

# Rail Fleet Services Monthly Report August 2016



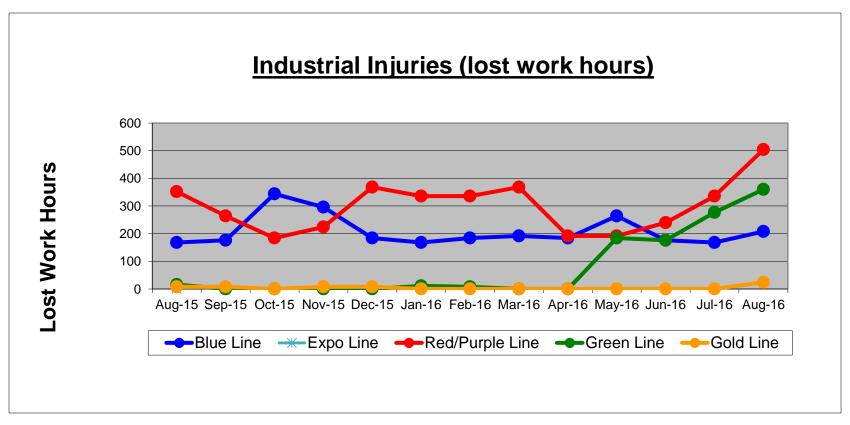
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# Industrial Injuries – Lost Work Hours August 2015-2016

	Aug-15	Sep-15	Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	13-Month Period
Blue Line	168	176	344	296	184	168	184	192	184	264	176	168	208	2,712
Expo Line	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Red/Purple Line	352	264	184	224	368	336	336	368	192	192	240	336	504	3,896
Green Line	16	0	0	0	0	12	8	0	0	184	176	277	360	1,033
Gold Line	8	8	0	8	8	0	0	0	0	0	0	0	24	56
Totals	544	448	528	528	560	516	528	560	376	640	592	781	1,096	7,697





# Rail Vehicle Accidents & Major Incidents August 2015-2016

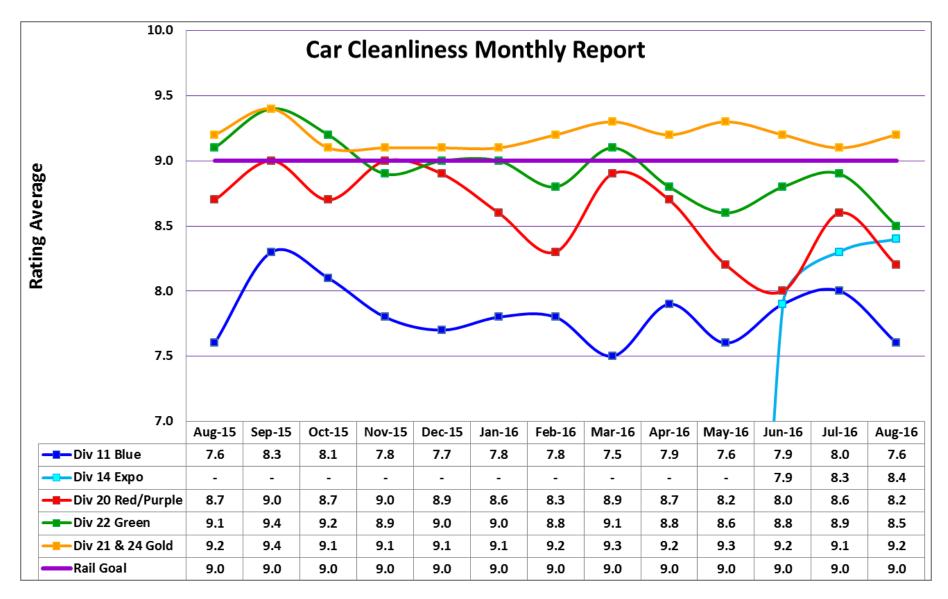
Repair Costs	Aug-15	Sep-15	Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	13-Month Period
Blue Line	\$1,971	\$2,838	\$40,969	\$65,454	\$17,160	\$4,570	\$7,379	\$2,037	\$1,232	\$513	\$0	\$0	\$3,211	\$147,334
Expo Line	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$576	\$0	\$576
Red/Purple Line	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,284	\$0	\$1,932	\$840	\$552	\$4,608
Green Line	\$5,333	\$0	\$1,205	\$0	\$23	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$51,535	\$58,096
Gold Line	\$2,611	\$0	\$1,074	\$1,547	\$1,547	\$0	\$53	\$1,487	\$4,646	\$0	\$19,451	\$564	\$0	\$32,980
Totals	\$9,915	\$2,838	\$43,248	\$67,001	\$18,730	\$4,570	\$7,432	\$3,524	\$7,162	\$513	\$21,383	\$1,980	\$55,298	\$243,594

_			Rail Vehicle Accident Costs - August 2016		
Date	Incident #	Problem Code	Incident Description	Rep	air Cost
/letro Blue L	ine				
8/5/16	276180	Train vs. Object	A 10-71 was reported at Florence station, Track 2. A passenger struck the train with the surfboard.	\$	-
8/13/16	2764533	Train vs. Pedestrian	A 10-72 was reported at Artesia station.	\$	2,643
8/23/16	2768583	Train vs. Vehicle	A 10-73 was reported at Pacific and 3rd St., Track 1 NB.	\$	568
8/30/16	2771057	Train vs. Vehicle	A 10-73 was reported at Washington and Naomi Ave. The vehicle made turn in front of the train. Minor incident with no injuries and no damage.	\$	-
			Metro Blue Line Total	\$	3,211
/letro Expo I	_ine				
8/29/16	2770580	Train vs. Vehicle	A 10-73 was reported at Colorado Blvd. Track 4 SB. Test train, no passengers.	\$	552
			Metro Expo Line Total	\$	552
Metro Green	Line				
8/19/16	2767280	Train vs. Object	A 10-71 was reported, Train vs. Debris on ROW. Four cars were damaged.	\$	51,535
			Metro Green Line Total	\$	51,535
/letro Red Li	ine				
8/10/16	2763561	Derailment	Cars 513/514 derailed for training exercise.	\$	-
			Metro Red Line Total	\$	-
			Grand Total	\$	55,298



**Metro** 

### Rail Vehicle – Car Cleanliness August 2015-2016



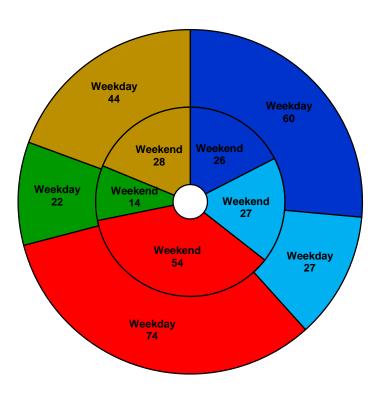


# Service Delivery August 2016

#### **August 2016 - Service Delivery**

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Gold Line monthly mileage includes Division 21 and 24.



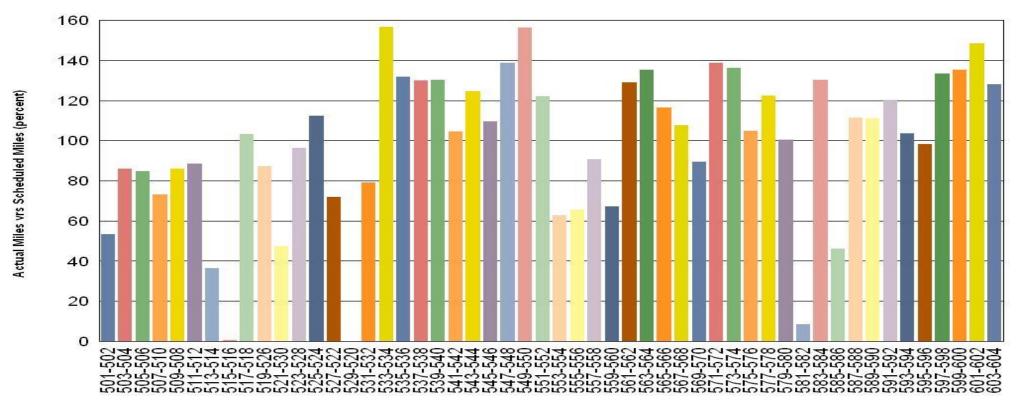




Metro

# Vehicle Utilization August 2016

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



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

The following cars were out of service due to:

Car # 513-514 - Propulsion Problem

Car # 515-516 - Floor Replacement Project

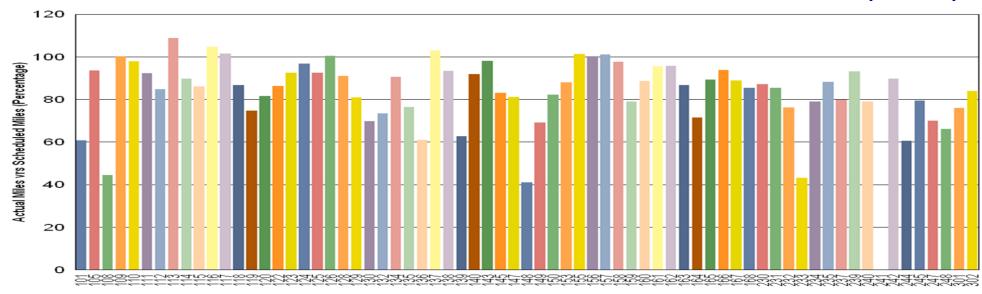
Car # 529-520 - Pending for Blower Motors

Car # 581-582 - Component Overhaul Campaign



### Vehicle Utilization August 2016

#### **Metro Blue Line (69 Cars)**



**Blue/Expo Line:** The following car was out of service due to:

Car # 241 – Truck work, Overhaul and Parts Issues

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

Car # 249 Prop Fault / Air Hose Campaign Car # K1019 Wheel Truing (Flats), & Open work orders

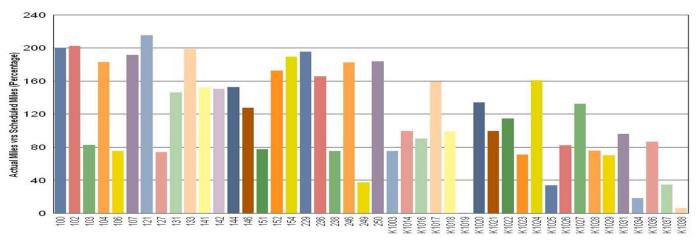
Car # K1025 Pa-Pic Issues & Open work orders

Car # K1034 CPUC accepted 08/26/16 Car # K1037 CPUC accepted 08/07/16 Coupler / Door issues

Car # K1038 CPUC accepted 08/26/16



#### **Metro Expo Line (39 Cars)**



## Vehicle Utilization August 2016

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

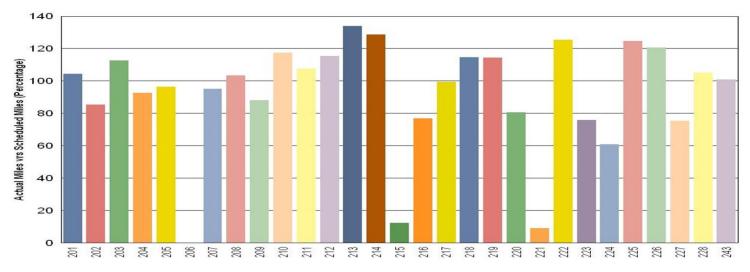
#### **Green Line:**

The following cars were out of service due to:

Car # 206 - Engineering Hold

Car # 215 - 90K Inspection

Car # 221 - Ext Paint/Body Rehab



#### **Metro Gold Line (60 Cars)**

#### **Gold Line:**

# The following cars were out of service due to:

Car # 707 - Train to Wayside Communication fault

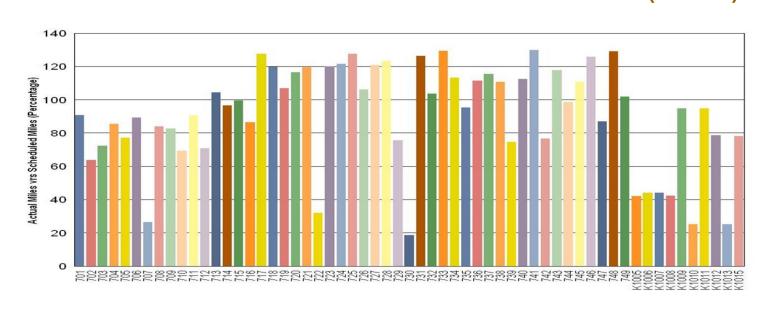
Car # 722 - Leaking Journal Bearings

Car # 730 - Problem with different wheel diameters

**Car # K1010** - Propulsion Faults (Warranty)

Car # K1013 - Propulsion Faults (Warranty)

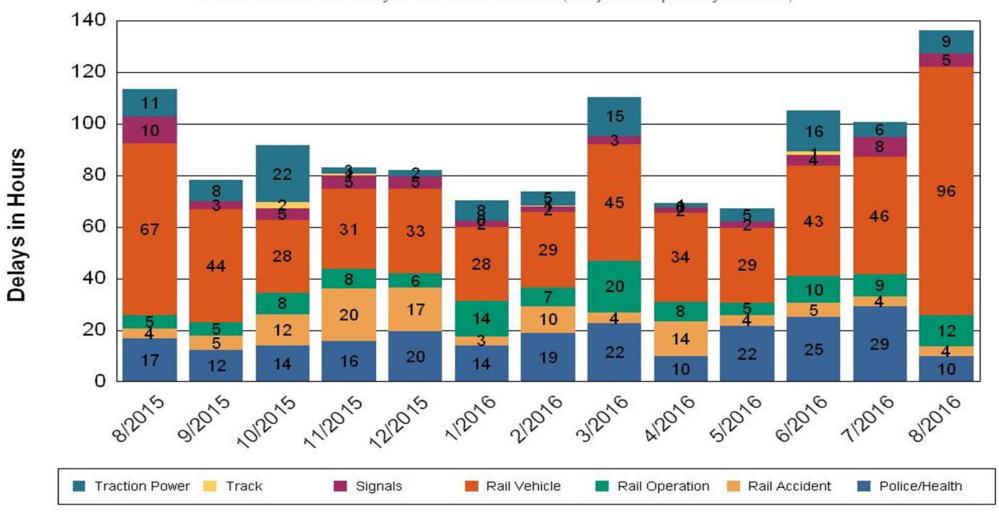




# All Train Delays (Hours) August 2015-2016

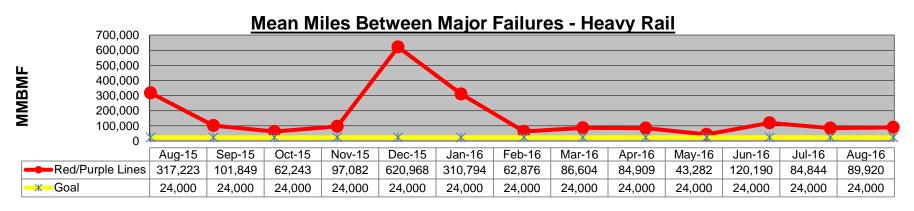
### **All Train Delays**

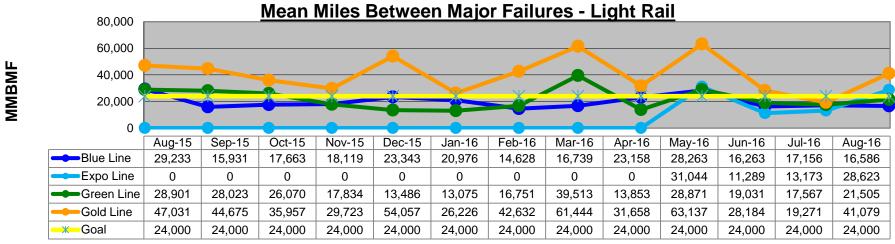
Totals Include the delay to all trains involved (not just the primary incident)

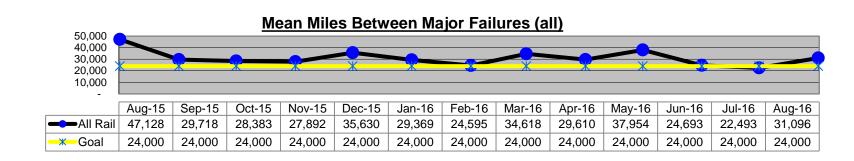




# Mean Miles Between Failures (Major) August 2015-2016



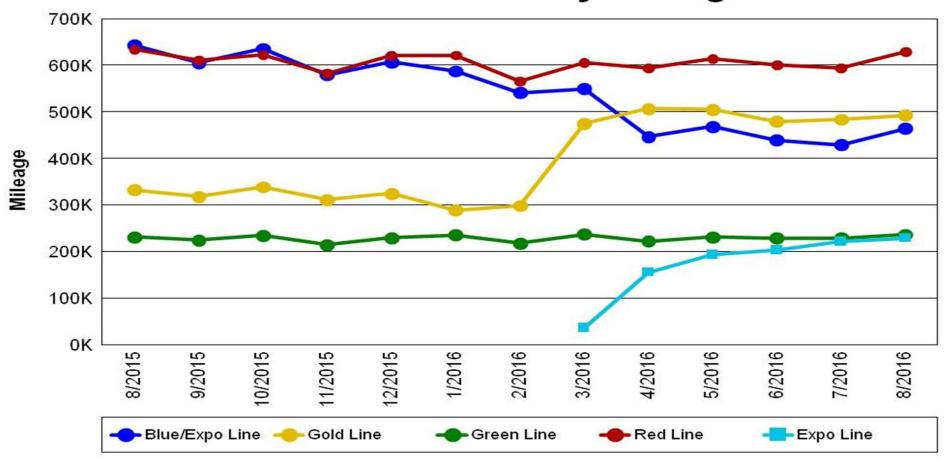




Metro

# Mileage Between Data Range (by month) August 2015-2016

### **Rail Division Monthly Mileage**



#### Notes:

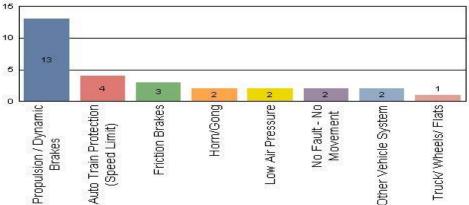
- ❖ Gold Line increase in mileage is due to the open of the Foothill extension, which includes stations further apart and faster average running speeds.
- ❖ With the opening of Division 14 in Santa Monica, the Expo Line mileage is now being reported separately from the Blue Line.



### **Top Incident Categories** August 2016

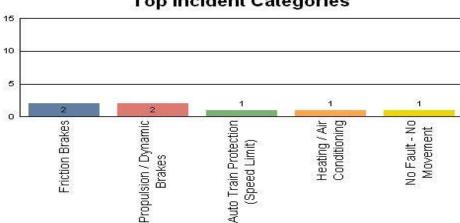


### **Top Incident Categories**



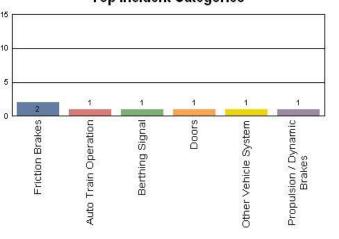
#### **Metro Expo Line (Div 14)**

#### Top Incident Categories

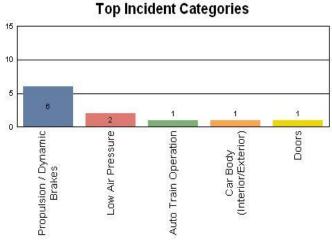


#### **Metro Red/Purple Line (Div 20)**

#### **Top Incident Categories**

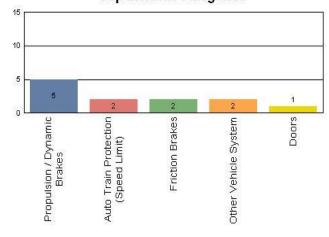


#### **Metro Green Line (Div 22)**



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

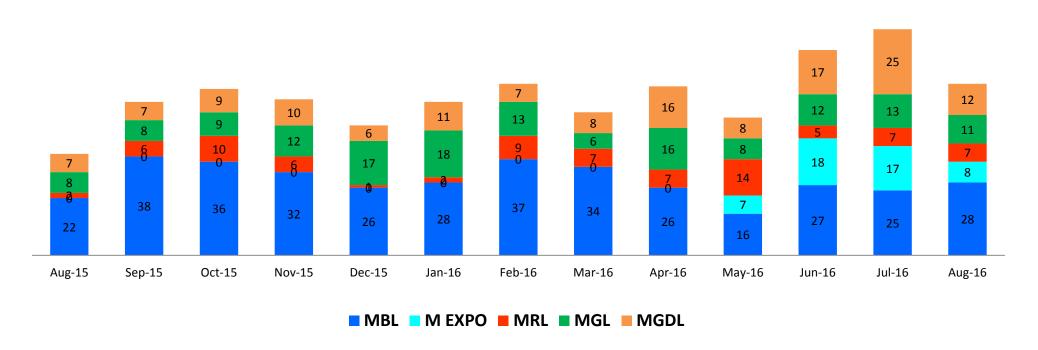
#### **Top Incident Categories**





# Major Incidents August 2015-2016

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



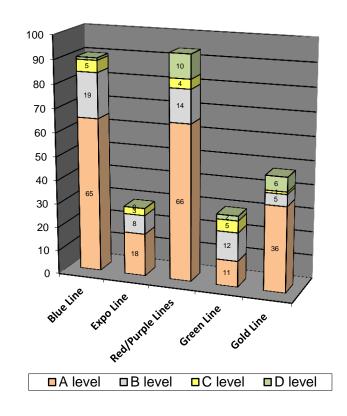


# Preventive Maintenance Compliance August 2015-2016

PM Compliance	Aug-15	Sep-15	Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16
Blue Line	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Expo Line	0%	0%	0%	0%	0%	0%	0%	0%	0%	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%	93%	97%	97%	100%	100%	100%	93%	100%	100%	100%
Gold Line	100%	100%	94%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Number of Prev	entive Mai	ntenance	Inspections	- August 2	016
Line	A level	B level	C level	D level	Totals
Blue Line	65	19	5	1	90
Expo Line	18	8	3	0	29
Red/Purple Lines	66	14	4	10	94
Green Line	11	12	5	2	30
Gold Line	36	5	1	6	48
Totals:	196	58	18	19	291

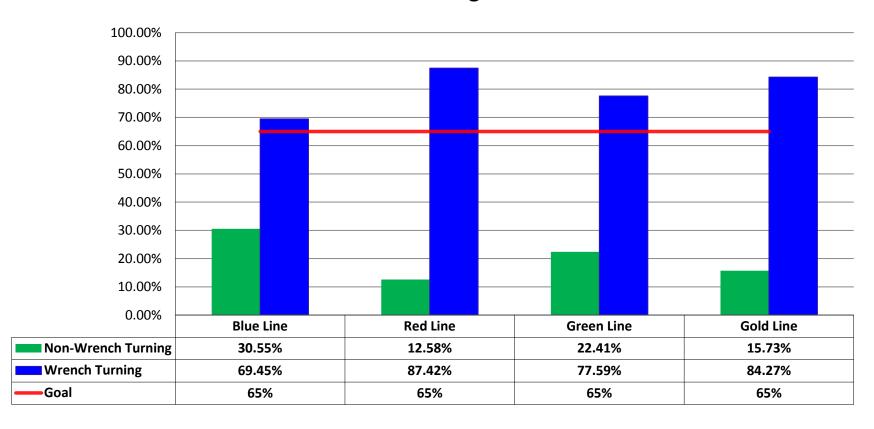
Explanation of PM	Inspection levels		Mile	Miles						
Line	Туре	A level	B level	C level	D level					
Blue/Expo Lines	P865/P2020	5,000	15,000	30,000	60,000					
Blue/Expo Lines	P2000	7,500	22,500	45,000	90,000					
Red/Purple Lines	A650	7,500	22,500	45,000	90,000					
Green Line	P2000	7,500	22,500	45,000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





# RFS Leader Wrench Turning August 2016

RFS - Leader Wrench Turning August 2016

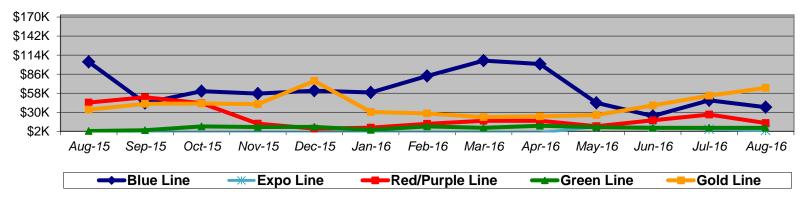


Notes: Labor hours contributed by Maint Specialist Leader, Rail Body/Paint Repair Leader, and Maint Specialist Temporary Leader



# Vandalism & Graffiti Report August 2015-2016

						Graffi	ti Costs							
	Aug-15	Sep-15	Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	13-Month Period
Blue Line	\$104K	\$43K	\$61K	\$58K	\$62K	\$59K	\$83K	\$106K	\$101K	\$44K	\$24K	\$48K	\$38K	\$830K
Expo Line	\$K	\$K	\$K	\$9K	\$8K	\$5K	\$3K	\$25K						
Red/Purple Line	\$44K	\$52K	\$43K	\$13K	\$6K	\$7K	\$13K	\$17K	\$17K	\$9K	\$18K	\$27K	\$14K	\$283K
Green Line	\$2K	\$4K	\$9K	\$8K	\$9K	\$4K	\$9K	\$7K	\$10K	\$8K	\$7K	\$7K	\$7K	\$92K
Gold Line	\$34K	\$42K	\$43K	\$42K	\$76K	\$30K	\$28K	\$23K	\$24K	\$26K	\$40K	\$54K	\$66K	\$529K
Totals:	\$185K	\$142K	\$156K	\$121K	\$152K	\$101K	\$134K	\$153K	\$153K	\$96K	\$98K	\$141K	\$128K	\$1,759K



August 2016	Vandalisr	n &	Graffiti - A	III Ra	ail	
	Qty		Labor	Ma	aterials	Totals
Windows Replaced	105	\$	20,790	\$	19,788	\$ 40,578
Vandal Shields Replaced	517	\$	13,703	\$	6,906	\$ 20,609
Seats Cleaned	420	\$	1,929	\$	168	\$ 2,097
Seats Inserts Replaced	164	\$	5,184	\$	5,870	\$ 11,054
Graffiti Removal - Other	1,417	\$	24,992	\$	22,101	\$ 47,093
Repainting Panels	185	\$	6,315	\$	90	\$ 6,405
Totals	2,808	\$	72,913	\$	54,923	\$ 127,836



# Vandalism & Graffiti Pictures August 2016

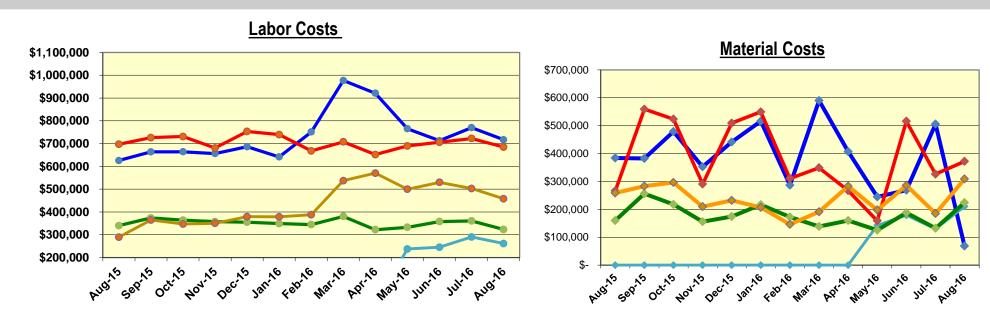
### **Blue Line**







# Labor and Material Costs August 2015-2016



	Aug-15	,	Sep-15	Oct-15	Nov-15	Dec-15	Jan-16		Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16
								Lal	or Costs						
Blue Line	\$ 625,577	\$	663,752	\$ 663,965	\$ 656,195	\$ 686,227	\$ 641,613	\$	750,961	\$ 976,568	\$ 920,945	\$ 765,108	\$ 712,774	\$ 770,143	\$ 716,923
Expo Line	\$ -	\$	-	\$ -	\$ -	\$ -	\$ -	\$	-	\$	\$ -	\$ 237,630	\$ 245,339	\$ 290,199	\$ 261,217
Red/Purple Lines	\$ 697,095	\$	726,107	\$ 731,128	\$ 680,629	\$ 753,216	\$ 739,336	\$	667,772	\$ 707,560	\$ 651,771	\$ 689,764	\$ 705,772	\$ 722,363	\$ 684,555
Green Line	\$ 340,115	\$	373,698	\$ 363,868	\$ 357,622	\$ 355,057	\$ 349,152	\$	344,701	\$ 380,356	\$ 322,108	\$ 332,662	\$ 357,807	\$ 360,682	\$ 323,087
Gold Line	\$ 289,571	\$	364,544	\$ 347,072	\$ 350,038	\$ 379,336	\$ 378,751	\$	387,820	\$ 537,337	\$ 570,186	\$ 499,874	\$ 529,761	\$ 502,967	\$ 458,067
Totals	\$ 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	\$ 2,525,038	\$ 2,551,454	\$ 2,646,353	\$ 2,443,849

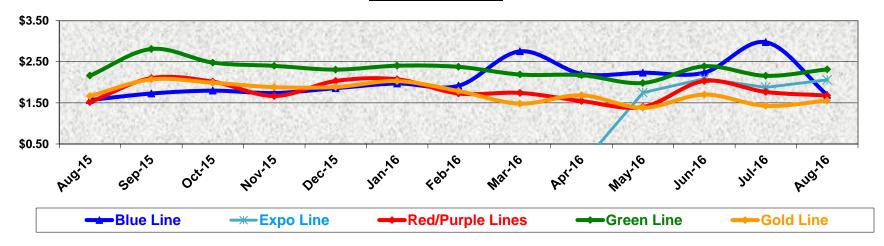
						N	late	rial Cost	S						
Blue Line	\$ 384,178	\$ 382,274	\$ 478,960	\$ 352,710	\$ 441,523	\$ 515,933	\$	286,531	\$	589,879	\$ 407,085	\$ 245,001	\$ 268,750	\$ 505,721	\$ 68,670
Expo Line	\$ -	\$ -	\$ -	\$ -	\$ -	\$ •	\$	-	\$		\$ -	\$ 142,495	\$ 179,099	\$ 130,419	\$ 210,312
Red/Purple Lines	\$ 266,405	\$ 559,179	\$ 523,558	\$ 290,721	\$ 509,448	\$ 549,576	\$	310,489	\$	349,093	\$ 267,284	\$ 159,258	\$ 515,978	\$ 326,251	\$ 371,920
Green Line	\$ 159,916	\$ 256,185	\$ 217,820	\$ 155,914	\$ 174,269	\$ 216,535	\$	172,625	\$	138,673	\$ 159,615	\$ 125,334	\$ 188,111	\$ 132,247	\$ 224,414
Gold Line	\$ 258,793	\$ 282,958	\$ 296,684	\$ 209,546	\$ 232,338	\$ 206,856	\$	145,891	\$	191,351	\$ 283,211	\$ 197,620	\$ 285,877	\$ 185,153	\$ 308,906
Totals	\$ 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	\$ 869,708	\$ 1,437,815	\$ 1,279,791	\$ 1,184,222



# Cost Per Mile August 2015-2016

Cost per mile:	Aug-15	Sep-15	Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Average
Blue Line	\$1.57	\$1.73	\$1.80	\$1.74	\$1.86	\$1.97	\$1.92	\$2.75	\$2.21	\$2.23	\$2.24	\$2.97	\$1.69	\$2.05
Expo Line	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$1.75	\$2.09	\$1.88	\$2.06	\$1.94
Red/Purple Lines	\$1.52	\$2.10	\$2.02	\$1.67	\$2.03	\$2.07	\$1.73	\$1.74	\$1.55	\$1.40	\$2.03	\$1.77	\$1.68	\$1.79
Green Line	\$2.16	\$2.81	\$2.48	\$2.40	\$2.31	\$2.40	\$2.38	\$2.19	\$2.17	\$1.98	\$2.39	\$2.16	\$2.31	\$2.32
Gold Line	\$1.67	\$2.07	\$1.99	\$1.88	\$1.89	\$2.03	\$1.79	\$1.48	\$1.68	\$1.38	\$1.70	\$1.43	\$1.56	\$1.73

### Cost per Mile





# ATU Absences vs. Overtime August 2016

ABSENCE TYPE and HOURS	3941 Blue	3947 Expo	3942 Red	3943 Green	3944 Gold	3948 Monrovia	Total
AWP-ABSENT W/O PERMISSION	_	_	8	8	_	_	16
BER-BEREAVEMENT	88	_	56	8	_	_	152
CTO-COMPENSATORY TIME OFF	31	32	216	176	8	52	515
CUT-EMPLOYEE LEAVES EARLY	_	3	0	-	_	-	3
DSL-DISABILITY LEAVE/LONG	624	64	352	-	_	-	1,040
EFH-EMG. FLOAT HOL.	80	40	104	72	16	96	408
ETO-EXCUSED TIME OFF	79	18	54	8	1	17	176
FMI-FAM IND INJURY	_	_	176	80	184	_	440
FML-FAMILY CARE LEAVE	536	296	200	333	216	24	1,605
FMS-FAMILY LEAVE SICK	144	_	120	28	32	24	348
HLF-HOLIDAY FLOATING	624	248	344	152	80	284	1,732
II-INDUSTRIAL INJURY	24	_	_	176	_	128	328
IIR-INDUS INJURY -REOCCUR.	_	_	136	_	_	_	136
JUR-JURY DUTY	16	_	-	8	_	_	24
LC1-LABOR CODE 233	136	26	88	72	24	114	460
LTI-OCCPIL/LONGTRM INJ LEAVE	184	_	368	184	_	_	736
MLN-MILITARY ABSENCE-UNPAID	_	_	40	_	_	_	40
OWP-OFF WITH PERMISSION	-	-	1	8	-	-	9
RTO-REQUESTED TIME OFF-NO PAY	32	-	8	-	-	-	40
SCK-SICK PAY	258	24	212	48	56	172	770
SCW-SICK WITHOUT PAY	39	-	-	32	-	16	87
SPN-SCHOOL PARTNER NOT PAID	_	_	-	_	_	16	16
SUS-DISCIPLINARY SUSPENSION	32	_	-	_	_	_	32
TAR-TARDY	2	0	3	1	-	2	8
UNP-UNION BUS PAID	16	16	16	_	_	_	48
VAC-VACATION	1,836	272	2,044	936	360	1,052	6,500
VAS-VACATION WHILE SICK	_	_	21	_	_	_	21
*TRAINING	400	-	-	-	304	2,264	2,968
Total Absence Hours	5,181	1,039	4,567	2,329	1,281	4,260	18,656
**ATU Number of Work Force (active)	110	33	103	44	17	61	368
Full Work Force hours/month	19,063	5,719	17,850	7,625	2,946	10,573	63,774
Absence as a % of Work Force	27%	18%	26%	31%	43%	40%	29%

OVERTIME TYPE and HOURS	3941 Blue	3947 Expo	3942 Red	3943 Green	3944 Gold	3948 Monrovia	Total
CTB-COMPENSATORY TIME TO BANK	235	81	664	145	8	157	1,291
OTP-PREM OVERTIME	3,913	1,348	3,972	1,517	57	1,160	11,967
TRO OVERTIME	-	7	16	4	-	-	27
WLO-Worked Lunch Overtme	154	119	228	91	27	75	693
Total Overtime Hours	4,303	1,555	4,880	1,757	91	1,392	13,979
Overtime as a % of Work Force	23%	27%	27%	23%	3%	13%	22%

<sup>\*</sup>Training hours captured by Instruction Department are added to Absences Report.

<sup>\*\*</sup>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.

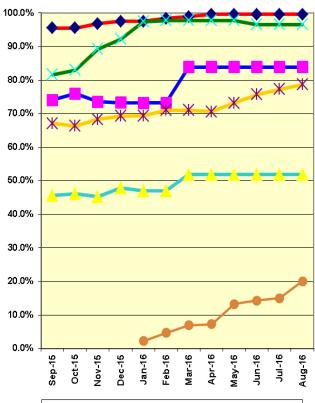
# RFS Instruction Department Activities August 2016

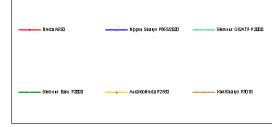
#### LRV Training classes completed during the month of August 2016

Description	Course Hours	Student Count	Training Hours	
Blue Line Training - (P865/2020 & P2000 LRVs): RFS 2-WEEK RAIL INTRODUCTION	80	5	400	
	Total Blue	Line Training (Hours):	400	
ight Rail Training [In Monrovia (P3010 LRVs)]:				
FS KINKISHARYO AIR COMFORT SYSTEM	24	10	240	
FS KINKISHARYO DOOR SYSTEMS	24	11	264	
FS KINKISHARYO FRICTION BRAKES AND CTRLS	32	11	352	
FS KINKISHARYO EVENT RECORDER & PASS. INFO DSPLY	8	10	80	
FS KINKISHARYO PROPULSION PWR/CTRL ELECT	48	11	528	
FS KINKISHARYO AUXILIARY POWER SUPPLY	40	10	400	
RFS 2-WEEK RAIL INTRODUCTION	80	5	400	
	lotal Light	Rail Training (Hours):	2264	
Gold Line Training (P2550 LRVs):	Total Expo	Line Training (Hours):	0	
RFS ANSALDOBREDA 2550 CARBODY	16	4	64	
RFS ANSALDOBREDA 2550 DOORS	32	5	160	
RFS ANSALDOBREDA 2550 EVENT RECORDER	16	5	80	
NO MONEDOBILES ( 2000 EVENT RECORDER		Line Training (Hours):	304	
Green Line Training (P2000 LRVs):				
lo vehicle training ths month	0	0	0	
	Total Green	Line Training (Hours):	0	
Total RFS Instruction for	or the month of Aug	just 2016 (Hours):	<u>2,968</u>	
Core Vehicle Training Completed:	BLUE	<u>EXPO</u>	GOLD	GREEN
Percentage of core vehicle training complete:	83.9%	38.0%	78.7%	96.6%
Siemens P2000 training complete:	51.8%	37.3%	N/A	N/A
KinkiSharyo P3010 training complete:	N/A	20.0	)%	N/A
Average Specialist Rail Experience Level in Years:	15.0	2.2	7.4	10.1

**Metro** 

#### **Core Training Completed**





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

# RFS Instruction Department Activities August 2016

#### HRV & Other Training classes completed during the month of August 2016

<u>Description</u>	Course Hours	Student Count	<u>Training Hours</u>	
Red Line Training - Breda A650 HRV: NO VEHICLE TRAINING THIS MONTH	0	0	0	
Total Red Line Training Hours			0	
Other Instruction Activities  A650 Curriculum, Administrative, and Technical Support	Curriculum 0	Administrative	Technical Support	<u>Tota</u>

Other instruction Activities	<u>Curriculum</u>	<u>Administrative</u>	<u>recnnicai Support</u>	<u>ı otai</u>
A650 Curriculum, Administrative, and Technical Support	0	144	24	168
P865/P2020 Curriculum, Administrative, and Technical Support	8	32	32	72
P2000 Curriculum, Administrative, and Technical Support	30	72	8	110
P2550 Curriculum, Administrative, and Technical Support	6	30	16	52
P3010 Curriculum, Administrative, and Technical Support	300	8	0	308
P3010 10K Technical Support/Training	0	0	96	96
Time Off (HOL, TOV, & SCK)				112
Total Other Instruction Activities				918

NOTE: RAIL SYSTEM SAFETY provided by Transportation

**Core Vehicle Training Completed: RED** 

Percentage of Core Vehicle Training Complete: 99.6% Average Specialist Rail Experience Level in Years: 12.6

