

## Appendix M

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### Gate Downtime Analysis Calculations

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Rail Alignment Segment	Freight train length- feet	Freight Miles per hour	Feet per minute	Transit time- minutes	Gate closure- advance - estimate- varies	Gate lift time	Passenger train length- feet	Miles per hour	Passenger trains per day	Feet per minute	Transit time- minutes	Gate closure- advance	Gate lift time	Passenger train closure time per crossing- est.	Freight closure time est. per Xing	Trains per day- project	Delay time- Tesoro
Lower Range																	
Sandpoint-Spokane	7800	20	1760	4.43	0.50	0.2	900	30	2	2640	0.3	0.5	0.2	2.1	5.13	8	41.05
Spokane-Pasco	7800	20	1760	4.43	0.50	0.2	900	30	2	2640	0.3	0.5	0.2	2.1	5.13	8	41.05
Pasco-Wisham	7800	20	1760	4.43	0.50	0.2	900	30	2	2640	0.3	0.5	0.2	2.1	5.13	4	20.53
Wisham-Vancouver	7800	20	1760	4.43	0.50	0.2	900	30	2	2640	0.3	0.5	0.2	2.1	5.13	4	20.53
Vancouver-Tacoma	7800	20	1760	4.43	0.50	0.2	900	30	10	2640	0.3	0.5	0.2	10.4	5.13	4	20.53
Tacoma-Auburn	7800	20	1760	4.43	0.50	0.2	900	30	28	2640	0.3	0.5	0.2	29.1	5.13	4	20.53
Auburn-Pasco	7800	20	1760	4.43	0.50	0.2	900	30	0	2640	0.3	0.5	0.2	0.0	5.13	0	-
Auburn-Seattle	7800	20	1760	4.43	0.50	0.2	900	30	28	2640	0.3	0.5	0.2	29.1	5.13	0	-
Seattle-Everett	7800	20	1760	4.43	0.50	0.2	900	30	14	2640	0.3	0.5	0.2	14.6	5.13	0	-
Everett-Spokane	7800	20	1760	4.43	0.50	0.2	900	30	2	2640	0.3	0.5	0.2	2.1	5.13	0	-
Upper Range																	
Sandpoint-Spokane	7800	20	1760	4.43	0.50	0.2	900	30	2	2640	0.3	0.5	0.2	2.1	5.13	8	41.05
Spokane-Pasco	7800	20	1760	4.43	0.50	0.2	900	30	2	2640	0.3	0.5	0.2	2.1	5.13	8	41.05
Pasco-Wisham	7800	20	1760	4.43	0.50	0.2	900	30	2	2640	0.3	0.5	0.2	2.1	5.13	4	20.53
Wisham-Vancouver	7800	20	1760	4.43	0.50	0.2	900	30	2	2640	0.3	0.5	0.2	2.1	5.13	4	20.53
Vancouver-Tacoma	7800	20	1760	4.43	0.50	0.2	900	30	10	2640	0.3	0.5	0.2	10.4	5.13	4	20.53
Tacoma-Auburn	7800	20	1760	4.43	0.50	0.2	900	30	28	2640	0.3	0.5	0.2	29.1	5.13	4	20.53
Auburn-Pasco	7800	20	1760	4.43	0.50	0.2	900	30	0	2640	0.3	0.5	0.2	0.0	5.13	4	20.53
Auburn-Seattle	7800	20	1760	4.43	0.50	0.2	900	30	28	2640	0.3	0.5	0.2	29.1	5.13	4	20.53
Seattle-Everett	7800	20	1760	4.43	0.50	0.2	900	30	14	2640	0.3	0.5	0.2	14.6	5.13	4	20.53
Everett-Spokane	7800	20	1760	4.43	0.50	0.2	900	30	2	2640	0.3	0.5	0.2	2.1	5.13	4	20.53

