



Rail Fleet Services Monthly Report April 2016

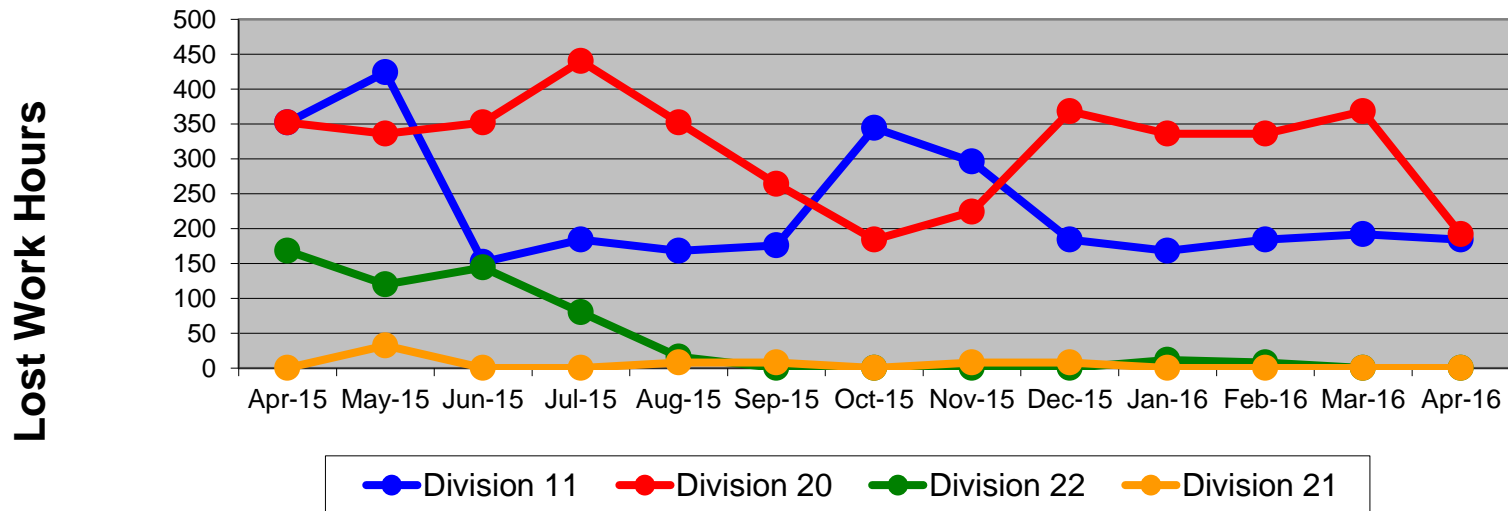
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Industrial Injuries – Lost Work Hours April 2015-2016

	Apr-15	May-15	Jun-15	Jul-15	Aug-15	Sep-15	Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	13-Month Period
Division 11	352	424	152	184	168	176	344	296	184	168	184	192	184	3,008
Division 20	352	336	352	440	352	264	184	224	368	336	336	368	192	4,104
Division 22	168	120	144	80	16	0	0	0	0	12	8	0	0	548
Division 21	0	32	0	0	8	8	0	8	8	0	0	0	0	64
Totals	872	912	648	704	544	448	528	528	560	516	528	560	376	7,724

Industrial Injuries (lost work hours)



Rail Vehicle Accidents & Major Incidents

April 2015-2016

Repair Costs	Apr-15	May-15	Jun-15	Jul-15	Aug-15	Sep-15	Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	13-Month Period
Blue/Expo Line	\$12,056	\$1,655	\$4,811	\$5,716	\$1,971	\$2,838	\$40,969	\$65,454	\$17,160	\$4,570	\$7,379	\$2,037	\$1,232	\$167,848
Red/Purple Line	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,284	\$1,284
Green Line	\$0	\$0	\$0	\$0	\$5,333	\$0	\$1,205	\$0	\$23	\$0	\$0	\$0	\$0	\$6,561
Gold Line	\$0	\$4,833	\$1,494	\$8,204	\$2,611	\$0	\$1,074	\$1,547	\$1,547	\$0	\$53	\$1,487	\$4,646	\$27,496
Totals	\$12,056	\$6,488	\$6,305	\$13,920	\$9,915	\$2,838	\$43,248	\$67,001	\$18,730	\$4,570	\$7,432	\$3,524	\$7,162	\$203,189

Rail Vehicle Accident Costs - April 2016				
Date	Incident #	Problem Code	Incident Description	Repair Cost
Metro Blue/Expo Line				
4/8/16	2717135	Train vs. Vehicle	A 10-73 was reported at 3rd St. and Pacific Ave., Long Beach.	\$ 348
4/9/16	2717511	Train vs. Vehicle	A 10-73 was reported at 1st St. Station. Track 2 SB.	\$ 251
4/13/16	2718793	Train vs. Vehicle	A 10-73 was reported at Exposition/Denker, NB.	\$ 633
MBL & EXPO Total				\$ 1,232
Metro Gold Line				
4/2/16	2714577	Train vs. Vehicle	A 10-73 was reported at Ave 45, Track 2 SB.	\$ -
4/13/16	2718974	Train vs. Vehicle	A 10-73 was reported at Alameda, Track 2 SB.	\$ 425
4/16/16	2720167	Train vs. Vehicle	A 10-73 was reported at 3rd St. and Arizona. Track 2 SB.	\$ 337
4/23/16	2722916	Train vs. Vehicle	A 10-73 was reported at 3rd St. and Arizona. Track 1.	\$ 3,884
MGOLD Total				\$ 4,646
Metro Red Line				
4/1/16	2714081	Train vs. Object	A 10-71 was reported, Train ran over a bike, WB.	\$ 212
4/9/16	2717281	Train vs. Object	A 10-71 was reported, Train made contact with the shopping cart.	\$ 1,072
MRL Total				\$ 1,284
Grand Total				\$ 7,162
10-71 = Train vs. Object/ 10-72 = Train vs. Pedestrian/ 10-73 = Train vs. Vehicle/ 10-74 = Train vs. MTA Vehicle/ 10-75 = Derailment				

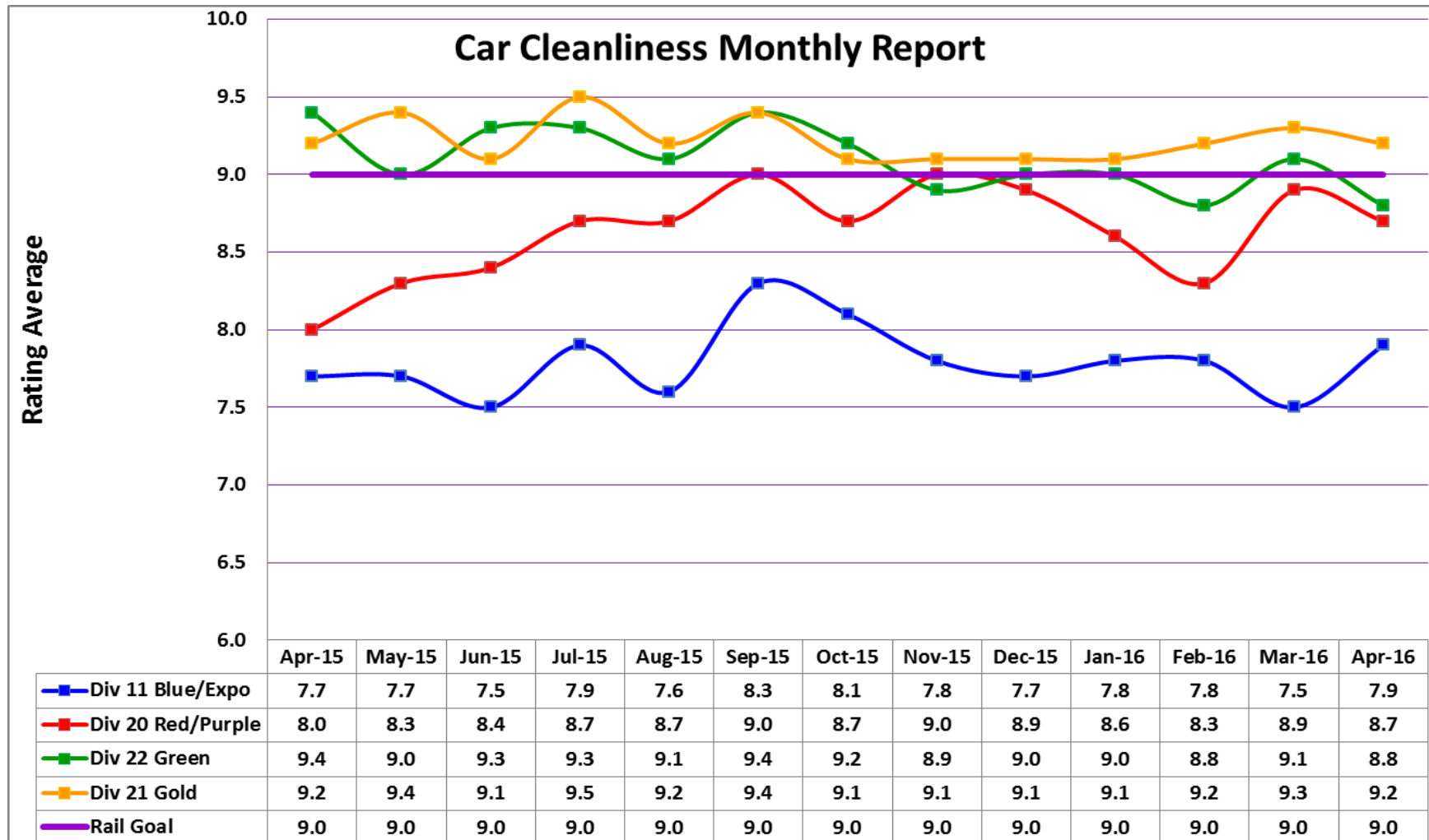


Note: Repair costs are only the expenses captured during the time period of the report. Actual costs may be significantly higher, if repairs are spread out over several months.

Metro

Rail Vehicle – Car Cleanliness

April 2015-2016



Service Delivery April 2016

April 2016 - Service Delivery

Blue/Expo Line Fleet Size: 92

	<u>Average Vehicles Required</u>	<u>Average Available</u>	<u>% Up (Down)</u>
Pull Out			
Weekday:	60	60	100%
Weekend:	26	43	165%
Late Pullouts: 1			
Monthly Mileage:	602,101		
* Expo data is not available.			

Red/Purple Line Fleet Size: 104

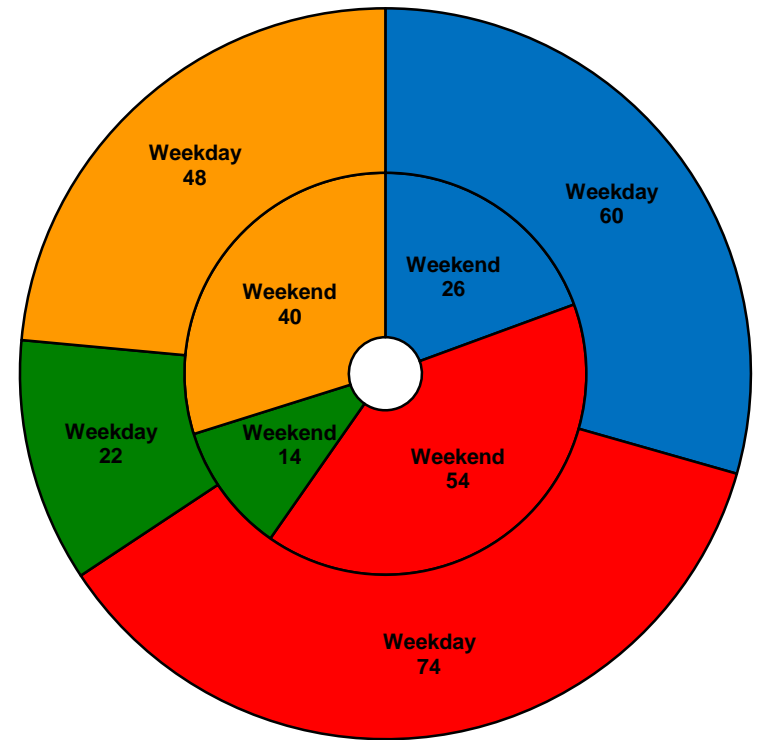
	<u>Vehicles Required</u>	<u>Average Available</u>	<u>% Up (Down)</u>
Pull Out			
Weekday:	74	80	108%
Weekend:	54	70	130%
Late Pullouts: 0			
Monthly Mileage:	594,366		

Green Line Fleet Size: 29

	<u>Vehicles Required</u>	<u>Average Available</u>	<u>% Up (Down)</u>
Pull Out			
Weekday:	22	22	100%
Weekend:	14	16	114%
Late Pullouts: 0			
Monthly Mileage:	221,651		

Gold Line Fleet Size: 60

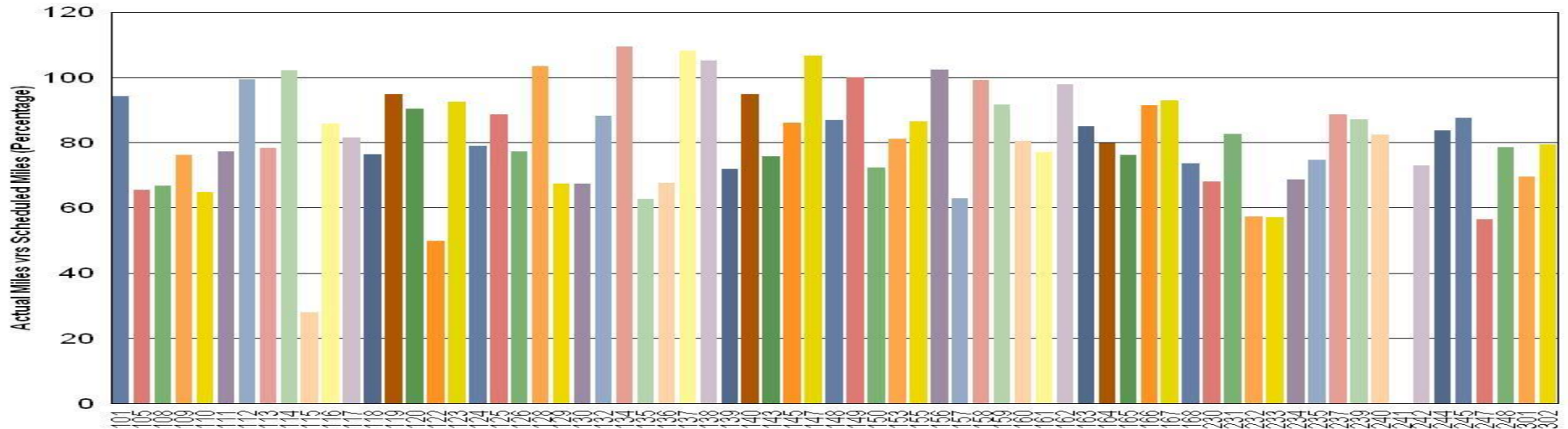
	<u>Average Vehicles Required</u>	<u>Average Available</u>	<u>% Up (Down)</u>
Pull Out			
Weekday:	48	51	106%
Weekend:	40	42	105%
Late Pullouts: 0			
Monthly Mileage*:	506,527		
* Gold Line monthly mileage includes Division 21 and 24.			



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

Vehicle Utilization April 2016

Metro Blue/Expo Line (92 Cars)



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

Car # 115 60K Inspection, Truck Work and Open Work Orders

Car # 241 Truck work and parts issues

Green Line: The following cars were out of service due to:

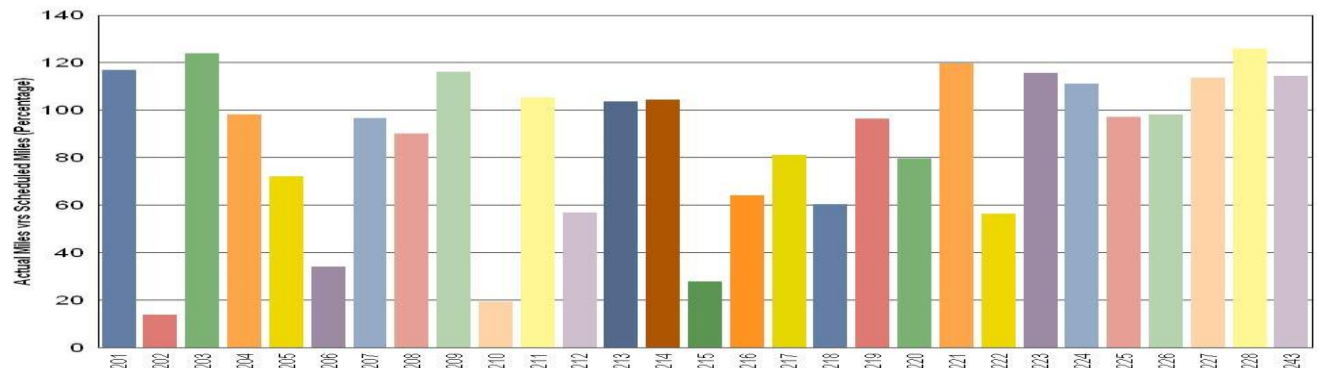
Car # 202 90K Inspection/Paint-Body Rehabilitation Campaign

Car # 206 Troubleshooting for EMI / Propulsion Fault (Repeater)

Car # 210 90K Inspection/Paint-Body Rehabilitation Campaign

Car # 215 B-end Drum Switch Replacement

Metro Green Line (29 Cars)



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

Vehicle Utilization

April 2016

Red/Purple Line:

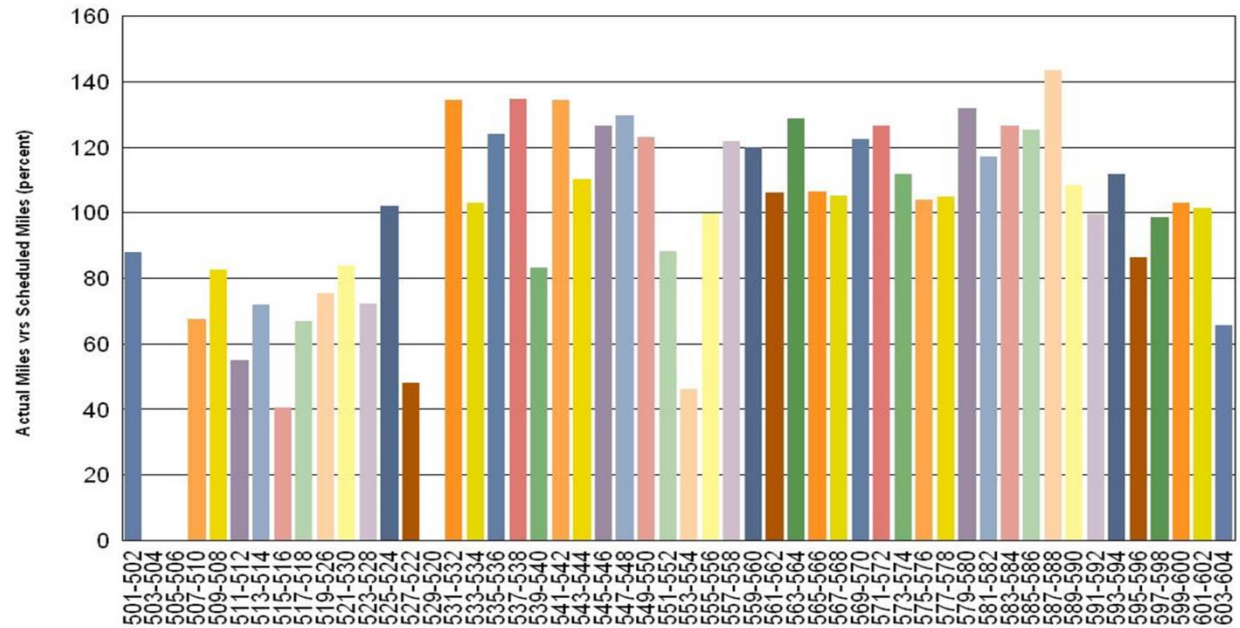
The following cars were out of service due to:

Car # 503-504 Floor Replacement Campaign

Car # 505-506 Propulsion fault

Car # 529-520 Propulsion fault

Metro Red/Purple Line (104 Cars)



Gold Line:

The following cars were out of service due to:

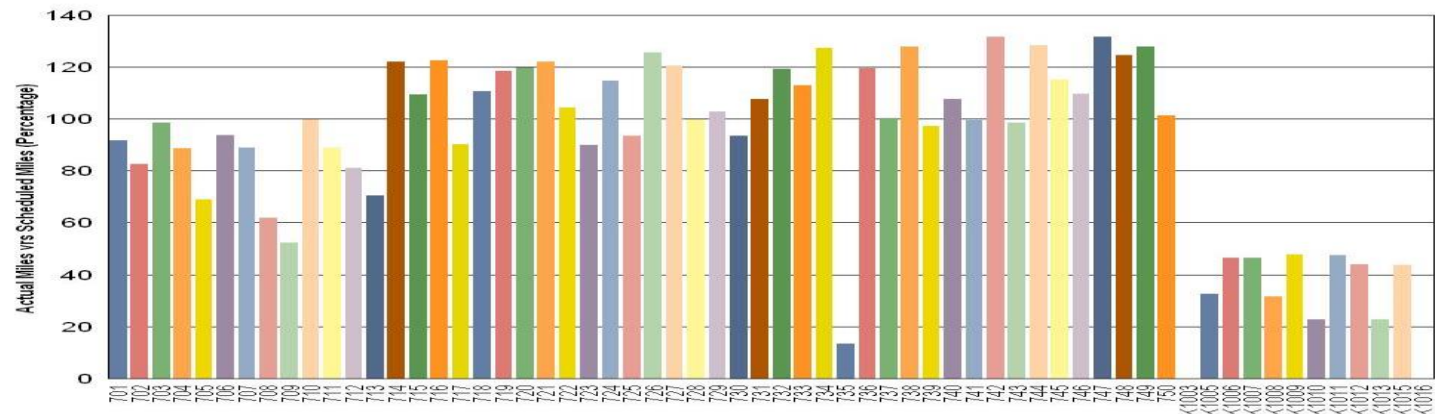
Car # 735 Auxiliary Inverter LON communications problems.

The KinkiSharyo cars (K1000 series)

Car # 1003 & 1016 Being transferred to the Expo Line, not in-service at this time

Car # 1005, 1008, 1010, & 1013 Having some new car bugs worked out

Metro Gold Line (60 Cars)

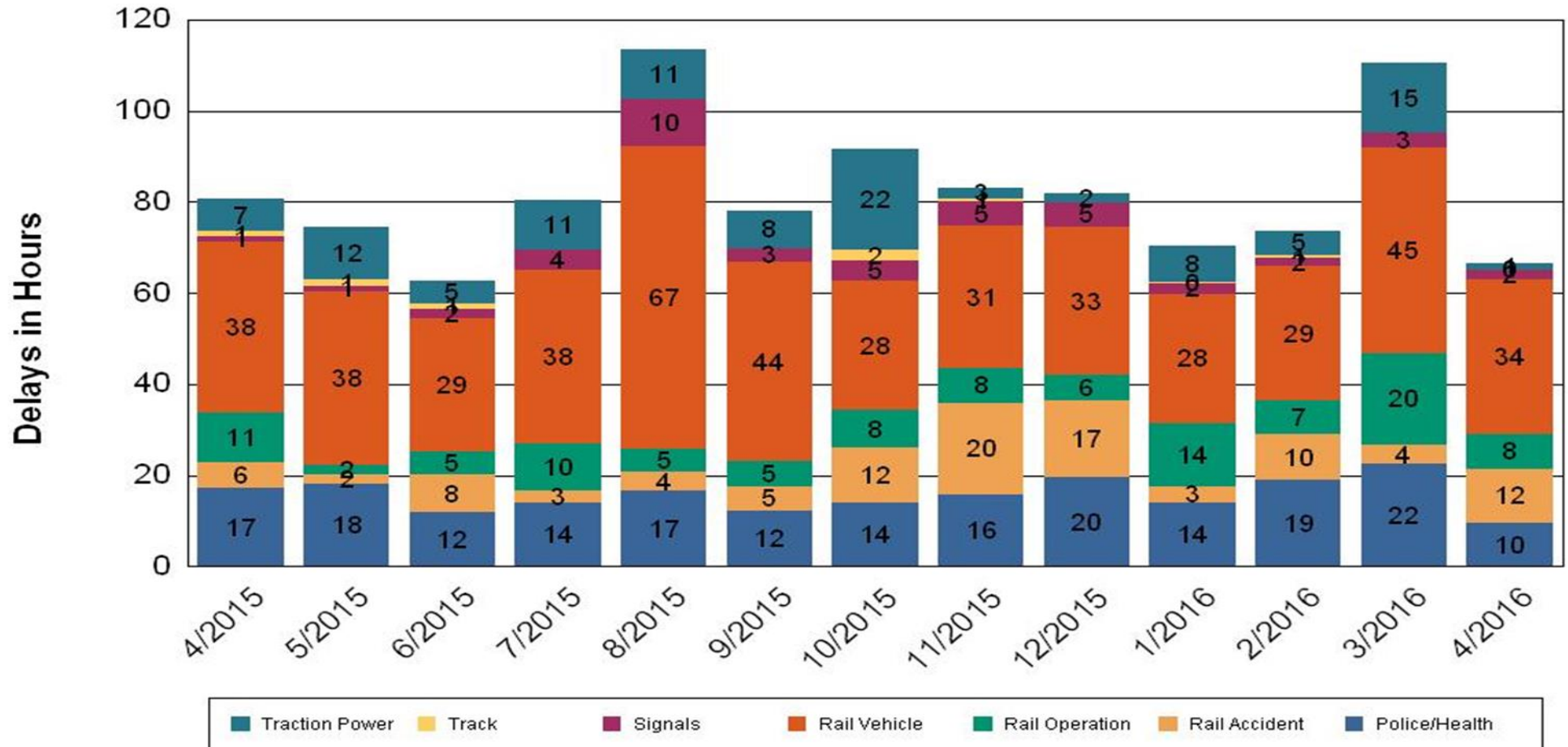


•Percentage includes an average 4% mileage deduction for yard mileage and vehicle testing.

All Train Delays (Hours) April 2015-2016

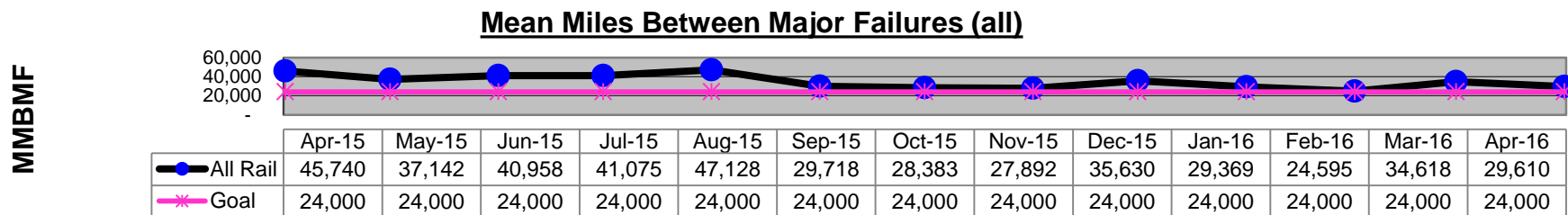
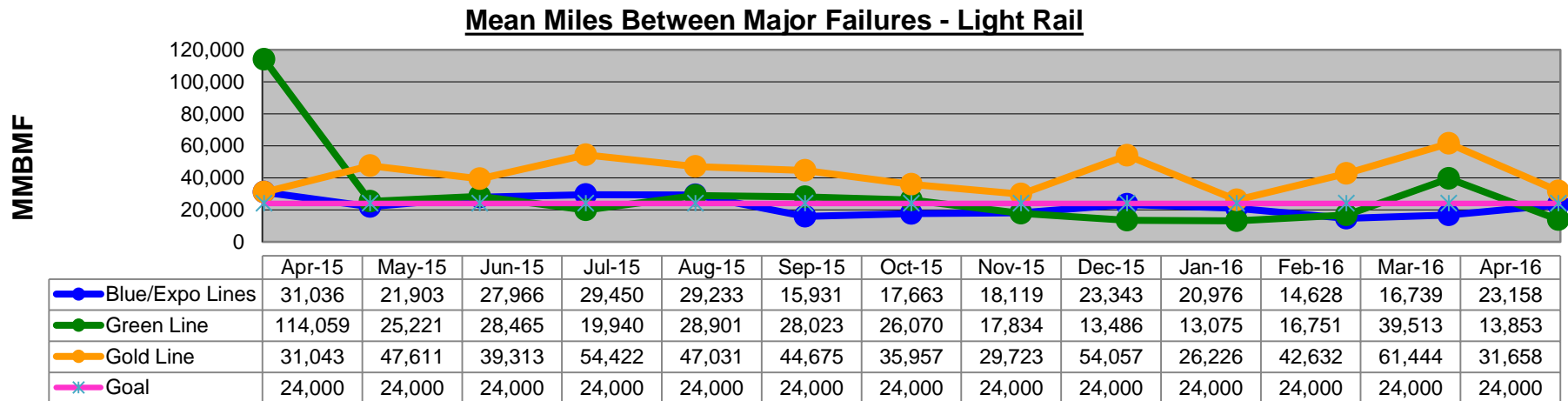
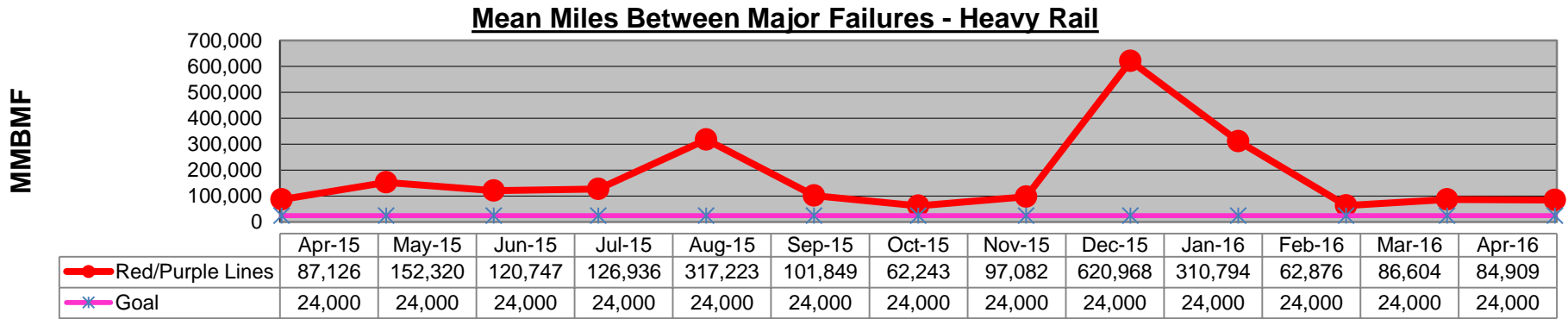
All Train Delays

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



Mean Miles Between Failures (Major)

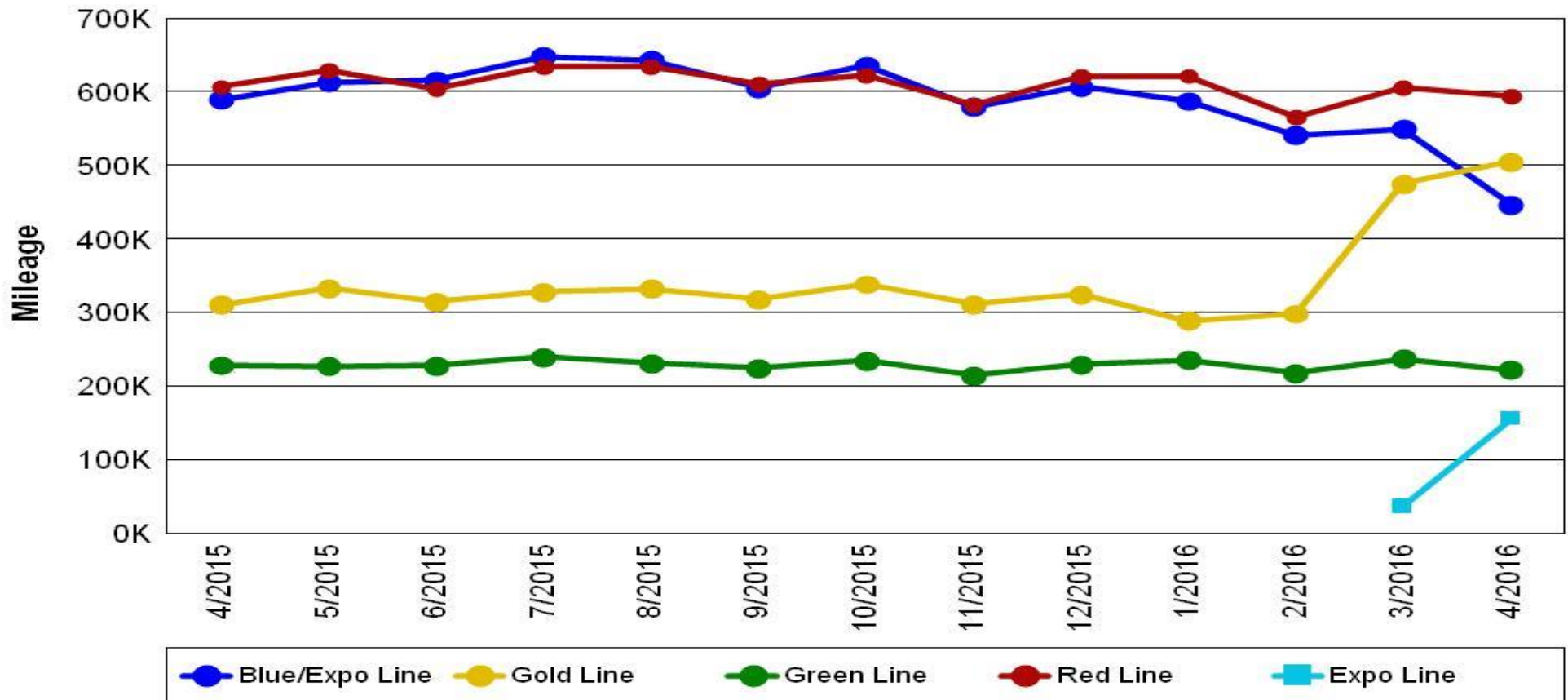
April 2015-2016



Mileage Between Data Range (by month)

April 2015-2016

Rail Division Monthly Mileage



Notes:

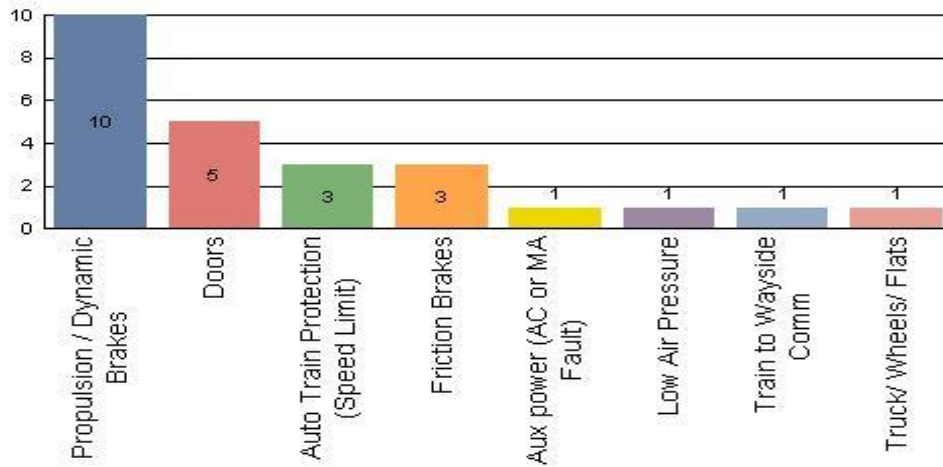
- ❖ Gold Line increase in mileage is due to the open of the Foothill extension, which includes stations further apart and faster average running speeds.
- ❖ With the opening of Division 14 in Santa Monica, the Expo Line mileage is now being reported separately from the Blue Line.

Top Incident Categories

April 2016

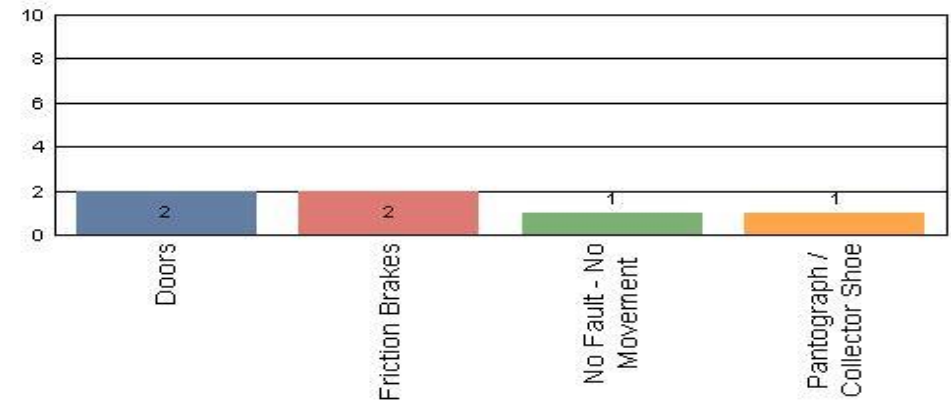
Metro Blue/Expo Line (Div 11 & Div 14)

Top Incident Categories



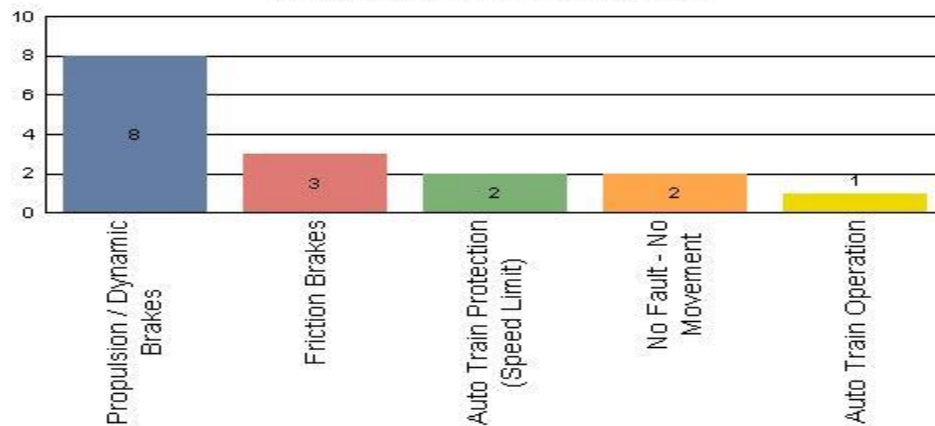
Metro Red/Purple Line (Div 20)

Top Incident Categories



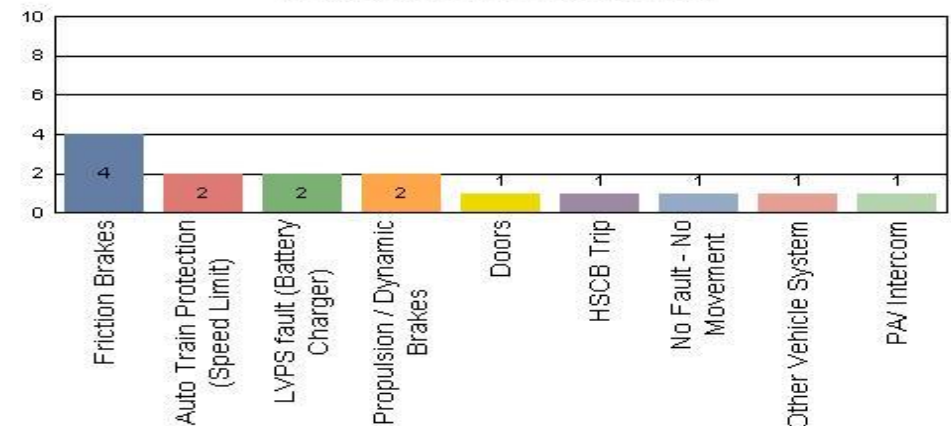
Metro Green Line (Div 22)

Top Incident Categories



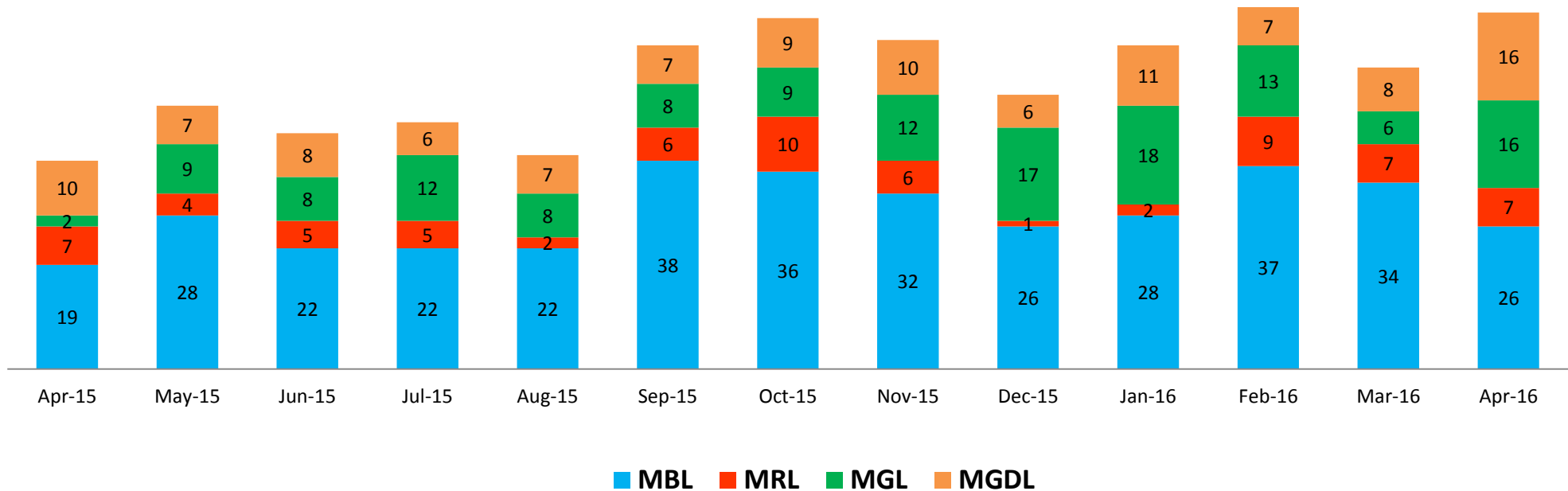
Metro Gold Line (Div 21 & Div 24)

Top Incident Categories



Major Incidents April 2015-2016

Numbers of Major System Failures (by Line)



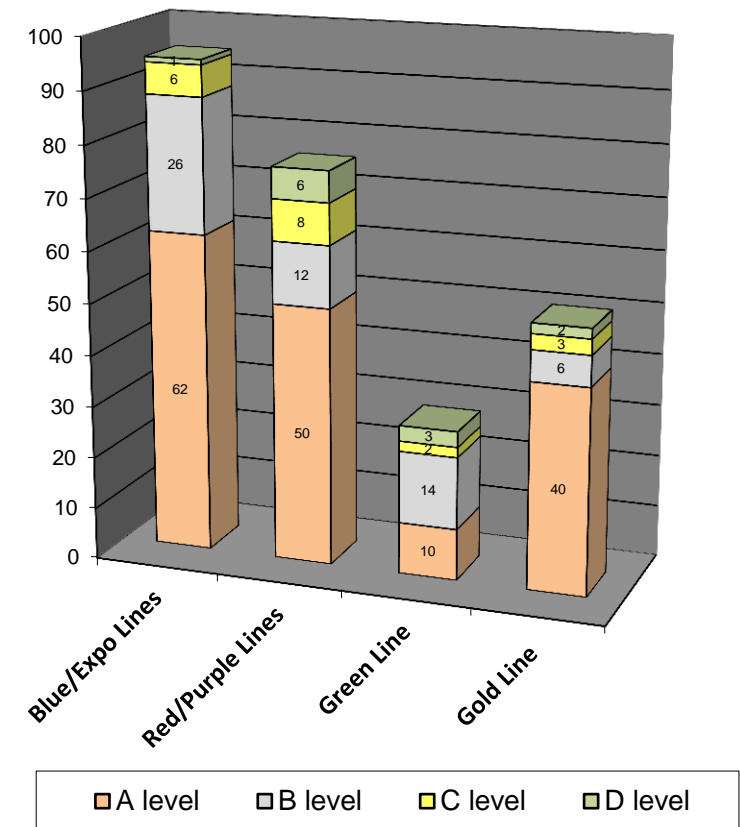
Preventive Maintenance Compliance

April 2015-2016

PM Compliance	Apr-15	May-15	Jun-15	Jul-15	Aug-15	Sep-15	Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16
Blue/Expo Lines	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Red/Purple Lines	97%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Green Line	100%	100%	100%	100%	100%	100%	100%	93%	97%	97%	100%	100%	100%
Gold Line	100%	100%	96%	100%	100%	100%	94%	100%	100%	100%	100%	100%	100%

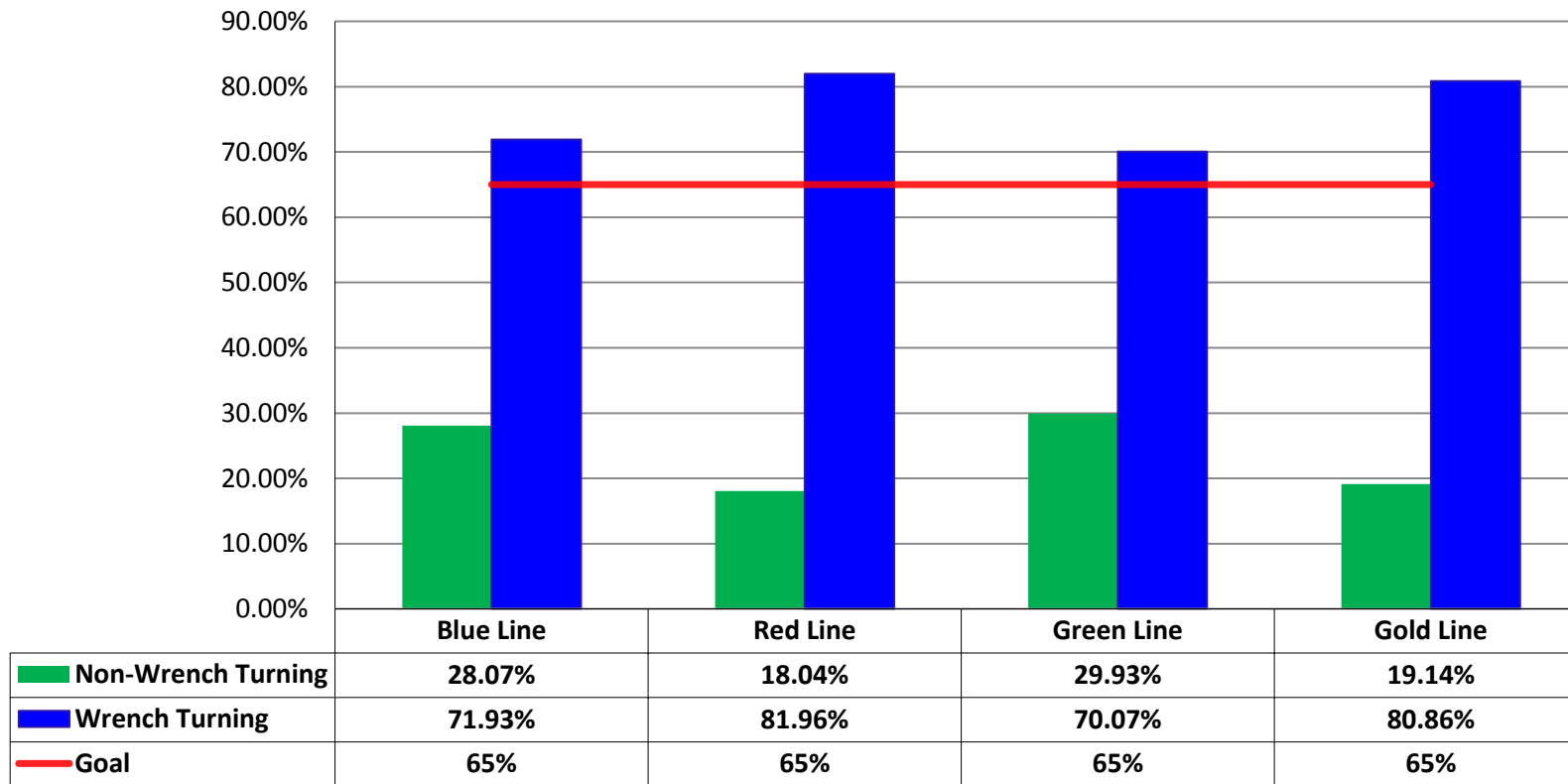
Number of Preventive Maintenance Inspections - April 2016					
Line	A level	B level	C level	D level	Totals
Blue/Expo Lines	62	26	6	1	95
Red/Purple Lines	50	12	8	6	76
Green Line	10	14	2	3	29
Gold Line	40	6	3	2	51
Totals:	162	58	19	12	251

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 Line	P3010	10,000	30,000	60,000	120,000



RFS Leader Wrench Turning April 2016

RFS - Leader Wrench Turning April 2016



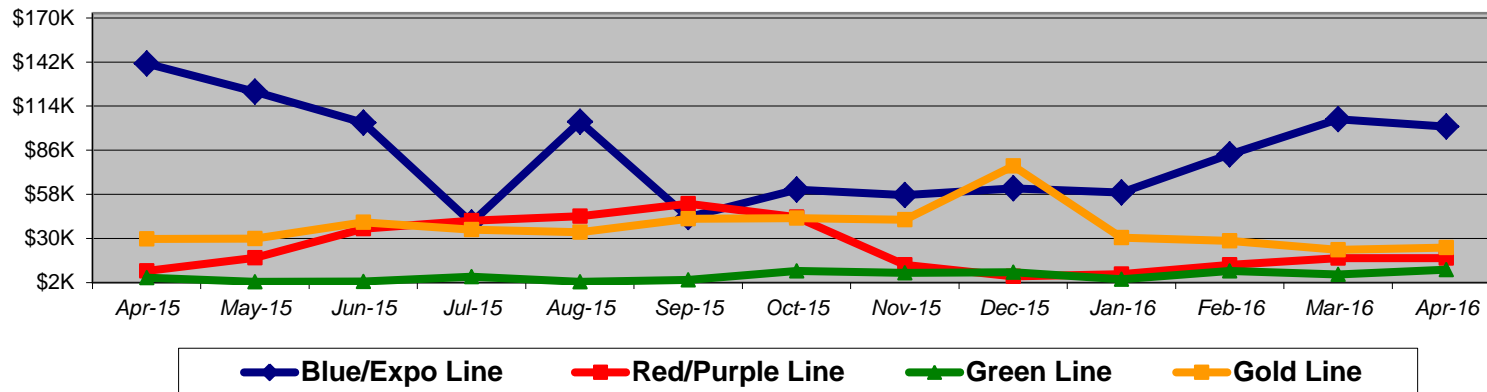
Notes: Labor hours contributed by Maint Specialist Leader, Rail Body/Paint Repair Leader, and Maint Specialist Temporary Leader

Vandalism & Graffiti Report

April 2015-2016

Graffiti Costs

	Apr-15	May-15	Jun-15	Jul-15	Aug-15	Sep-15	Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	13-Month Period
Blue/Expo Line	\$141K	\$123K	\$104K	\$40K	\$104K	\$43K	\$61K	\$58K	\$62K	\$59K	\$83K	\$106K	\$101K	\$1,084K
Red/Purple Line	\$9K	\$18K	\$36K	\$41K	\$44K	\$52K	\$43K	\$13K	\$6K	\$7K	\$13K	\$17K	\$17K	\$319K
Green Line	\$5K	\$3K	\$3K	\$6K	\$2K	\$4K	\$9K	\$8K	\$9K	\$4K	\$9K	\$7K	\$10K	\$79K
Gold Line	\$30K	\$30K	\$40K	\$36K	\$34K	\$42K	\$43K	\$42K	\$76K	\$30K	\$28K	\$23K	\$24K	\$478K
Totals:	\$185K	\$173K	\$183K	\$123K	\$185K	\$142K	\$156K	\$121K	\$152K	\$101K	\$134K	\$153K	\$153K	\$1,961K



April 2016 Vandalism & Graffiti - All Rail				
	Qty	Labor	Materials	Totals
Windows Replaced	304	\$ 42,084	\$ 44,923	\$ 87,007
Vandal Shields Replaced	900	\$ 26,335	\$ 11,347	\$ 37,682
Seats Cleaned	383	\$ 2,433	\$ 496	\$ 2,929
Seats Inserts Replaced	133	\$ 4,190	\$ 4,018	\$ 8,208
Graffiti Removal - Other	620	\$ 9,614	\$ 2,065	\$ 11,679
Repainting Panels	162	\$ 5,103	\$ -	\$ 5,103
Totals	2,502	\$ 89,759	\$ 62,849	\$ 152,608

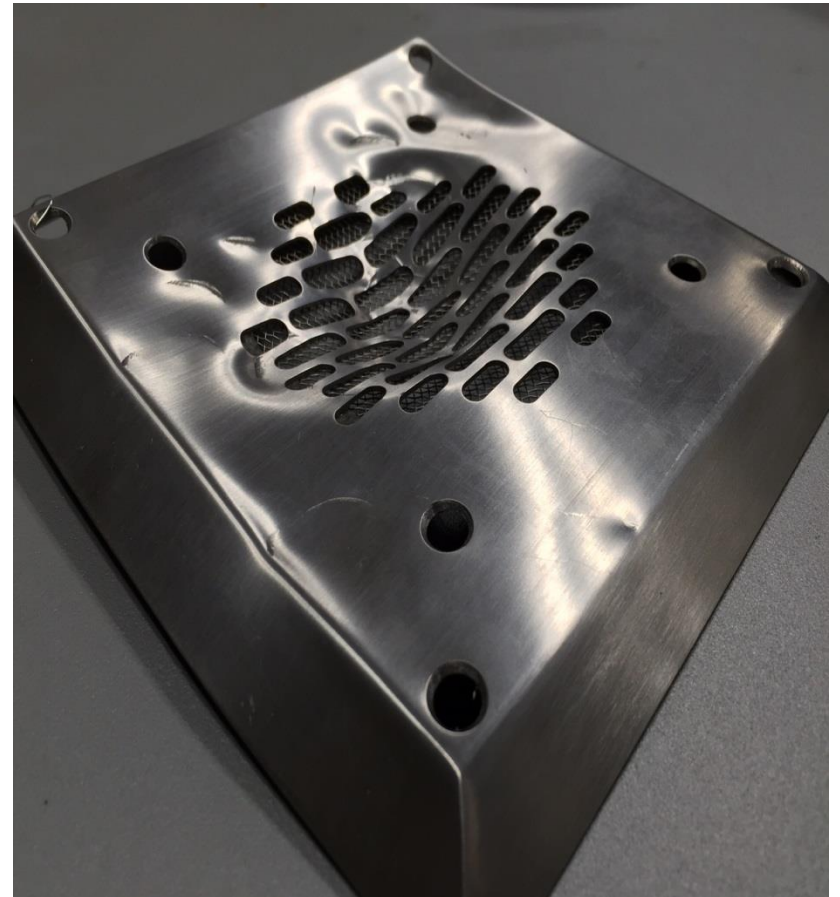
Vandalism & Graffiti Pictures

April 2016

Blue Line



Gold Line

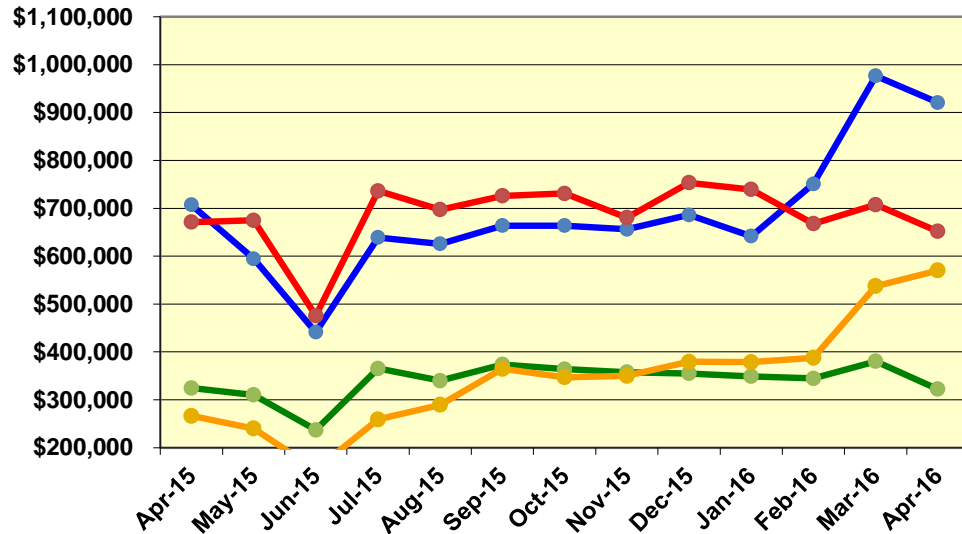


Intercom grill smashed with hammer

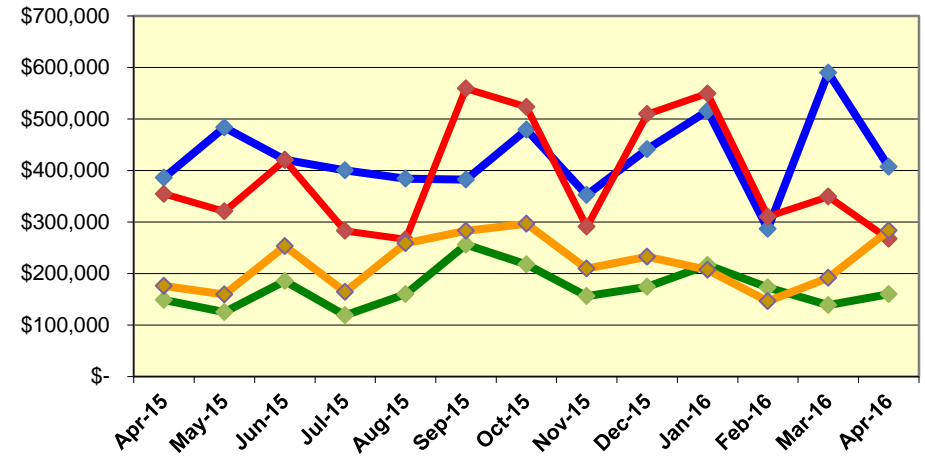
Labor and Material Costs

April 2015-2016

Labor Costs



Material Costs



Apr-15	May-15	Jun-15*	Jul-15	Aug-15	Sep-15	Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16
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Labor Costs

	Apr-15	May-15	Jun-15*	Jul-15	Aug-15	Sep-15	Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16
Blue/Expo Lines	\$ 707,348	\$ 594,550	\$ 441,364	\$ 638,967	\$ 625,577	\$ 663,752	\$ 663,965	\$ 656,195	\$ 686,227	\$ 641,613	\$ 750,961	\$ 976,568	\$ 920,945
Red/Purple Lines	\$ 671,084	\$ 674,681	\$ 475,810	\$ 736,269	\$ 697,095	\$ 726,107	\$ 731,128	\$ 680,629	\$ 753,216	\$ 739,336	\$ 667,772	\$ 707,560	\$ 651,771
Green Line	\$ 324,550	\$ 310,181	\$ 236,931	\$ 365,229	\$ 340,115	\$ 373,698	\$ 363,868	\$ 357,622	\$ 355,057	\$ 349,152	\$ 344,701	\$ 380,356	\$ 322,108
Gold Line	\$ 266,529	\$ 240,056	\$ 154,498	\$ 259,228	\$ 289,571	\$ 364,544	\$ 347,072	\$ 350,038	\$ 379,336	\$ 378,751	\$ 387,820	\$ 537,337	\$ 570,186
Totals	\$ 1,969,511	\$ 1,819,467	\$ 1,308,603	\$ 1,999,693	\$ 1,952,358	\$ 2,128,101	\$ 2,106,033	\$ 2,044,483	\$ 2,173,836	\$ 2,108,852	\$ 2,151,255	\$ 2,601,822	\$ 2,465,011

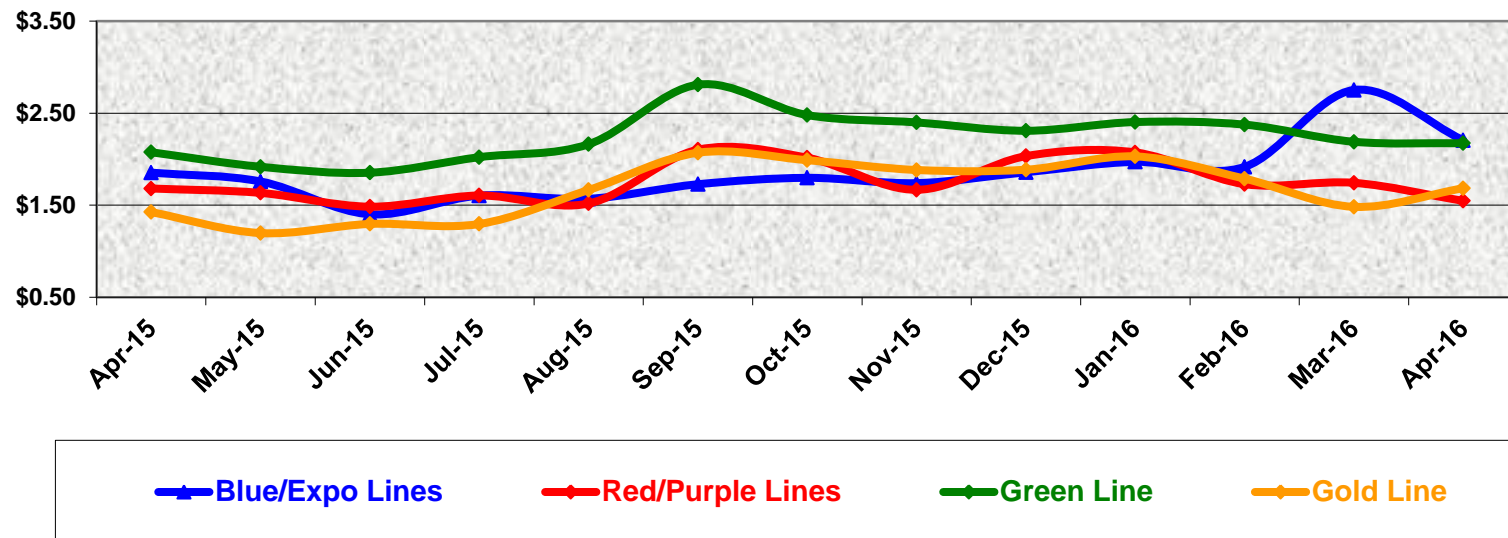
Material Costs

	Apr-15	May-15	Jun-15*	Jul-15	Aug-15	Sep-15	Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16
Blue/Expo Lines	\$ 385,794	\$ 483,368	\$ 421,088	\$ 400,315	\$ 384,178	\$ 382,274	\$ 478,960	\$ 352,710	\$ 441,523	\$ 515,933	\$ 286,531	\$ 589,879	\$ 407,085
Red/Purple Lines	\$ 354,492	\$ 320,754	\$ 420,042	\$ 282,744	\$ 266,405	\$ 559,179	\$ 523,558	\$ 290,721	\$ 509,448	\$ 549,576	\$ 310,489	\$ 349,093	\$ 267,284
Green Line	\$ 148,839	\$ 125,054	\$ 185,086	\$ 118,559	\$ 159,916	\$ 256,185	\$ 217,820	\$ 155,914	\$ 174,269	\$ 216,535	\$ 172,625	\$ 138,673	\$ 159,615
Gold Line	\$ 175,922	\$ 159,016	\$ 253,284	\$ 163,954	\$ 258,793	\$ 282,958	\$ 296,684	\$ 209,546	\$ 232,338	\$ 206,856	\$ 145,891	\$ 191,351	\$ 283,211
Totals	\$ 1,065,048	\$ 1,088,194	\$ 1,279,500	\$ 965,571	\$ 1,069,291	\$ 1,480,596	\$ 1,517,022	\$ 1,008,891	\$ 1,357,578	\$ 1,488,899	\$ 915,536	\$ 1,268,996	\$ 1,117,195

Cost Per Mile April 2015-2016

Cost per mile:	Apr-15	May-15	Jun-15	Jul-15	Aug-15	Sep-15	Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	Average
Blue/Expo Lines	\$1.85	\$1.76	\$1.40	\$1.60	\$1.57	\$1.73	\$1.80	\$1.74	\$1.86	\$1.97	\$1.92	\$2.75	\$2.21	\$1.86
Red/Purple Lines	\$1.68	\$1.63	\$1.48	\$1.61	\$1.52	\$2.10	\$2.02	\$1.67	\$2.03	\$2.07	\$1.73	\$1.74	\$1.55	\$1.76
Green Line	\$2.08	\$1.92	\$1.85	\$2.02	\$2.16	\$2.81	\$2.48	\$2.40	\$2.31	\$2.40	\$2.38	\$2.19	\$2.17	\$2.24
Gold Line	\$1.43	\$1.20	\$1.30	\$1.30	\$1.67	\$2.07	\$1.99	\$1.88	\$1.89	\$2.03	\$1.79	\$1.48	\$1.68	\$1.67

Cost per Mile



ATU Absences vs. Overtime

April 2016

ABSENCE TYPE and HOURS	3941 & 3947 Blue & Expo	3942 Red	3943 Green	3944 Gold	3948 Monrovia	Total
BER-BEREAVEMENT	48	24	8	-	-	80
CTO-COMPENSATORY TIME OFF	374	454	168	51	188	1,235
CUT-EMPLOYEE LEAVES EARLY	1	-	1	-	1	2
DSL-DISABILITY LEAVE/LONG	1,008	760	-	-	176	1,944
EFH-EMG. FLOAT HOL.	32	64	8	-	32	136
ETO-EXCUSED TIME OFF	81	49	4	1	21	155
FMI-FAM IND INJURY	-	16	-	136	160	312
FML-FAMILY CARE LEAVE	304	263	97	8	360	1,032
FMS-FAMILY LEAVE SICK	94	68	28	8	96	294
HLF-HOLIDAY FLOATING	216	336	128	40	240	960
II-INDUSTRIAL INJURY	16	-	-	-	-	16
IIR-INDUS INJURY -REOCCUR.	-	24	-	-	-	24
JUR-JURY DUTY	-	8	-	32	8	48
LC1-LABOR CODE 233	417	294	240	42	200	1,193
LTI-OCCPIL/LONGTRM INJ LEAVE	168	168	-	-	-	336
OWP-OFF WITH PERMISSION	22	11	1	-	-	34
RTO-REQUESTED TIME OFF-NO PAY	8	17	-	-	20	45
SCK-SICK PAY	262	311	162	40	112	886
SCW-SICK WITHOUT PAY	32	24	46	-	24	126
SPN-SCHOOL PARTNER NOT PAID	-	-	8	-	-	8
TAR-TARDY	4	2	3	0	0	9
UB-UNION BUSINESS	8	-	5	-	-	13
VAC-VACATION	836	860	348	36	400	2,480
*TRAINING	800	344	8	-	184	1,335
Total Absence Hours	4,732	4,096	1,261	394	2,221	12,704
**ATU Number of Work Force (active)	144	101	45	16	61	367
Full Work Force hours/month	24,955	17,503	7,799	2,773	10,573	63,601
Absence as a % of Work Force	19%	23%	16%	14%	21%	20%

OVERTIME TYPE and HOURS	3941 & 3947 Blue & Expo	3942 Red	3943 Green	3944 Gold	3948 Monrovia	Total
CTB-COMPENSATORY TIME TO BANK	89	55	57	-	16	217
OTP-PREM OVERTIME	4,606	3,081	1,002	67	62	8,818
TRO OVERTIME	-	43	-	-	-	43
WLO-Worked Lunch Overtime	208	163	74	27	4	475
Total Overtime Hours	4,903	3,343	1,133	93	82	9,553
Overtime as a % of Work Force	20%	19%	15%	3%	1%	15%

*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.



Metro

RFS Instruction Department Activities

April 2016

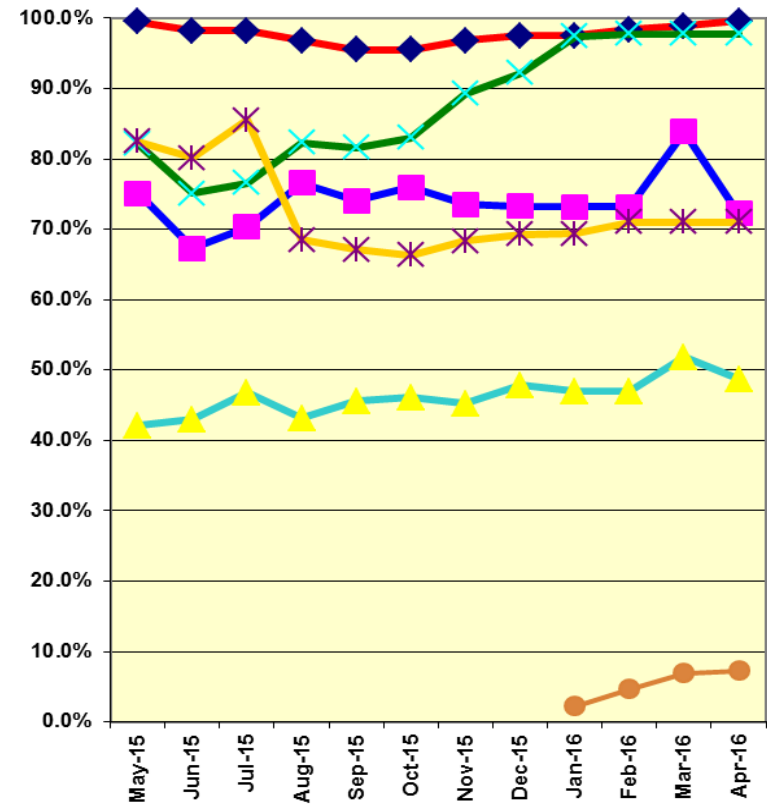
LRV Training classes completed during the month of April 2016

Description	Course Hours	Student Count	Training Hours
<u>Blue Line Training - (P865/2020 & P2000 LRVs):</u>			
RFS 865/2020 MAINLINE DUTY, DEAD TOW AND VEHICLE RECOVERY (HAND	32	7	224
Total Blue Line Training (Hours):			224
<u>Light Rail Training [In Monrovia (P3010 LRVs):</u>			
RFS KINKISHARYO COUPLER	8	11	88
RFS KINKISHARYO PANTOGRAPH	8	11	88
ANNUAL MAINTENANCE SAFETY AWARENESS	1.5	5	7.5
Total Light Rail Training (Hours):			183.5
<u>Expo Line Training - (P865/2020, P2000, & P3010 LRVs):</u>			
RFS KINKISHARYO INTRO & MAINLINE RESPONSE	16	8	128
RFS 865/2020 MAINLINE DUTY, DEAD TOW AND VEHICLE RECOVERY (HAND	32	14	448
			576
<u>Green Line Training (P2000 LRVs):</u>			
ANNUAL MAINTENANCE SAFETY AWARENESS	1.5	5	7.5
Total Green Line Training (Hours):			7.5
Total RFS Instruction for the month of April 2016 (Hours):			1,335

Core Vehicle Training Completed: BLUE EXPO GOLD GREEN

Percentage of core vehicle training complete:	83.9%	36.3%	71.0%	97.8%
Siemens P2000 training complete:	51.8%	39.5%	N/A	N/A
KinkiSharyo P3010 training complete:	N/A	7.3%	N/A	N/A
Average Specialist Rail Experience Level in Years:	14.6	1.7	7.0	9.8

Core Training Completed



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

RFS Instruction Department Activities

April 2016

HRV & Other Training classes completed during the month of April 2016

<u>Description</u>	<u>Course Hours</u>	<u>Student Count</u>	<u>Training Hours</u>
Red Line Training - Breda A650 HRV:			
RFS BRED A 650 MAINLINE DUTY, DEAD TOW AND VEHICLE	8	3	24
RFS BRED A 650 PREVENT MAINT INSP	40	3	120
RFS BRED A 650 APSE	24	5	120
RFS BRED A 650 PROPULSION ABB	16	5	80
Total Red Line Training Hours			344

<u>Other Instruction Activities</u>	<u>Curriculum</u>	<u>Administrative</u>	<u>Technical Support</u>	<u>Total</u>
A650 Curriculum, Administrative, and Technical Support	24	8	16	48
P865/P2020 Curriculum, Administrative, and Technical Support	88	20	48	156
P2000 Curriculum, Administrative, and Technical Support	80	24	104	208
P2550 Curriculum, Administrative, and Technical Support	16	16	24	56
P3010 Curriculum, Administrative, and Technical Support	16	40	16	72
TLC Webinar			1.5	1.5
WAYSIDE WORKER PROTECTION provided by Transportation				296
Total Other Instruction Activities				838

Core Vehicle Training Completed: RED

Percentage of Core Vehicle Training Complete: 99.6%

Average Specialist Rail Experience Level in Years: 12.2