

ATTACHMENT B – Crash Rate Analysis

For this bulletin, an example will assume that an access request has been submitted on OR22 (Salem Highway, No. 72) at mile point 7.50 in Salem.

Determine the Jurisdiction (Urban/Rural) and the Published Local Crash Rate from this table.

HIGHWAY 72, SALEM

START		2011		Crashes per Million Vehicle Miles Traveled					
M.P.	SECTION DESCRIPTION	Miles	Crashes	ADT	2011	2010	2009	2008	2007
URBAN CITY - SALEM									
0.00	Jct PACIFIC HY 1 /I-5 to BEGIN COUPLET	3.34	20	21,836	.75	.82	1.08	1.14	.82
3.34	BEGIN CPLT /COMMERCIAL to END /MILL CRK -SBD	1.18	32	16,479	4.51	2.92	3.32	2.54	3.95
3.34	BEGIN CPLT /LIBERTY ST to END /MILL CRK -NBD	CP 1.18	20	14,379	3.23	2.71	2.38	3.08	2.23
4.52	MILL CRK to DIVISION ST	.20	2	32,300	.85	1.26	.96	1.97	.39
4.72	DIVISION ST to BEGIN COUPLET	.61	19	27,136	3.14	1.94	3.32	3.76	3.05
5.33	BEGIN CPLT /STATE ST to CHURCH ST -EBD	.36	17	13,294	9.73	8.46	9.00	5.16	10.55
5.69	CHURCH ST to END COUPLET -EBD	.14	2	11,400	3.43	6.81		1.73	1.94
5.33	BEGIN CPLT /STATE ST to CHURCH ST -WBD	CP .32	20	15,315	11.18	8.82	7.69	8.95	7.39
5.65	CHURCH ST to END COUPLET -WBD	CP .19	2	9,300	3.10	7.59	1.52	3.09	4.08
5.83	END COUPLET to 12TH ST	.37	7	21,748	2.38	3.87	3.08	3.14	1.09
6.20	12TH ST to 25TH ST SE	1.32	44	34,443	2.65	3.00	2.23	2.57	2.33
7.52	25TH ST SE to END SALEM HY 072	.96	68	47,514	4.08	3.64	2.93	2.87	2.63
	TOTAL SALEM	8.48	253	24,044	2.83	2.63	2.42	2.50	2.27

MP 7.50 is between MP 6.20 and MP 7.52

SUMMARY OF HIGHWAY 72, SALEM

URBAN CITY	8.48	253	24,044	2.83
SUBURBAN AREA	.00	0	0	.00
URBAN UNKNOWN MILEPOINT	.00	0	0	
TOTAL URBAN	8.48	253	24,044	2.83
RURAL CITY	.00	0	0	.00
RURAL AREA	.00	0	0	.00
RURAL UNKNOWN MILEPOINT	.00	0	0	
TOTAL RURAL	.00	0	0	.00
TOTAL HIGHWAY	8.48	253	24,044	2.83

Determine the Highway Functional Classification from this Table.

Oregon Department of Transportation



Functional Classification and National Highway System Status As of November 2014* on Oregon State Highways

<http://www.oregon.gov/ODOT/TD/TDATA/rics/docs/ORStateHwysFCandNHS.pdf>

LRS	Hwy	Rdwy ID	Mlge Type	Begin MP	End MP	NHS	FC Code	Historic FC Code	FC Description	HPMS Area	Urban Area
06700D00	067	2		6.03	6.49	No	4	06	Minor Arterial	1	
06700I00	067	1		-0.03	3.92	Yes	3	14	Other Principal Arterial	2	PENDLETON
06700I00	067	1		4.62	5.03	No	3	14	Other Principal Arterial	2	PENDLETON
06700I00	067	1		5.03	6.60	No	4	06	Minor Arterial	1	
06800D00	068	2		0	0.33	Yes	3	14	Other Principal Arterial	4	PORTLAND
06800D00	068	2		9.94	10.02	Yes	3	14	Other Principal Arterial	4	PORTLAND
06800I00	068	1		0	10.18	Yes	3	14	Other Principal Arterial	4	PORTLAND
06900D00	069	2		4.37	12.78	Yes	2	12	Other Freeways and Expressways	4	EUGENE
06900D00	069	2		12.78	13	No	2	12	Other Freeways and Expressways	4	EUGENE
06900I00	069	1		0	1.26	Yes	3	02	Other Principal Arterial	1	
06900I00	069	1		1.26	4.24	Yes	3	14	Other Principal Arterial	4	EUGENE
06900I00	069	1		4.24	13	Yes	2	12	Other Freeways and Expressways	4	EUGENE
07000D00	070	2		0	10.78	Yes	1	01	Interstate	1	
07000I00	070	1		0	11.21	Yes	1	01	Interstate	1	
07100I00	071	1		0	49.17	No	4	06	Minor Arterial	1	
07100I00	071	1		49.17	50.96	Yes	3	14	Other Principal Arterial	2	BAKER CITY
07200D00	072	2		0	0.65	Yes	2	12	Other Freeways and Expressways	4	SALEM
07200D00	072	2		3.34	6.57	Yes	3	14	Other Principal Arterial	4	SALEM
07200I00	072	1		0	3.34	Yes	2	12	Other Freeways and Expressways	4	SALEM
07200I00	072	1		3.34	7.92	Yes	3	14	Other Principal Arterial	4	SALEM
07200I00	072	1		7.92	8.48	Yes	2	12	Other Freeways and Expressways	4	SALEM
08100D00	081	2		1.45	5.72	Yes	3	14	Other Principal Arterial	4	PORTLAND
08100D00	081	2		27.09	27.66	No	4	06	Minor Arterial	1	
08100I00	081	1		-6.09	-3.75	No	3	14	Other Principal Arterial	4	PORTLAND
08100I00	081	1		1.45	15.01	Yes	3	14	Other Principal Arterial	4	PORTLAND
08100I00	081	1		15.01	19.26	No	4	06	Minor Arterial	1	
08100I00	081	1		19.26	22.05	No	3	14	Other Principal Arterial	2	CANBY
08100I00	081	1		22.05	30.87	No	4	06	Minor Arterial	1	
08100I00	081	1		30.87	33.62	Yes	3	14	Other Principal Arterial	2	WOODBURN
08100I00	081	1		33.62	42.21	No	4	06	Minor Arterial	1	
08100I00	081	1		42.21	46.49	Yes	3	14	Other Principal Arterial	4	SALEM

MP 7.50 is between MP 3.34 and MP 7.92

HPMS Area: 1=Rural, 2=Small Urban, 3 and 4=Urbanized

Prepared by the RICS Unit of Oregon Department of Transportation
(503)986-4386; 11/26/2014 8:23:48 AM

*Information is updated regularly. Please check back for the most current status.

Determine the State Crash Rate from this Table.

TABLE II: FIVE-YEAR COMPARISON OF STATE HIGHWAY CRASH RATES

Table II presents a comparison of state highway crash rates for the past five years, for urban and rural areas, by functional classification. Mileage is shown for the current data year only.

See Table IV for information on official highway mileage.

JURISDICTION AND		2011	2010	2009	2008	2007		
FUNCTIONAL CLASSIFICATION	MILES*	Rate	Rate	Rate	Rate	Rate		
TOTAL STATE HWY SYSTEM		7,438.98	0.98	0.87	0.82	0.83	0.85	
Do NOT Use averages of Urban and Rural	Interstate Freeways	729.57	0.44	0.41	0.38	0.37	0.38	
	Other Fwys/Expressways	53.89	0.87	0.78	0.62	0.67	0.74	
	Non-Freeways (combined)	6,655.52	1.48	1.31	1.23	1.25	1.27	
	Other Principal Arterials	3,289.95	1.52	1.33	1.25	1.29	1.29	
	Minor Arterials	1,955.08	1.35	1.26	1.18	1.13	1.20	
	Urban Collectors	8.69	1.17	1.99	1.74	1.18	1.10	
	Rural Major Collectors	1,364.20	1.37	1.20	1.12	1.18	1.25	
	Rural Minor Collectors	34.71	2.00	1.29	0.32	0.87	0.64	
	Rural Local	2.89	0.00	0.00	7.49	0.00	0.00	
URBAN HWY SYSTEM		819.10	1.33	1.19	1.08	1.10	1.13	
Do NOT Use averages of Urban and Suburban	Interstate Freeways	179.24	0.57	0.52	0.45	0.47	0.48	
	Other Fwys/Expressways	53.89	0.87	0.78	0.62	0.67	0.74	
	Non-Freeways (combined)	585.97	2.53	2.26	2.05	2.06	2.06	
	Other Principal Arterials	514.32	2.52	2.23	2.03	2.09	2.07	
	Minor Arterials	62.96	2.65	2.59	2.36	1.81	2.05	
	Urban Collectors	8.69	1.17	1.99	1.74	1.18	1.10	
Urban Cities		577.11	1.48	1.31	1.20	1.22	1.25	
Use these	Interstate Freeways	113.47	0.67	0.59	0.50	0.53	0.54	
	Other Fwys/Expressways	49.21	0.85	0.75	0.61	0.67	0.75	
	Non-Freeways (combined)	414.43	2.86	2.55	2.41	2.37	2.40	
	Other Principal Arterials	375.11	2.84	2.50	2.36	2.37	2.38	
	Minor Arterials	37.74	3.23	3.33	3.10	2.31	2.63	
	Urban Collectors	1.58	0.90	1.77	3.34	1.25	1.95	
	Suburban Areas		241.99	0.82	0.79	0.69	0.70	0.73
	Interstate Freeways	65.77	0.31	0.30	0.32	0.28	0.31	
	Other Fwys/Expressways	4.68	1.17	1.33	0.82	0.61	0.65	
	Non-Freeways (combined)	171.54	1.52	1.40	1.12	1.25	1.18	
Other Principal Arterials	139.21	1.51	1.40	1.12	1.29	1.19		
Minor Arterials	25.22	1.59	1.32	1.11	0.91	1.10		
Urban Collectors	7.11	1.24	2.05	1.29	1.16	0.86		
RURAL HWY SYSTEM		6,619.88	0.67	0.60	0.59	0.59	0.61	
Do NOT Use averages of Rural Cities and Rural Areas	Interstate Freeways	550.33	0.30	0.29	0.30	0.27	0.28	
	Non-Freeways (combined)	6,069.55	0.91	0.80	0.78	0.80	0.83	
	Other Principal Arterials	2,775.63	0.80	0.70	0.68	0.70	0.72	
	Minor Arterials	1,892.12	1.13	1.02	0.97	0.99	1.03	
	Rural Major Collectors	1,364.20	1.37	1.20	1.12	1.18	1.25	
	Rural Minor Collectors	34.71	2.00	1.29	0.32	0.87	0.64	
	Rural Local	2.89	0.00	0.00	7.49	0.00	0.00	
Rural Cities		224.40	1.25	1.12	1.09	1.10	1.13	
Use these	Interstate Freeways	14.05	0.39	0.30	0.31	0.30	0.24	
	Non-Freeways (combined)	210.35	1.45	1.30	1.27	1.27	1.32	
	Other Principal Arterials	110.79	1.39	1.28	1.17	1.19	1.19	
	Minor Arterials	54.14	1.80	1.41	1.63	1.60	1.71	
	Rural Major Collectors	45.17	1.04	1.25	1.09	1.10	1.30	
	Rural Minor Collectors	0.25	0.00	0.00	0.00	0.00	0.00	
	Rural Areas		6,395.48	0.64	0.57	0.56	0.57	0.58
	Interstate Freeways	536.28	0.29	0.29	0.30	0.27	0.28	
	Non-Freeways (combined)	5,859.20	0.88	0.77	0.75	0.77	0.79	
	Other Principal Arterials	2,664.84	0.76	0.66	0.65	0.67	0.69	
Minor Arterials	1,837.98	1.08	1.00	0.93	0.95	0.99		
Rural Major Collectors	1,319.03	1.41	1.19	1.13	1.19	1.24		
Rural Minor Collectors	34.46	2.16	1.40	0.35	0.94	0.69		
Rural Local	2.89	0.00	0.00	7.49	0.00	0.00		

* Couplet data is included. Frontage road and connection data are excluded.

Determine the State Crash Rate from this Table.

Example from Crash Summary Report

Home > CS > ISB > TAD > SCM > AMI > SPIS > CSR > Summary Home | My Subscriptions | Help

Highway #	072	Highway Name	Salem, 0.00, 8.47	View Report
Begin MP	7.25	End Mp	7.75	
Direction	Roadway 1 & 2			

1 of 1 100% Find | Next

Oregon Department of Transportation

2012 Crash Summary Report 2009-2011
 Tuesday, May 14, 2013
 Salem 072 MP 7.25 to MP 7.75

Crash Totals

Head On	0
Angle	2
Turning	11
Rear End	61
Side Swipe	
Meeting	0
Overtaking	11
Fixed Object	2
Pedestrian	0
Backing	1
Parking	0
Non-Collision	0
Miscellaneous	0
Total Crashes	88

Injury and Fatal Crashes

Injury A (Most Severe)	0
Injury B (Moderate)	6
Injury C (Least Severe)	30
TOTAL Injury Crashes	36
FATAL Crashes	0

Additional Statistics

Daylight Crashes	75
Truck Involved Crashes	4
Intersection Crashes	31
Wet Crashes	21
Snow/Ice Involved Crashes	0
Speed Involved	8
Driver Impaired	0
Work Zone Involved	0
Deer/Elk Involved	0
Pedal cycle Involved Crashes	2
Cell Phone/ Crashes	0
*Average Daily Traffic (ADT)	41,150
Computed Crash Rate	3.91
ADT at First Crash	33,800
ADT at Last Crash	48,500
First Crash at MP	7.25
Last Crash at MP	7.72

Safety Priority Index System (SPIS) Summary

Highest SPIS Value	77.20
Lowest SPIS Value	11.06
Top 10% CutOff	42.51
Total SPIS Sites on Top 10% List	10

Property Damage Only (PDO)

Total PDO crashes	52
-------------------	----

* The Average Daily Traffic (ADT) was the newest year available when the data sets for this tool were compiled. V1.0

Example from the Transportation Data Crash Reports Program.

CDS150
12/19/2012

OREGON DEPARTMENT OF TRANSPORTATION - TRANSPORTATION DEVELOPMENT DIVISION
TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT
CRASH SUMMARIES BY YEAR BY COLLISION TYPE

Page: 1

Highway 072 ALL ROAD TYPES, MP 7.25 to 7.75 01/01/2009 to 12/31/2011, Both Add and Non-Add mileage

COLLISION TYPE	FATAL	NON-	PROPERTY	TOTAL	PEOPLE	PEOPLE	TRUCKS	DRY	WET	DAY	DARK	INTER-	SECTION	OFF-
	CRASHES	FATAL	DAMAGE	CRASHES	KILLED	INJURED		SURF	SURF			SECTION	RELATED	ROAD
YEAR: 2011														
ANGLE	0	1	1	2	0	2	0	2	0	1	1	1	0	0
REAR-END	0	9	10	19	0	14	1	15	3	18	1	6	6	0
SIDESWIPE - OVERTAKING	0	0	3	3	0	0	0	2	1	3	0	1	1	0
TURNING MOVEMENTS	0	2	4	6	0	4	0	6	0	6	0	4	0	0
YEAR 2011 TOTAL	0	12	18	30	0	20	1	25	4	28	2	12	7	0
YEAR: 2010														
BACKING	0	0	1	1	0	0	0	0	1	0	1	0	0	0
REAR-END	0	10	8	18	0	14	3	11	6	17	1	9	5	0
SIDESWIPE - OVERTAKING	0	1	1	2	0	1	0	0	2	2	0	0	0	0
TURNING MOVEMENTS	0	1	2	3	0	1	0	2	1	3	0	2	0	0
YEAR 2010 TOTAL	0	12	12	24	0	16	3	13	10	22	2	11	5	0
YEAR: 2009														
FIXED / OTHER OBJECT	0	1	1	2	0	2	0	2	0	0	2	1	0	2
REAR-END	0	10	14	24	0	16	0	18	6	18	6	4	15	0
SIDESWIPE - OVERTAKING	0	0	6	6	0	0	0	5	1	6	0	1	0	0
TURNING MOVEMENTS	0	1	1	2	0	1	0	2	0	1	1	2	0	0
YEAR 2009 TOTAL	0	12	22	34	0	19	0	27	7	25	9	8	15	2
FINAL TOTAL	0	36	52	88	0	55	4	65	21	75	13	31	27	2