



Rail Fleet Services Monthly Report November 2015



Metro

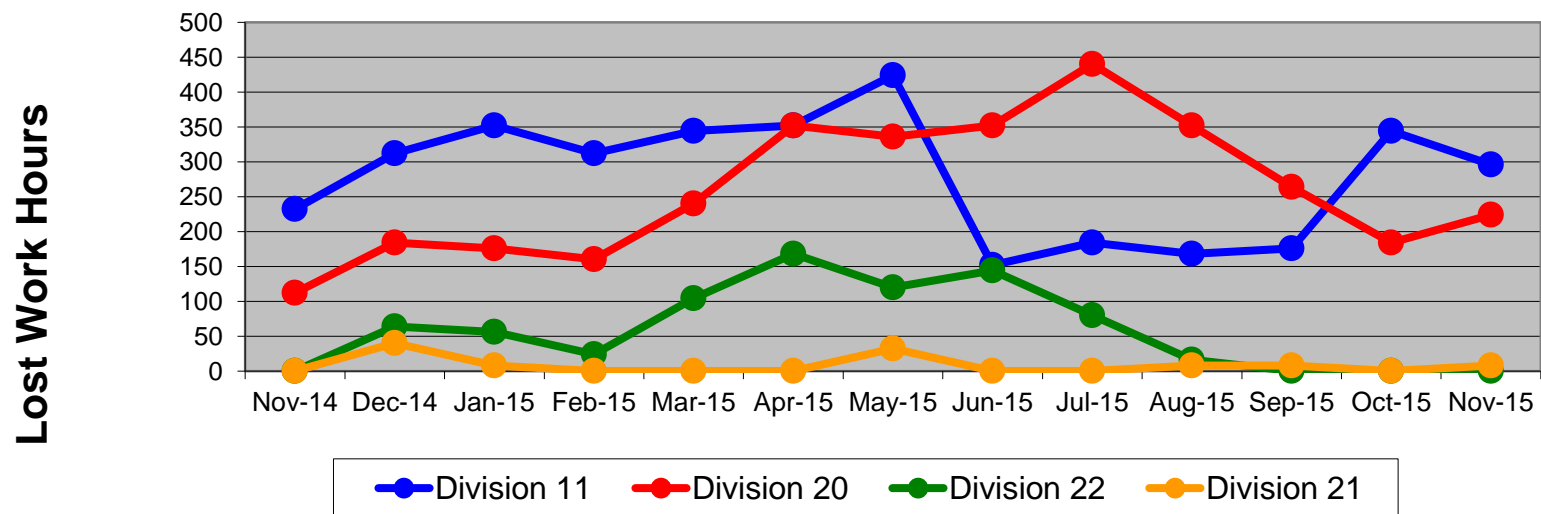
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Industrial Injuries – Lost Work Hours November 2014-2015

	Nov-14	Dec-14	Jan-15	Feb-15	Mar-15	Apr-15	May-15	Jun-15	Jul-15	Aug-15	Sep-15	Oct-15	Nov-15	13-Month Period
Division 11	232	312	352	312	344	352	424	152	184	168	176	344	296	3,648
Division 20	112	184	176	160	240	352	336	352	440	352	264	184	224	3,376
Division 22	0	64	56	24	104	168	120	144	80	16	0	0	0	776
Division 21	0	40	8	0	0	0	32	0	0	8	8	0	8	104
Totals	344	600	592	496	688	872	912	648	704	544	448	528	528	7,904

Industrial Injuries (lost work hours)



Rail Vehicle Accidents & Major Incidents

November 2014-2015

Repair Costs	Nov-14	Dec-14	Jan-15	Feb-15	Mar-15	Apr-15	May-15	Jun-15	Jul-15	Aug-15	Sep-15	Oct-15	Nov-15	13-Month Period
Blue/Expo Line	\$5,762	\$3,463	\$9,301	\$17,834	\$17,322	\$12,056	\$1,655	\$4,811	\$5,716	\$1,971	\$2,838	\$40,969	\$65,454	\$189,152
Red/Purple Line	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Green Line	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$5,333	\$0	\$1,205	\$0	\$6,538
Gold Line	\$0	\$5,664	\$0	\$315	\$0	\$0	\$4,833	\$1,494	\$8,204	\$2,611	\$0	\$1,074	\$1,547	\$25,742
Totals	\$5,762	\$9,127	\$9,301	\$18,149	\$17,322	\$12,056	\$6,488	\$6,305	\$13,920	\$9,915	\$2,838	\$43,248	\$67,001	\$221,432

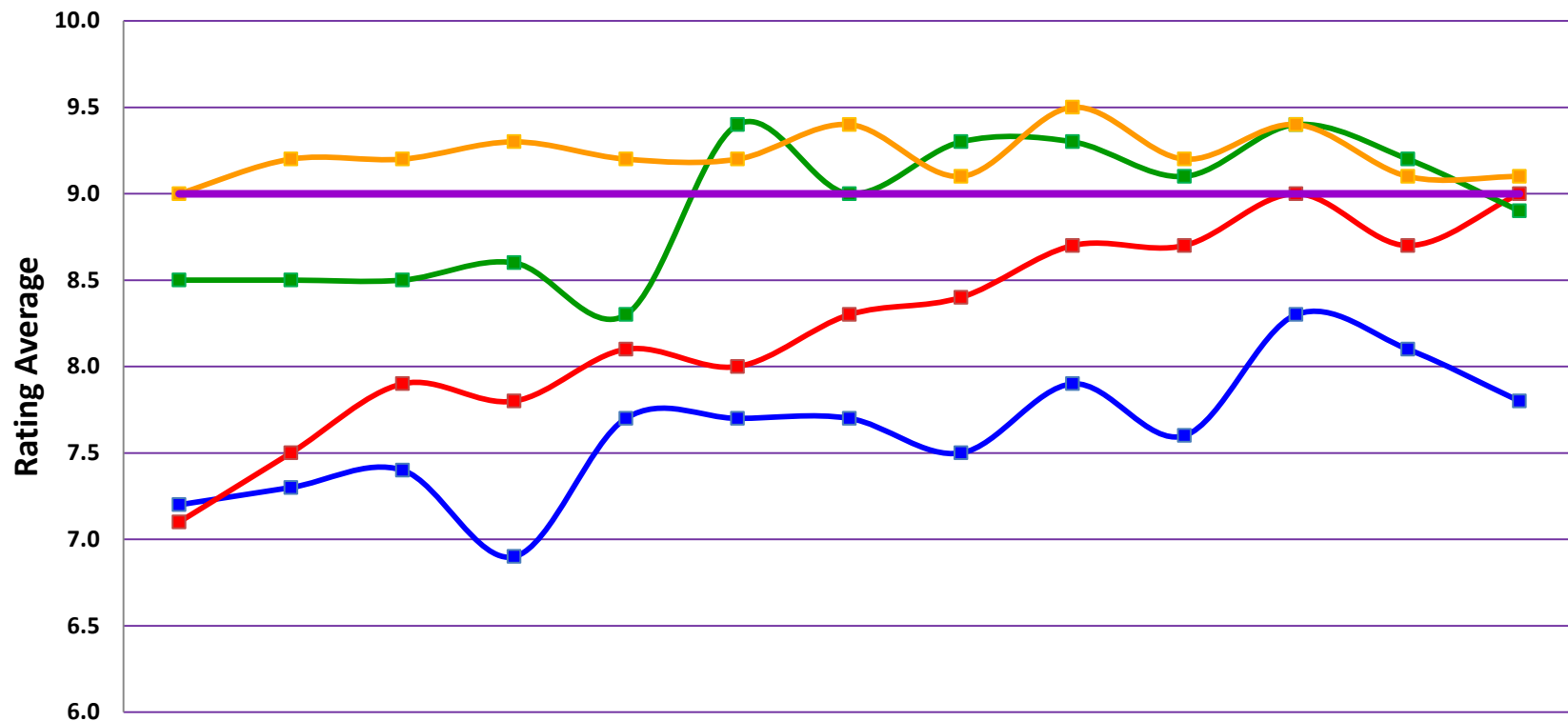
Rail Vehicle Accident Costs - November 2015				
Date	Incident #	Problem Code	Incident Description	Repair Cost
Metro Blue/Expo Line				
11/11/15	2661966	Train vs. Vehicle	A 10-73 was reported. Train made contact with the vehicle at the intersection of Washington and Olive.	\$ 1,173
11/13/15	2662818	Train vs. Vehicle	A 10-73 was reported. Train 120, at Flower and 18th St.	\$ 780
11/14/15	2662919	Train vs. Vehicle	A 10-73 was reported. Train 110, Track 4 and USC Watt Way.	\$ 15,996
11/16/15	2663618	Train vs. Vehicle	A 10-73 was reported. Train 111, at 20th St. and Long Beach.	\$ 313
11/23/15	2666119	Train vs. Vehicle	A 10-73 was reported. Train 110, Track 2 at 119th St.	\$ 47,192
Total				\$ 65,454
Metro Gold Line				
11/3/15	2658704	Train vs. Vehicle	A 10-73 was reported. Train 403, Track 2 at 3rd St. and Mednic.	\$ 1,547
11/5/15	2659396	Train vs. Object	A 10-71 was reported. Debris on the track.	\$ -
Total				\$ 1,547
Grand Total				\$ 67,001
(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.

Rail Vehicle – Car Cleanliness

November 2014-2015

Car Cleanliness Monthly Report



Service Delivery November 2015

November 2015 - Service Delivery

Blue/Expo Line Fleet Size: 92

<u>Pull Out</u>	<u>Vehicles Required</u>	<u>Average Available</u>	<u>% Up (Down)</u>
Weekday:	78	76	97%
Weekend:	60	63	105%
Late Pullouts: 2			
Monthly Mileage:	579,811		

Red/Purple Line Fleet Size: 104

<u>Pull Out</u>	<u>Vehicles Required</u>	<u>Average Available</u>	<u>% Up (Down)</u>
Weekday:	74	78	105%
Weekend:	54	70	130%
Late Pullouts: 0			
Monthly Mileage:	582,490		

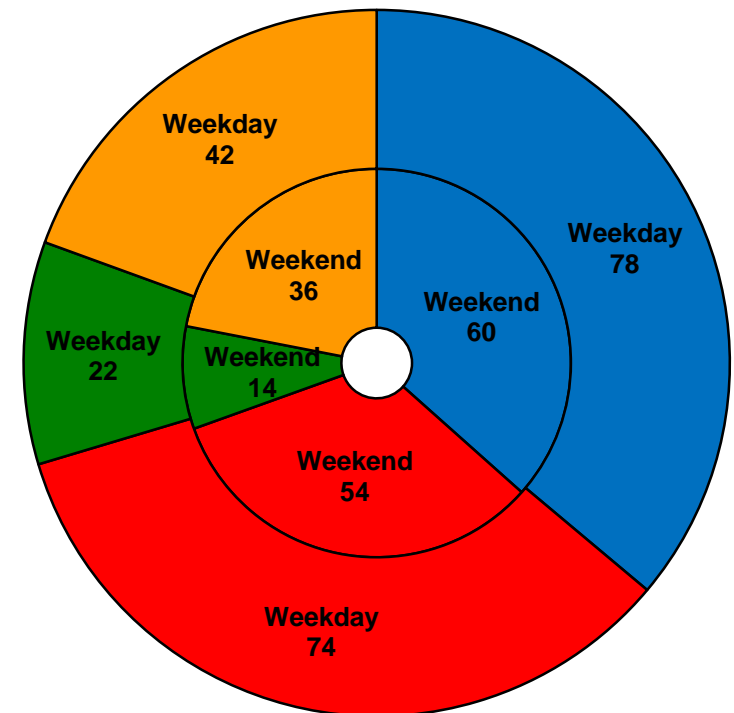
Green Line Fleet Size: 29

<u>Pull Out</u>	<u>Vehicles Required</u>	<u>Average Available</u>	<u>% Up (Down)</u>
Weekday:	22	22	100%
Weekend:	14	16	114%
Late Pullouts: 0			
Monthly Mileage:	214,006		

Gold Line Fleet Size: 50

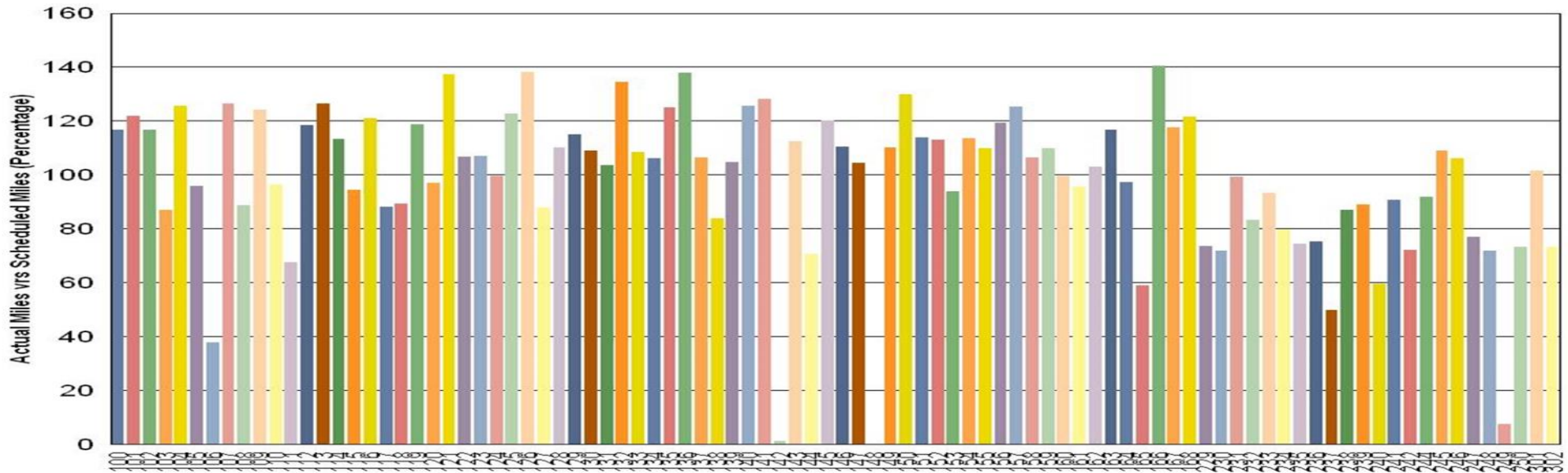
<u>Pull Out</u>	<u>Vehicles Required</u>	<u>Average Available</u>	<u>% Up (Down)</u>
Weekday:	42	42	100%
Weekend:	36	39	108%
Late Pullouts: 0			
Monthly Mileage*:	312,298		

* Gold Line monthly mileage includes Division 21 and 24.



Vehicle Utilization November 2015

Metro Blue/Expo Line (92 Cars)



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

Car # 106 Major Roof Repair, Articulation Floor Overhaul, and Graffiti Abatement

Car # 142 Long Term Major Accident Repair

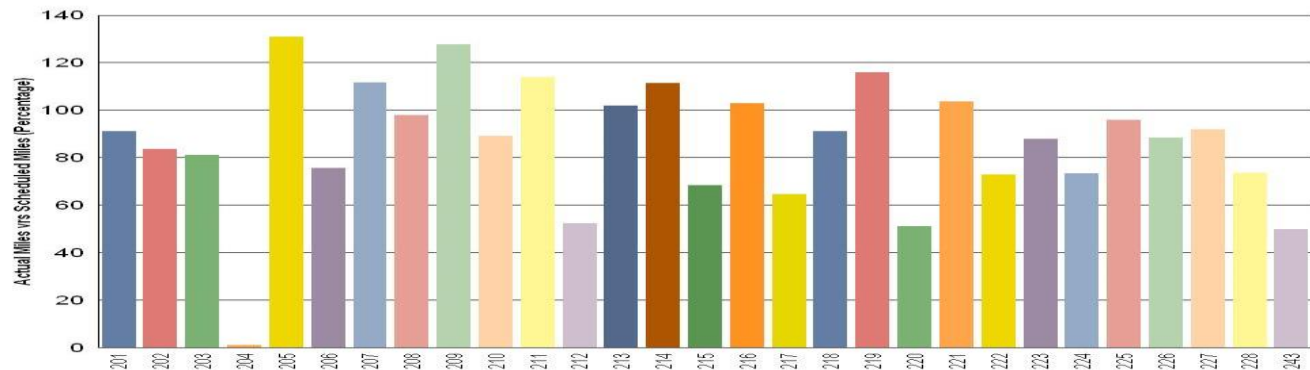
Car # 148 Troubleshooting for Repeating Propulsion Faults/Dynamic Brake Faults. Training car.

Car # 249 90K Inspection and Open Work Orders.

Green Line: The following car was out of service due to:

Car # 204 Propulsion Issues and A-B End Blower Motor Noise

Metro Green Line (29 Cars)



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

Vehicle Utilization November 2015

Red/Purple Line:

The following cars were out of service due to:

Car # 507-510 HVAC/Propulsion

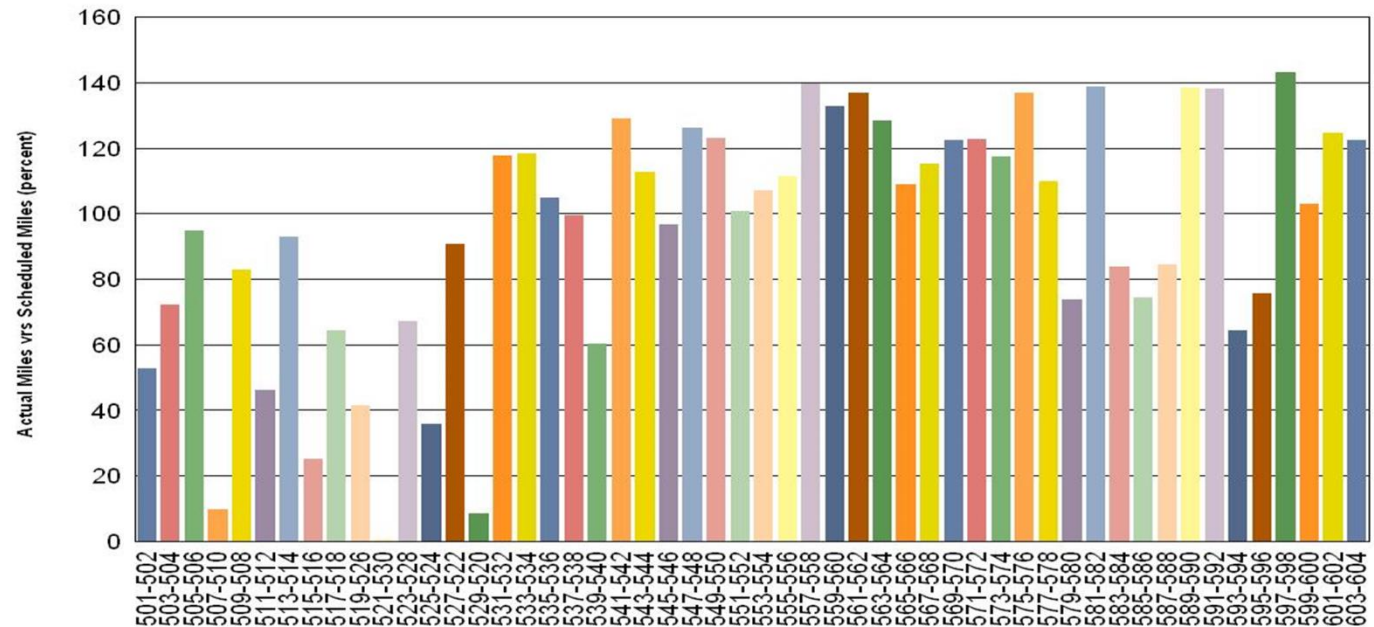
Car # 515-516 Propulsion

Car # 521-530 Traction Motors/Trucks.

Car # 525-524 Flooring Campaign

Car # 529-520 Traction Motors

Metro Red/Purple Line (104 Cars)

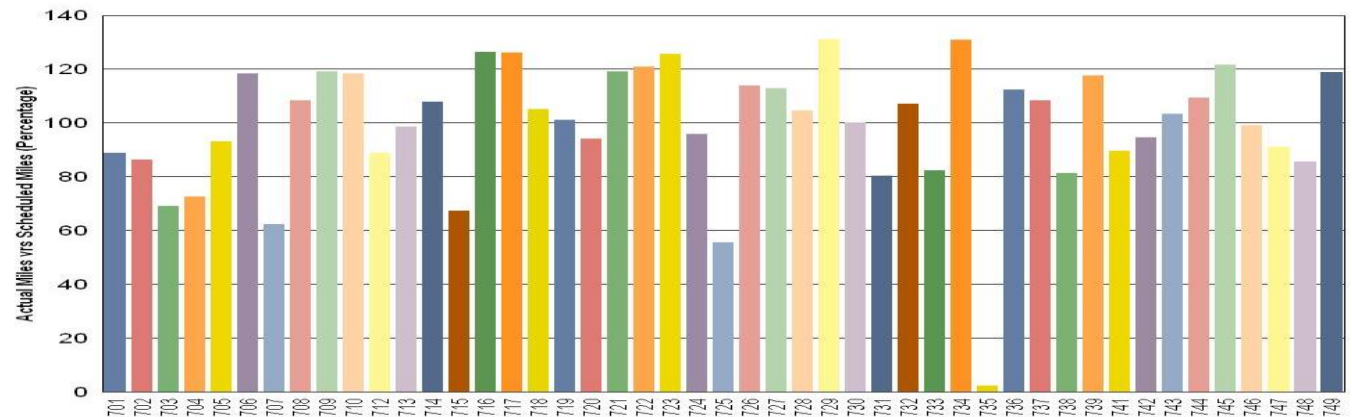


Gold Line:

The following car was out of service due to:

Car # 735 Repair of the Auxiliary Inverter

Metro Gold Line (50 Cars)

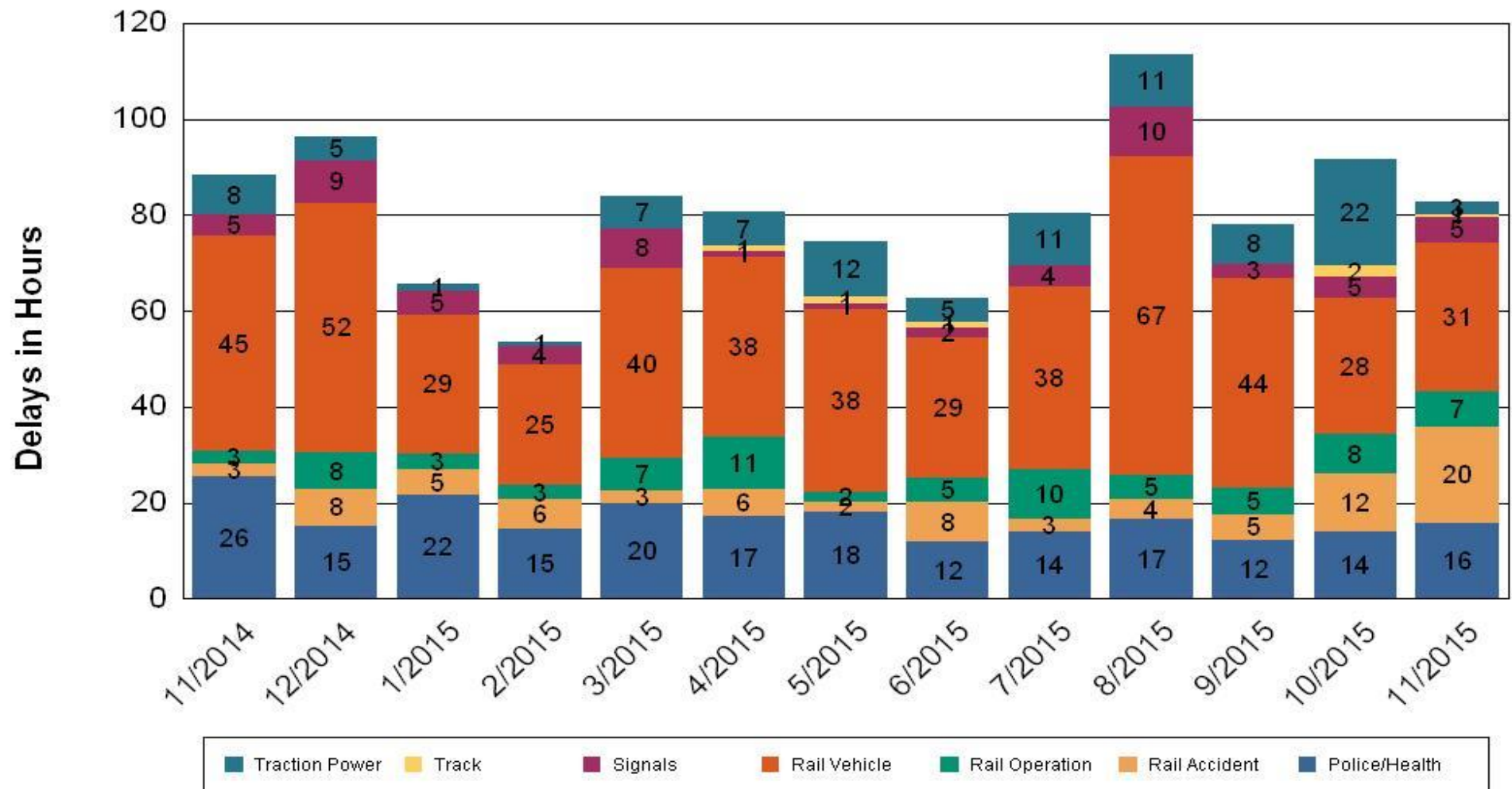


•Percentage includes an average 4% mileage deduction for yard mileage and vehicle testing.

All Train Delays (Hours) November 2014-2015

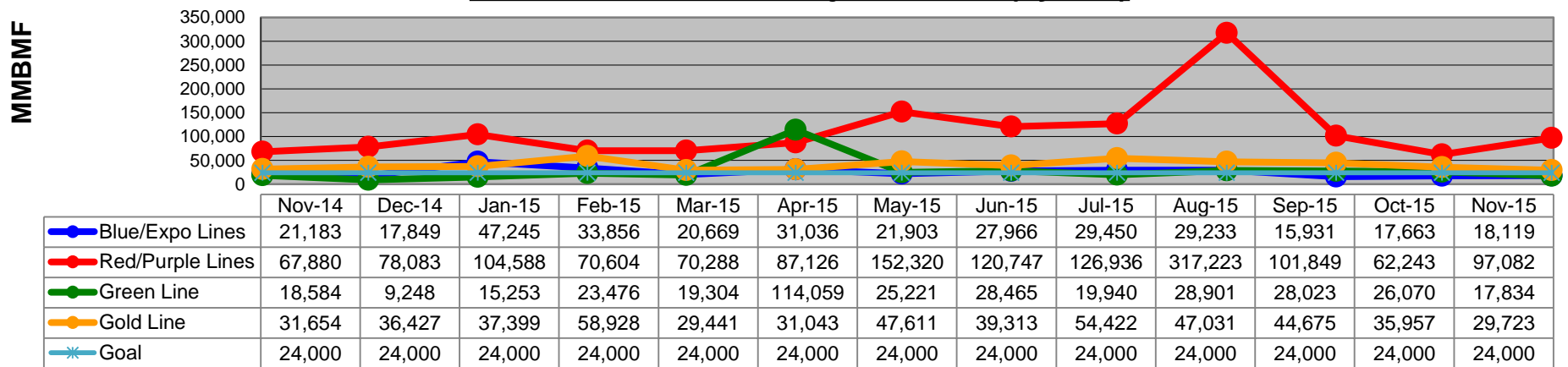
All Train Delays

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

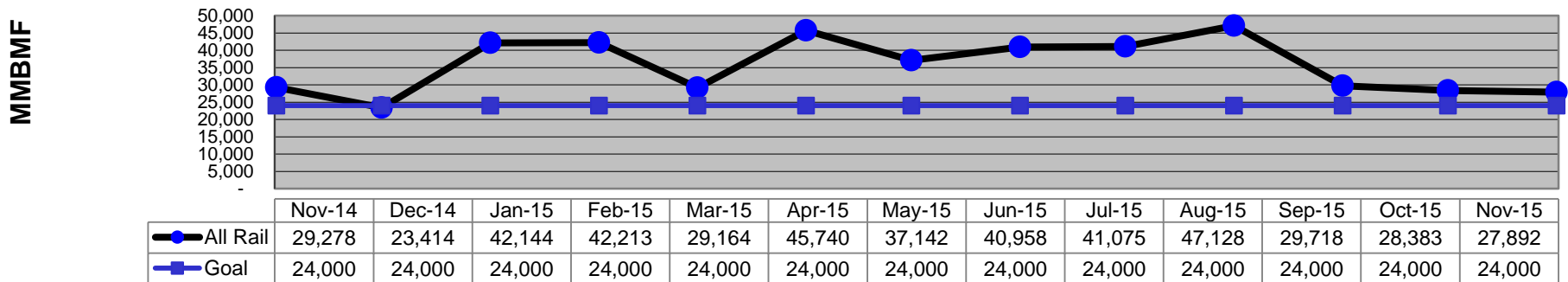


Mean Miles Between Failures (Major) November 2014-2015

Mean Miles Between Major Failures (by line)

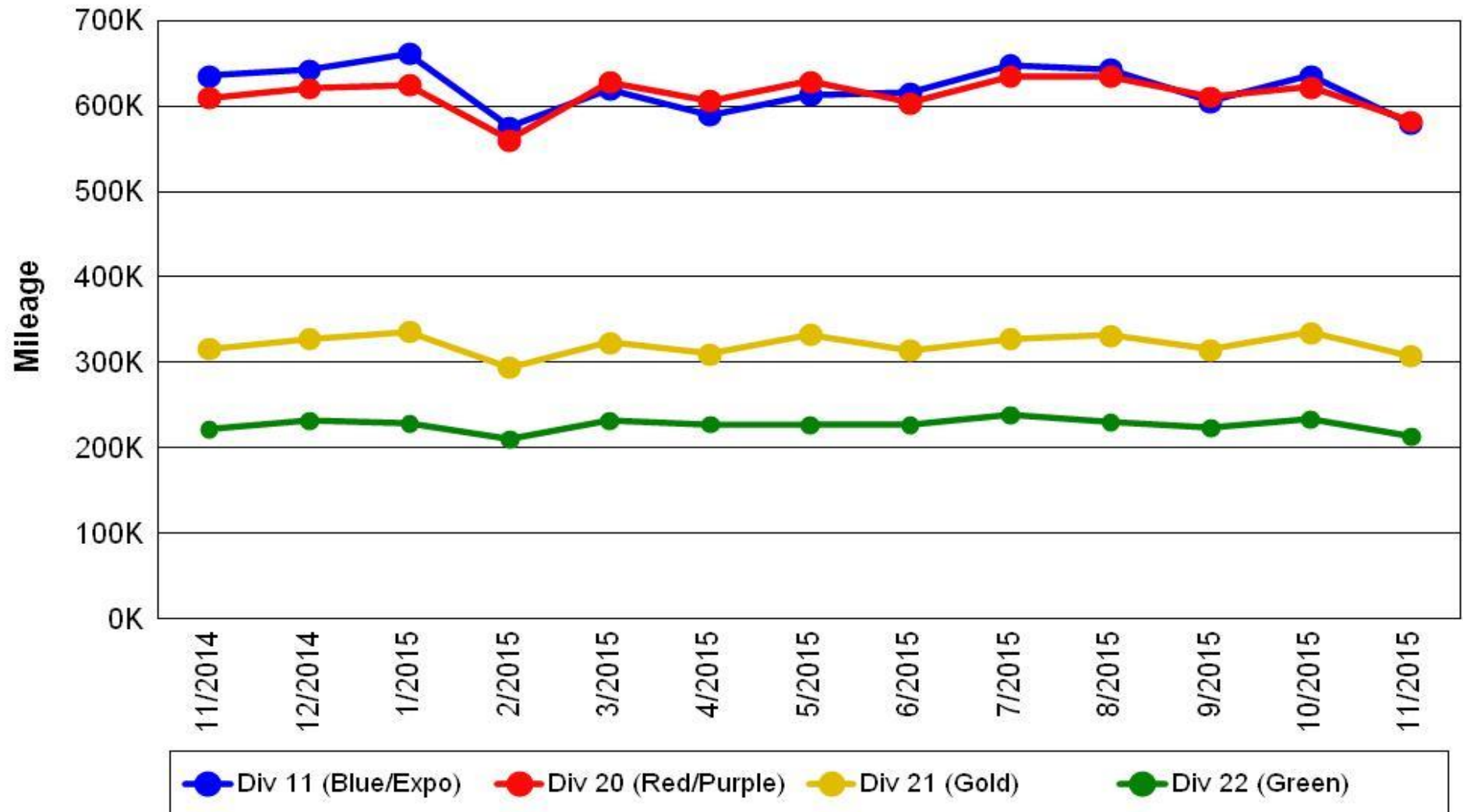


Mean Miles Between Major Failures (all)



Mileage Between Data Range (by month) November 2014-2015

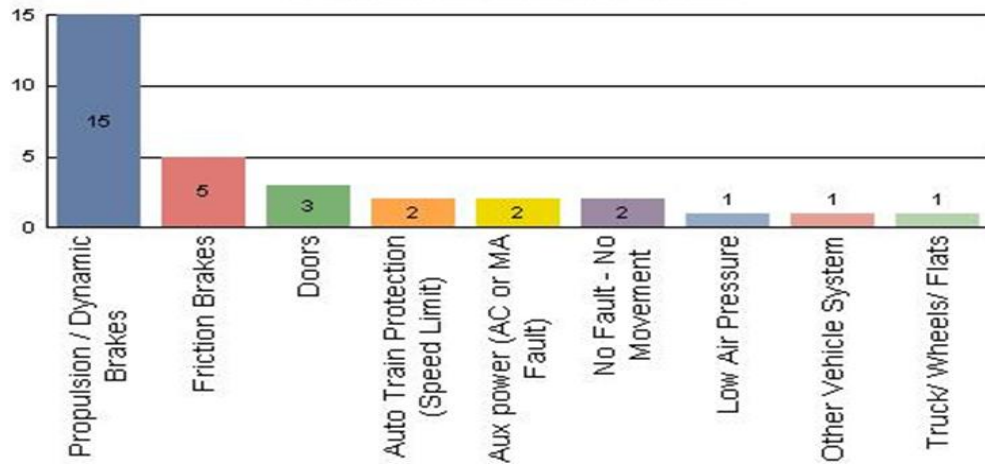
Rail Division Monthly Mileage



Top Incident Categories November 2015

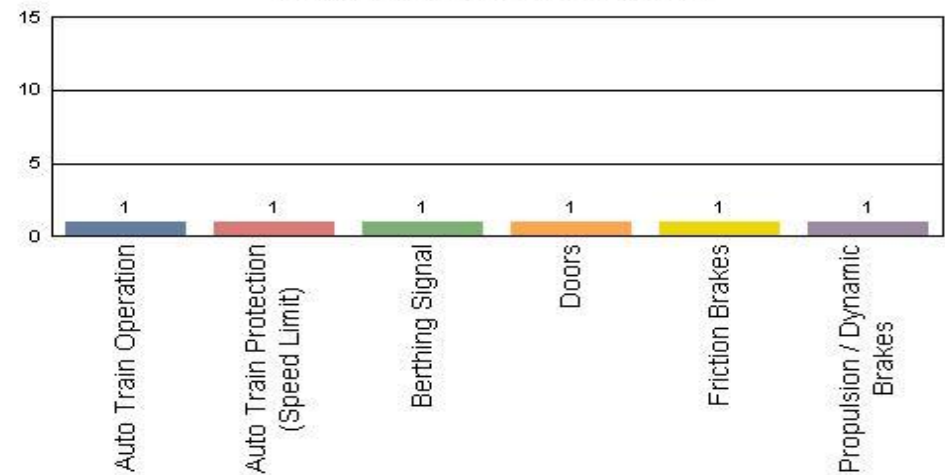
Metro Blue/Expo Line

Top Incident Categories



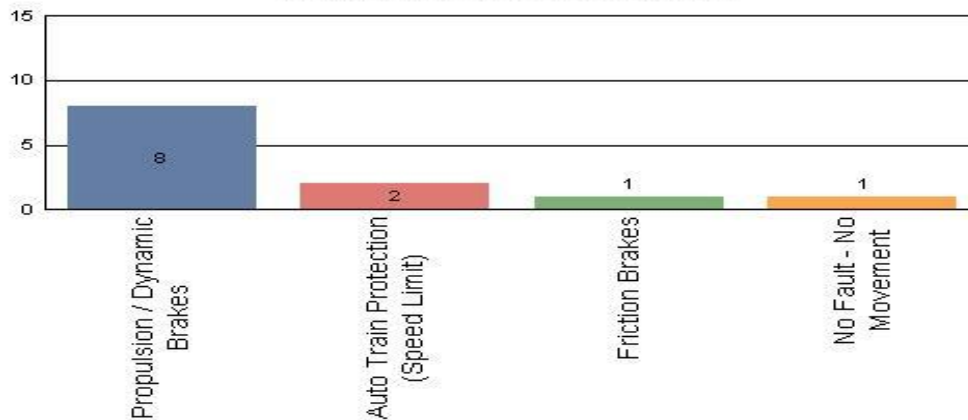
Metro Red/Purple Line

Top Incident Categories



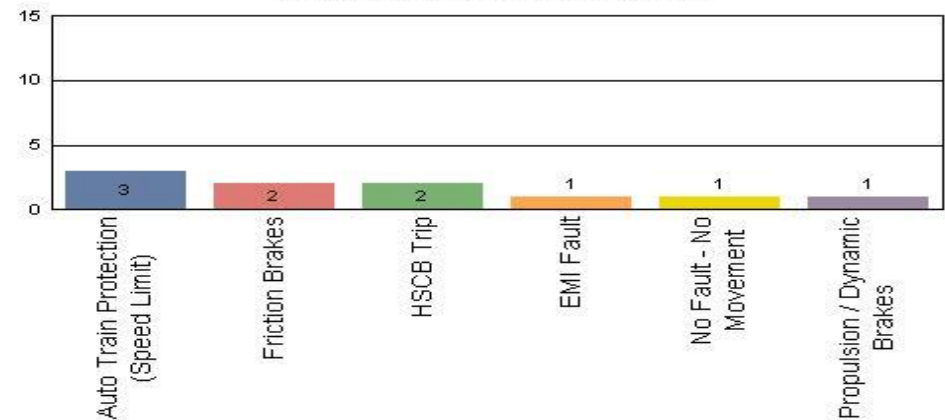
Metro Green Line

Top Incident Categories



Metro Gold Line

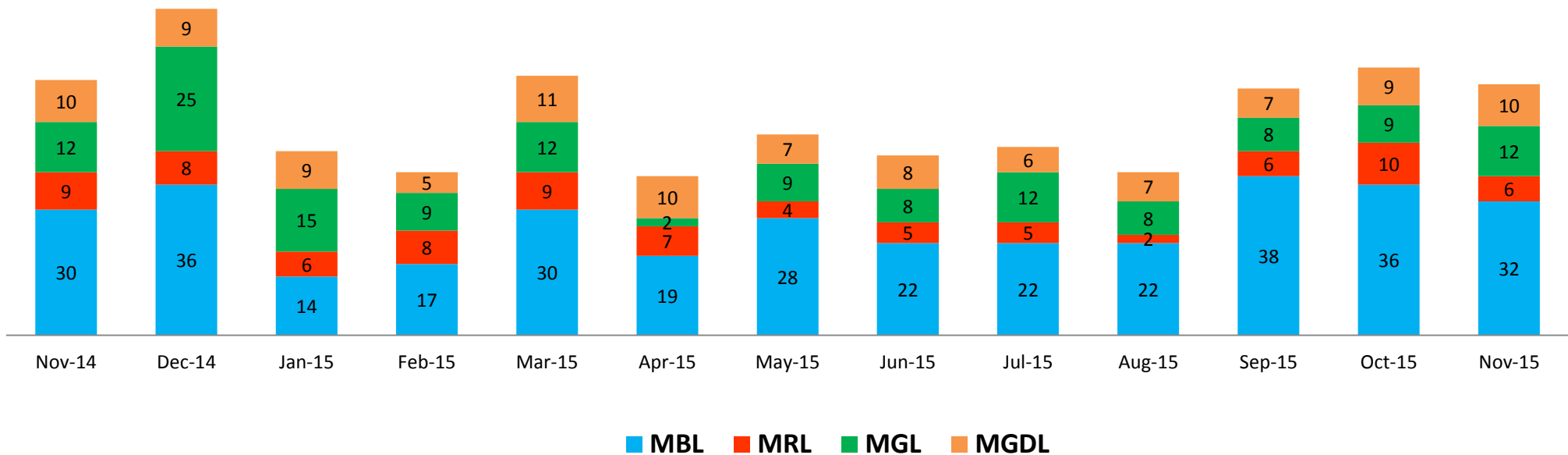
Top Incident Categories



Major Incidents

November 2014-2015

Numbers of Major System Failures (by Line)

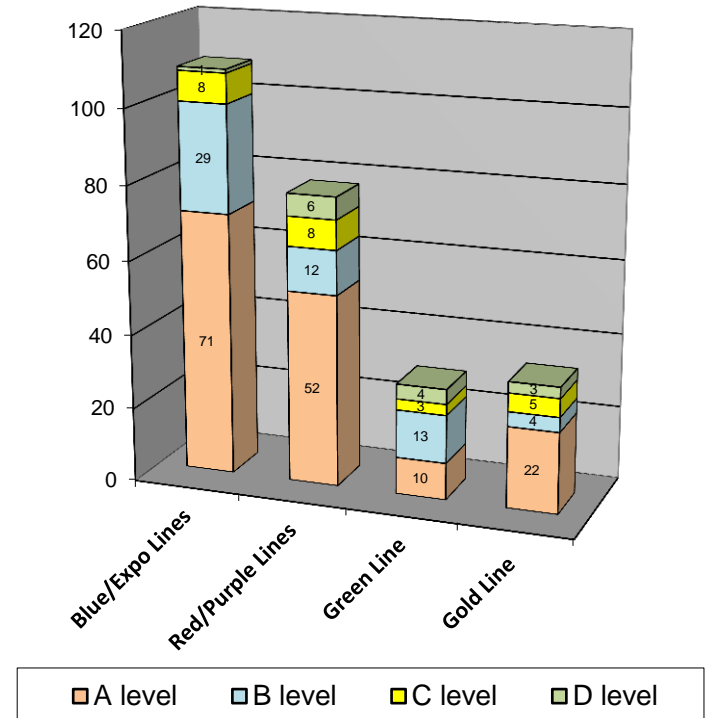


Preventive Maintenance Compliance November 2014-2015

PM Compliance	Nov-14	Dec-14	Jan-15	Feb-15	Mar-15	Apr-15	May-15	Jun-15	Jul-15	Aug-15	Sep-15	Oct-15	Nov-15
Blue/Expo Lines	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Red/Purple Lines	100%	100%	100%	100%	100%	97%	100%	100%	100%	100%	100%	100%	100%
Green Line	97%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	93%
Gold Line	100%	100%	100%	100%	100%	100%	100%	96%	100%	100%	100%	94%	100%

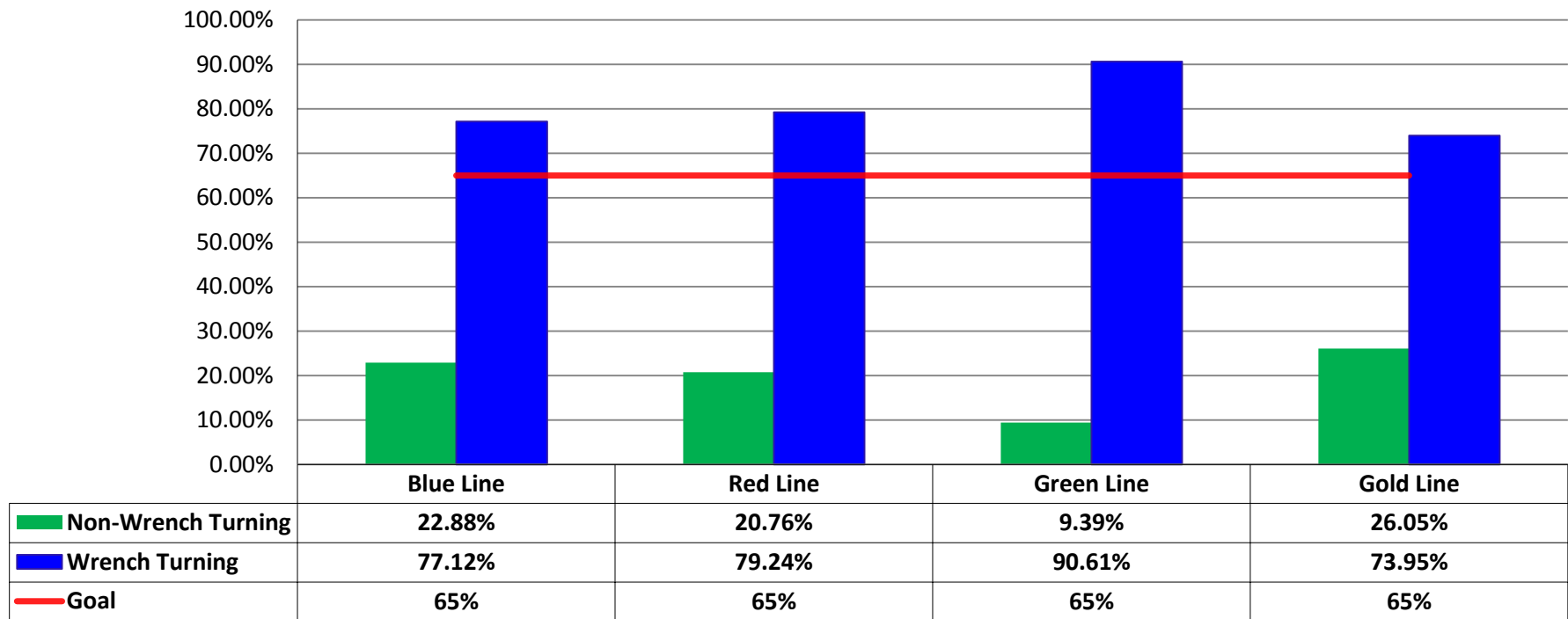
Number of Preventive Maintenance Inspections - November 2015					
Line	A level	B level	C level	D level	Totals
Blue/Expo Lines	71	29	8	1	109
Red/Purple Lines	52	12	8	6	78
Green Line	10	13	3	4	30
Gold Line	22	4	5	3	34
Totals:	155	58	24	14	251

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



RFS Leader Wrench Turning November 2015

RFS - Leader Wrench Turning November 2015



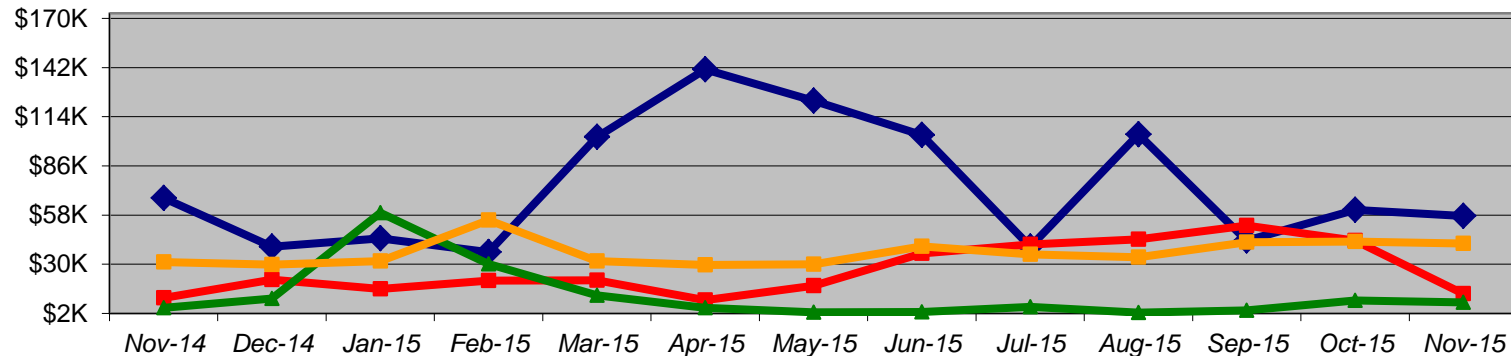
Notes: Labor hours contributed by Maint Specialist Leader, Rail Body/Paint Repair Leader, and Maint Specialist Temporary Leader

Vandalism & Graffiti Report

November 2014-2015

Graffiti Costs

	Nov-14	Dec-14	Jan-15	Feb-15	Mar-15	Apr-15	May-15	Jun-15	Jul-15	Aug-15	Sep-15	Oct-15	Nov-15	13-Month Period
Blue/Expo Line	\$68K	\$40K	\$45K	\$37K	\$103K	\$141K	\$123K	\$104K	\$40K	\$104K	\$43K	\$61K	\$58K	\$965K
Red/Purple Line	\$11K	\$21K	\$16K	\$21K	\$21K	\$9K	\$18K	\$36K	\$41K	\$44K	\$52K	\$43K	\$13K	\$347K
Green Line	\$5K	\$10K	\$59K	\$30K	\$12K	\$5K	\$3K	\$3K	\$6K	\$2K	\$4K	\$9K	\$8K	\$157K
Gold Line	\$31K	\$30K	\$32K	\$55K	\$32K	\$30K	\$30K	\$40K	\$36K	\$34K	\$42K	\$43K	\$42K	\$476K
Totals:	\$115K	\$102K	\$152K	\$143K	\$167K	\$185K	\$173K	\$183K	\$123K	\$185K	\$142K	\$156K	\$121K	\$1,946K



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

November 2015 Vandalism & Graffiti - All Rail				
	Qty	Labor	Materials	Totals
Windows Replaced	158	\$ 19,656	\$ 26,559	\$ 46,215
Vandal Shields Replaced	366	\$ 9,324	\$ 9,777	\$ 19,101
Seats Cleaned	580	\$ 4,964	\$ 1,764	\$ 6,728
Seats Inserts Replaced	174	\$ 5,481	\$ 5,948	\$ 11,429
Graffiti Removal - Other	807	\$ 20,061	\$ 8,133	\$ 28,194
Repainting Panels	293	\$ 9,230	\$ -	\$ 9,230
Totals	2,378	\$ 68,716	\$ 52,181	\$ 120,897

Graffiti Pictures November 2015

Blue Line

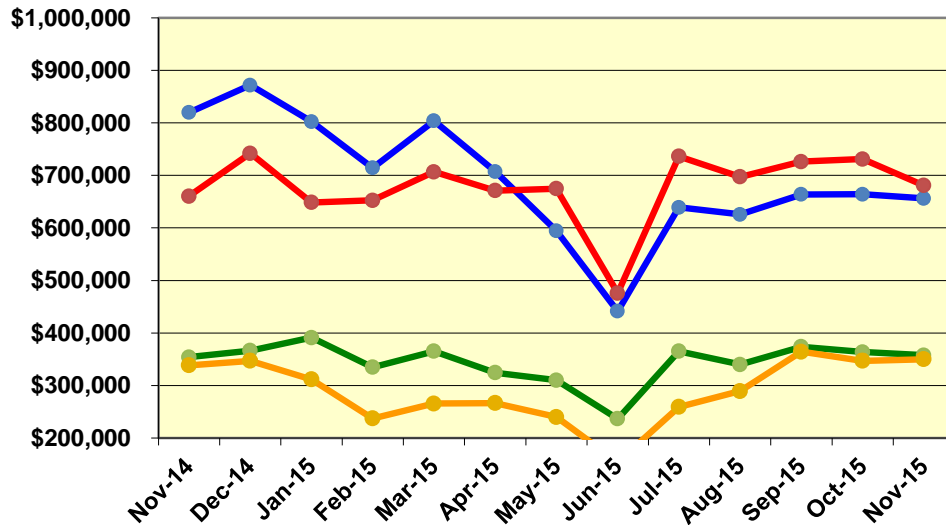


Gold Line

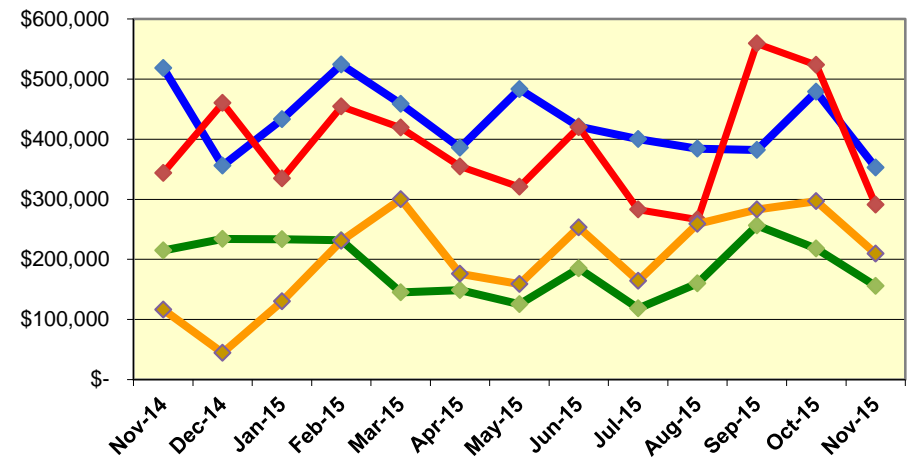


Labor and Material Costs November 2014-2015

Labor Costs



Material Costs



	Nov-14	Dec-14	Jan-15	Feb-15	Mar-15	Apr-15	May-15	Jun-15*	Jul-15	Aug-15	Sep-15	Oct-15	Nov-15
Labor Costs													
Blue/Expo Lines	\$ 819,497	\$ 871,682	\$ 802,256	\$ 714,349	\$ 803,757	\$ 707,348	\$ 594,550	\$ 441,364	\$ 638,967	\$ 625,577	\$ 663,752	\$ 663,965	\$ 656,195
Red/Purple Lines	\$ 660,321	\$ 741,908	\$ 648,538	\$ 652,406	\$ 706,794	\$ 671,084	\$ 674,681	\$ 475,810	\$ 736,269	\$ 697,095	\$ 726,107	\$ 731,128	\$ 680,629
Green Line	\$ 354,058	\$ 366,422	\$ 391,161	\$ 334,919	\$ 365,457	\$ 324,550	\$ 310,181	\$ 236,931	\$ 365,229	\$ 340,115	\$ 373,698	\$ 363,868	\$ 357,622
Gold Line	\$ 338,610	\$ 347,182	\$ 311,868	\$ 237,438	\$ 265,835	\$ 266,529	\$ 240,056	\$ 154,498	\$ 259,228	\$ 289,571	\$ 364,544	\$ 347,072	\$ 350,038
Totals	\$ 2,172,486	\$ 2,327,193	\$ 2,153,823	\$ 1,939,112	\$ 2,141,842	\$ 1,969,511	\$ 1,819,467	\$ 1,308,603	\$ 1,999,693	\$ 1,952,358	\$ 2,128,101	\$ 2,106,033	\$ 2,044,483

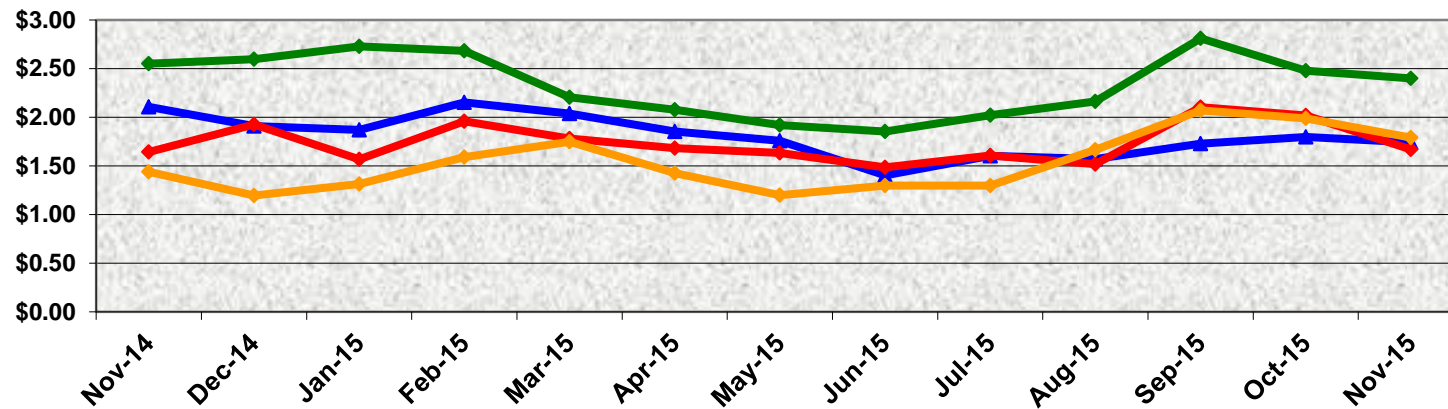
	Material Costs												
Blue/Expo Lines	\$ 518,334	\$ 355,729	\$ 433,347	\$ 524,157	\$ 458,588	\$ 385,794	\$ 483,368	\$ 421,088	\$ 400,315	\$ 384,178	\$ 382,274	\$ 478,960	\$ 352,710
Red/Purple Lines	\$ 343,936	\$ 460,076	\$ 334,623	\$ 454,326	\$ 419,099	\$ 354,492	\$ 320,754	\$ 420,042	\$ 282,744	\$ 266,405	\$ 559,179	\$ 523,558	\$ 290,721
Green Line	\$ 214,902	\$ 234,118	\$ 233,318	\$ 231,562	\$ 144,927	\$ 148,839	\$ 125,054	\$ 185,086	\$ 118,559	\$ 159,916	\$ 256,185	\$ 217,820	\$ 155,914
Gold Line	\$ 116,179	\$ 44,498	\$ 130,036	\$ 230,896	\$ 300,170	\$ 175,922	\$ 159,016	\$ 253,284	\$ 163,954	\$ 258,793	\$ 282,958	\$ 296,684	\$ 209,546
Totals	\$ 1,193,351	\$ 1,094,420	\$ 1,131,324	\$ 1,440,941	\$ 1,322,783	\$ 1,065,048	\$ 1,088,194	\$ 1,279,500	\$ 965,571	\$ 1,069,291	\$ 1,480,596	\$ 1,517,022	\$ 1,008,891

Cost Per Mile

November 2014-2015

Cost per mile:	Nov-14	Dec-14	Jan-15	Feb-15	Mar-15	Apr-15	May-15	Jun-15	Jul-15	Aug-15	Sep-15	Oct-15	Nov-15	Average
Blue/Expo Lines	\$2.11	\$1.91	\$1.87	\$2.15	\$2.04	\$1.85	\$1.76	\$1.40	\$1.60	\$1.57	\$1.73	\$1.80	\$1.74	\$1.81
Red/Purple Lines	\$1.64	\$1.92	\$1.57	\$1.96	\$1.78	\$1.68	\$1.63	\$1.48	\$1.61	\$1.52	\$2.10	\$2.02	\$1.67	\$1.74
Green Line	\$2.55	\$2.60	\$2.73	\$2.68	\$2.20	\$2.08	\$1.92	\$1.85	\$2.02	\$2.16	\$2.81	\$2.48	\$2.40	\$2.34
Gold Line	\$1.44	\$1.19	\$1.31	\$1.59	\$1.75	\$1.43	\$1.20	\$1.30	\$1.30	\$1.67	\$2.07	\$1.99	\$1.79	\$1.54

Cost per Mile



Blue/Expo Lines

Red/Purple Lines

Green Line

Gold Line

ATU Absences vs. Overtime

November 2015

ABSENCE TYPE and HOURS	3941 & 3947 Blue & Expo	3942 Red	3943 Green	3944 Gold	Total
AWP-ABSENT W/O PERMISSION	-	-	18	-	18
BER-BEREAVEMENT	80	24	16	24	144
CTO-COMPENSATORY TIME OFF	287	391	92	140	910
CUT-EMPLOYEE LEAVES EARLY	2	0	1	-	2
DSL-DISABILITY LEAVE/LONG	960	856	-	312	2,128
EFH-EMG. FLOAT HOL.	32	104	16	72	224
ETO-EXCUSED TIME OFF	100	30	6	28	164
FMI-FAM IND INJURY	-	112	-	-	112
FML-FAMILY CARE LEAVE	560	126	99	259	1,044
FMS-FAMILY LEAVE SICK	228	82	24	51	385
HLF-HOLIDAY FLOATING	464	312	148	184	1,108
HNP-HOLIDAY NOT PAID	-	16	-	16	32
HOL-HOLIDAY LEGAL	848	608	88	288	1,832
II-INDUSTRIAL INJURY	128	-	-	8	136
IIR-INDUS INJURY -REOCCUR.	-	56	-	-	56
IS-INVESTIGATIVE SUSPENSION	-	-	-	56	56
JUR-JURY DUTY	24	24	16	24	88
LC1-LABOR CODE 233	160	187	40	120	507
LTI-OCCPIL/LONGTRM INJ LEAVE	168	336	-	-	504
MLN-MILITARY ABSENCE-UNPAID	8	16	-	-	24
RTO-REQUESTED TIME OFF-NO PAY	16	-	4	-	20
SCK-SICK PAY	208	276	112	120	715
SCW-SICK WITHOUT PAY	32	24	24	17	97
TAR-TARDY	3	2	2	1	8
VAC-VACATION	1,136	1,065	340	692	3,232
VAS-VACATION WHILE SICK	-	124	-	-	124
TRAINING	624	520	640	464	2,248
Total Absence Hours	6,066	5,289	1,686	2,876	15,917
ATU Number of Work Force (budget)	125	104	46	48	323
Full Work Force hours/month	21,663	18,023	7,972	8,318	55,976
Absence as a % of Work Force	28%	29%	21%	35%	28%

OVERTIME TYPE and HOURS	3941 & 3947 Blue & Expo	3942 Red	3943 Green	3944 Gold	Total
CTB-COMPENSATORY TIME TO BANK	130	71	73	94	368
OTP-PREM OVERTIME	3,042	3,710	1,685	772	9,209
TRO OVERTIME	-	-	-	8	8
WLO-Worked Lunch Overtime	162	114	76	42	393
Total Overtime Hours	3,335	3,894	1,834	915	9,979
Overtime as a % of Work Force	15%	22%	23%	11%	18%

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

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



Metro

RFS Instruction Department Activities

November 2015

Training classes completed during the month of November 2015

Description	Course Hours	Student Count	Training Hours
Blue & Expo Line Training - (P865/2020 & P2000 LRV):			
RFS SIEMENS 2000 FRICTION BRAKES	48	6	288
RFS SIEMENS 2000 HVAC	56	6	336
Total Blue Line Training (Hours):			624
Red Line Training (Breda A650 HRV):			
RFS BRED A 650 PROPULSION GE	40	5	200
RFS BRED A 650 MTO SYSTEMS	24	5	120
RFS BRED A 650 VEHICLE INTRO	40	5	200
Total Red Line Training (Hours):			520
Gold Line Training (P2550 LRVs):			
RFS ANSALDOBRED A 2550 LIGHTING	12	4	48
RFS ANSALDOBRED A 2550 PROPULSION	80	4	320
RFS ANSALDOBRED A 2550 APS\LVPS\BATTERY	24	4	96
Total Gold Line Training (Hours):			464
Green Line Training (P2000 LRVs):			
RFS SIEMENS 2000 PROPULSION	40	5	200
RFS SIEMENS 2000 T/B, SANDERS	8	5	40
RFS SIEMENS 2000 US&S ATP/ATO/TWC	48	5	240
RFS SIEMENS 2000 AUX. INVERTER	32	5	160

Total Green Line Training (Hours): 640

Total RFS Instruction for the month of November 2015 (Hours): 2,248

Other Instruction Activities	C	A	TS	Total
A650 Curriculum, Administrative, and Technical Support	8	8	32	48
P865/P2020 Curriculum, Administrative, and Technical Support	80	20	60	160
P2000 Curriculum, Administrative, and Technical Support	40	8	32	80
P2550 Curriculum, Administrative, and Technical Support	16	8	8	32
P3010 Curriculum, Administrative, and Technical Support	140	16	156	312
Instructor Holidays				160

Total Other Instruction Activities 792

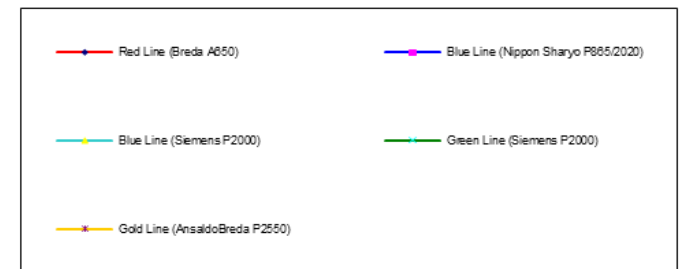
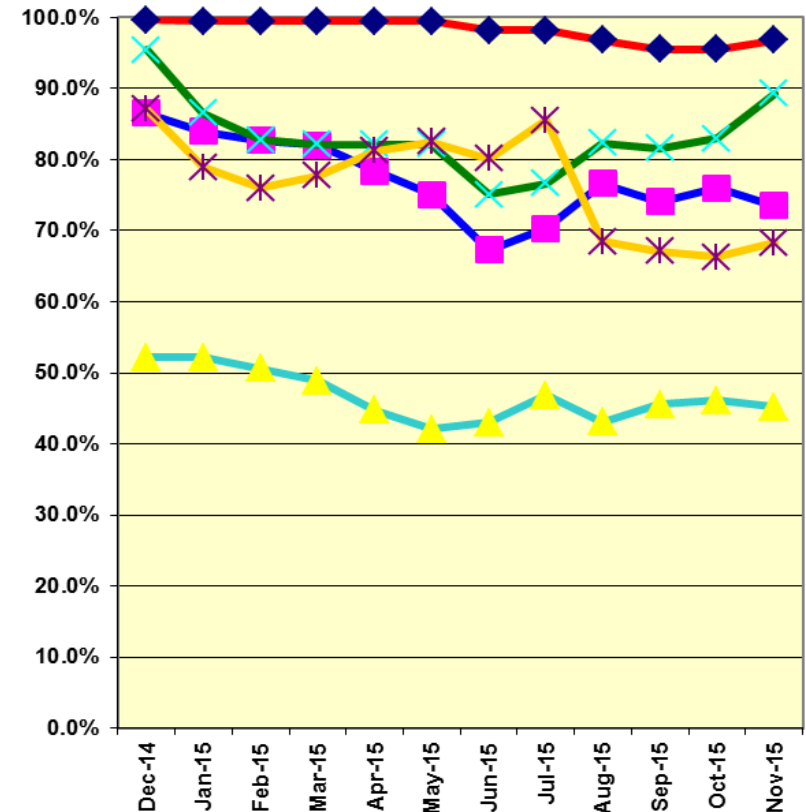
Core Vehicle Training Completed: BLUE RED GREEN GOLD

Percentage of core vehicle training complete: 73.5% 96.8% 89.3% 68.3%

Siemens P2000 training complete: 45.2% N/A N/A N/A

Average Specialist Rail Experience Level in Years: 10.6 11.8 9.5 6.8

Core Training Completed



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



Metro