# November 2019 Monthly Operations Report











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# INTRODUCTION

Pursuant to Schedule 6, Section 1.8.2(a) of the Concession Agreement, Plenary Roads Denver ("PRD") is required to submit a monthly report covering all essential statistics related to the Managed Lanes. The following data covers the month of November 2019. Operationally, November was a positive month. Several routine maintenance tasks were completed, there were minimal incidents to maintained elements, and traffic volumes were consistent with expectations.

### 1.0 VOLUMES AND LANE USAGE

Over the last several months as more commuters use the transponders for either ExpressToll™ (AVI) or HOV travel, License Plate (LPT) transactions have consistently decreased as a percentage of total traffic volume. The total monthly gantry traffic volume for November 2019 in the I-25 Central and US 36 Managed Lanes was 267,385 and 1,399,041, respectively.

The table below provides the monthly summary for each Managed Lanes roadway, along with a detailed breakdown of weekday volumes. For reference, the AM Peak Period is considered to be weekdays from 6:45 am – 8:45 am. The PM Peak Period is considered to be, weekdays, from 4:15pm – 5:45pm. It should be noted, that the I-25 Managed Lane traffic reflects traffic counts from a single gantry and US 36 Managed Lane counts reflect fourteen gantries, seven gantries in each direction. Therefore, US 36 data will indicate far greater traffic counts that are not comparative to those of I-25.

The following charts depict the distribution of traffic by type (Figure 1) and the daily traffic counts (Figure 2) and for the month.

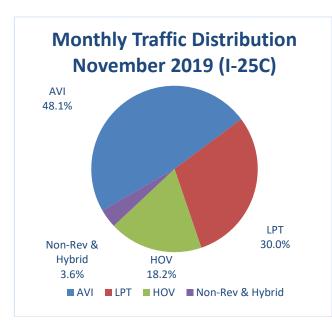
	Traffic	Summary (	(US 36)			
	AVI	LPT	HOV	Non-Rev & Hybrid	Total	Hybrid
Total Monthly Traffic	766,671	358,360	238,461	35,549	1,399,041	2,103
Maximum Weekday Traffic	42,508	20,510	14,202	1,891	73,472	159
Average Weekday Traffic	32,359	14,273	8,000	1,547	56,179	85
Average Hourly AM Peak Traffic	4,474	1,711	884	196	7,265	N/A
Average Hourly PM Peak Traffic	4,959	2,029	1,077	182	8,247	N/A





	Traffi	ic Summary (	(I-25C)			
	AVI	LPT	HOV	Non-Rev & Hybrid	Total	Hybrid
Total Monthly Traffic	128,661	80,190	48,784	9,750	267,385	537
Maximum Weekday Traffic	7,518	4,729	2,337	480	14,995	35
Average Weekday Traffic	5,608	3,477	1,891	425	10,976	23
Average Hourly AM Peak Traffic	721	509	258	57	1,488	N/A
Average Hourly PM Peak Traffic	710	428	233	57	1,371	N/A

Table 1 - Monthly Traffic Summaries



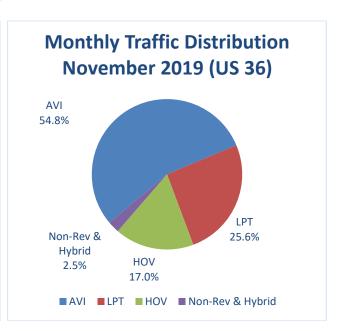
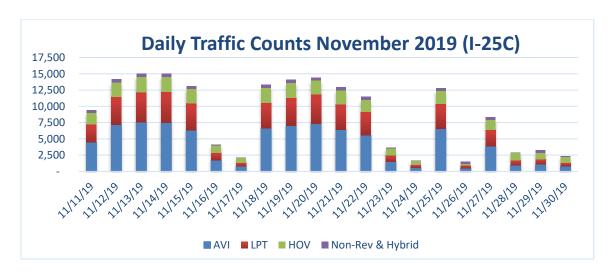


Figure 1 – Monthly Traffic Distribution







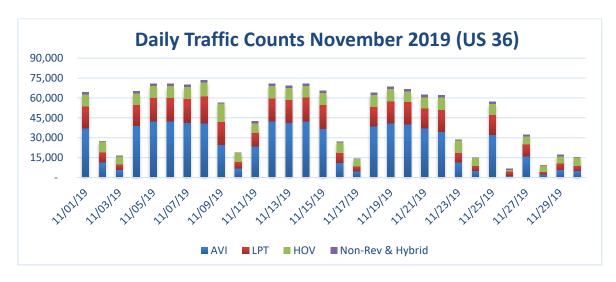


Figure 2 - Daily Traffic Counts

#### 2.0 REVENUES

During the month of November 2019, PRD collected \$664,916 and \$749,380 from users of the I-25 Central and US36 Managed Lanes, respectively. For purposes of this report, revenues are recognized at the time of collection, which is typically sometime after they have been incurred for those customers who are billed based on their license plate. For example, if a single-occupant vehicle uses the lanes in October but pays in January, the associated revenue is attributed to January.

#### 3.0 OPERATIONAL INCIDENTS, ISSUES, AND CLOSURES

The project had numerous routine debris removals, lighting incidents, guardrail incidents, sign incidents, and graffiti control during the month. The routine lighting, guardrail, roadway markings and sign incidents are all planned for repair within the allowable response period and several previously identified lighting incidents were repaired. All incidents were responded to and rectified within the allowable timeframes.

Date	Start	Stop	Duration
July 5, 2019	15:42	16:27	0:45
July 9, 2019	17:30	18:15	0:45
July 10, 2019	13:35	14:32	0:57
July 12, 2019 - October 4,	19:15	05:00	2,145:45
2019			(89 Days 9 Hours and 45
			Minutes)
July 25, 2019	08:57	10:10	1:13





August 1, 2019	15:42	16:55	1:13
August 12, 2019	08:02	08:54	0:52
August 12, 2019	18:36	19:01	0:25
August 15, 2019	15:46	16:17	0:31
August 16, 2019	05:46	07:36	1:50
August 23, 2019	08:22	09:21	0:59
August 26, 2019	15:50	16:32	0:42
September 3, 2019	07:46	08:17	0:32
September 13, 2019	15:48	16:30	0:42
September 16, 2019	12:50	13:27	0:37
October 3, 2019	06:48	07:21	0:33
October 4, 2019	07:40	08:14	0:34
October 10, 2019	10:00	11:48	1:48
October 10, 2019	10:33	11:18	0:45
October 15, 2019	09:06	09:43	0:37
October 21, 2019	16:03	17:39	1:36
October 21, 2019	16:46	18:14	1:28
October 28, 2019	06:00	06:45	0:45
October 30, 2019	09:41	10:25	0:44
October 31, 2019	16:03	17:39	1:36
November 4, 2019	18:32	19:27	0:55
November 6, 2019	07:19	08:00	0:41
November 22, 2019	05:35	06:43	1:08
November 22, 2019	17:41	18:50	1:09
November 26, 2019	12:35	15:48	3:13
Total			2,175 hours 20 minutes
Remaining Closure Hours Available (Ref: CA 29.7)			0 hours 0 minutes

Table 2 – Managed Lanes Closures to Date

The table below provides a listing of ETCS items recorded this month, consistent with Appendix 6-2 of Schedule 6.

Element ID	Cat	Element	Performance Item	PRD Notified	Contractual Cure Period	Cure Achieved
None						





Table 3 – ETCS Issues per CA Schedule 6 Appendix 6-2

The table below provides a status of all Noncompliance categories in accordance with paragraph 1.2 of Schedule 10.

Non- compliance Location	Nature	Cause	Cure Date	Uncured Non- compliance Point	Unexpired Non- compliance Point	365 Day Expiration Date	1095 Day Expiration Date
None							

**Table 4 – Status of Noncompliance Categories** 

# 4.0 MEAN TIME BETWEEN FAILURE (MTBF) AND MEAN TIME TO REPAIR (MTTR)

Mean Time Between Failure (MTBF) and Mean Time To Repair (MTTR) data is provided in the table below. Only Maintained Elements that were repaired during the reporting period and had a failure type breakdown are listed in the table. We consider a breakdown to be a failure when the element cannot be used for its intended purpose until repaired.

Maintained Element	Mean Time Between Failure (MTBF) (Hours)	Mean Time To Repair (MTTR) (Hours)
None	N/A	N/A

Table 5 – Mean Time Between Failure & Mean Time To Repair

#### 5.0 HYBRID UTILIZATION

Total Hybrid	Trips
I-25 Central	537
US 36	2,103

**Table 6 – Hybrid Utilization** 







Fuel-efficient "Hybrid" vehicles are permitted to access the Express Lanes free of charge, regardless of occupant numbers, provided that they have obtained a permit from CDOT, obtained a Hybrid transponder from E-470, and display an E-470 Hybrid decal on the vehicle's windshield.





# OPERATIONS AND MAINTENANCE MONTHLY REPORT NOVEMBER 2019

US 36 and I-25 Express Lanes Project



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Attention: Mr. Christian Guevara, PE



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# OPERATIONS AND MAINTENANCE — MONTHLY REPORT NOVEMBER 2019 US 36 and I-25 Express Lanes Project

Revision	Date	Approved
Rev. 0	12/08/2019	Int. De

This report titled *Operations and Maintenance Monthly Report, November 2019* has been prepared by Ferrovial Services for the exclusive use of Plenary Roads Denver, LLC (PRD). No other party is an intended beneficiary of this report or the information, opinions, and conclusions contained herein. Any use by any party other than PRD of any of the information, opinions, or conclusions is the sole responsibility of said party. The use of this report shall be at the sole risk of the user regardless of any fault or negligence of PRD or Ferrovial Services.

The information and analyses contained herein have been completed to a level of detail commensurate with the objectives of the assignment and in light of the information made available to Ferrovial Services at the time of preparation. This report and its supporting documentation have been reviewed and/or checked for conformance with industry-accepted norms. To the best of the information and belief of Ferrovial Services, the information presented in this report is accurate to within the limitations specified herein.

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The O&M Monthly Report contains all relevant information for the month of November 2019. Ferrovial Services continues ongoing and preventive maintenance activities for the I-25 and US36 Managed Lanes Project.

## Ferrovial Services Commitment to Safety

Ferrovial Services conducted weekly toolbox talk meetings during the month. The purpose of the tool box talks is to cover important safety items that relate to the project such as near misses, "better ways" as to how safety is conducted for the Project, and discussion on safety procedures for maintenance activities. In addition to the toolbox talks, Ferrovial Services conducts a weekly progress meeting. This is a forum for feedback from staff on Operations, Incident Response, and Maintenance activities.

Toolbox Talks this month included:

- Plow Operations Safety
- Bike Path Safety for Commuters
- Bus Stops Safety for Commuters

# A. Summary of the Planned Maintenance Activities for the Upcoming Month – November 2019

Ferrovial Services has identified the upcoming planned maintenance activities as described in Table 1.7.1.3 of The Maintenance Management Plan. These activities include preventative and routine maintenance in order to successfully operate and maintain the Project. A listing of the planned maintenance activities for the month of December 2019 is included below.





# FIG. A-1 Planned Maintenance Activities for December 2019

*X* – *Indicates the day the task is planned.* 

Performance Standard Identification	Work Activity-	Frequency															De	ec-19	)														
Number (Table 6.1)	Description		1 S	2 M	3 T	4 W	5 T	6 F	7 S	8 S	9 M	10 T	11 W	12 T	13 F	14 S	15 S	16 M	17 T	18 W	19 T	20 F	21 S	22 S	23 M	24 T	25 W	26 T	27 F	28 S	29 S	30 M	31 T
ML-1	MAINTENANCE PATROL	Daily		х	х	х	х	х			х	х	х	х	х			х	х	х	х	х			х			х	х			х	х
ML-1	FLEXIBLE PAVEMENT OBSERVATION / REPAIR	F-52		х							х							х							х							х	
ML-1	RIGID PAVEMENT OBSERVATION / REPAIR	F-52		х							х							х							Х							х	
ML-4	DELINEATORS & MARKERS OBSERVE / CLEAN / REPAIR	F-12					х					х							Х														
ML-2	DRAINAGE STRUCTURE (INLET) INSPECTION	F-1					х																										
ML-2	DRAINAGE (INLET) OBSERVE/ CLEAN / REPAIR	F-12					х																										
ML-2	DRAINAGE (PIPE/CULVERT) OBSERVE / CLEAN / RPR	F-12					х																										
ML-5.1	GUARDRAIL, SAFETY BARRIER										х	х						х	Х														
ML 5.2	IMPACT ATTENUATORS										х	х																					
ML-6	SIGN OBSERVATION / REPAIR	F-52		х	х						х	х						х							х								
ML-8	ACCESS PANEL OBSERVATION / REPAIR	F-12									х																						
ML-10	HERBICIDE & WEED CONTROL MAINTENANCE	F-52						x							Х							Х							Х				
ML-12	GRAFFITI OBSERVATION / REMOVAL	F-52		х							х							х							х							х	
ML-14	LITTER OBSERVATION / REMOVAL	Daily		х	х	х	х	x			х	х	х	x	Х			х	Х	х	x	Х			х			х	Х			х	х
ML-15	NODE BUILDING 2 MAINTENANCE	F-1													Х																		
ML-15	SAND STORAGE DOME MAINTENANCE	F-1													х																		
ML-15	LIQUID STORAGE FACILITY MAINTENANCE	F-1													х																		
	REVERSIBLE LANE OPERATIONS	Daily		х	х	х	х	х			х	х	х	х	х			х	Х	х	х	Х			Х	Х		Х	х			х	х
	GATE MAINTENANCE & REPAIR										х							х							х							х	

Frequency of Activity:

Daily – Daily Activity F-4 – Quarterly Activity F-52 – Weekly Activity F-2 – Semi-Annual Activity

F-12 – Monthly Activity F-1 – Annual Activity







# B. Summary of Performed and Completed Maintenance Activities

## Fig. B-1 Performed and Complete Maintenance Activities for November 2019

X Indicates the day of the month that the task was completed.

Performance Standard Identification	Work Activity-Description	Frequency															No	v-19														
Number (Table 6.1)			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
6.1)			F	S	S	М	T	W	T	F	S	S	М	Т	W	Т	F	S	S	М	Т	W	T	F	S	S	М	T	W	T	F	S
ML-1	MAINTENANCE PATROL	Daily	x			x	x	x	x	x			x	x	x	x	x			x	x	x	x	x			x	x	x			
ML-1	FLEXIBLE PAVEMENT OBSERVATION / REPAIR	F-52				x							x							x							x					
ML-1	RIGID PAVEMENT OBSERVATION / REPAIR	F-52				x							x							х							x					
ML-4	DELINEATORS & MARKERS OBSERVE / CLEAN / REPAIR	F-12												x																		
ML-2	DRAINAGE (INLET) OBSERVE/ CLEAN / REPAIR	F-12												х																		
ML-2	DRAINAGE (PIPE/CULVERT) OBSERVE / CLEAN / RPR	F-12												х																		
ML-5.1	GUARDRAIL, SAFETY BARRIER								X																							
ML 5.2	IMPACT ATTENUATORS								x																							
ML-6	SIGN OBSERVATION / REPAIR	F-52				X							x							x							x					
ML-8	ELECTRICAL SUPPLY INSPECTION / REPAIR	F-12											x																			
ML-8	ACCESS PANEL OBSERVATION / REPAIR	F-12											x																			
ML-10	HERBICIDE & WEED CONTROL MAINTENANCE	F-52	x							x							X							х								
ML-12	GRAFFITI OBSERVATION / REMOVAL	F-52						х							X							X						х				
ML-14	MECHANICAL ROAD SWEEPING	F-12																		х	X	X	х									
ML-14	LITTER OBSERVATION / REMOVAL	Daily	x			х	х	х	X	X			X	х	x	x	х			х	X	X	х	х			х	х	х			
ML-15	NODE BUILDING 2 MAINTENANCE	F-1								X																						
ML-15	SAND STORAGE DOME MAINTENANCE	F-1								X																						
ML-15	LIQUID STORAGE FACILITY MAINTENANCE	F-1								X																						
	REVERSIBLE LANE OPERATIONS	Daily	х			х	X	х	X	X			X	X	x	x	X			X	X	X	X	х			х	х	X		x	
	GATE MAINTENANCE & REPAIR					X							X							х							X					







Fig. B-2 Work Accomplished This Month

Activity	Actual Work
102 Patrolling and Inspect (HR)	13
152 Flex Patch /Minor Repairs (SY)	2
157 Hnd Crck Seal Rigid Pave (LF)	20,000
210 Slope Repairs (CY)	5
218 Litter Removal (CY)	29
218 Debris in Roadway (HR)	15
222 Sweeping (MI)	116
301 Sign Maintenance (EA)	12
304 Del Post Maint (EA)	120
306 Metal Guardrail Maint (LF)	5
308 Pavement Striping (MI)	28
314 Reversible Lane Operations	224
329 Courtesy Assistance (HR)	380
402 Snow Plowing (MI)	797
540 Graffiti Removal (SF)	220

## C. Summary of Planned Maintenance that was Not Completed for the Month

Ferrovial Services completed all scheduled maintenance activities for the period of November with an exception for sign cleaning due to inclement weather conditions. Frequencies and/or actual date of the month of some activities may have been adjusted based on actual conditions.

# D. Summary of the Maintenance Activities and Results Performed for the Month Beyond Planned Maintenance

A summary of unplanned maintenance activities provided below:

Snow and Ice Control:

Precipitation Event Start		Equipment Deployed		Precipitation Event End		Service Level "A" Achieved in ML		Service Level "B" Achieved in GP	
11/10/2019	22:25	11/10/2019	21:30	11/11/2019	13:40	11/11/2019	6:15	11/11/2019	6:15
11/20/2019	1:55	11/20/2019	0:15	11/22/2019	11:50	11/22/2019	9:20	11/22/2019	9:20
11/25/2019	17:20	11/25/2019	15:30	11/27/2019	6:48	11/26/2019	15:44	11/26/2019	15:44
11/29/2019	20:45	11/29/2019	17:30	11/30/2019	6:20	11/30/2019	2:15	11/30/2019	2:15

Courtesy Patrol: None

Hazardous Materials Incidents: None







# E. Operating Contractor's Incident Response Logs Related to Maintenance Activities

This section provides a summary of Ferrovial Services performance related to the Performance and Measurement Criteria listed in Appendix 6-1.1 of the Operating Contract.

The table below provides a listing of items recorded this month:

Category 2	Element Category	Description	Location	Notified	Response to Defects			
Barrier	Calegory				Category 1		Category 2	
GP5.1   Barrier (impact Damage)								
GP5.1   Garrier (Impact Damage)					3			
MES.1   Lighting   O40-U36-LHT-0080, 973/2019   N/A   N/A   Respt. H Progress   Respt. & Morths   Respt. H Progress   Respt. & Morths   Respt. H Progress   Respt. H Progress   Respt. & Morths   Respt. H Progress   Respt. H P	GP5.1		MP 57.1 WB		N/A	N/A	' '	
M.5.2   Attenuator (Impact Damage)		(Impact Damage)		08:20:00			1	
MLS.1   Lighting   Q40-U36-LHT-0090, MP 55.8   Z1:00:00   N/A   N/A   Respct : 1/19/2019 22:00   N/A   N/A   Respct : Morths   Regd: 6 Morths   Respct : Actual: In Progress   Regd: 6 Morths   Respct : Morths   Respct : Morths   Regd: 6 Morths   Respct : Morths   Regd: 6 Morths   Respct : Morths   Regd: 6 Morths   R		_						
Control   Cont	MI 5 2		MP 56 1 FB		N/A	N/A		
GP5.1   Guardrail (Impact Damage)   MP 54.4 WB   7/17/2019   00:30:00   N/A   N/A   Regd: — Actual: In Progress   Regd: Mornths   Respd: — Actual: In Progress   Reg		(Impact Damage)	00:1 22	06:40:00				
GP5.1   Cultural (mpact Damage)   MP 54.4 WB   07/72019   07/3019   N/A   Respt Actual: In Progress   Act								
ML8.1   Lighting   O40-U36-LHT-0210,   9/3/2019   N/A   N/A   Respt   Actual: In Progress   Reqd: 6 Months   Respt   Actual: In Progress   Reqd: 6 Months   Respt   Actual: In Progress   Reqd: 6 Months   Respt	GP5.1		MP 54.4 WB		N/A	N/A		
Multipling   O40-U36-LHT-0210, MP 56.6   21:00:00   N/A   N/A   Regot :		(Impact Damage)	•	00:30:00				
Mate								
Mate	ML8.1				N/A	N/A		
Mail		(W Out)	MP 56.6	21:00:00	·			
Mul.   Lighting (All Out)   MP 55.9   21:00:00   N/A   N/A   Respd: - Actual: in Progress   A				- /- /				
Mate	ML8.1				N/A	N/A		
Mail		(All Out)	MP 55.9	21:00:00				
ML8.1         Lighting (S Out)         040-U36-LHT-0020, MP 56.7         9/3/2019 21:00:00         N/A         N/A         Regot: - Actual: in Progress           ML8.1         Lighting (All Out)         040-U36-LHT-0080, MP 55.8         9/3/2019 21:00:00         N/A         N/A         N/A         Regot: - Actual: in Progress           ML8.1         Lighting (All Out)         040-U36-LHT-0060, MP 55.7         9/3/2019 21:00:00         N/A         N/A         N/A         Regot: - Actual: in Progress           ML8.1         Lighting (All Out)         040-U36-LHT-0060, MP 55.7         9/3/2019 21:00:00         N/A         N/A         N/A         Regot: - Actual: in Progress           ML8.1         Lighting (All Out)         040-U36-LHT-0050, MP 55.6         9/3/2019 21:00:00         N/A         N/A         N/A         Regot: 6 Months Respot: - Actual: in Progress           ML8.1         Lighting (All Out)         040-U36-LHT-0150, MP 56.2         9/3/2019 21:00:00         N/A         N/A         N/A         Regot: 6 Months Respot: - Actual: in Progress           ML8.1         Lighting (All Out)         040-U36-LHT-0110, MP 215.1         9/3/2019 21:00:00         N/A         N/A         N/A         Regot: 6 Months Respot: - Actual: in Progress           ML8.1         Lighting (SE Out)         040-U36-LHT-0100, MP 56.8         9/3/2019 21:00:00         N/A		Park Com	040 1100 1117 0000	0/0/0040				
ML8.1 Lighting (All Out)	ML8.1				N/A	N/A		
Main		(S Out)	MP 56.7	21:00:00			Actual: In Progress	
ML8.1		l inhtin n	040 1100 1117 0000	0/0/0040				
ML8.1 Lighting (All Out) 040-U36-LHT-0070, 9/3/2019 N/A N/A N/A N/A Respd:  ML8.1 Lighting (All Out) 040-U36-LHT-0050, 9/3/2019 N/A	ML8.1				N/A	N/A	Respd:	
ML8.1   Lighting   O40-U36-LHT-0070,   9/3/2019   N/A   N/A   Respd:   Actual: in Progress   Red; 6 Months   Respd:   Actual: in Progress   Actual: in Progress   Red; 6 Months   Respd:   Actual: in Progress   Actual: in Progress   Red; 6 Months   Respd:   Actual: in Progress   Red; 6 Months   Respd:   Actual: in Progress   Red; 6 Months   Respd:   Actual: in Progress   Respd:   Actual: in		(All Out)	MP 55.8	21:00:00			Actual: In Progress	
ML8.1   Lighting		l imbain n			N/A	N/A	Reqd: 6 Months	
ML8.1 Lighting	ML8.1						Respd:	
ML8.1         Lighting (All Out)         040-U36-LHT-0050, MP 55.7         9/3/2019 21:00:00         N/A         N/A         Respd: Actual: in Progress           ML8.1         Lighting (All Out)         040-U36-LHT-0050, MP 55.6         9/3/2019 21:00:00         N/A         N/A         N/A         Respd: Actual: in Progress           ML8.1         Lighting (All Out)         040-U36-LHT-0150, MP 56.2         9/3/2019 21:00:00         N/A         N/A         N/A         Regd: 6 Months Respd: Actual: in Progress           ML8.1         Lighting (All Out)         040-U36-LHT-0110, MP 215.1         9/3/2019 21:00:00         N/A         N/A         N/A         Reqd: 6 Months Respd: Actual: in Progress           ML8.1         Lighting (SE Out)         040-U36-LHT-0070, MP 214.8         9/3/2019 21:00:00         N/A         N/A         N/A         Reqd: 6 Months Respd: Actual: in Progress           ML8.1         Lighting (N Out)         040-U36-LHT-0240, MP 56.8         9/3/2019 21:00:00         N/A         N/A         N/A         Reqd: 6 Months Respd: Actual: in Progress           ML8.1         Lighting (E) Out)         040-U36-LHT-0130, MP 56.5         9/3/2019 21:00:00         N/A         N/A         N/A         Reqd: 6 Months Respd: Actual: in Progress           ML8.1         Lighting (All Out)         040-U36-LHT-0130, MP 56.5         9/3/201		(All Out)	IVIF 55.6	21.00.00				
ML8.1 (All Out) MP 55.7 21:00:00 N/A N/A Respd: Actual: In Progress Reqd: 6 Months Respd: Actual: In Progress N/A N/A Respd: Actual: In Progress Reqd: 6 Months Respd: Actual: In Progress N/A N/A Respd: Actual: In Progress N/A N/A Respd: Actual: In Progress Reqd: 6 Months Respd: Actual: In Progress N/A N/A Respd: Actual: In Progress Reqd: 6 Months Respd: Actual: In Progress N/A N/A Respd: Actual: In Progress Reqd: 6 Months Respd: Actual: In Progress		Lighting	040-1136-1 HT-0060	0/3/2010			Reqd: 6 Months	
ML8.1 Lighting (All Out) 040-U36-LHT-0150, 9/3/2019 N/A N/A Respd: Actual: In Progress Reqd: 6 Months Respd: Actual: In Progress Regd: 6 Months Respd: Actual: In Progress Redd: 6 Months Respd: Actual: In Progress Redd: 6 Months Respd:	ML8.1				N/A	N/A		
ML8.1   Lighting (All Out)   MP 55.6   21:00:00   N/A   N/A   Respd: Actual: In Progress   Reqd: 6 Months   Respd: Actual: In Progress   Redd: 6 Months   Respd: Actual: In P		(All Out)	1411 00.7	21.00.00				
ML8.1 (All Out) MP 55.6 21:00:00 N/A N/A Respc: Actual: In Progress Reqd: 6 Months Respd: Actual: In Progress N/A N/A N/A N/A Respd: Actual: In Progress Reqd: 6 Months Respd: Actual: In Progress N/A N/A N/A Respd: Actual: In Progress N/A N/A Respd: Actual: In Progress Reqd: 6 Months Respd: Actual: In Progress N/A N/A Respd: Actual: In Progress Reqd: 6 Months Respd: Actual: In Progress N/A N/A Respd: Actual: In Progress Reqd: 6 Months Respd: Actual: In Progress N/A N/A Respd: Actual: In Progress Reqd: 6 Months Respd: Actual: In Progress Reqd: 6 Months Respd: Actual: In Progress N/A N/A Respd: Actual: In Progress Reqd: 6 Months Respd: Actual: In Progress		Lighting	040-U36-LHT-0050	9/3/2019				
ML8.1 Lighting (All Out) MP 56.2 21:00:00 N/A N/A Regd: 6 Months Respd: Actual: in Progress Reqd: 6 Months Respd: Actual: in Progress Regd: 6 Months Respd:	ML8.1				N/A	N/A		
ML8.1   Lighting (All Out)   MP 56.2   21:00:00   N/A   N/A   Respd: Actual: In Progress   Reqd: 6 Months   Respd: Actual: In P		( 5 a.)	00.0	2				
MIL8.1		Lighting	040-U36-LHT-0150.	9/3/2019				
ML8.1   Lighting (All Out)   O40-I25-LHT-0110, MP 21:00:00   N/A   N/A   N/A   Respd: Actual: In Progress   Reqd: 6 Months   Respd	ML8.1				N/A	N/A		
ML8.1   Lighting (All Out)   215.1   21:00:00   N/A   N/A   Respd: Actual: In Progress		(						
ML8.1		Lighting	040-I25-LHT-0110. MP	9/3/2019			· ·	
ML8.1 Lighting (SE Out) 214.8 21:00:00 N/A N/A N/A Respd: Actual: In Progress Regd: 6 Months Respd: Actual: In Progress N/A	ML8.1			21:00:00	N/A	N/A		
ML8.1   Lighting (SE Out)   214.8   21:00:00   N/A   N/A   Respd: Actual: In Progress		, ,						
ML8.1   Lighting (N Out)   MP 56.8   21:00:00   N/A   N/A   N/A   Respd: Actual: in Progress   Reqd: 6 Months   Respd: Actual:		Lighting	040-l25-LHT-0070, MP	9/3/2019	N//A			
ML8.1         Lighting (N Out)         040-U36-LHT-0240, MP 56.8         9/3/2019 21:00:00         N/A         N/A         Reqd: 6 Months Respc: Actual: In Progress           ML8.1         Lighting (E Out)         040-U36-LHT-0190, MP 56.5         9/3/2019 21:00:00         N/A         N/A         N/A         N/A         Reqd: 6 Months Respc: Actual: In Progress           ML8.1         Lighting (All Out)         040-U36-LHT-0130, MP 56.1         9/3/2019 21:00:00         N/A         N/A         N/A         Reqd: 6 Months Respc: Actual: In Progress           ML8.1         Lighting (All Out)         040-U36-LHT-0180, MP 56.4         21:00:00         N/A         N/A         N/A         Reqd: 6 Months Respc: Actual: In Progress           ML8.1         Lighting (EW Out)         040-U36-LHT-0180, MP 56.4         21:00:00         N/A         N/A         N/A         Reqd: 6 Months Respc:	IVIL8.1	(SE Out)	'	21:00:00	N/A	IWA		
ML8.1         Lighting (N Out)         040-036-LH1-0240, MP 56.8         9/3/2019 21:00:00         N/A         N/A         N/A         Respd: Actual: In Progress           ML8.1         Lighting (E Out)         040-U36-LHT-0190, MP 56.5         9/3/2019 21:00:00         N/A         N/A         N/A         N/A         Respd: Actual: In Progress           ML8.1         Lighting (All Out)         040-U36-LHT-0130, MP 56.1         9/3/2019 21:00:00         N/A         N/A         N/A         N/A         Respd: Actual: In Progress           ML8.1         Lighting (EW Out)         040-U36-LHT-0180, MP 56.4         9/3/2019 21:00:00         N/A         N/A         N/A         Reqd: 6 Months           Regd: 6 Months         Respd:         Regd: 6 Months         Respd:         Regd: 6 Months								
ML8.1 Lighting (E Out) 040-U36-LHT-0190, 9/3/2019 N/A N/A N/A N/A Respd:  ML8.1 Lighting (All Out) 040-U36-LHT-0130, 9/3/2019 N/A N/A N/A N/A N/A Respd:  ML8.1 Lighting (All Out) 040-U36-LHT-0130, 9/3/2019 N/A N/A N/A Respd:  ML8.1 Lighting (All Out) 040-U36-LHT-0180, 9/3/2019 N/A N/A Respd:  ML8.1 Lighting (All Out) 040-U36-LHT-0180, 9/3/2019 N/A N/A Respd:  ML8.1 Lighting (All Out) 040-U36-LHT-0180, 9/3/2019 N/A N/A Respd:	MIGA	Lighting	040-U36-LHT-0240,	9/3/2019	N1/A	N1/A		
ML8.1         Lighting (E Out)         040-U36-LHT-0190, MP 56.5         9/3/2019 21:00:00         N/A         N/A         N/A         Reqd: 6 Months Respd: Actual: In Progress           ML8.1         Lighting (All Out)         040-U36-LHT-0130, MP 56.1         9/3/2019 21:00:00         N/A         N/A         N/A         N/A         Regd: 6 Months Respd: Actual: In Progress           ML8.1         Lighting (FW Out)         040-U36-LHT-0180, MP 56.4         9/3/2019 21:00:00         N/A         N/A         N/A         Reqd: 6 Months Respd:		(N Out)	MP 56.8	21:00:00	IN/A	IN/A		
ML8.1         Lighting (E Out)         040-036-LH1-0190, MP 56.5         9/3/2019 21:00:00         N/A         N/A         Respd: Actual: In Progress           ML8.1         Lighting (All Out)         040-036-LHT-0130, MP 56.1         9/3/2019 21:00:00         N/A         N/A         N/A         Regd: 6 Months Respd: Actual: In Progress           ML8.1         Lighting (EW Out)         040-036-LHT-0180, 9/3/2019 21:00:00         N/A         N/A         N/A         Reqd: 6 Months Respd:						+		
ML8.1 Lighting (All Out) MP 56.1 21:00:00 Actual: In Progress    ML8.1 Lighting (All Out) MP 56.1 21:00:00 N/A N/A N/A Respd:   Actual: In Progress Reqd: 6 Months Respd:   Actual: In Progress Reqd: 6 Months Respd:   Actual: In Progress Reqd: 6 Months Respd:	MIO1	Lighting	040-U36-LHT-0190,	9/3/2019	NI/A	NI/A		
ML8.1 Lighting (All Out) 040-U36-LHT-0130, 9/3/2019 N/A N/A N/A Respd: Actual: In Progress  ML8.1 Lighting 040-U36-LHT-0180, 9/3/2019  ML8.1 (FW Out) MP 56.4 21:00:00 N/A N/A N/A Respd:	IVILO. I	(E Out)	MP 56.5	21:00:00	INA	IWA		
ML8.1 Lighting (All Out) MP 56.1 21:00:00 N/A N/A Respd: Actual: In Progress  Reqd: 6 Months  ML8.1 (FW Out) MP 56.4 21:00:00 N/A N/A N/A Respd:						1		
(All Out)   MP 56.1   21:00:00   Actual: In Progress	MIQ1				NI/A	N/A		
ML8.1 Lighting 040-U36-LHT-0180, 9/3/2019 N/A N/A Respd:	IVILO. I	(All Out)	MP 56.1	21:00:00	IN/A	IN/A		
ML8.1 Ligning 040-036-Lin1-0180, 9/3/2019 N/A N/A Respd: MP 56.4 21:00:00 N/A N/A Respd:			+					
1   1 (EVV ()UT)   1   MP 56 4   21 ()U()U()   1   1   1   1   1   1   1   1   1	MI 8 1				N/A	N/A		
Actual: In Progress	IVILO. I	(EW Out)	MP 56.4	21:00:00	IVA	IW/A	Actual: In Progress	





Element Category	Description	Location	Notified	Response to Defects		
Category				Categ Hazard Mitigation	ory 1 Permanent Remedy	Category 2
ML8.1	Lighting (All Out)	040-U36-LHT-0140, MP 56.2	9/3/2019 21:00:00	N/A	N/A	Permanent Repair  Reqd: 6 Months  Respd:  Actual: In Progress
ML8.2	Lighting (Out)	040-20S-LHT-0005- SGN_LHT-03, MP 0.5	9/4/2019 21:00:00	N/A	N/A	Reqd: 6 Months Respd: Actual: In Progress
ML8.2	Lighting (Out)	040-20S-LHT-0005- SGN_LHT-02, MP 0.5	9/4/2019 21:00:00	N/A	N/A	Reqd: 6 Months Respd: Actual: In Progress
GP8.2	Lighting (Out)	040-U36-LHT-0550- SGN_LHT-03, MP 55.0	9/4/2019 21:00:00	N/A	N/A	Reqd: 6 Months Respd: Actual: In Progress
GP8.2	Lighting (Out)	040-U36-LHT-0550- SGN_LHT-02, MP 55.0	9/4/2019 21:00:00	N/A	N/A	Reqd: 6 Months Respd: Actual: In Progress
GP8.2	Lighting (Out)	040-U36-LHT-0550- SGN_LHT-01, MP 56.0	9/4/2019 21:00:00	N/A	N/A	Reqd: 6 Months Respd: Actual: In Progress
GP8.2	Lighting (Out)	040-U36-LHT-0569- SGN_LHT-02, MP 56.9	9/4/2019 21:00:00	N/A	N/A	Reqd: 6 Months Respd: Actual: In Progress
ML8.2	Lighting (Out)	040-20S-LHT-0005- SGN_LHT-01, MP 0.5	9/4/2019 21:00:00	N/A	N/A	Reqd: 6 Months Respd: Actual: In Progress
GP6.1	Sign (Impact Damage)	MP 42.6 WB	9/11/2019 19:15:00	N/A	N/A	Reqd: 6 Months Respd: 11/3/2019 11:50 Actual: 1.75 Months
GP6.1	Sign (Impact Damage)	MP 47.3 EB	9/26/2019 22:49:00	N/A	N/A	Reqd: 6 Months Respd: 11/1/2019 01:45 Actual: 1.17 Months
GP5.1	Guardrail (Impact Damage)	MP 47.5 WB	10/4/2019 11:16:00	N/A	N/A	Reqd: 6 Months Respd: 11/13/2019 01:30 Actual: 1.31 Months
GP6.1	Sign (Impact Damage)	MP 49.1 WB	10/27/2019 02:41:00	N/A	N/A	Reqd: 6 Months Respd: Actual: In Progress
GP6.1	Sign (Impact Damage)	MP 46.1 WB	10/30/2019 16:00:00	N/A	N/A	Reqd: 6 Months Respd: Actual: In Progress
GP1.1	Debris (Cleared Debris From Lanes)	MP 54.4 WB	11/2/2019 09:32:00	Reqd: 1 Hours Respd: 11/2/2019 09:21 Actual: 0.16 Hours	N/A	N/A
GP1.1	Debris (Cleared Carcass From Lanes)	MP 40.0 EB	11/2/2019 02:45:00	Reqd: 1 Hours Respd: 11/2/2019 04:00 Actual: 0.75 Hours	N/A	N/A
GP1.1	Debris (Cleared Debris From Lanes)	MP 44 EB	11/3/2019 05:12:00	Reqd: 1 Hours Respd: 11/3/2019 05:15 Actual: 0.04 Hours	N/A	N/A
GP1.1	Debris (Cleared Bed Frames From Lanes)	MP 50.6 EB	11/3/2019 21:05:00	Reqd: 1 Hours Respd: 11/3/2019 22:00 Actual: 0.91 Hours	N/A	N/A
GP6.1	Sign (Impact Damage)	MP 39.35 WB	11/4/2019 10:36:00	N/A	N/A	Reqd: 6 Months Respd: 11/4/2019 16:30 Actual: 0.01 Months
GP1.1	Debris (Cleared Bag From Lanes)	MP 43.3 WB	11/4/2019 09:24:00	Reqd: 1 Hours Respd: 11/4/2019 10:07 Actual: 0.71 Hours	N/A	N/A
GP6.1	Sign (Impact Damage)	MP 55.9 EB	11/5/2019 08:15:00	N/A	N/A	Reqd: 6 Months Respd: 11/5/2019 12:40 Actual: 0.01 Months
GP12.1	Graffiti (Removed Graffiti)	MP 37.55 WB	11/6/2019 12:57:00	N/A	Reqd: 10 Days Respd: 11/7/2019 09:48 Actual: 0.86 Days	N/A
GP1.1	Debris (Cleared Boxes From Lanes)	MP 48.1 EB	11/11/2019 11:34:00	Reqd: 1 Hours Respd: 11/11/2019 12:05 Actual: 0.51 Hours	N/A	N/A
GP6.1	Sign (Impact Damage)	MP 48.1 WB	11/11/2019 06:00:00	N/A	N/A	Reqd: 6 Months Respd: 11/11/2019 00:10 Actual: 0.01 Months





Element Category	Description	Location	Notified	Response to Defects			
				Categ		Category 2	
				Hazard Mitigation	Permanent Remedy	Permanent Repair	
GP1.1	Debris (Cleared Tire From Lanes)	MP 42.6 WB	11/11/2019 22:15:00	Reqd: 1 Hours Respd: 11/11/2019 22:45 Actual: 0.49 Hours	N/A	N/A	
ML6.1	Sign (Impact Damage)	MP 42.0 WB	11/12/2019 11:27:00	N/A	N/A	Reqd: 6 Months Respd: 11/12/2019 21:30 Actual: 0.01 Months	
GP6.1	Sign (Impact Damage)	MP 39.3 EB	11/12/2019 11:27:00	N/A	N/A	Reqd: 6 Months Respd: 11/12/2019 22:14 Actual: 0.01 Months	
GP5.1	Guardrail (Impact Damage)	MP 55.8 EB	11/14/2019 05:31:00	N/A	N/A	Reqd: 6 Months Respd: Actual: In Progress	
GP5.1	Guardrail (Impact Damage)	MP 216.6 SB	11/18/2019 17:05:00	N/A	N/A	Reqd: 6 Months Respd: Actual: In Progress	
GP5.1	Guardrail (Impact Damage)	MP 216.94 SB	11/18/2019 17:05:00	N/A	N/A	Reqd: 6 Months Respd: Actual: In Progress	
GP12.1	Graffiti (Removed Graffiti)	MP 216.6 NB	11/18/2019 17:06:00	N/A	Reqd: 10 Days Respd: 11/19/2019 13:00 Actual: 0.82 Days	N/A	
GP8.1	Light Pole (Impact Damage)	MP 39.4 EB	11/18/2019 12:52:00	N/A	N/A	Reqd: 6 Months Respd: Actual: In Progress	
GP1.2	Pavement (Fixed Potholes)	MP 39.25 WB RAMP	11/19/2019 16:00:00	Reqd: 24 Hours Respd: 11/20/2019 14:07 Actual: 22.08 Hours	N/A	N/A	
GP1.1	Debris (Cleared Tarp From Lanes)	MP 56.95 WB	11/20/2019 09:50:00	Reqd: 1 Hours Respd: 11/20/2019 10:16 Actual: 0.43 Hours	N/A	N/A	
GP2.4	Travel Way ( Treated Ice Patch)	MP39.0 EB	11/28/2019 02:52:00	Reqd: 1 Hours Respd: 11/28/2019 03:30 Actual: 0.63 Hours	N/A	N/A	

All items were completed within the required response time. Items that are *In Progress* are still within the allowed response time.

## F. Detailed Results of All Inspections, Assessments, and Testing Activities

During this reporting period there were no special inspections, assessments, or testing results outside normal operating condition.

## G. Monthly Toll System Performance Reports

Toll system operated within proposed parameters per Ferrovial Services observations.

# H. Preventative Maintenance Plan and Progress

Preventative Maintenance work is contingent on Initial Works Package implementation.

# I, J. Mean Time between Failure (MTBF), Mean Time To Repair (MTTR)

No Maintained Elements experienced a failure type breakdown this month. Ferrovial Services considers a breakdown to be a failure when the element cannot be used for its intended purpose until repaired.