

# Rail Fleet Services Monthly Report June 2015



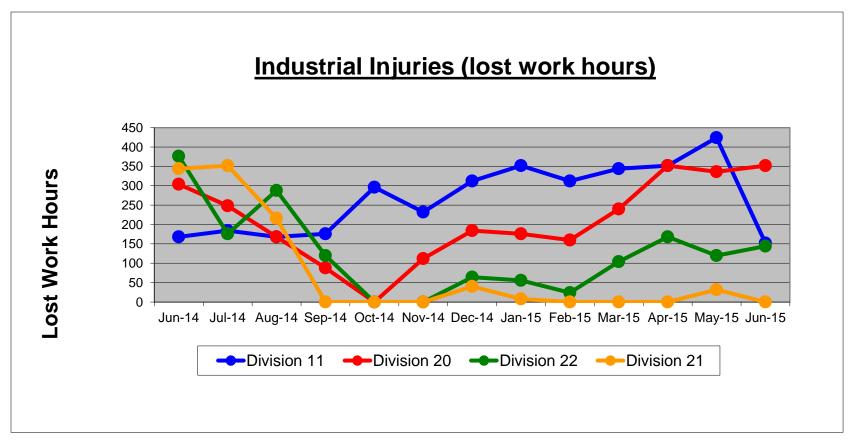
### **Table of Contents**

•	Safety		
	- Industrial Injuries	Page	3
	- Rail Vehicle Accidents & Major Incidents	Page	4
	Customer Service		
	- Service Delivery – AM/PM Pull-Outs	Page	5
	- Vehicle Utilization – Blue Line & Green Line	Page	6
	- Vehicle Utilization – Red Line & Gold Line	Page	7
	- All Train Delay Incidents	Page	8
	- Mean Miles Between Failures (Major)	Page	9
	- Mileage Between Data Range (by month)	Page	10
•	Business Processes		
	- Top Incident Categories	Page	11
	- Major Incidents	Page	12
	- Preventive Maintenance Compliance	Page	13
	- RFS Wrench Turning	Page	14
•	Finance		
	- Vandalism & Graffiti Costs	Page	15
	- Graffiti Pictures	Page	16
	- Labor & Material Costs	Page	17
	- Cost per mile	Page	18
	- Absence vs. Overtime	Page	19
	Growth		
	- RFS Instruction Department Activities	Page	20



# Industrial Injuries – Lost Work Hours June 2014-2015

	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	Jan-15	Feb-15	Mar-15	Apr-15	May-15	Jun-15	13-Month Period
Division 11	168	184	168	176	296	232	312	352	312	344	352	424	152	3,472
Division 20	304	248	168	88	0	112	184	176	160	240	352	336	352	2,720
<b>Division 22</b>	376	176	288	120	0	0	64	56	24	104	168	120	144	1,640
<b>Division 21</b>	344	352	216	0	0	0	40	8	0	0	0	32	0	992
Totals	1,192	960	840	384	296	344	600	592	496	688	872	912	648	8,824





# Rail Vehicle Accidents & Major Incidents June 2014-2015

Repair Costs	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	Jan-15	Feb-15	Mar-15	Apr-15	May-15	Jun-15	13-Month Period
Blue/Expo Line	\$9,964	\$1,528	\$207	\$42,690	\$12,945	\$5,762	\$3,463	\$9,301	\$17,834	\$17,322	\$12,056	\$1,655	\$4,811	\$139,538
Red/Purple Line	\$0	\$0	\$0	\$0	\$4,194	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$4,194
Green Line	\$0	\$0	\$0	\$0	\$267	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$267
Gold Line	\$5,860	\$50,059	\$1,669	\$0	\$0	\$0	\$5,664	\$0	\$315	\$0	\$0	\$4,833	\$1,494	\$69,894
Totals	\$15,824	\$51,587	\$1,876	\$42,690	\$17,406	\$5,762	\$9,127	\$9,301	\$18,149	\$17,322	\$12,056	\$6,488	\$6,305	\$213,893

			Rail Vehicle Accident Costs - June 2015		
Date	Incident #	Problem Code	Incident Description	Rep	air Cost
Metro Blue/	Expo Line				
6/11/15	2604691	Train vs. Vehicle	A 10-73 was reported. Train 103 at the intersection of Washington Blvd. and Los Angeles Street, Track 2, Southbound.	\$	1,634
6/25/15	2609607	Train vs. Vehicle	A 10-73 was reported. Train 117 San Pedro Station, Track 2, Southbound.	\$	766
6/30/15	2611461	Train vs. Vehicle	A 10-73 was reported. Auto attempted "U" turn into path of train at Washington and Trinity, Northbound.	\$	2,411
			Total	\$	4,811
Metro Gold I	Line				
6/3/15	2601508	Train vs. Vehicle	A 10-73 was reported, South of Pico Aliso Station.	\$	810
6/13/15	2605278	Train vs. Vehicle	A 10-73 was reported. Train 411 Avenue 52, Track 2, Southbound.	\$	684
			Total	\$	1,494
			Grand Total	\$	6,305
	(10-71) = Train	vs. Object, (10-72) = Trair	n vs. Pedestrian, (10-73) = Train vs. Vehicle (10-74) = Train vs. MTA Vehicle, (10-75) = Derailmen	t	



### Service Delivery June 2015

#### **June 2015 - Service Delivery**

#### Blue/Expo Line Fleet Size: 92\*

Pull Out	Vehicles Required	Average Available	<u>% Up (Down)</u>
Weekday:	78	76	97%
Weekend:	60	62	103%

Late Pullouts: 0

Monthly Mileage: 615,249

#### Red/Purple Line Fleet Size: 104

Pull Out	Vehicles Required	Average Available	<u>% Up (Down)</u>
Weekday:	74	82	111%
Weekend:	54	70	130%

Late Pullouts: 0

Monthly Mileage: 603,734

#### **Green Line Fleet Size: 29**

Pull Out	Vehicles Required	Average Available	% Up (Down)
Weekday:	22	22	100%
Weekend:	14	15	107%

Late Pullouts: 0

Monthly Mileage: 227,721

#### **Gold Line Fleet Size: 50\*\***

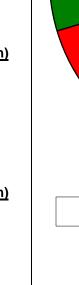
Pull Out	<b>Vehicles Required</b>	Average Available	% Up (Down)
Weekday:	42	42	100%
Weekend:	36	38	106%

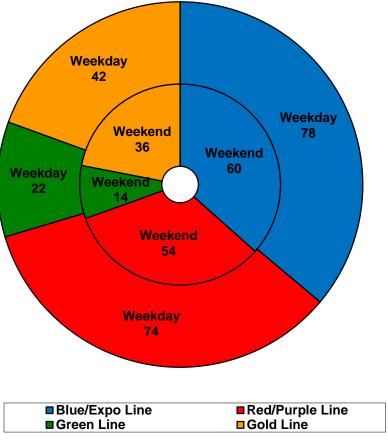
Late Pullouts: 0

Monthly Mileage: 314,507

\*Two cars are out at Expo II for Acceptance Testing.

\*\*Two cars are out on the Foothill Gold Line extension to Azusa for testing.



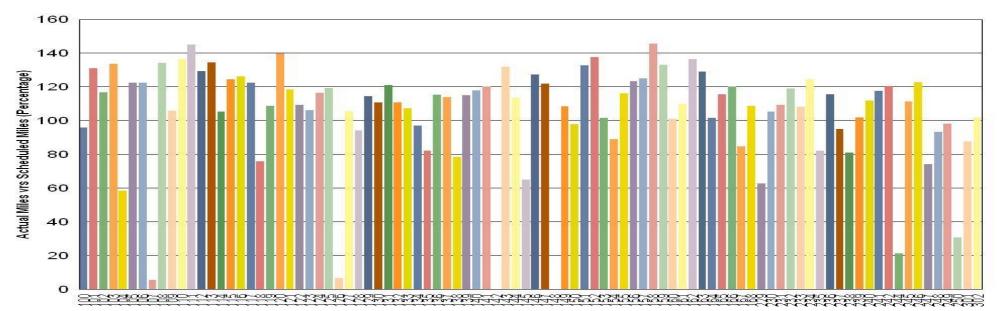




**Metro** 

### Vehicle Utilization June 2015

### **Metro Blue/Expo Line (92 Cars)**



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

Car # 107 Being used at Expo II for Acceptance Testing

Car # 126 Being used at Expo II for Acceptance Testing

Car # 142 Accident Repairs

Car # 148 Repairs and Training Vehicle

Car # 244 90K Inspection and Training Vehicle

Car # 250 Repairs and Training Vehicle

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

Car # 206 Awaiting Parts (Aux Inverter NG)

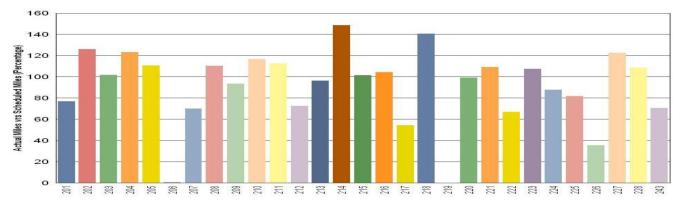
Car # 219 Paint Car sent to Blue Line

(returned 7/03/15)

Car # 226 90K Inspection



### **Metro Green Line (29 Cars)**



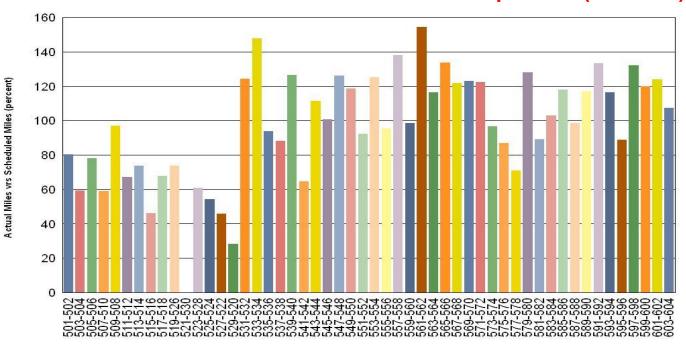
## Vehicle Utilization June 2015

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

#### **Red/Purple Line:**

The following cars were out of service due to:

Car # 521-530 Traction Motor
Car # 529-520 Traction Motor, currently back in service.



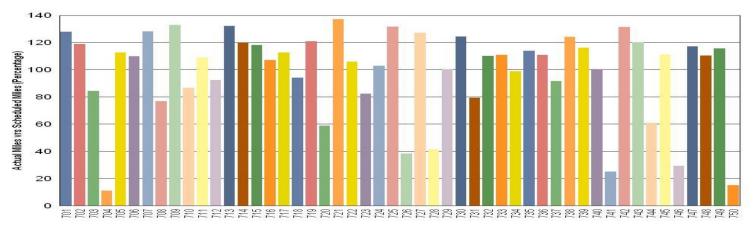
#### **Gold Line:**

The following cars were out of service due to:

Car # 704 Assigned to Foothill
Extension Testing
Car # 726 Battery Overheating
Problem
Car # 741 120,000-mile Preventive
Maintenance Inspection
Car # 746 Assigned to Foothill
Extension Testing
Car # 750 Auxiliary Inverter Problem



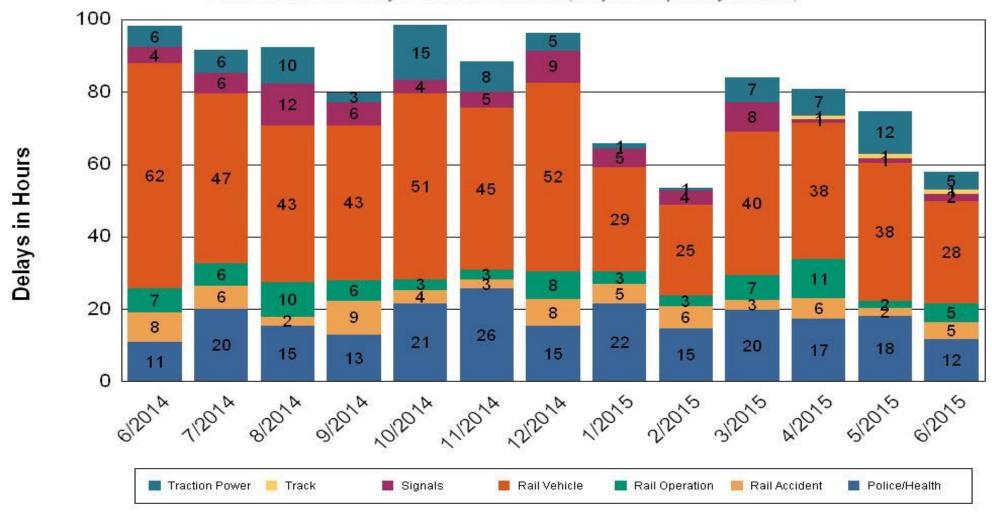
### **Metro Gold Line (50 Cars)**



### All Train Delays (Hours) June 2014-2015

### **All Train Delays**

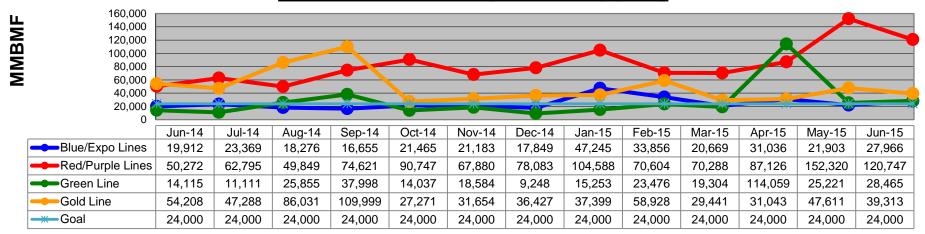
Totals Include the delay to all trains involved (not just the primary incident)





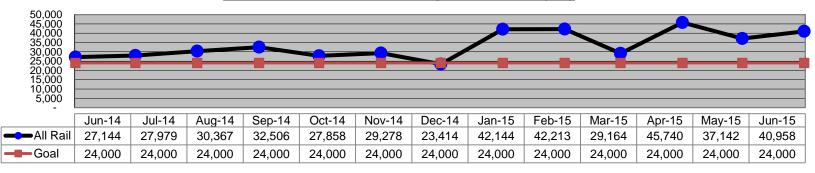
## Mean Miles Between Failures (Major) June 2014-2015

#### Mean Miles Between Major Failures (by line)



### Mean Miles Between Major Failures (all)

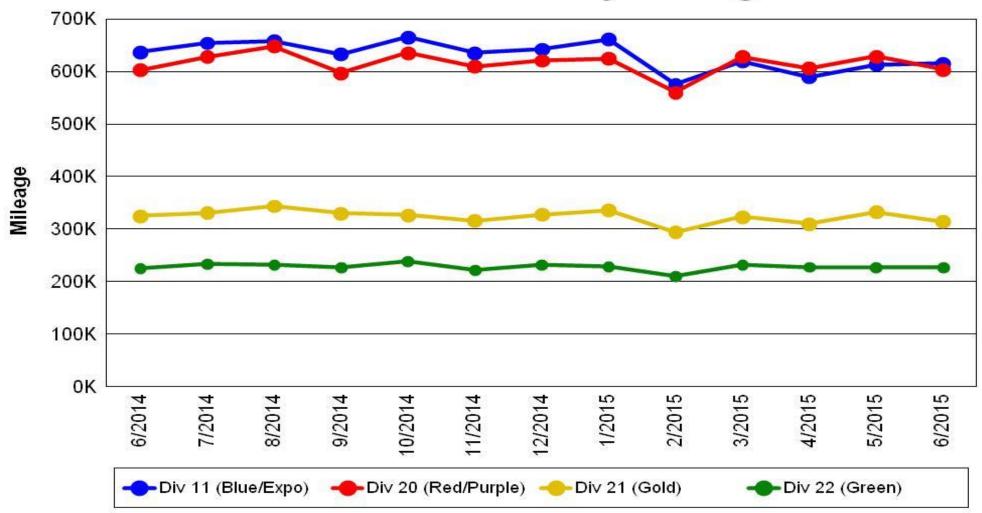
**MMBMF** 





### Mileage Between Data Range (by month) June 2014-2015

### Rail Division Monthly Mileage

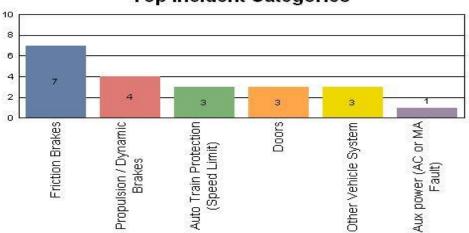




### Top Incident Categories June 2015

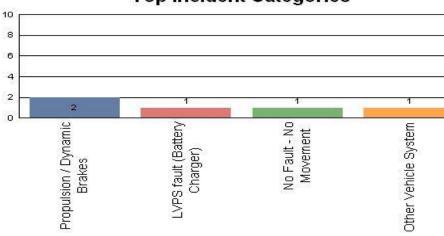
### **Metro Blue/Expo Line**

### **Top Incident Categories**



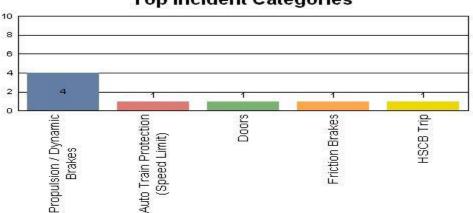
### **Metro Red/Purple Line**

#### **Top Incident Categories**



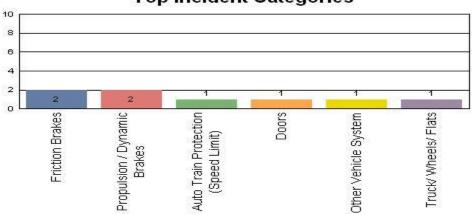
### **Metro Green Line**

#### **Top Incident Categories**



#### **Metro Gold Line**

#### **Top Incident Categories**

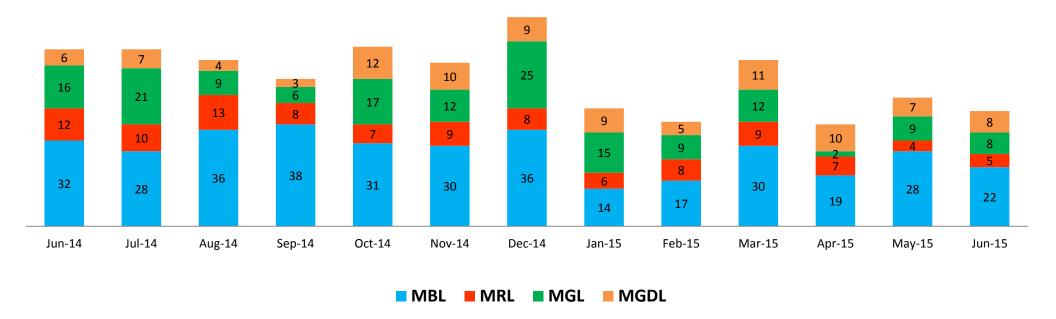




**Major Incident**: When a train does not complete its scheduled run or is more than 5 minutes late of its scheduled arrival time.

# Major Incidents June 2014-2015

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



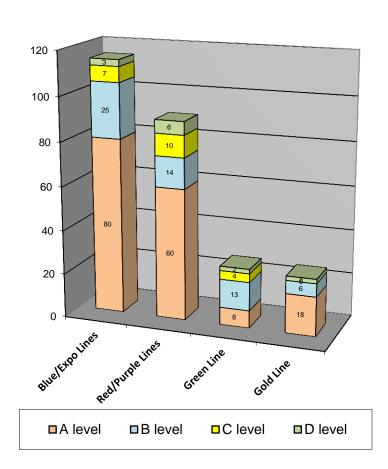


# Preventive Maintenance Compliance June 2014-2015

PM Compliance	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	Jan-15	Feb-15	Mar-15	Apr-15	May-15	Jun-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%	100%	100%	100%	100%	100%	97%	100%	100%
Green Line	97%	100%	100%	100%	100%	97%	100%	100%	100%	100%	100%	100%	100%
Gold Line	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	96%

Number of	Number of Preventive Maintenance Inspections - June 2015													
Line	A level	B level	C level	D level	Totals									
Blue/Expo Lines	80	25	7	3	115									
Red/Purple Lines	60	14	10	6	90									
Green Line	8	13	4	2	27									
Gold Line 18 6 0 2 26														
Totals: 166 58 21 13 258														

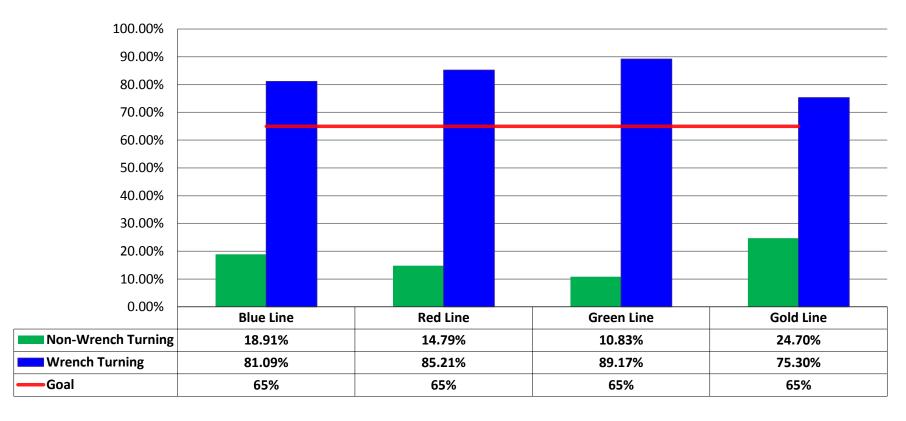
Explanation of Pl	M Inspection levels	Miles								
Line	Туре	A level	B level	C level	D level					
Blue/Expo Lines	P865/P2020	5,000	15,000	30,000	60,000					
Blue/Expo Lines	P2000	7,500	22,500	45,000	90,000					
Red/Purple Lines	A650	7,500	22,500	45,000	90,000					
Green Line	P2000	7,500	22,500	45,000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





# RFS Wrench Turning June 2015

RFS - Wrench Turning
June 2015



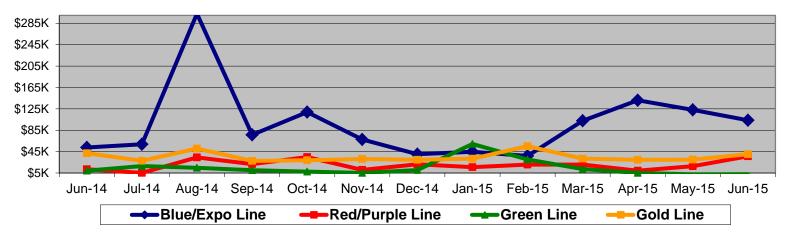
Notes: Labor hours contributed by Maint Specialist Leader, Rail Body/Paint Repair Leader, and Maint Specialist Temporary Leader



### Vandalism & Graffiti Report June 2014-2015

#### **Graffiti Costs**

	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	Jan-15	Feb-15	Mar-15	Apr-15	May-15	Jun-15	13-Month Period
Blue/Expo Line	\$53K	\$59K	\$303K	\$77K	\$119K	\$68K	\$40K	\$45K	\$37K	\$103K	\$141K	\$123K	\$104K	\$1269K
Red/Purple Line	\$12K	\$5K	\$34K	\$22K	\$35K	\$11K	\$21K	\$16K	\$21K	\$21K	\$9K	\$18K	\$36K	\$260K
Green Line	\$9K	\$18K	\$15K	\$10K	\$8K	\$5K	\$10K	\$59K	\$30K	\$12K	\$5K	\$3K	\$3K	\$188K
Gold Line	\$42K	\$28K	\$51K	\$28K	\$29K	\$31K	\$30K	\$32K	\$55K	\$32K	\$30K	\$30K	\$40K	\$456K
Totals:	\$116K	\$110K	\$402K	\$136K	\$190K	\$115K	\$102K	\$152K	\$143K	\$167K	\$185K	\$173K	\$183K	\$2,174K



June 2015	Vandalism	& G	iraffiti - Al	l Ra	il	
	Qty		Labor	М	aterials	Totals
Windows Replaced	326	\$	25,830	\$	49,572	\$ 75,402
Vandal Shields Replaced	984	\$	25,276	\$	20,206	\$ 45,482
Seats Cleaned	564	\$	810	\$	4,032	\$ 4,842
Seats Inserts Replaced	401	\$	12,607	\$	13,733	\$ 26,340
Graffiti Removal - Other	1,087	\$	18,026	\$	2,639	\$ 20,665
Repainting Panels	314	\$	9,891	\$	-	\$ 9,891
Totals	3.676	\$	92.440	\$	90.182	\$ 182,622



# **Graffiti Pictures June 2015**

### **Blue Line**

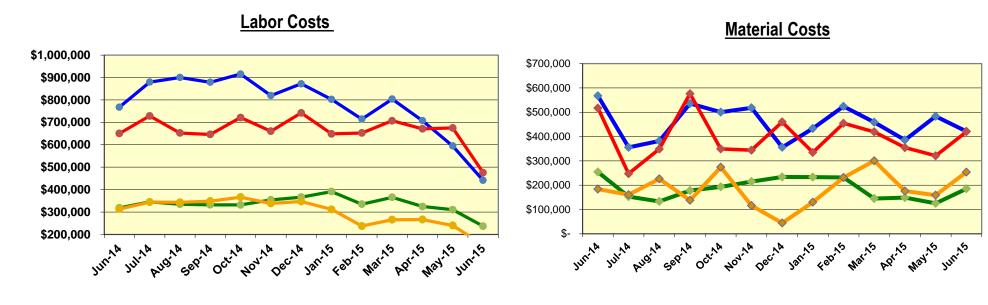


### **Green Line**





# Labor and Material Costs June 2014-2015



	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14		Dec-14		Jan-15	Feb-15	Mar-15	Apr-15	May-15	Jun-15*
							ı	Labor Cost	s						
Blue/Expo Lines	\$ 767,717	\$ 879,339	\$ 900,043	\$ 878,598	\$ 915,432	\$ 819,497	_		i	802,256	\$ 714,349	\$ 803,757	\$ 707,348	\$ 594,550	\$ 441,364
Red/Purple Lines	\$ 650,226	\$ 728,383	\$ 652,202	\$ 645,981	\$ 721,060	\$ 660,321	\$	741,908	\$	648,538	\$ 652,406	\$ 706,794	\$ 671,084	\$ 674,681	\$ 475,810
Green Line	\$ 318,516	\$ 345,270	\$ 334,772	\$ 331,870	\$ 331,661	\$ 354,058	\$	366,422	\$	391,161	\$ 334,919	\$ 365,457	\$ 324,550	\$ 310,181	\$ 236,931
Gold Line	\$ 313,589	\$ 344,331	\$ 343,246	\$ 348,288	\$ 366,248	\$ 338,610	\$	347,182	\$	311,868	\$ 237,438	\$ 265,835	\$ 266,529	\$ 240,056	\$ 154,498
Totals	\$ 2,050,048	\$ 2,297,323	\$ 2,230,262	\$ 2,204,736	\$ 2,334,400	\$ 2,172,486	\$	2,327,193	\$	2,153,823	\$ 1,939,112	\$ 2,141,842	\$ 1,969,511	\$ 1,819,467	\$ 1,308,603

								M	laterial Cos	ts						
Blue/Expo Lines	\$ 567,257	\$ 355,405	\$	382,184	\$ 536,100	\$ 500,390	\$ 518,334	\$	355,729	\$	433,347	\$ 524,157	\$ 458,588	\$ 385,794	\$ 483,368	\$ 421,088
Red/Purple Lines	\$ 516,934	\$ 247,048	<b>\$</b>	348,370	\$ 576,230	\$ 349,031	\$ 343,936	\$	460,076	\$	334,623	\$ 454,326	\$ 419,099	\$ 354,492	\$ 320,754	\$ 420,042
Green Line	\$ 254,264	\$ 153,001	\$	133,386	\$ 178,206	\$ 193,176	\$ 214,902	\$	234,118	\$	233,318	\$ 231,562	\$ 144,927	\$ 148,839	\$ 125,054	\$ 185,086
Gold Line	\$ 183,869	\$ 160,751	\$	225,818	\$ 137,883	\$ 274,059	\$ 116,179	\$	44,498	\$	130,036	\$ 230,896	\$ 300,170	\$ 175,922	\$ 159,016	\$ 253,284
Totals	\$ 1,522,323	\$ 916,204	\$	1,089,759	\$ 1,428,418	\$ 1,316,657	\$ 1,193,351	\$	1,094,420	\$	1,131,324	\$ 1,440,941	\$ 1,322,783	\$ 1,065,048	\$ 1,088,194	\$ 1,279,500

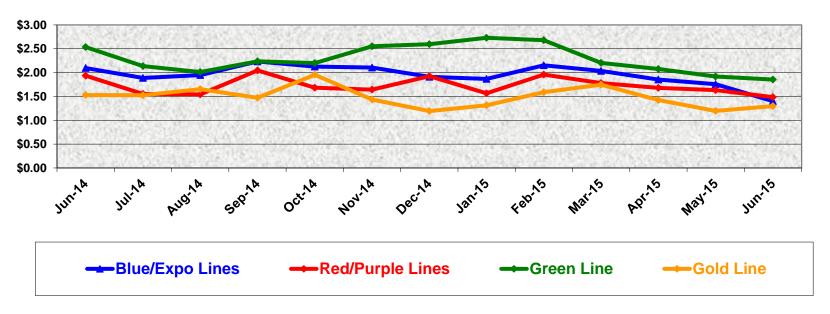
Note: \*Preliminary labor and material costs for June 2015 due to FY15 fiscal year ending awaiting accrual process.



### Cost Per Mile June 2014-2015

Cost per mile:	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	Jan-15	Feb-15	Mar-15	Apr-15	May-15	Jun-15	Average
Blue/Expo Lines	\$2.10	\$1.89	\$1.95	\$2.24	\$2.13	\$2.11	\$1.91	\$1.87	\$2.15	\$2.04	\$1.85	\$1.76	\$1.40	\$1.95
Red/Purple Lines	\$1.93	\$1.55	\$1.54	\$2.05	\$1.68	\$1.64	\$1.92	\$1.57	\$1.96	\$1.78	\$1.68	\$1.63	\$1.48	\$1.73
Green Line	\$2.54	\$2.14	\$2.01	\$2.24	\$2.20	\$2.55	\$2.60	\$2.73	\$2.68	\$2.20	\$2.08	\$1.92	\$1.85	\$2.29
Gold Line	\$1.53	\$1.53	\$1.65	\$1.47	\$1.96	\$1.44	\$1.19	\$1.31	\$1.59	\$1.75	\$1.43	\$1.20	\$1.30	\$1.49

### **Cost per Mile**





# ATU Absences vs. Overtime June 2015

	3941 & 3947	3942	3943	3944	Total
ABSENCE TYPE and HOURS	Blue & Expo	Red	Green	Gold	lotai
AWP-ABSENT W/O PERMISSION	-	-	32	-	32
BER-BEREAVEMENT	-	24	-	-	24
CTO-COMPENSATORY TIME OFF	45	74	16	6	141
CUT-EMPLOYEE LEAVES EARLY	0	-	1	-	1
DSL-DISABILITY LEAVE/LONG	968	600	-	-	1,568
EFH-EMG. FLOAT HOL.	88	104	96	80	368
ETO-EXCUSED TIME OFF	99	29	7	23	158
FMI-FAM IND INJURY	200	104	-	-	304
FML-FAMILY CARE LEAVE	280	606	123	336	1,345
FMS-FAMILY LEAVE SICK	105	365	-	-	470
HLF-HOLIDAY FLOATING	1,136	576	320	416	2,448
II-INDUSTRIAL INJURY	_	_	144	-	144
IPD-INJURED PARTIAL DAY	-	4	-	-	4
IS-INVESTIGATIVE SUSPENSION	32	-	-	-	32
JUR-JURY DUTY	16	56	-	-	72
LC1-LABOR CODE 233	92	181	88	64	425
LTI-OCCPIL/LONGTRM INJ LEAVE	152	352	-	_	504
MLN-MILITARY ABSENCE-UNPAID	16	-	-	-	16
OWP-OFF WITH PERMISSION	-	0	-	-	0
SCK-SICK PAY	96	104	88	276	564
SCW-SICK WITHOUT PAY	16	16	96	40	168
SUS-DISCIPLINARY SUSPENSION	24	-	-	_	24
TAR-TARDY	1	0	3	1	5
VAC-VACATION	1,583	1,556	584	1,016	4,739
VAS-VACATION WHILE SICK	64	44	ı	-	108
Total Absence Hours	5,013	4,796	1,598	2,257	13,664
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	23%	27%	20%	27%	24%

	3941 & 3947	3942	3943	3944	Total
OVERTIME TYPE and HOURS	Blue & Expo	Red	Green	Gold	i Otai
CTB-COMPENSATORY TIME TO BANK	760	1,118	370	274	2,522
OTP-PREM OVERTIME	3,448	3,361	1,229	984	9,022
WLO-Worked Lunch Overtime	127	139	90	35	391
Total Overtime Hours	4,335	4,618	1,688	1,293	11,935
Overtime as a % of Work Force	20%	26%	21%	16%	21%



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

# RFS Instruction Department Activities June 2015

#### **Training classes completed during the month of June 2015**

Description	Course Hours	Student Count	Training Hours	
BL 65 1: 7::				
Blue & Expo Line Training - (P865/2020 & P2000 LRV):	_			
RFS LRV RE-RAILING	8	14	112	
RFS 2-WEEK RAIL INTRODUCTION	80	6	480	
RFS 865/2020 PROPULSION	32	9	288	
RFS 865/2020 FRICTION BRAKES EMS GENERAL AWARENESS TRAINING	56 0.5	8 1	448	
ENIS GENERAL AWARENESS TRAINING RFS SIEMENS 2000 AUX. INVERTER	32	1 8	0.5 256	
RFS SIEMENS 2000 AOX. HAVERTER RFS SIEMENS 2000 DOOR CONTROLS	40	8	320	
RFS SIEMENS 2000 DOOK CONTROLS	48	8	384	
N 3 SILIVILING 2000 I NICTION BIVANES	40	O	304	
Total Blue Line	Training	(Hours):	2,289	
Gold Line Training (P2550 LRVs):				
RFS ANSALDOBREDA 2550 LIGHTING	12	8	96	
RFS ANSALDOBREDA 2550 FRICTION BRAKES	40	8	320	
Total Gold Line	e Training	(Hours):	416	
Green Line Training (P2000 LRVs):				
RFS SIEMENS 2000 US&S ATP/ATO/TWC	48	4	192	
RFS SIEMENS 2000 AUX. INVERTER	32	4	128	
Total Green Line	e Training	(Hours):	320	
Total RFS Instruction for the month of	•	` ,		
Total RF3 instruction for the month of a	Julie 2015	(Hours):	<u>3,025</u>	
Other Instruction Activities				
A650 Curriculum, Administrative, and Technical Support			144	
P865\P2020 Curriculum, Administrative, and Technical Support			40	
P2000 Curriculum, Administrative, and Technical Support			80	
			40	
P2550 Curriculum, Administrative, and Technical Support				
Instructor Holiday, Vacation, Sick			56	
2015 APTA Rail Rodeo			72	
Total Other Instruction Activitie	<u>s</u>		432	
Core Vehicle Training Completed	d: BLUE	RED	GREEN	GOLD
Percentage of core vehicle training complete	e: 67.3%	98.2%	75.1%	80.1%
Siemens P2000 training complete	e: 43.0%	N/A	N/A	N/A

