

Mt Philo Rd and State Park Rd Multiway Stop Analysis

Chittenden County Metropolitan Planning Organization
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<http://www.ccmpp.org/>
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2003 MUTCD Multiway Stop Warrant Analysis Criteria (Section 2B.07)

C. Minimum volumes:

1. The vehicular volume entering the intersection from the major street approaches (total of both approaches) averages at least 300 vehicles per hour for any 8 hours of an average day, and
2. The combined vehicular, pedestrian, and bicycle volume entering the intersection from the minor street approaches (total of both approaches) averages at least 200 units per hour for the same 8 hours, with an average delay to minor-street vehicular traffic of at least 30 seconds per vehicle during the highest hour, but
3. If the 85th-percentile approach speed of the major-street traffic exceeds 65 km/h or exceeds 40 mph, the minimum vehicular volume warrants are 70 percent of the above values.

(note: There are additional MUTCD criteria related to crash history, left-turn conflicts, sight distance, and intersecting neighborhood residential streets. More information available at <http://mutcd.fhwa.dot.gov/HTM/2003r1/part2/part2b1.htm>)

August 22, 2006 Traffic Count Data

Hour	Mt. Philo Road--From North					State Park Road--From East					Mt. Philo Road--From South					Mt. Philo State Park--From West					
	Right	Thru	Left	Bike	App Total	Right	Thru	Left	Bike	App Total	Right	Thru	Left	Bike	App Total	Right	Thru	Left	Bike	App Total	Int Total
7:00:00 AM	6	18	3	0	27	3	4	2	0	9	0	39	6	0	45	9	2	12	0	23	104
8:00:00 AM	11	22	4	0	37	2	4	5	0	11	1	30	9	3	43	2	2	9	0	13	104
9:00:00 AM	4	16	5	0	25	2	1	1	1	5	2	13	6	1	22	3	3	6	0	12	64
10:00:00 AM	8	18	5	0	31	2	6	2	0	10	1	34	6	0	41	2	4	9	0	15	97
11:00:00 AM	9	23	7	0	39	5	5	2	0	12	3	18	3	0	24	2	9	3	0	14	89
12:00:00 PM	7	35	5	1	48	6	1	3	0	10	4	19	9	0	32	4	3	8	0	15	105
1:00:00 PM	7	18	5	4	34	3	6	2	0	11	7	19	4	0	30	6	1	6	1	14	89
2:00:00 PM	6	29	0	0	35	5	2	6	0	13	0	28	5	3	36	5	5	7	0	17	101
3:00:00 PM	13	43	0	0	56	2	1	1	0	4	1	29	4	0	34	5	1	9	0	15	109
4:00:00 PM	9	51	5	0	65	2	1	0	0	3	0	33	6	3	42	5	2	12	0	19	129
5:00:00 PM	16	70	7	1	94	4	3	2	0	9	1	27	8	1	37	3	4	19	0	26	166
6:00:00 PM	8	35	1	0	44	2	2	3	0	7	0	9	2	0	11	1	1	1	0	3	65
12-Hour Total	104	378	47	6	535	38	36	29	1	104	20	298	68	11	397	47	37	101	1	186	1222

MUTCD Warrant Analysis Data

Hour	Major Street Approach Volumes	Minor Street Approach Volumes	Major Street 70% Warrant Met?	Minor Street 70% Warrant Met?
7:00:00 AM	72	32	No	No
8:00:00 AM	77	27	No	No
9:00:00 AM	46	17	No	No
10:00:00 AM	72	25	No	No
11:00:00 AM	63	26	No	No
12:00:00 PM	79	26	No	No
1:00:00 PM	60	28	No	No
2:00:00 PM	68	33	No	No
3:00:00 PM	90	19	No	No
4:00:00 PM	104	25	No	No
5:00:00 PM	129	37	No	No
6:00:00 PM	55	10	No	No

The Major Street 70% warrant is 210 vehicles per hour.
 The Minor Street 70% warrant is 140 vehicles per hour.

Conclusion

The MUTCD Multiway Stop criteria are not met. A 4-way stop at this intersection is not recommended.