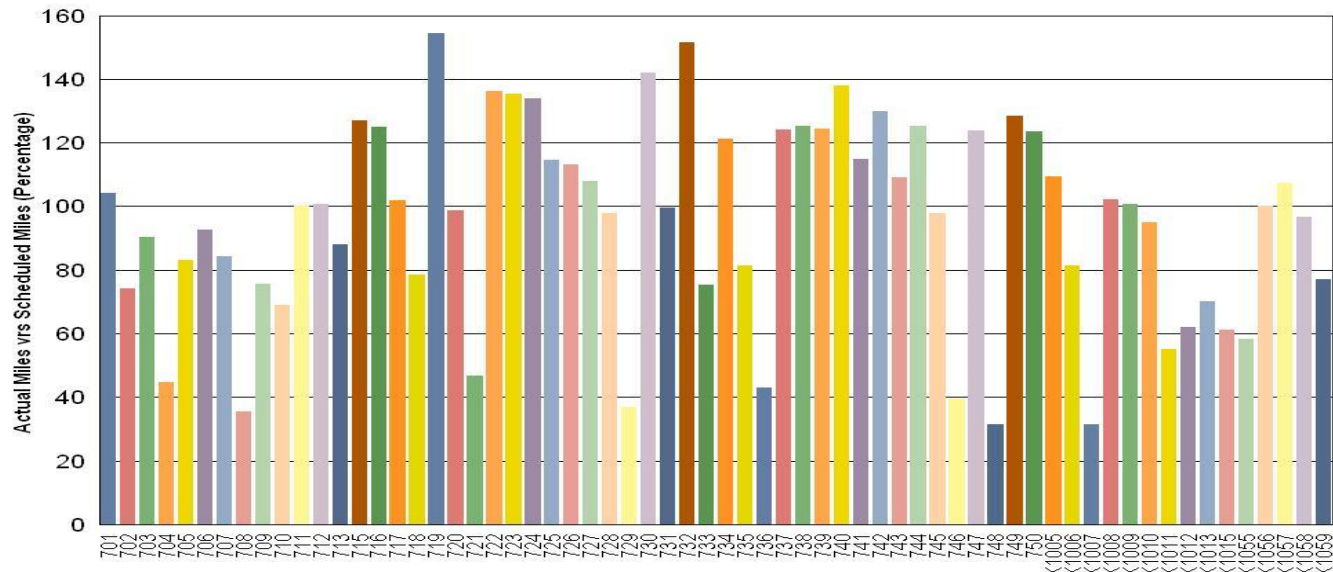
The following cars were out of service due to:

**Car # 708** – 30K Inspection, Open Work Order

**Car # 729** – 120K Inspection, Open Work Order

**Car # 748** – Burnt Wires, Open Work Order

**Car # K1007** – Warranty Repair, waiting for Download Reviews and Repair

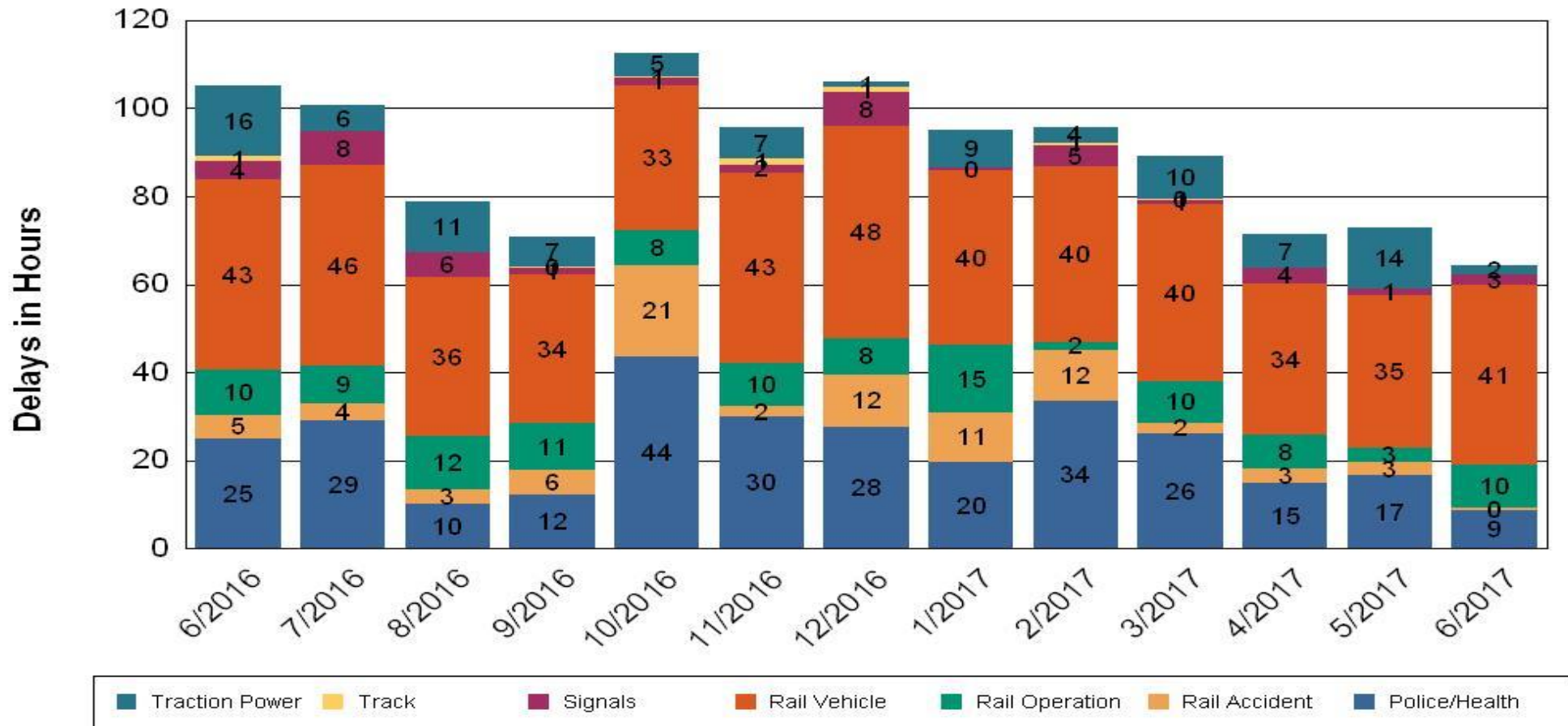


•Percentage includes an average 4% mileage deduction for yard mileage and vehicle testing.

# All Train Delays (Hours) June 2016-2017

## All Train Delays

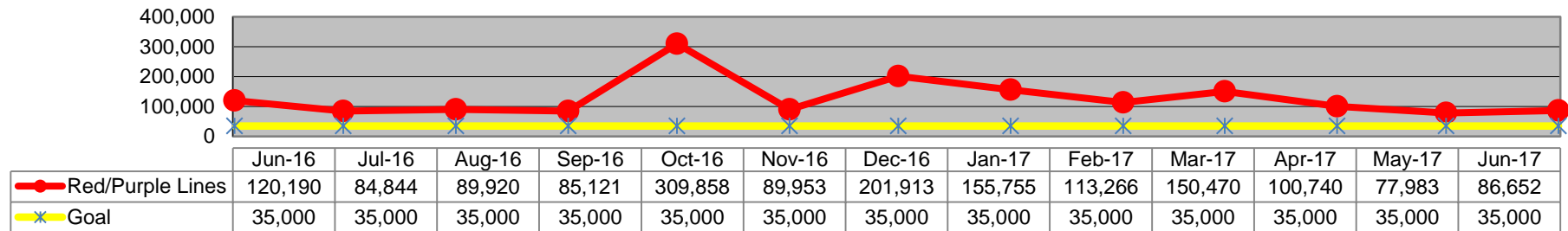
Totals Include the delay to all trains involved (not just the primary incident)



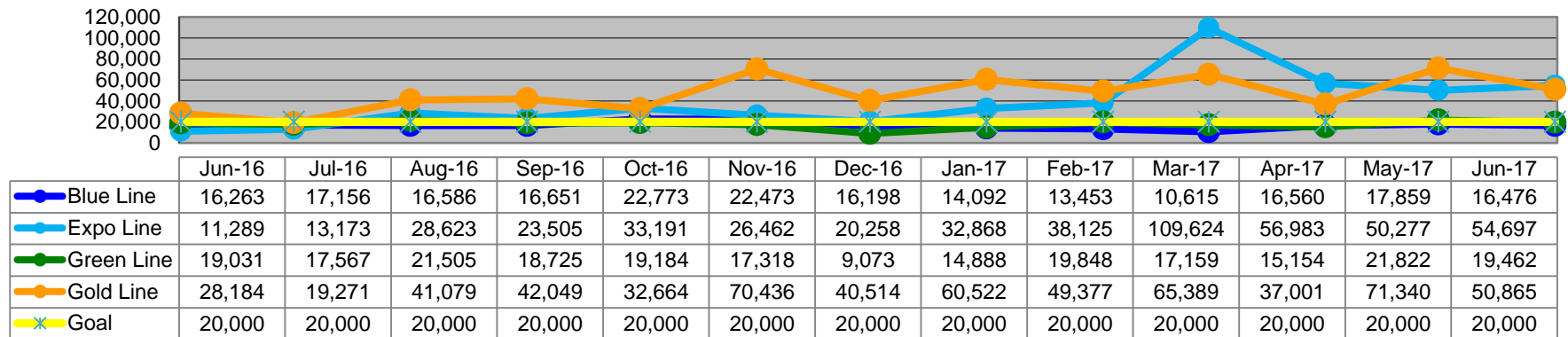
# Mean Miles Between Major Failures (MMBF)

## June 2016-2017

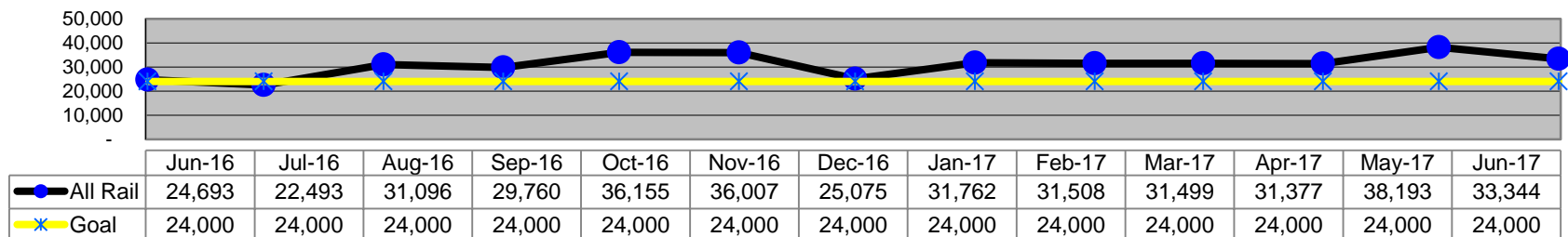
### Mean Miles Between Major Failures - Heavy Rail



### Mean Miles Between Major Failures - Light Rail



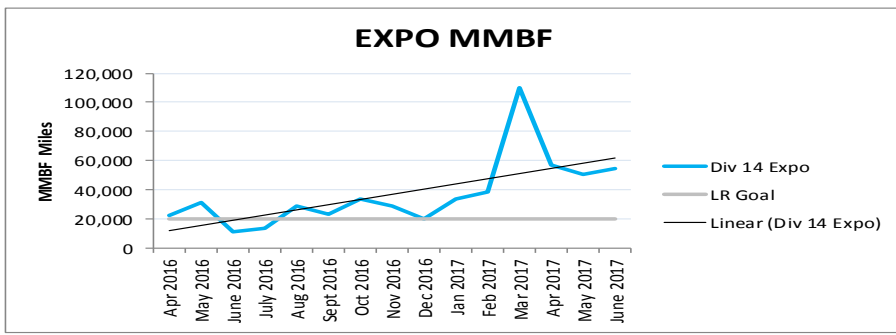
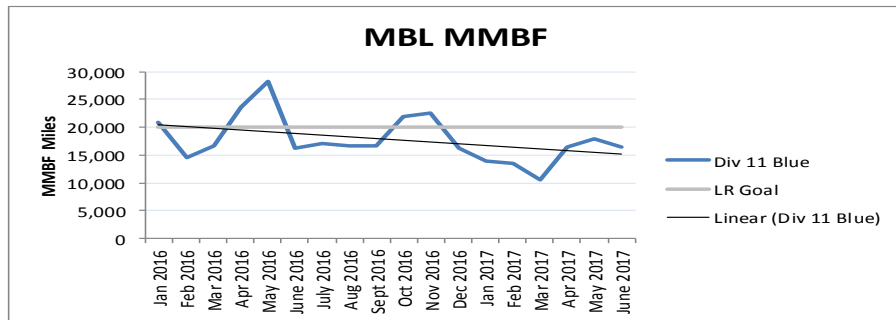
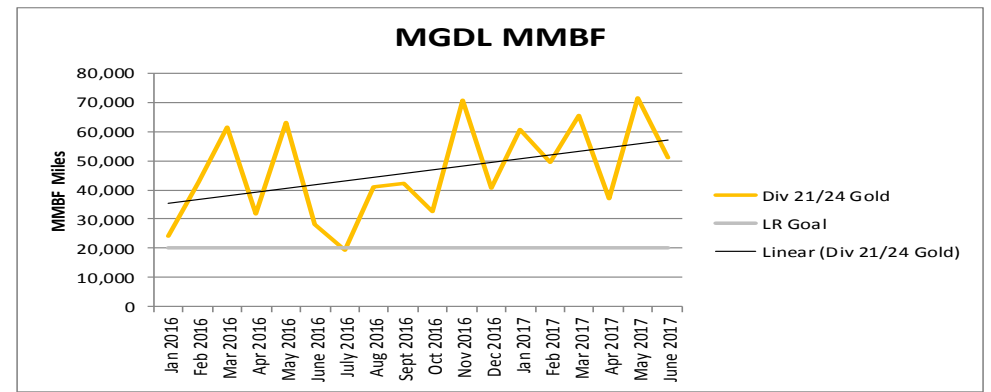
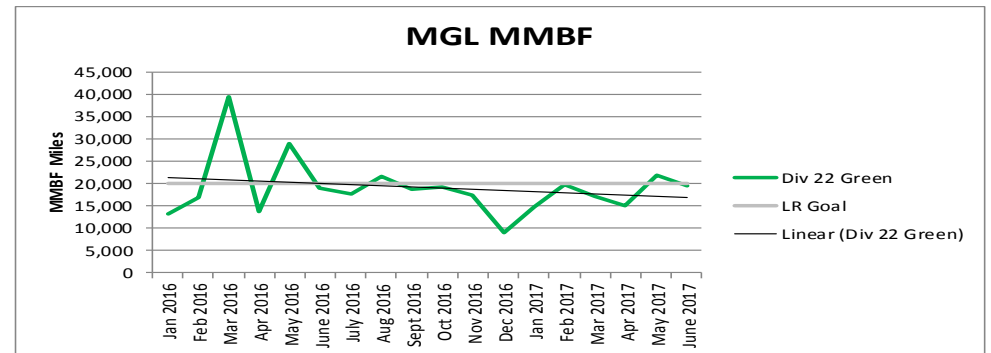
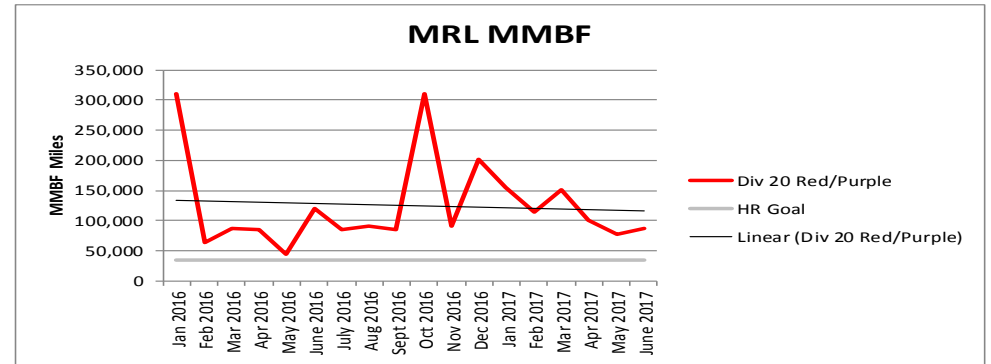
### Mean Miles Between Major Failures (all)



# MMBF by Division

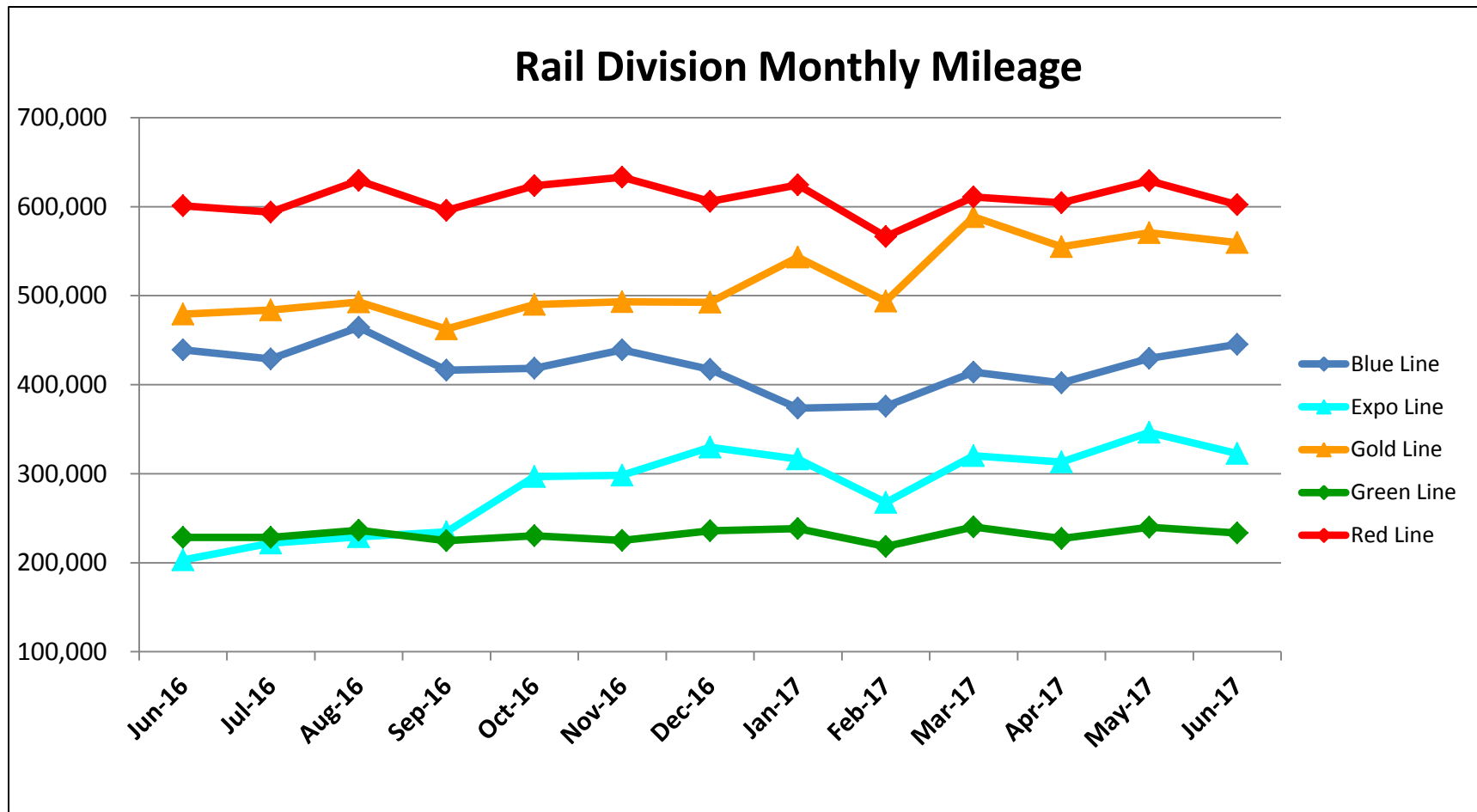
## June 2016-2017

| Month     | Div 11<br>Blue | Div 20<br>Red/Purple | Div 22<br>Green | Div 21/24<br>Gold | Div 14<br>Expo | LR Goal | HR Goal |
|-----------|----------------|----------------------|-----------------|-------------------|----------------|---------|---------|
| Jan 2016  | 20,976         | 310,794              | 13,075          | 24,371            | -              | 20,000  | 35,000  |
| Feb 2016  | 14,628         | 62,876               | 16,751          | 42,632            | -              | 20,000  | 35,000  |
| Mar 2016  | 16,739         | 86,604               | 39,513          | 61,444            | -              | 20,000  | 35,000  |
| Apr 2016  | 23,513         | 84,909               | 13,853          | 31,658            | 22,195         | 20,000  | 35,000  |
| May 2016  | 28,263         | 43,282               | 28,871          | 63,137            | 31,044         | 20,000  | 35,000  |
| June 2016 | 16,263         | 120,190              | 19,031          | 28,184            | 11,289         | 20,000  | 35,000  |
| July 2016 | 17,156         | 84,844               | 17,567          | 19,271            | 13,173         | 20,000  | 35,000  |
| Aug 2016  | 16,586         | 89,920               | 21,505          | 41,079            | 28,623         | 20,000  | 35,000  |
| Sept 2016 | 16,651         | 85,121               | 18,725          | 42,049            | 23,505         | 20,000  | 35,000  |
| Oct 2016  | 22,027         | 309,858              | 19,184          | 32,664            | 33,606         | 20,000  | 35,000  |
| Nov 2016  | 22,473         | 89,953               | 17,318          | 70,436            | 29,108         | 20,000  | 35,000  |
| Dec 2016  | 16,198         | 201,913              | 9,073           | 40,514            | 20,258         | 20,000  | 35,000  |
| Jan 2017  | 13,950         | 155,755              | 14,888          | 60,522            | 33,309         | 20,000  | 35,000  |
| Feb 2017  | 13,453         | 113,266              | 19,848          | 49,377            | 38,125         | 20,000  | 35,000  |
| Mar 2017  | 10,615         | 150,470              | 17,159          | 65,389            | 109,624        | 20,000  | 35,000  |
| Apr 2017  | 16,560         | 100,740              | 15,154          | 37,001            | 56,983         | 20,000  | 35,000  |
| May 2017  | 17,859         | 77,983               | 21,822          | 71,340            | 50,277         | 20,000  | 35,000  |
| June 2017 | 16,476         | 86,652               | 19,462          | 50,865            | 54,697         | 20,000  | 35,000  |



# Mileage Between Data Range (by month)

## June 2016-2017



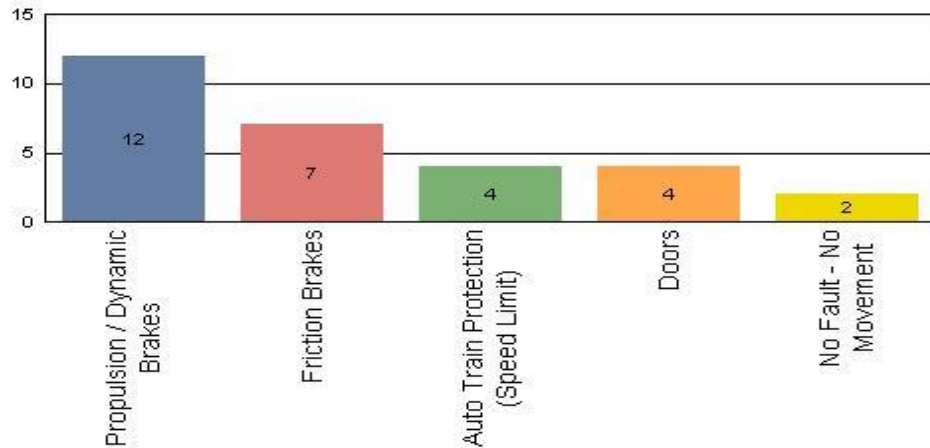
**Notes:**

- Gold Line increase in mileage is due to the open of the Foothill extension, which includes stations further apart and faster average running speeds.
- With the opening of Division 14 in Santa Monica, the Expo Line mileage is now being reported separately from the Blue Line.

# Top Incident Categories June 2017

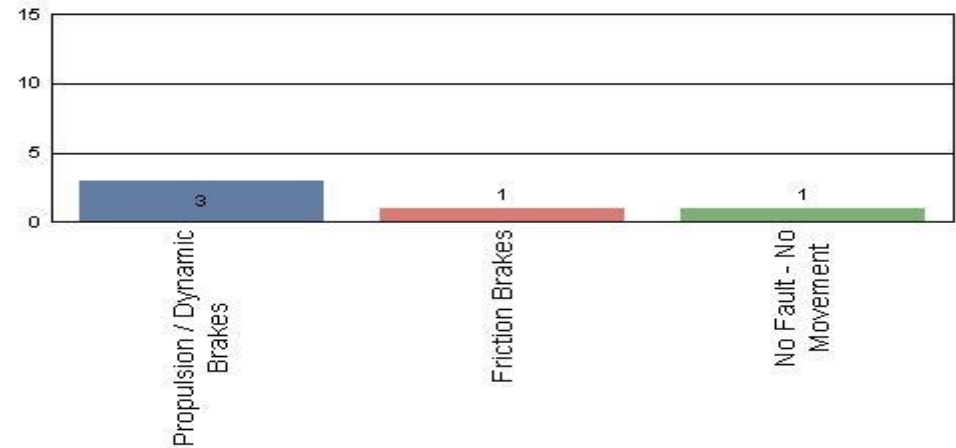
## Metro Blue Line (Div 11)

Top Incident Categories



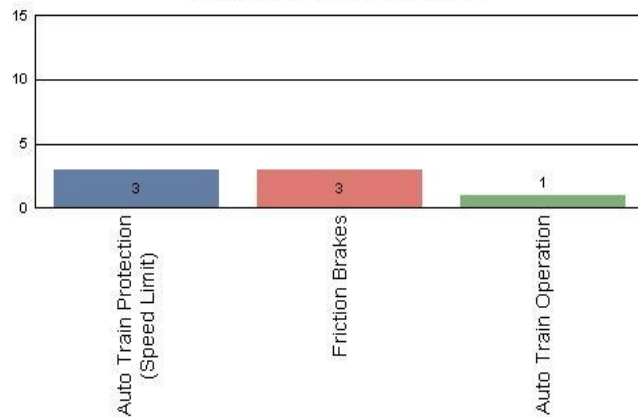
## Metro Expo Line (Div 14)

Top Incident Categories



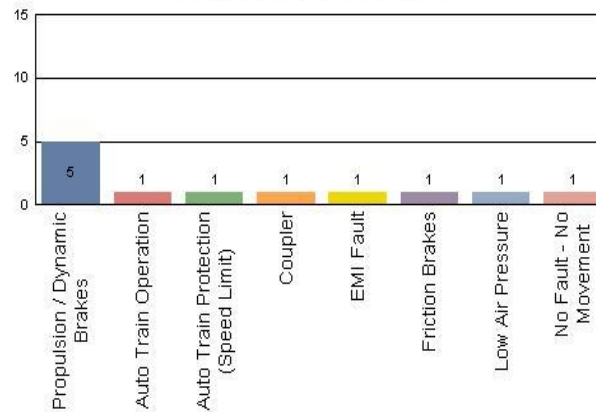
## Metro Red/Purple Line (Div 20)

Top Incident Categories



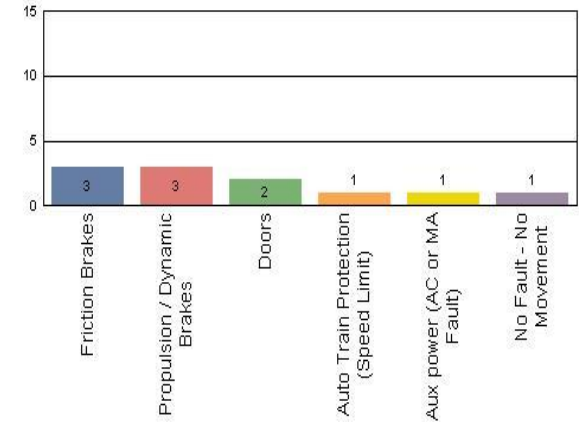
## Metro Green Line (Div 22)

Top Incident Categories



## Metro Gold Line (Div 21 & Div 24)

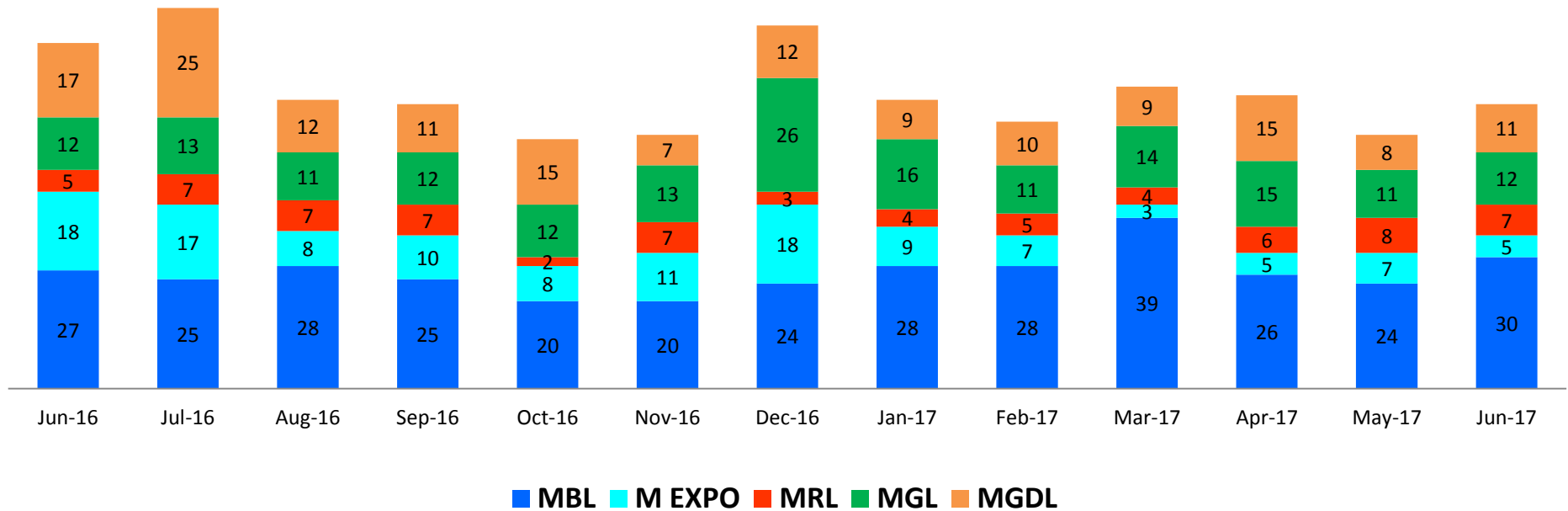
Top Incident Categories



# Major Incidents

## June 2016-2017

### Numbers of Major System Failures (by Line)



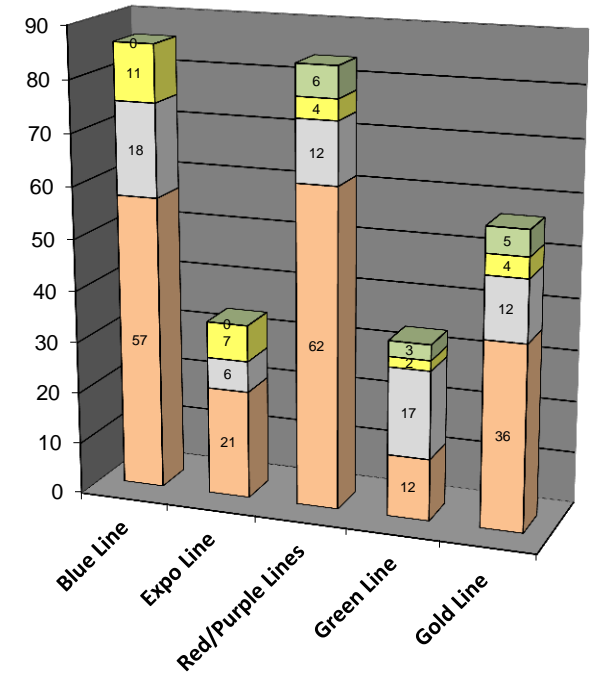
# Preventive Maintenance Compliance

## June 2016-2017

| PM Compliance    | Jun-16 | Jul-16 | Aug-16 | Sep-16 | Oct-16 | Nov-16 | Dec-16 | Jan-17 | Feb-17 | Mar-17 | Apr-17 | May-17 | Jun-17 |
|------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Blue Line        | 100%   | 100%   | 100%   | 100%   | 100%   | 100%   | 100%   | 100%   | 100%   | 100%   | 100%   | 100%   | 100%   |
| Expo Line        | 100%   | 100%   | 100%   | 100%   | 100%   | 100%   | 100%   | 100%   | 100%   | 100%   | 100%   | 100%   | 100%   |
| Red/Purple Lines | 100%   | 100%   | 100%   | 100%   | 100%   | 100%   | 100%   | 100%   | 100%   | 100%   | 100%   | 100%   | 100%   |
| Green Line       | 100%   | 100%   | 100%   | 97%    | 100%   | 100%   | 100%   | 100%   | 100%   | 100%   | 100%   | 100%   | 100%   |
| Gold Line        | 100%   | 100%   | 100%   | 100%   | 100%   | 100%   | 100%   | 100%   | 100%   | 100%   | 100%   | 100%   | 98%    |

| Number of Preventive Maintenance Inspections - June 2017 |            |           |           |           |            |
|--|------------|-----------|-----------|-----------|------------|
| Line   | A level    | B level   | C level   | D level   | Totals     |
| Blue Line  | 57         | 18        | 11        | 0         | 86         |
| Expo Line  | 21         | 6         | 7         | 0         | 34         |
| Red/Purple Lines   | 62         | 12        | 4         | 6         | 84         |
| Green Line   | 12         | 17        | 2         | 3         | 34         |
| Gold Line  | 36         | 12        | 4         | 5         | 57         |
| <b>Totals:</b>   | <b>188</b> | <b>65</b> | <b>28</b> | <b>14</b> | <b>295</b> |

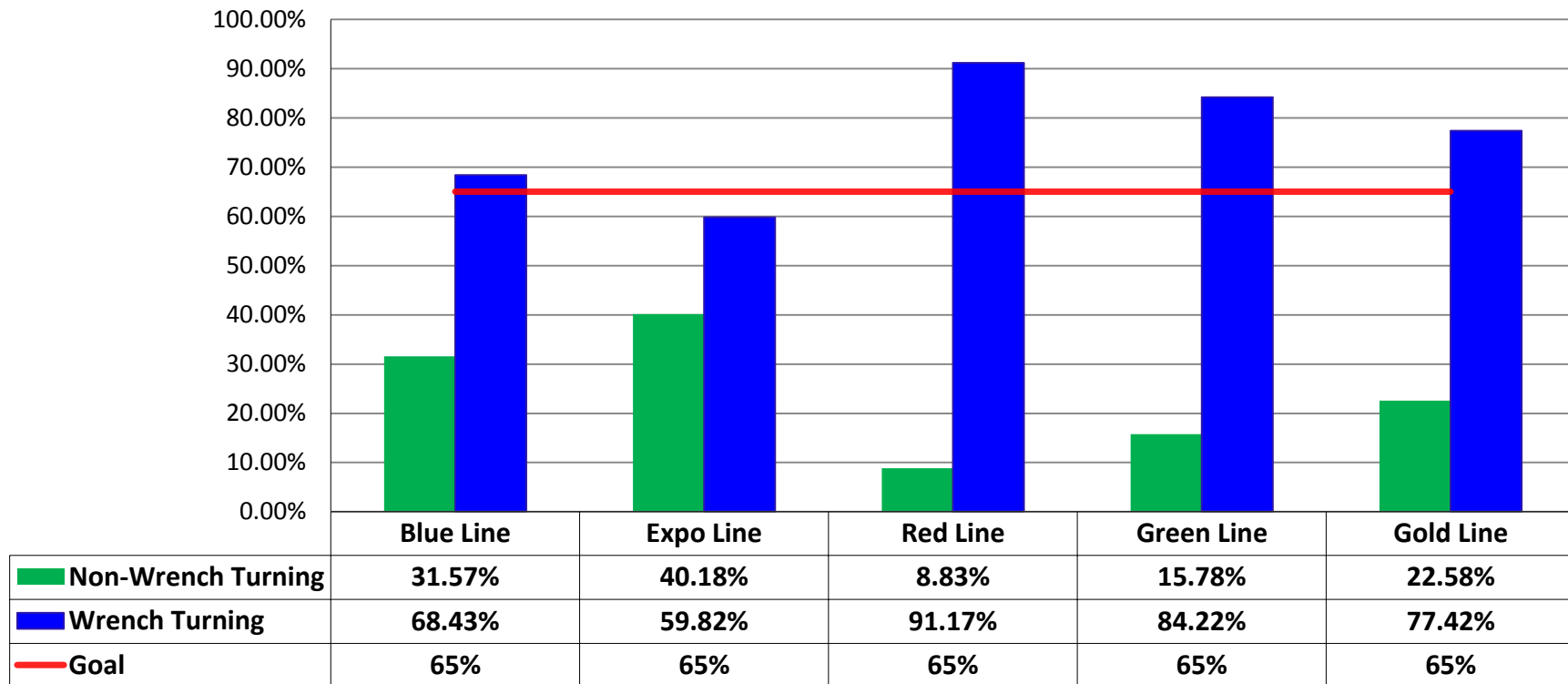
| Explanation of PM Inspection levels |            | Miles   |         |         |         |
|-------------------------------------|------------|---------|---------|---------|---------|
| Line                                | Type       | A level | B level | C level | D level |
| Blue/Expo Lines                     | P865/P2020 | 5,000   | 15,000  | 30,000  | 60,000  |
| Blue/Expo Lines                     | P2000      | 7,500   | 22,500  | 45,000  | 90,000  |
| Red/Purple Lines                    | A650       | 7,500   | 22,500  | 45,000  | 90,000  |
| Green Line                          | P2000      | 7,500   | 22,500  | 45,000  | 90,000  |
| Gold Line                           | P2550      | 10,000  | 30,000  | 60,000  | 120,000 |
| Gold/Expo Lines                     | P3010      | 10,000  | 30,000  | 60,000  | 120,000 |





# RFS Leader Wrench Turning June 2017

## RFS - Leader Wrench Turning June 2017



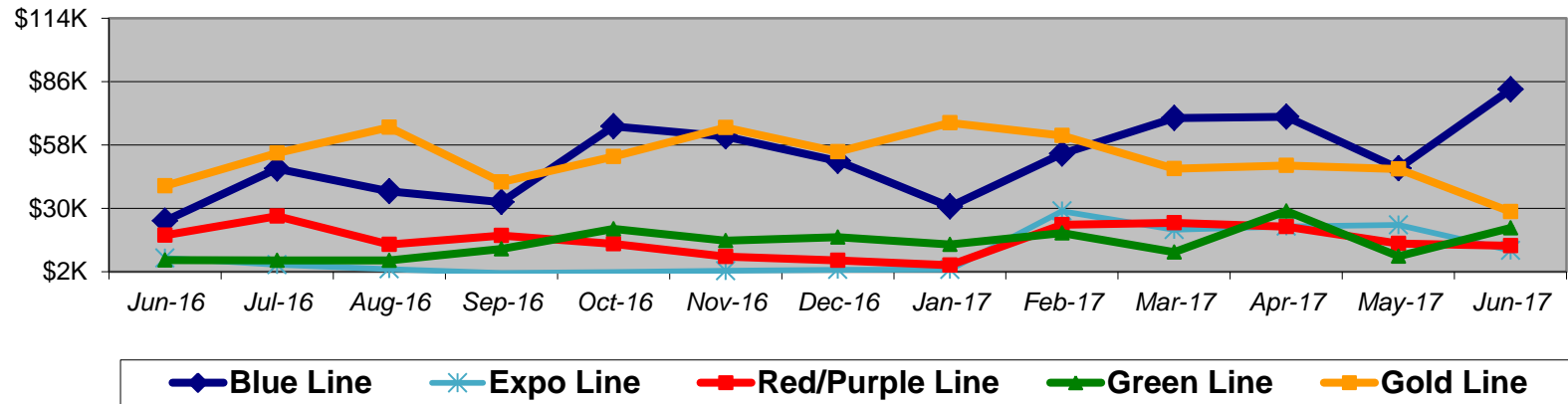
**Notes:** Labor hours contributed by Maint Specialist Leader, Rail Body/Paint Repair Leader, and Maint Specialist Temporary Leader

# Vandalism & Graffiti Report

## June 2016-2017

Graffiti Costs

|                 | Jun-16 | Jul-16 | Aug-16 | Sep-16 | Oct-16 | Nov-16 | Dec-16 | Jan-17 | Feb-17 | Mar-17 | Apr-17 | May-17 | Jun-17 | 13-Month Period |
|-----------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-----------------|
| Blue Line       | \$24K  | \$48K  | \$38K  | \$33K  | \$66K  | \$62K  | \$51K  | \$31K  | \$54K  | \$70K  | \$71K  | \$48K  | \$83K  | \$677K          |
| Expo Line       | \$8K   | \$5K   | \$3K   | \$2K   | \$2K   | \$2K   | \$3K   | \$3K   | \$29K  | \$21K  | \$22K  | \$23K  | \$11K  | \$134K          |
| Red/Purple Line | \$18K  | \$27K  | \$14K  | \$18K  | \$14K  | \$9K   | \$7K   | \$5K   | \$23K  | \$24K  | \$22K  | \$14K  | \$13K  | \$208K          |
| Green Line      | \$7K   | \$7K   | \$7K   | \$12K  | \$21K  | \$16K  | \$17K  | \$14K  | \$19K  | \$11K  | \$29K  | \$9K   | \$21K  | \$191K          |
| Gold Line       | \$40K  | \$54K  | \$66K  | \$42K  | \$53K  | \$66K  | \$55K  | \$68K  | \$62K  | \$48K  | \$49K  | \$47K  | \$29K  | \$678K          |
| Totals:         | \$98K  | \$141K | \$128K | \$106K | \$157K | \$154K | \$133K | \$121K | \$187K | \$172K | \$193K | \$141K | \$158K | \$1,888K        |



June 2017 Vandalism & Graffiti - All Rail

|                          | Qty          | Labor             | Materials        | Totals            |
|--------------------------|--------------|-------------------|------------------|-------------------|
| Windows Replaced         | 279          | \$ 40,887         | \$ 29,658        | \$ 70,545         |
| Vandal Shields Replaced  | 552          | \$ 22,901         | \$ 12,132        | \$ 35,033         |
| Seats Cleaned            | 245          | \$ 4,839          | \$ 40            | \$ 4,879          |
| Seats Inserts Replaced   | 394          | \$ 17,703         | \$ 3,486         | \$ 21,189         |
| Graffiti Removal - Other | 1,569        | \$ 17,810         | \$ 3,854         | \$ 21,664         |
| Repainting Panels        | 135          | \$ 4,253          | \$ -             | \$ 4,253          |
| <b>Totals</b>            | <b>3,174</b> | <b>\$ 108,393</b> | <b>\$ 49,170</b> | <b>\$ 157,563</b> |

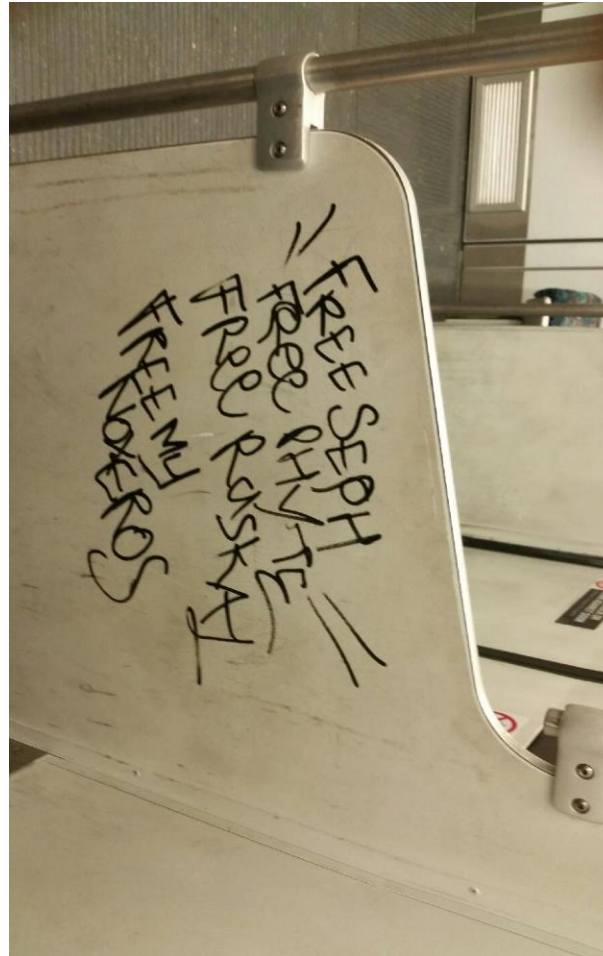
# Vandalism & Graffiti Pictures

## June 2017

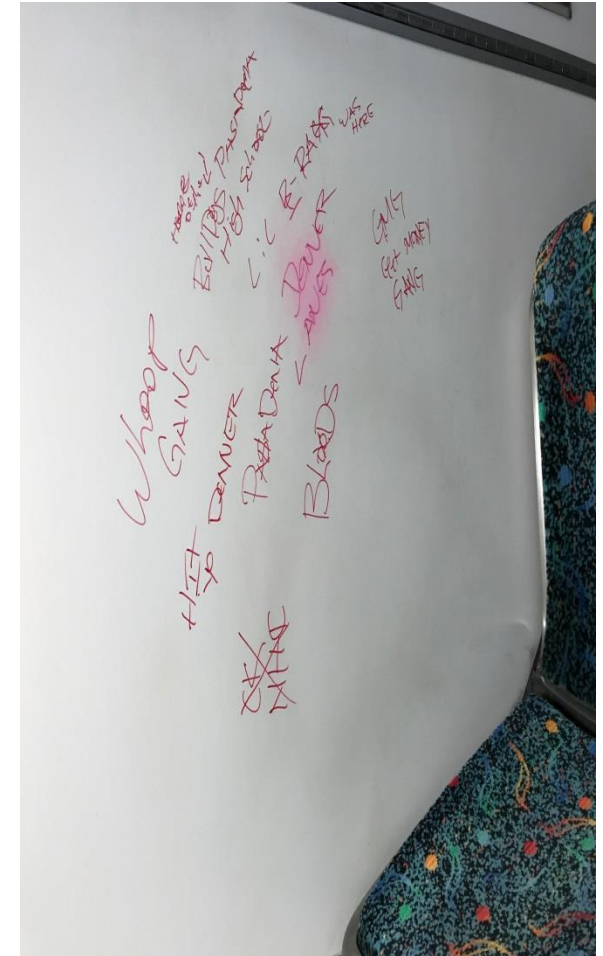
## Blue Line



## Green Line



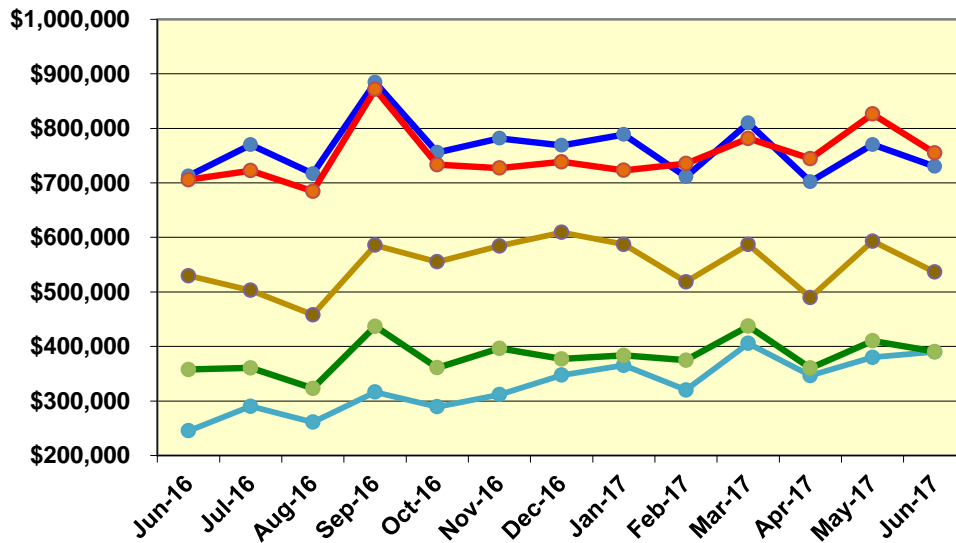
## Gold Line



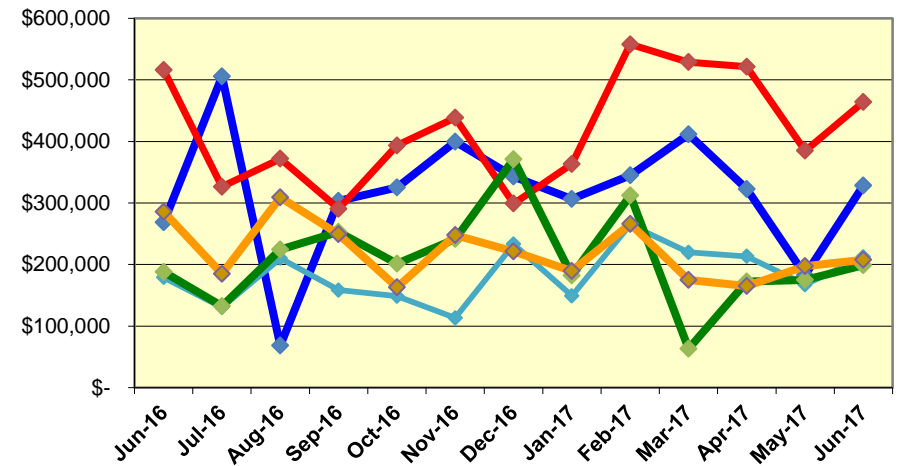
# Labor and Material Costs

## June 2016-2017

Labor Costs



Material Costs



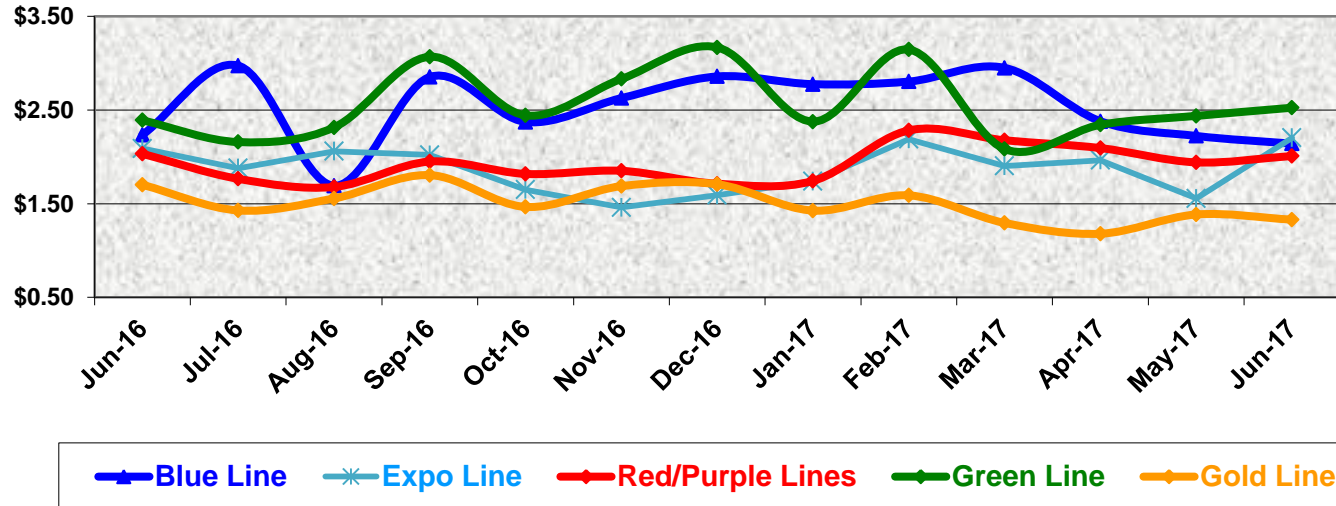
|                    | Jun-16       | Jul-16       | Aug-16       | Sep-16       | Oct-16       | Nov-16       | Dec-16       | Jan-17       | Feb-17       | Mar-17       | Apr-17       | May-17       | Jun-17       |
|--------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| <b>Labor Costs</b> |              |              |              |              |              |              |              |              |              |              |              |              |              |
| Blue Line          | \$ 712,774   | \$ 770,143   | \$ 716,923   | \$ 884,555   | \$ 755,958   | \$ 781,662   | \$ 768,756   | \$ 788,785   | \$ 711,354   | \$ 810,012   | \$ 702,374   | \$ 770,245   | \$ 730,183   |
| Expo Line          | \$ 245,339   | \$ 290,199   | \$ 261,217   | \$ 316,395   | \$ 289,213   | \$ 311,627   | \$ 347,280   | \$ 365,354   | \$ 320,019   | \$ 405,656   | \$ 346,398   | \$ 379,871   | \$ 389,878   |
| Red/Purple Lines   | \$ 705,772   | \$ 722,363   | \$ 684,555   | \$ 871,431   | \$ 733,202   | \$ 727,093   | \$ 738,672   | \$ 723,038   | \$ 735,394   | \$ 781,595   | \$ 744,460   | \$ 826,461   | \$ 754,862   |
| Green Line         | \$ 357,807   | \$ 360,682   | \$ 323,087   | \$ 436,825   | \$ 360,963   | \$ 396,278   | \$ 376,933   | \$ 383,591   | \$ 374,747   | \$ 437,154   | \$ 360,314   | \$ 410,146   | \$ 390,662   |
| Gold Line          | \$ 529,761   | \$ 502,967   | \$ 458,067   | \$ 585,582   | \$ 555,213   | \$ 584,203   | \$ 609,215   | \$ 587,313   | \$ 518,524   | \$ 586,949   | \$ 489,634   | \$ 593,070   | \$ 536,404   |
| Totals             | \$ 2,551,454 | \$ 2,646,353 | \$ 2,443,849 | \$ 3,094,789 | \$ 2,694,548 | \$ 2,800,863 | \$ 2,840,856 | \$ 2,848,080 | \$ 2,660,038 | \$ 3,021,365 | \$ 2,643,180 | \$ 2,979,794 | \$ 2,801,989 |

|                       |              |              |              |              |              |              |              |              |              |              |              |              |              |
|-----------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| <b>Material Costs</b> |              |              |              |              |              |              |              |              |              |              |              |              |              |
| Blue Line             | \$ 268,750   | \$ 505,721   | \$ 68,670    | \$ 303,202   | \$ 324,999   | \$ 399,427   | \$ 342,695   | \$ 306,710   | \$ 344,931   | \$ 411,541   | \$ 322,424   | \$ 182,846   | \$ 328,206   |
| Expo Line             | \$ 179,099   | \$ 130,419   | \$ 210,312   | \$ 158,666   | \$ 148,670   | \$ 113,229   | \$ 233,001   | \$ 149,260   | \$ 264,561   | \$ 219,980   | \$ 213,435   | \$ 167,428   | \$ 212,682   |
| Red/Purple Lines      | \$ 515,978   | \$ 326,251   | \$ 371,920   | \$ 290,597   | \$ 393,507   | \$ 438,480   | \$ 299,157   | \$ 363,192   | \$ 557,616   | \$ 528,820   | \$ 521,242   | \$ 384,776   | \$ 463,957   |
| Green Line            | \$ 188,111   | \$ 132,247   | \$ 224,414   | \$ 252,988   | \$ 201,438   | \$ 241,344   | \$ 370,755   | \$ 182,518   | \$ 312,113   | \$ 63,371    | \$ 172,269   | \$ 174,969   | \$ 199,040   |
| Gold Line             | \$ 285,877   | \$ 185,153   | \$ 308,906   | \$ 249,398   | \$ 162,899   | \$ 247,842   | \$ 221,172   | \$ 189,520   | \$ 265,930   | \$ 175,047   | \$ 165,012   | \$ 197,220   | \$ 207,555   |
| Totals                | \$ 1,437,815 | \$ 1,279,791 | \$ 1,184,222 | \$ 1,254,851 | \$ 1,231,513 | \$ 1,440,322 | \$ 1,466,779 | \$ 1,191,200 | \$ 1,745,150 | \$ 1,398,760 | \$ 1,394,383 | \$ 1,107,239 | \$ 1,411,440 |

# Cost Per Mile June 2016-2017

| Cost per mile:   | Jun-16 | Jul-16 | Aug-16 | Sep-16 | Oct-16 | Nov-16 | Dec-16 | Jan-17 | Feb-17 | Mar-17 | Apr-17 | May-17 | Jun-17 | Average |
|------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|
| Blue Line        | \$2.24 | \$2.97 | \$1.69 | \$2.85 | \$2.37 | \$2.63 | \$2.86 | \$2.78 | \$2.80 | \$2.95 | \$2.38 | \$2.22 | \$2.14 | \$2.53  |
| Expo Line        | \$2.09 | \$1.88 | \$2.06 | \$2.02 | \$1.65 | \$1.46 | \$1.59 | \$1.74 | \$2.19 | \$1.90 | \$1.96 | \$1.56 | \$2.20 | \$1.87  |
| Red/Purple Lines | \$2.03 | \$1.77 | \$1.68 | \$1.95 | \$1.82 | \$1.85 | \$1.71 | \$1.74 | \$2.28 | \$2.18 | \$2.09 | \$1.94 | \$2.01 | \$1.93  |
| Green Line       | \$2.39 | \$2.16 | \$2.31 | \$3.07 | \$2.44 | \$2.83 | \$3.17 | \$2.38 | \$3.15 | \$2.08 | \$2.34 | \$2.44 | \$2.52 | \$2.56  |
| Gold Line        | \$1.70 | \$1.43 | \$1.56 | \$1.81 | \$1.47 | \$1.69 | \$1.71 | \$1.43 | \$1.59 | \$1.29 | \$1.18 | \$1.38 | \$1.33 | \$1.50  |

**Cost per Mile**



# ATU Absences vs. Overtime

## June 2017

| ABSENCE TYPE and HOURS              | 3941 Blue    | 3947 Expo    | 3942 Red     | 3943 Green   | 3944 Gold  | 3948 Monrovia | Total         |
|-------------------------------------|--------------|--------------|--------------|--------------|------------|---------------|---------------|
| AWP-ABSENT W/O PERMISSION           | 16           | -            | -            | 12           | -          | 8             | 36            |
| CTO-COMPENSATORY TIME OFF           | 16           | 16           | 20           | 8            | -          | -             | 60            |
| CUT-EMPLOYEE LEAVES EARLY           | 0            | 4            | -            | 3            | -          | 1             | 8             |
| DSL-DISABILITY LEAVE/LONG           | 408          | 176          | -            | 448          | -          | -             | 1,032         |
| EFH-EMG. FLOAT HOL.                 | 48           | 64           | 144          | 88           | 8          | 144           | 496           |
| ETO-EXCUSED TIME OFF                | 58           | 65           | 52           | 14           | -          | 22            | 211           |
| FMI-FAM IND INJURY                  | -            | -            | 240          | 176          | -          | 192           | 608           |
| FML-FAMILY CARE LEAVE               | 544          | 388          | 205          | 280          | 8          | 328           | 1,753         |
| FMS-FAMILY LEAVE SICK               | -            | 94           | 33           | -            | 8          | 51            | 186           |
| HLF-HOLIDAY FLOATING                | 992          | 256          | 632          | 168          | 96         | 336           | 2,480         |
| II-INDUSTRIAL INJURY                | 168          | 176          | -            | 168          | -          | -             | 512           |
| JUR-JURY DUTY                       | 8            | -            | 16           | -            | -          | 24            | 48            |
| LC1-LABOR CODE 233                  | 40           | 56           | 132          | 80           | 24         | 92            | 424           |
| LTI-OCCPIL/LONGTRM INJ LEAVE        | 168          | -            | 464          | -            | -          | -             | 632           |
| MLN-MILITARY ABSENCE-UNPAID         | 48           | -            | -            | -            | -          | -             | 48            |
| OWP-OFF WITH PERMISSION             | -            | 16           | 14           | -            | -          | -             | 30            |
| RTO-REQUESTED TIME OFF-NO PAY       | -            | -            | -            | 1            | -          | -             | 1             |
| SCK-SICK PAY                        | 288          | 64           | 108          | 40           | 72         | 127           | 698           |
| SCW-SICK WITHOUT PAY                | -            | -            | -            | 152          | -          | 41            | 193           |
| TAR-TARDY                           | 3            | 1            | 1            | 3            | 0          | (11)          | (2)           |
| VAC-VACATION                        | 2,002        | 360          | 2,152        | 732          | 184        | 1,108         | 6,538         |
| VAS-VACATION WHILE SICK             | -            | -            | 8            | -            | -          | -             | 8             |
| *TRAINING                           | 200          | -            | -            | 160          | -          | 240           | 600           |
| <b>Total Absence Hours</b>          | <b>5,006</b> | <b>1,736</b> | <b>4,221</b> | <b>2,532</b> | <b>400</b> | <b>2,703</b>  | <b>16,598</b> |
| **ATU Number of Work Force (active) | 107          | 41           | 102          | 43           | 19         | 60            | 372           |
| Full Work Force hours/month         | 18,543       | 7,105        | 17,677       | 7,452        | 3,293      | 10,400        | 64,468        |
| <b>Absence as a % of Work Force</b> | <b>27%</b>   | <b>24%</b>   | <b>24%</b>   | <b>34%</b>   | <b>12%</b> | <b>26%</b>    | <b>26%</b>    |

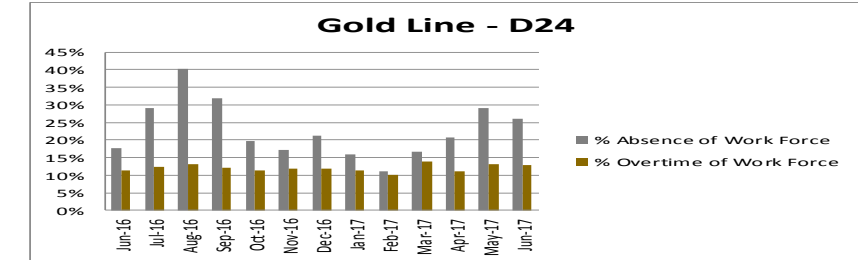
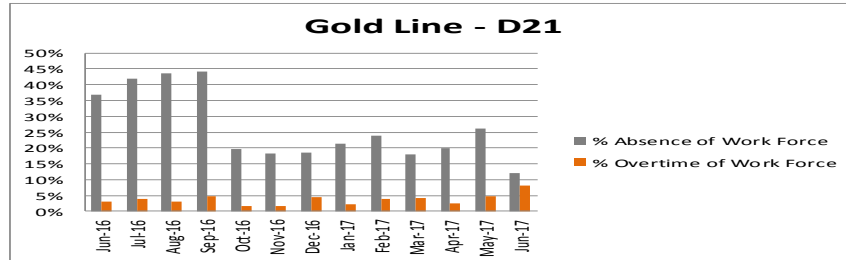
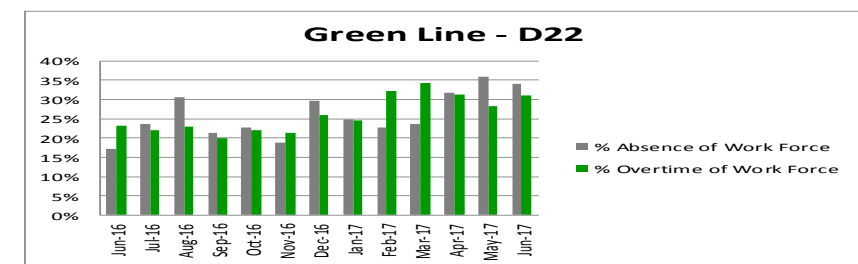
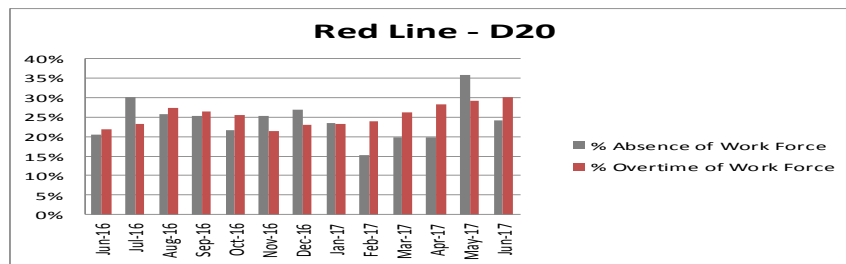
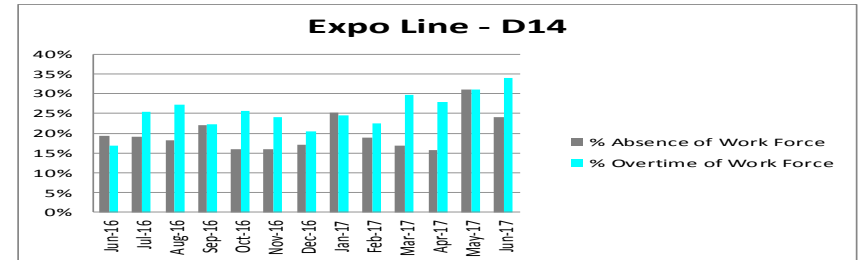
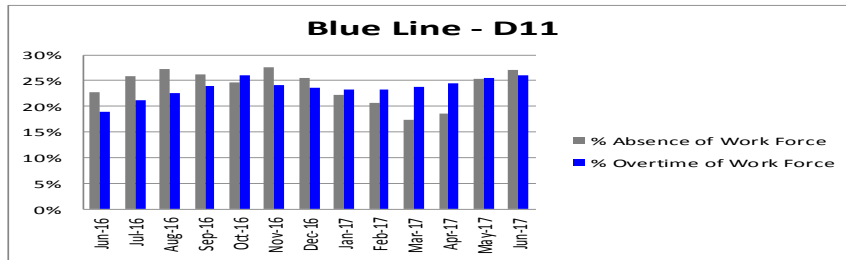
| OVERTIME TYPE and HOURS              | 3941 Blue    | 3947 Expo    | 3942 Red     | 3943 Green   | 3944 Gold | 3948 Monrovia | Total         |
|--------------------------------------|--------------|--------------|--------------|--------------|-----------|---------------|---------------|
| CTB-COMPENSATORY TIME TO BANK        | 473          | 437          | 1,267        | 353          | 2         | 350           | 2,881         |
| OTP-PREM OVERTIME                    | 4,166        | 1,797        | 3,839        | 1,877        | 29        | 907           | 12,614        |
| WLO-Worked Lunch Overtime            | 132          | 150          | 267          | 86           | 32        | 88            | 755           |
| <b>Total Overtime Hours</b>          | <b>4,770</b> | <b>2,384</b> | <b>5,374</b> | <b>2,316</b> | <b>62</b> | <b>1,345</b>  | <b>16,250</b> |
| <b>Overtime as a % of Work Force</b> | <b>26%</b>   | <b>34%</b>   | <b>30%</b>   | <b>31%</b>   | <b>2%</b> | <b>13%</b>    | <b>25%</b>    |

\*Training hours captured by Instruction Department are added to Absences Report.

\*\*ATU Employee Numbers from ATU Manpower Status Report (last week of the month)

Note: Overtime also covers other required activities, including Training, Component Overhaul, and Special Events.

# ATU - %Absence & %Overtime of Work Force June 2016 - 2017



| % Absence of Work Force | Jun-16 | Jul-16 | Aug-16 | Sep-16 | Oct-16 | Nov-16 | Dec-16 | Jan-17 | Feb-17 | Mar-17 | Apr-17 | May-17 | Jun-17 | 13-Month Average |
|-------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|------------------|
| Blue Line D11           | 23%    | 26%    | 27%    | 26%    | 25%    | 28%    | 26%    | 22%    | 21%    | 17%    | 19%    | 25%    | 27%    | 24%              |
| Expo Line D14           | 19%    | 19%    | 18%    | 22%    | 16%    | 16%    | 17%    | 25%    | 19%    | 17%    | 16%    | 31%    | 24%    | 20%              |
| Red Line D20            | 20%    | 30%    | 26%    | 25%    | 22%    | 25%    | 27%    | 23%    | 15%    | 20%    | 20%    | 36%    | 24%    | 24%              |
| Green Line D22          | 17%    | 24%    | 31%    | 21%    | 23%    | 19%    | 30%    | 25%    | 23%    | 24%    | 32%    | 36%    | 34%    | 26%              |
| Gold Line D21           | 37%    | 42%    | 43%    | 44%    | 20%    | 18%    | 18%    | 21%    | 24%    | 18%    | 20%    | 26%    | 12%    | 26%              |
| Gold Line D24           | 18%    | 29%    | 40%    | 32%    | 20%    | 17%    | 21%    | 16%    | 11%    | 17%    | 21%    | 29%    | 26%    | 23%              |

| % Overtime of Work Force | Jun-16 | Jul-16 | Aug-16 | Sep-16 | Oct-16 | Nov-16 | Dec-16 | Jan-17 | Feb-17 | Mar-17 | Apr-17 | May-17 | Jun-17 | 13-Month Average |
|--------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|------------------|
| Blue Line D11            | 19%    | 21%    | 23%    | 24%    | 26%    | 24%    | 24%    | 23%    | 23%    | 24%    | 24%    | 26%    | 26%    | 24%              |
| Expo Line D14            | 17%    | 25%    | 27%    | 22%    | 26%    | 24%    | 20%    | 24%    | 22%    | 30%    | 28%    | 31%    | 34%    | 25%              |
| Red Line D20             | 22%    | 23%    | 27%    | 26%    | 26%    | 21%    | 23%    | 23%    | 24%    | 26%    | 28%    | 29%    | 30%    | 25%              |
| Green Line D22           | 23%    | 22%    | 23%    | 20%    | 22%    | 21%    | 26%    | 25%    | 32%    | 34%    | 31%    | 28%    | 31%    | 26%              |
| Gold Line D21            | 3%     | 4%     | 3%     | 5%     | 2%     | 2%     | 5%     | 2%     | 4%     | 4%     | 2%     | 5%     | 2%     | 3%               |
| Gold Line D24            | 11%    | 12%    | 13%    | 12%    | 11%    | 12%    | 12%    | 11%    | 10%    | 14%    | 11%    | 13%    | 13%    | 12%              |



# RFS Instruction Department Activities

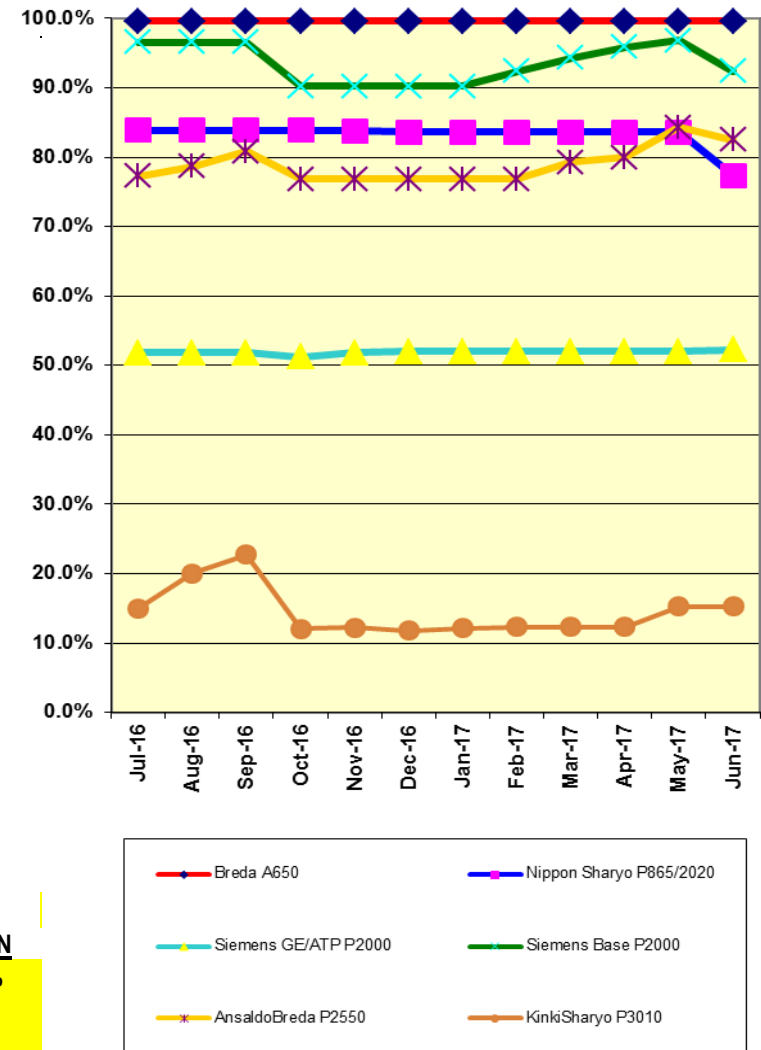
## June 2017

### LRV Training classes completed during the month of June 2017

| Description   | Course Hours | Student Count | Training Hours |
|---|--------------|---------------|----------------|
| <b><u>Blue Line Training - (P865/2020 &amp; P2000 LRVs):</u></b>          |              |               |                |
| RFS KINKISHARYO VEHICLE SYSTEMS   | 40           | 5             | 200            |
| <b>Total Blue Line Training (Hours):</b>                                  |              |               | <b>200</b>     |
| <b><u>Light Rail Training [In Monrovia (P2550 &amp; P3010 LRVs)]:</u></b> |              |               |                |
| RFS KINKISHARYO VEHICLE SYSTEMS   | 40           | 6             | 240            |
| <b>Total Light Rail Training (Hours):</b>                                 |              |               | <b>240</b>     |
| <b><u>Expo Line Training - (P865/2020, P2000, &amp; P3010 LRVs):</u></b>  |              |               |                |
| <b>Total Expo Line Training (Hours):</b>                                  |              |               | <b>0</b>       |
| <b><u>Gold Line Training (P2550 LRVs):</u></b>                            |              |               |                |
| <b>Total Gold Line Training (Hours):</b>                                  |              |               | <b>0</b>       |
| <b><u>Green Line Training (P2000 LRVs):</u></b>                           |              |               |                |
| RFS KINKISHARYO INTRO & MAINLINE RESPONSE                                 | 16           | 10            | 160            |
| <b>Total Green Line Training (Hours):</b>                                 |              |               | <b>160</b>     |
| <b>Total RFS Instruction for the month of June 2017 (Hours):</b>          |              |               | <b>720</b>     |

|  |                    |                    |                    |                     |
|--|--------------------|--------------------|--------------------|---------------------|
| <b><u>Core Vehicle Training Completed:</u></b>     | <b><u>BLUE</u></b> | <b><u>EXPO</u></b> | <b><u>GOLD</u></b> | <b><u>GREEN</u></b> |
| Percentage of core vehicle training complete:      | 77.4%              | 21.3%              | 82.5%              | 92.4%               |
| Siemens P2000 training complete:                   | 52.3%              | 39.8%              | N/A                | N/A                 |
| KinkiSharyo P3010 training complete:               | 0.5%               | 21.4%              | 23.9%              | N/A                 |
| Average Specialist Rail Experience Level in Years: | 14.6               | 3.7                | 7.3                | 10.7                |

### Core Training Completed



Variations caused by new hires, employee transfers, & training completed



# RFS Instruction Department Activities

## June 2017

### HRV & Other Training classes completed during the month of June 2017

| <u>Description</u>                               | <u>Course Hours</u> | <u>Student Count</u> | <u>Training Hours</u> |
|--|---------------------|----------------------|-----------------------|
| <b><u>Red Line Training - Breda A650 HRV</u></b> |                     |                      |                       |
| None (JAC Program Training)                      | 0                   | 0                    | 0                     |
| <b>Total Red Line Training Hours</b>             |                     |                      | <b>0</b>              |

|                                    |    |    |            |
|------------------------------------|----|----|------------|
| <b><u>JAC Training</u></b>         |    |    |            |
| RFS BRED A 650 LIGHT & DEST DESIGN | 12 | 10 | 120        |
| <b>Total JAC Training Hours</b>    |    |    | <b>120</b> |

|  |     |    |              |
|--|-----|----|--------------|
| <b><u>Other Training (RFS Created or Provided)</u></b> |     |    |              |
| SAFETY AND THE HUMAN ELEMENT (Div 11)                  | 1.5 | 79 | 118.5        |
| SAFETY AND THE HUMAN ELEMENT (Div 14)                  | 1.5 | 23 | 34.5         |
| SAFETY AND THE HUMAN ELEMENT (DIV 20)                  | 1.5 | 89 | 133.5        |
| SAFETY AND THE HUMAN ELEMENT (Div 21)                  | 1.5 | 9  | 13.5         |
| SAFETY AND THE HUMAN ELEMENT (Div 22)                  | 1.5 | 35 | 52.5         |
| SAFETY AND THE HUMAN ELEMENT (DIV 24)                  | 1.5 | 28 | 42           |
| <b>Total Other Training Hours</b>                      |     |    | <b>394.5</b> |

|  |                          |                              |                                 |                     |
|--|--------------------------|------------------------------|---------------------------------|---------------------|
| <b><u>Other Instruction Activities</u></b>             | <b><u>Curriculum</u></b> | <b><u>Administrative</u></b> | <b><u>Technical Support</u></b> | <b><u>Total</u></b> |
| A650 Curriculum, Administrative, and Technical Support | 164                      | 270                          | 43                              | 477                 |
| Time Off (HOL, TOV, & SCK)                             |                          |                              |                                 | 40                  |
| <b>Total Other Instruction Activities</b>              |                          |                              |                                 | <b>517</b>          |

|  |                   |
|--|-------------------|
| <b><u>Core Vehicle Training Completed:</u></b>     | <b><u>RED</u></b> |
| Percentage of Core Vehicle Training Complete:      | <b>99.6%</b>      |
| Average Specialist Rail Experience Level in Years: | <b>12.9</b>       |