

Ferry Rd and Lake Rd Multiway Stop Analysis

Chittenden County Metropolitan Planning Organization
 30 Kimball Ave, Suite 206
 South Burlington, VT 05403
<http://www.ccmppo.org/>
 August 29, 2006

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>)

Ferry Road Traffic Volume

Location: Between Lake Rd & Greenbush Rd
 June 2004 Automated Traffic Recorder Count Data

| | Westbound | Eastbound | Total | 3% Growth from 2004-2006 |
|-------------|-----------|-----------|-------|--------------------------|
| 7:00:00 AM | 58 | 60 | 118 | 122 |
| 8:00:00 AM | 75 | 81 | 156 | 161 |
| 9:00:00 AM | 80 | 76 | 156 | 161 |
| 10:00:00 AM | 87 | 77 | 164 | 169 |
| 11:00:00 AM | 97 | 84 | 181 | 186 |
| 12:00:00 PM | 96 | 91 | 187 | 193 |
| 1:00:00 PM | 93 | 82 | 175 | 180 |
| 2:00:00 PM | 93 | 95 | 188 | 194 |
| 3:00:00 PM | 93 | 111 | 204 | 210 |
| 4:00:00 PM | 97 | 99 | 196 | 202 |
| 5:00:00 PM | 98 | 97 | 195 | 201 |
| 6:00:00 PM | 66 | 65 | 131 | 135 |

Lake Road Traffic Volume

Location: South of Hills Point Rd
 August 2003 Automated Traffic Recorder Count Data

| | Northbound | Southbound | Total | 5% Growth from 2003-2006 |
|--|------------|------------|-------|--------------------------|
| | 14 | 9 | 23 | 24 |
| | 10 | 9 | 19 | 20 |
| | 17 | 11 | 28 | 29 |
| | 14 | 12 | 26 | 27 |
| | 14 | 17 | 31 | 33 |
| | 15 | 19 | 34 | 36 |
| | 13 | 21 | 34 | 36 |
| | 18 | 23 | 41 | 43 |
| | 24 | 21 | 45 | 47 |
| | 23 | 27 | 50 | 53 |
| | 16 | 25 | 41 | 43 |
| | 17 | 19 | 36 | 38 |

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 | 122 | 24 | No | No |
| 8:00:00 AM | 161 | 20 | No | No |
| 9:00:00 AM | 161 | 29 | No | No |
| 10:00:00 AM | 169 | 27 | No | No |
| 11:00:00 AM | 186 | 33 | No | No |
| 12:00:00 PM | 193 | 36 | No | No |
| 1:00:00 PM | 180 | 36 | No | No |
| 2:00:00 PM | 194 | 43 | No | No |
| 3:00:00 PM | 210 | 47 | Yes | No |
| 4:00:00 PM | 202 | 53 | No | No |
| 5:00:00 PM | 201 | 43 | No | No |
| 6:00:00 PM | 135 | 38 | No | No |

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

Conclusion

The MPO does not have a 12 hour intersection traffic count available at the Ferry Rd / Lake Rd intersection. An AM and PM peak hour count is available from 2003. This count has lower volumes in the 7-9 am and 4-6 pm timeframe than most of the counts provided above. **The preliminary investigation of traffic volumes above suggests the volume warrants for a multi-way stop would not be met.**