

Sample Road No-Build and Build												
Predicted Crashes by Severity and Site Type and Observed Crashes Using the Site-Specific EB Method for Urban and Suburban Arterials												
Collision type / Site type	Predicted average crash frequency (crashes/year)			Observed crashes, $N_{observed}$ (crashes/year)		k Value		Weighted adjustment, w		Expected average crash frequency, $N_{expected}$		
	$N_{predicted}$ (TOTAL)	$N_{predicted}$ (FI)	$N_{predicted}$ (PDO)	FI	PDO	FI	PDO	FI	PDO	$N_{predicted}$ (TOTAL)	$N_{predicted}$ (FI)	$N_{predicted}$ (PDO)
Freeway Segment												
Sample Road Freeway Segment												
Multiple-Vehicle	80.740	19.918	60.822	112	209	0.073	0.069	0.190	0.070	198.460	61.110	137.350
Single-vehicle	10.381	2.566	7.816	21	25	0.043	0.062	0.750	0.410	26.033	7.579	18.454
Total	91.121	22.484	68.638	133	234	--	--	--	--	224.493	68.689	155.804
Ramp Speed Change Lane												
Merge Lanes												
SB Merge from EB Sample	4.556	1.551	3.005	11	9	0.040	0.040	0.850	0.730	7.580	2.980	4.600
NB Merge from EB Sample	6.364	2.120	4.244	15	29	0.040	0.040	0.800	0.660	17.280	4.640	12.640
SB Merge from WB Sample	6.694	2.272	4.422	17	26	0.040	0.040	0.790	0.650	17.260	5.320	11.940
NB Merge from WB Sample	5.457	1.745	3.712	4	7	0.040	0.040	0.830	0.690	6.850	2.120	4.730
Diverge Lanes												
NB Diverge to Sample Road	1.508	0.450	1.058	4	6	0.560	0.630	0.570	0.330	6.340	1.980	4.360
SB Diverge to Sample	2.328	0.665	1.663	0	4	0.560	0.630	0.470	0.240	3.750	0.310	3.440
Ramp Terminals												
NB Ramp Terminal	6.056	1.962	4.094	1	0	0.190	0.270	0.480	0.230	2.410	1.460	0.950
SB Ramp Terminal	5.640	1.803	3.837	0	1	0.190	0.270	0.500	0.240	2.590	0.900	1.690
COMBINED (sum of column)	129.724	35.052	94.673	185	316	--	--	--	--	288.553	88.399	200.154

SW 10th Street No-Build												
Predicted Crashes by Severity and Site Type and Observed Crashes Using the Site-Specific EB Method for Urban and Suburban Arterials												
Collision type / Site type	Predicted average crash frequency (crashes/year)			Observed crashes, N _{observed} (crashes/year)		k Value		Weighted adjustment, w		Expected average crash frequency, N _{expected}		
	N _{predicted} (TOTAL)	N _{predicted} (FI)	N _{predicted} (PDO)	FI	PDO	FI	PDO	FI	PDO	N _{predicted} (TOTAL)	N _{predicted} (FI)	N _{predicted} (PDO)
Freeway Segment												
SW 10th Street Freeway Segment												
Multiple-Vehicle	104.746	24.353	80.393	75	147	0.039	0.037	0.260	0.100	202.130	61.890	140.240
Single-vehicle	18.269	4.117	14.152	18	22	0.023	0.033	0.779	0.414	25.929	7.179	18.750
Total	123.015	28.470	94.546	93	169	--	--	--	--	228.059	69.069	158.990
Ramp Speed Change Lane												
Merge Lanes												
SB Merge from SW 10th Street	8.493	3.074	5.419	13	26	0.040	0.040	0.740	0.600	19.240	5.670	13.570
NB Merge from SW 10th Street	8.215	2.967	5.248	10	14	0.040	0.040	0.750	0.610	13.410	4.760	8.650
Diverge Lanes												
NB Diverge to SW 10th Street	2.448	0.696	1.752	17	24	0.560	0.630	0.460	0.230	28.350	9.490	18.860
Ramp Terminals												
NB Ramp Terminal	19.256	4.145	15.111	2	0	0.110	0.250	0.440	0.080	3.990	2.750	1.240
SB Off Ramp Terminal	20.008	7.223	12.785	2	6	0.090	0.140	0.350	0.160	10.880	3.810	7.070
SB On Ramp Terminal	9.494	2.607	6.887	2	3	0.190	0.270	0.410	0.150	5.840	2.250	3.590
COMBINED (sum of column)	190.929	49.182	141.747	139.000	242.000	--	--	--	--	309.769	97.799	211.970

SW 10th Street Build Options									
Predicted Crashes by Severity and Site Type and Observed Crashes Using the Site-Specific EB Method for Urban and Suburban Arterials									
Collision type / Site type	Build 1			Build 2			Build 3		
	Predicted average crash frequency (crashes/year)			Predicted average crash frequency (crashes/year)			Predicted average crash frequency (crashes/year)		
	$N_{\text{predicted}}$ (TOTAL)	$N_{\text{predicted}}$ (FI)	$N_{\text{predicted}}$ (PDO)	$N_{\text{predicted}}$ (TOTAL)	$N_{\text{predicted}}$ (FI)	$N_{\text{predicted}}$ (PDO)	$N_{\text{predicted}}$ (TOTAL)	$N_{\text{predicted}}$ (FI)	$N_{\text{predicted}}$ (PDO)
Freeway Segment 1									
Multiple-Vehicle	104.284	27.763	76.521	100.538	26.939	73.599	101.000	27.036	73.964
Single-vehicle	18.189	4.451	13.738	17.895	4.394	13.501	17.939	4.403	13.536
Total	122.473	32.214	90.259	118.433	31.333	87.100	118.939	31.439	87.500
Freeway Segment 2									
Multiple-Vehicle	22.034	5.434	16.600	20.303	5.083	15.220	19.424	4.902	14.522
Single-vehicle	4.588	1.066	3.522	4.422	1.036	3.386	4.335	1.020	3.315
Total	26.622	6.500	20.122	24.725	6.119	18.606	23.759	5.922	17.837
Collector-Distributor Road									
SW 10th Street NB On-Ramp C-D Road	5.575	2.07	3.50	7.943	3.24	4.70	11.879	5.60	6.28
Ramp Terminals									
NB Ramp Terminal	29.934	11.60	18.33	33.668	12.75	20.92	39.331	14.57	24.76
SB Off/On Ramp Terminal	30.284	10.41	19.88	40.678	13.84	26.83	57.086	19.29	37.79
COMBINED (sum of column)	214.889	62.800	152.088	225.446	67.291	158.155	250.993	76.828	174.165

Hillsboro Blvd No-Build												
Predicted Crashes by Severity and Site Type and Observed Crashes Using the Site-Specific EB Method for Urban and Suburban Arterials												
Collision type / Site type	Predicted average crash frequency (crashes/year)			Observed crashes, N _{observed} (crashes/year)		k Value		Weighted adjustment, w		Expected average crash frequency, N _{expected}		
	N _{predicted} (TOTAL)	N _{predicted} (FI)	N _{predicted} (PDO)	FI	PDO	FI	PDO	FI	PDO	N _{predicted} (TOTAL)	N _{predicted} (FI)	N _{predicted} (PDO)
Freeway Segment												
Hillsboro Blvd Freeway Segment												
Multiple-Vehicle	82.943	20.748	62.195	115	222	0.064	0.060	0.210	0.090	305.060	96.140	208.920
Single-vehicle	11.098	2.504	8.594	16	21	0.038	0.055	0.780	0.415	21.319	5.472	15.847
Total	94.041	23.252	70.789	131	243	--	--	--	--	326.379	101.612	224.767
Ramp Speed Change Lane												
Merge Lanes												
SB Merge from WB Hillsboro Blvd	6.050	2.020	4.030	30	38	0.040	0.040	0.810	0.670	22.450	7.290	15.160
Diverge Lanes												
NB Diverge to EB Hillsboro Blvd	2.240	0.640	1.600	2	4	0.560	0.630	0.480	0.250	4.750	1.350	3.400
Ramp Terminals												
NB to EB Ramp Terminal*	14.640	6.650	7.990	--	--	--	--	--	--	14.640	6.650	7.990
SB Off Ramp Terminal	13.890	6.500	7.390	3	1	0.090	0.140	0.450	0.220	6.870	4.300	2.570
*The traffic signal at this ramp terminal was built in 2018. As such it did not exist during the period of the crash data and the EB Method can't be applied for the site												
COMBINED (sum of column)	130.861	39.062	91.799	166.000	286.000	--	--	--	--	375.089	121.202	253.887

Hillsboro Blvd Build Options									
Predicted Crashes by Severity and Site Type and Observed Crashes Using the Site-Specific EB Method for Urban and Suburban Arterials									
Collision type / Site type	Build 1			Build 2			Build 3		
	Predicted average crash frequency (crashes/year)			Predicted average crash frequency (crashes/year)			Predicted average crash frequency (crashes/year)		
	N_{predicted} (TOTAL)	N_{predicted} (FI)	N_{predicted} (PDO)	N_{predicted} (TOTAL)	N_{predicted} (FI)	N_{predicted} (PDO)	N_{predicted} (TOTAL)	N_{predicted} (FI)	N_{predicted} (PDO)
Freeway Segment 1									
Multiple-Vehicle	29.665	6.910	22.755	29.777	6.932	22.845	31.733	7.300	24.433
Single-vehicle	5.204	1.174	4.030	5.213	1.176	4.037	5.364	1.202	4.162
Total	34.869	8.084	26.785	34.990	8.107	26.883	37.098	8.502	28.595
Freeway Segment 2									
Multiple-Vehicle	32.501	8.538	23.963	34.593	8.986	25.606	38.624	9.835	28.788
Single-vehicle	6.865	1.695	5.170	7.060	1.733	5.327	7.419	1.802	5.617
Total	39.366	10.233	29.133	41.653	10.719	30.934	46.043	11.637	34.406
Ramp Speed Change Lane									
Merge Lanes									
SB Merge from Hillsboro Blvd	7.161	2.63	4.53	7.145	2.60	4.55	7.450	2.71	4.74
NB Merge From Hillsboro Blvd	4.856	1.12	3.74	4.870	1.12	3.75	5.080	1.17	3.91
Diverge Lanes									
NB Diverge to Hillsboro Blvd	1.450	0.43	1.02	1.452	0.43	1.02	1.500	0.45	1.05
SB Diverge to 10th Street	0.670	0.23	0.44	0.668	0.23	0.44	0.690	0.24	0.45
Connector-Distributor Road									
Hillsboro NB On-Ramp CD Road	1.270	0.45	0.82	1.260	0.45	0.81	1.240	0.44	0.80
Hillsboro SB On-Ramp CD Road	1.722	0.65	1.07	1.587	0.59	1.00	1.610	0.60	1.01
Ramp Terminals									
NB Off Ramp Terminal	20.990	9.45	11.54	21.019	9.41	11.61	21.190	9.49	11.70
SB Off Ramp Terminal	13.950	6.52	7.43	14.177	6.64	7.54	14.190	6.64	7.55
COMBINED (sum of column)	126.303	39.792	86.511	128.822	40.297	88.525	136.090	41.879	94.211