

ORDINANCE NO. 2012-2

ROAD SPEED LIMITS

**AN ORDINANCE TO ESTABLISH A SPEED LIMIT ON MARYSVILLE ROAD,
LEWIS AND CLARK COUNTY, MONTANA,
AND TO PROVIDE PENALTIES FOR A VIOLATION THEREOF**

WHEREAS, the Lewis and Clark County Commission requested a review of the speed limit on Marysville Road, Lewis and Clark County; and

WHEREAS, the Lewis and Clark County Public Works Department requested that Abelin Traffic Services of Helena, Montana, perform a speed study on this road and determine if the posted speed limit is appropriate for the existing road conditions and travel patterns; and

WHEREAS, Section 61-8-310, MCA allows the Lewis and Clark County Commission to establish speed limits on any public highways as defined in 60-1-103, MCA; and

WHEREAS, Marysville Road in Lewis and Clark County, Montana, is a public road as defined in Section 60-1-103, MCA; and

NOW, THEREFORE, BE IT ORDAINED BY THE COUNTY COMMISSION OF LEWIS AND CLARK COUNTY, STATE OF MONTANA:

SECTION 1. SPEED LIMIT ESTABLISHED

See attached "Exhibit A – Abelin Speed Study."

SECTION 2. SPEED LIMIT SIGNS

Upon receiving notice of the regulatory speed limit established by this Ordinance, and after the passage of at least thirty days from the date this Ordinance is adopted, the Public Works Department shall erect the appropriate signs giving drivers notice of the regulatory speed limit established by this Ordinance.

SECTION 3. PENALTY

Section 1 – Lincoln Road to Mile Post 3. A vehicle traveling more than 55 mph on this section of Marysville Road is in violation of the law, and the driver is subject to penalties.

Section 2 - Mile Post 3.0 to Mile Post 5.7. A vehicle traveling more than 45 mph on this section of Marysville Road is in violation of the law, and the driver is subject to penalties.

Section 3 – Mile Post 5.7 to Marysville. A vehicle traveling more than 25 mph on this section of Marysville Road is in violation of the law, and the driver is subject to penalties.

Penalty for violation of this Ordinance or any provision thereof shall be enforced according to Title 61, Chapter 8, MCA, or any other applicable state or local law.

SECTION 4. SEVERABILITY

Should any court declare any part of this ordinance unconstitutional or invalid, the ordinance as a whole, or any part thereof, other than the part so declared to be unconstitutional or invalid, shall remain in effect.

SECTION 5. EFFECTIVE DATE

This Ordinance shall take effect thirty days after the date of Second Reading and approval of this Ordinance by the County Commission.

SECTION 6. MODIFICATION

This Ordinance may be modified by formal action by the Board of County Commissioners in the same manner as required in the adoption of the Ordinance.

SECTION 7. DURATION

This Ordinance shall remain in effect until repealed or suspended by other legislative or judicial action.

READ and adopted at first reading this _____ day of _____, 2012, by the Lewis and Clark County Commission, State of Montana.

Andy Hunthausen, Chairman

READ and adopted at second and final reading this _____ day of _____, 2012.

Andy Hunthausen, Chairman

ATTEST:

Paulette DeHart, Clerk of the Board



June 18, 2012

Eric Griffin
Lewis & Clark County
3402 Cooney Drive
Helena, MT 59601

RE: Marysville Road Speed Study

Dear Eric,

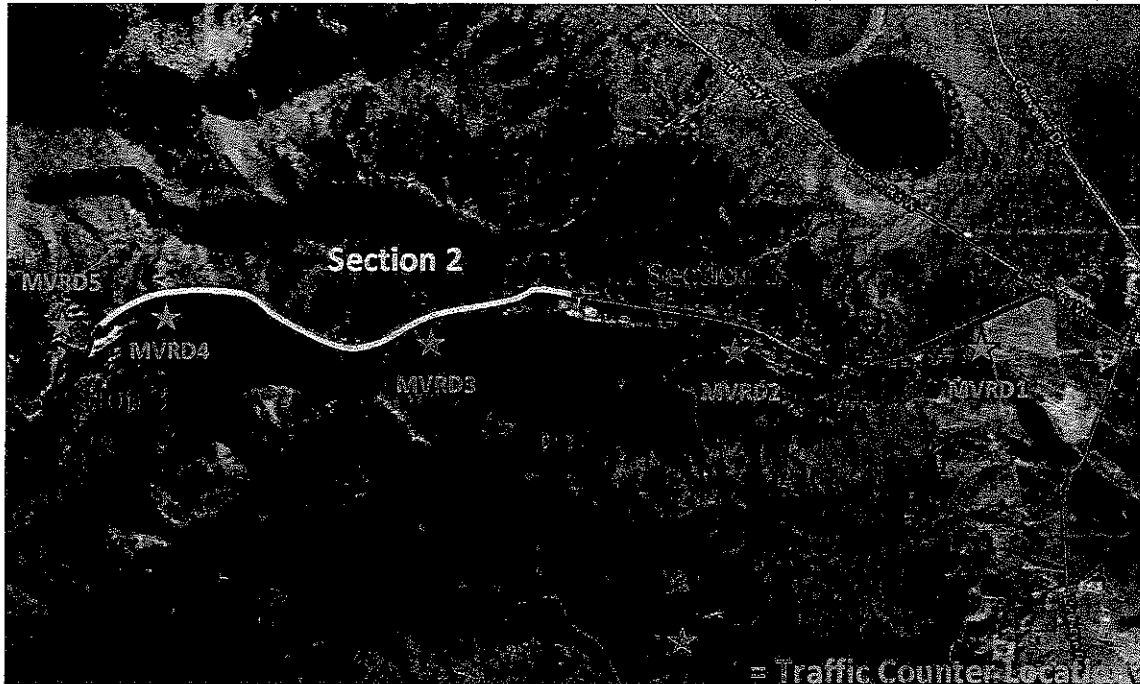
Per your request Abelin Traffic Services (ATS) has reviewed the existing vehicle speeds along Marysville Road west of Lincoln Road. Marysville Road provides access to the community of Marysville and the Great Divide Ski Area. The Drumlummon Mine also uses the road to access its operations to the south of Marysville Road. Marysville Road was fully reconstructed to modern standards in 2009 and is currently maintained by Lewis & Clark County. The road has a posted speed limit of 45 MPH for most of its length. The speed limit decreases to 25 MPH near the town of Marysville. ATS analyzed speed trends on Marysville Road to determine if the current posted speed limit is appropriate for this road based on existing road conditions and travel characteristics.

Existing Conditions

The study roadway begins at an intersection with Lincoln Road and extends west towards Marysville. The newly constructed road is in good condition and has a paved width of 29 feet with 11.5 to 12-foot driving lanes. See **Figure 1** for a map of the study area. Data available from the Montana Department of Transportation indicates that the roadway currently carries an average of 210 Vehicles Per Day. Marysville Road experiences the greatest traffic volumes in the winter while the Great Divide Ski Area is in operation. This study analyzes the summer traffic conditions on this roadway and provides a reasonable evaluation of the relative travel speeds along the road for the majority of the year.

For the purposes of this study ATS broke the road into three different sections. These sections include the portion of road from Lincoln Road to Mile Post 3, Mile Post 3 to the 25 MPH Speed limit change near Marysville, and the 25 MPH section through Marysville.

Figure 1 - Vicinity Map



Road Sections

Section 1 – Lincoln Road to Mile Post 3

Section 1 includes the portion of Marysville Road from the intersection with Lincoln Road to Mile Post 3. The posted speed limit on this section is 45 MPH. This section has a uniform character with good visibility and wide clear zones. The first 1.5 miles of this road is reasonably straight, the road then enters some curves which can be easily driven at 55 MPH or greater and have good visibility. The east entrance to the Drumlummon Mine is located at mile post 2.8. Approximately 80% of the road has passing zones in both directions. Some portions of this section have guard rails protecting the south side of the road. The roadway has a paved width of 29 feet with 11.5-12 foot lanes.

Section 2 – Mile Post 3.0 to Mile Post 5.7

At Mile Post 3.0, the character of Marysville Road changes slightly. Beginning at Mile Post 3 the road has more curves, numerous guard rails, narrower clear zones, a steeper grade, and few passing zones. Several of the curves on Section 2 are not designed for speeds of 55 MPH. The road retains the 29 foot paved surface with 11.5 foot lanes. Section 2 ends where the speed limit drops to 25 MPH at Mile Post 5.7, just east of the western entrance to the Drumlummon mine.

Section 3- Mile Post 5.7 to Marysville

Section 3 begins at Mile Post 5.7. At this location the posted speed limit drops from 45 MPH to 25 MPH. The west entrance to the Drumlummon mine is located at Mile Post 5.8. The entrance is located near a sharp curve in the road with limited visibility. This curve has road sensors installed to warn mine vehicles of approaching traffic. The road then continues into the town of Marysville at Mile Post 6.0. The section ends at milepost 6.1 at the end of the paved section in Marysville.

Crash Data

Abelin Traffic Services obtained crash data for the study roadway from the Montana DOT. It should be noted that the reconstruction of Marysville Road has not been completed for sufficient time to draw accurate conclusions on the effect of the reconstruction on vehicle crash rates. However, it does appear that the vehicle crash rate along the road has decreased since the road reconstruction was completed in 2009. The crash rate prior to 2008 was 5.9 vehicle crashes per year. The crash rate since 2008 has been 4.3 vehicle crashes per year. All of the crashes reported since 2009 have been single vehicle run-off the road accidents or animal collisions. Prior to the road reconstruction, the majority of vehicle crashes occurred in the curves of Section 2. With the new road in place, vehicle crashes are more spread out across the length of Marysville Road.

Speed Data

Vehicle speed data was collected on the four sections of roadway June 6-8 2012. The weather condition during the traffic study was warm and mostly sunny and the roads had very good driving conditions throughout the data collection period. The data was collected continuously using Diamond Unicorn Limited traffic counters to record the individual speed data from every vehicle using the road. The results of the data collection are shown in Table 1.

TABLE 1 – Vehicle Speed Data

	Site 1 Section 1	Site 2 Section 1	Site 3 Section 2	Site 4 Section 2	Site 5 Section 3
Average Speed (MPH)	50.6	54.1	50.6	45.5	22.9
85% Percentile Speed (MPH)	58.8	63.2	58.5	55.6	30.1
10 MPH Pace Speeds	45-55 MPH	45-55 MPH	45-55 MPH	45-55 MPH	20-30 MPH
Percent in Pace	52%	47%	53%	55%	55%
Average Daily Traffic Volume	466	458	426	427	202

The data indicates that vehicle speeds along Marysville Road are well above the posted speed limit. More than 50% of traffic is traveling above the speed limit in Sections 1 and 2. At Site #2 only 12% of

traffic is traveling below the 45 MPH speed limit. The pace speeds on the road are fairly consistent at 45-55 MPH with 47%-55% of vehicles traveling within the pace. The 85th percentile speeds (the speed at which 85% of road users are driving at or below) varies between 56 and 63 MPH along Sections 1 and 2 with only slightly lower speeds in Section 2. Vehicle classification data collected during this study indicates that 6% of the traffic on Marysville Road consists of large mine vehicles.

Based on the speed information, it would be appropriate to set three different speed limits on Marysville Road. In Section 1 where speeds are higher and the road has fewer curves, a 55 MPH speed limit would be appropriate. In Section 2 above Mile Post 3 the speed limit should remain at the posted 45 MPH speed limit to account for the narrower clear zones and additional curves. The 25 MPH speed limit in Section 3 should be maintained as it is currently marked.

Recommendations

✓ It is recommended that the posted speed limit on Marysville Road be increased to 55 MPH from Mile Post 0.0 to Mile Post 3.0. Above Mile post 3.0 the 45 MPH speed limit should be maintained and the 25 MPH speed limit through Marysville should also remain. If you have any questions about these results please feel free to call me at 406-459-1443

Sincerely,

A handwritten signature in black ink, appearing to read 'Bob Abelin', written in a cursive style.

Bob Abelin, P.E.
Abelin Traffic Services, Inc.

Basic Speed Class Summary: MVRD1

(FHWA09)	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10	#11	#12	#13	#14	#15	#16	#17	#18	#19	#20	#21		
Description	1.0 - 10.1 - 15.1 - 20.1 - 25.1 - 30.1 - 35.1 - 40.1 - 45.1 - 50.1 - 55.1 - 60.1 - 65.1 - 70.1 - 75.1 - 80.1 - 85.1 - 90.1 - 95.1 - 100.1																					Total	
Log	10.0	15.0	20.0	25.0	30.0	35.0	40.0	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0	90.0	95.0	100.0	Other	Excess		
TOTAL COUNT : #1.	0	0	0	1	0	8	20	89	137	112	52	19	8	2	0	0	0	0	0	0	0	2	450
#3.	0	0	1	3	2	7	14	52	96	103	67	47	20	10	2	0	0	0	0	0	0	0	424
	0	0	1	4	2	15	34	141	233	215	119	66	28	12	2	0	0	0	0	0	0	2	874
Percents : #1.	0%	0%	0%	0%	0%	2%	4%	20%	30%	25%	12%	4%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%	51%
#3.	0%	0%	0%	1%	0%	2%	3%	12%	23%	24%	16%	11%	5%	2%	0%	0%	0%	0%	0%	0%	0%	0%	49%
	0%	0%	0%	0%	0%	2%	4%	16%	27%	25%	14%	8%	3%	1%	0%	0%	0%	0%	0%	0%	0%	0%	
Average : #1.	0	0	0	0	0	0	0	2	3	2	1	0	0	0	0	0	0	0	0	0	0	8	
#3.	0	0	0	0	0	0	0	1	2	2	1	1	0	0	0	0	0	0	0	0	0	7	
	0	0	0	0	0	0	0	3	5	4	2	1	0	0	0	0	0	0	0	0	0	15	
Days & ADT : #1.	1.8	240																					
#3.	1.8	226																					
	1.8	466																					
Avg,50,67,85% : #1.	49.1	48.8	52.3	56.9	45.0 - 54.9	56%																	
Pace (pace %) #3.	52.1	52.2	55.9	62.1	45.2 - 55.1	47%																	
	50.6	50.4	53.6	58.8	45.2 - 55.1	52%																	

Basic Speed Class Summary: MVRD2

(FHWA09)	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10	#11	#12	#13	#14	#15	#16	#17	#18	#19	#20	#21		
	1.0 - 10.1 - 15.1 - 20.1 - 25.1 - 30.1 - 35.1 - 40.1 - 45.1 - 50.1 - 55.1 - 60.1 - 65.1 - 70.1 - 75.1 - 80.1 - 85.1 - 90.1 - 95.1 - 100.1																						
Description	10.0	15.0	20.0	25.0	30.0	35.0	40.0	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0	90.0	95.0	100.0	Other	Excess	Total	
TOTAL COUNT :	#1.	0	0	0	2	0	1	8	42	90	102	78	48	32	6	3	0	0	0	0	0	1	413
	#3.	0	0	0	0	0	0	2	41	119	85	87	61	35	9	7	0	0	0	0	0	0	446
		0	0	0	2	0	1	10	83	209	187	165	109	67	15	10	0	0	0	0	0	1	859
Percents :	#1.	0%	0%	0%	0%	0%	0%	2%	10%	22%	25%	19%	12%	8%	1%	1%	0%	0%	0%	0%	0%	0%	48%
	#3.	0%	0%	0%	0%	0%	0%	9%	27%	19%	20%	14%	8%	2%	2%	0%	0%	0%	0%	0%	0%	0%	52%
		0%	0%	0%	0%	0%	1%	10%	24%	22%	19%	13%	8%	2%	1%	0%	0%	0%	0%	0%	0%	0%	
Average :	#1.	0	0	0	0	0	0	1	2	2	2	1	1	0	0	0	0	0	0	0	0	0	9
	#3.	0	0	0	0	0	0	1	3	2	2	1	1	0	0	0	0	0	0	0	0	0	10
		0	0	0	0	0	0	2	5	4	4	2	2	0	0	0	0	0	0	0	0	0	19
Days & ADT :	#1.	1.8	220																				
	#3.	1.8	237																				
		1.8	458																				
Avg,50,67,85%:	#1.	53.6	53.0	57.1	62.9	47.3	57.2	47%															
Pace (pace %)	#3.	54.6	53.6	57.8	63.5	46.4	56.3	46%															
		54.1	53.3	57.6	63.2	46.0	55.9	47%															

Basic Speed Class Summary: MVRD3

(FHWA09)	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10	#11	#12	#13	#14	#15	#16	#17	#18	#19	#20	#21		
	1.0 - 10.1 - 15.1 - 20.1 - 25.1 - 30.1 - 35.1 - 40.1 - 45.1 - 50.1 - 55.1 - 60.1 - 65.1 - 70.1 - 75.1 - 80.1 - 85.1 - 90.1 - 95.1 - 100.1																						
Description	10.0 - 15.0 - 20.0 - 25.0 - 30.0 - 35.0 - 40.0 - 45.0 - 50.0 - 55.0 - 60.0 - 65.0 - 70.0 - 75.0 - 80.0 - 85.0 - 90.0 - 95.0 - 100.0 - Other																					Excess	Total
TOTAL COUNT :	#1.	0	0	1	1	6	6	20	89	108	90	58	19	7	2	0	0	0	0	0	0	0	407
	#3.	0	0	0	0	0	1	9	45	134	108	65	49	11	5	1	0	0	0	0	0	429	
		0	0	1	1	6	7	29	134	242	198	123	68	18	7	1	0	0	0	0	0	836	
Percents :	#1.	0%	0%	0%	0%	1%	1%	5%	22%	27%	22%	14%	5%	2%	0%	0%	0%	0%	0%	0%	0%	49%	
	#3.	0%	0%	0%	0%	0%	0%	2%	10%	31%	25%	15%	11%	3%	1%	0%	0%	0%	0%	0%	0%	51%	
		0%	0%	0%	0%	1%	1%	3%	16%	29%	24%	15%	8%	2%	1%	0%	0%	0%	0%	0%	0%	0%	
Average :	#1.	0	0	0	0	0	0	2	2	2	1	0	0	0	0	0	0	0	0	0	0	7	
	#3.	0	0	0	0	0	0	1	3	2	1	1	0	0	0	0	0	0	0	0	0	8	
		0	0	0	0	0	0	3	5	4	2	1	0	0	0	0	0	0	0	0	0	15	
Days & ADT :	#1.	1.9	207																				
	#3.	1.9	219																				
		1.9	426																				
Avg,50,67,85%:	#1.	49.0	48.5	52.5	57.3	45.0 - 54.9	49%																
Pace (pace %)	#3.	52.0	51.7	54.4	61.2	45.2 - 55.1	56%																
		50.6	50.1	53.5	58.5	45.2 - 55.1	53%																

Basic Speed Class Summary: MVRD4

(DEFAULTX)		#1	#2	#3	#4	#5	#6	#7	#8	#9	#10	#11	#12	#13	#14	#15	#16	Total	
		0.0 - 20.0	20.0 - 25.0	25.0 - 30.0	30.0 - 35.0	35.0 - 40.0	40.0 - 45.0	45.0 - 50.0	50.0 - 55.0	55.0 - 60.0	60.0 - 65.0	65.0 - 70.0	70.0 - 75.0	75.0 - 80.0	80.0 - 85.0	85.0 - 90.0	Other	Empty	Total
TOTAL COUNT :		#1. 0	2	4	7	10	10	42	88	127	89	19	6	1	1	0	0	1	407
	#3.	0	0	1	0	1	1	17	62	143	102	57	32	9	4	1	0	1	431
		<u>0</u>	<u>2</u>	<u>5</u>	<u>7</u>	<u>11</u>	<u>11</u>	<u>59</u>	<u>150</u>	<u>270</u>	<u>191</u>	<u>76</u>	<u>38</u>	<u>10</u>	<u>5</u>	<u>1</u>	<u>0</u>	<u>2</u>	<u>838</u>
Percents :		#1. 0%	0%	1%	2%	2%	2%	10%	22%	31%	22%	5%	1%	0%	0%	0%	0%	0%	49%
	#3.	0%	0%	0%	0%	0%	0%	4%	14%	33%	24%	13%	7%	2%	1%	0%	0%	0%	51%
		<u>0%</u>	<u>0%</u>	<u>1%</u>	<u>1%</u>	<u>1%</u>	<u>1%</u>	<u>7%</u>	<u>18%</u>	<u>32%</u>	<u>23%</u>	<u>9%</u>	<u>5%</u>	<u>1%</u>	<u>1%</u>	<u>0%</u>	<u>0%</u>	<u>0%</u>	<u>0%</u>
Average :		#1. 0	0	0	0	0	0	1	2	3	2	0	0	0	0	0	0	0	8
	#3.	0	0	0	0	0	0	0	1	3	2	1	1	0	0	0	0	0	8
		<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>1</u>	<u>3</u>	<u>6</u>	<u>4</u>	<u>1</u>	<u>1</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>16</u>
Days & ADT :		#1. 1.9	207																
	#3.	1.9	220																
		<u>1.9</u>	<u>427</u>																
Avg,50,67,85%:		#1. 55.3	56.8	59.0	62.9	55.1 - 65.0	53%												
	Pace (pace %)	#3. 60.4	59.5	62.9	68.2	55.1 - 65.0	57%												
		<u>57.9</u>	<u>58.2</u>	<u>61.4</u>	<u>65.6</u>	<u>55.1 - 65.0</u>	<u>55%</u>												

Basic Speed Class Summary: MVRD5

(FHWA09)		#1	#2	#3	#4	#5	#6	#7	#8	#9	#10	#11	#12	#13	#14	#15	#16	#17	#18	#19	#20	#21			
		1.0 - 10.1 - 15.1 - 20.1 - 25.1 - 30.1 - 35.1 - 40.1 - 45.1 - 50.1 - 55.1 - 60.1 - 65.1 - 70.1 - 75.1 - 80.1 - 85.1 - 90.1 - 95.1 - 100.1																							
Description		Lea																					Other	Free	Total
TOTAL COUNT:	#1.	2	26	48	49	32	23	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	182
	#3.	3	8	44	78	47	32	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	215
		5	34	92	127	79	55	2	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	397
Percents:	#1.	1%	14%	26%	27%	18%	13%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	46%
	#3.	1%	4%	20%	36%	22%	15%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	54%
		1%	9%	23%	32%	20%	14%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
Average:	#1.	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
	#3.	0	0	1	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
		0	1	2	3	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9
Days & ADT:	#1.	1.9	92																						
	#3.	1.9	109																						
		1.9	202																						
Avg,50,67,85%:	#1.	21.7	22.0	23.9	28.5	16.2 - 26.1	53%																		
Pace (pace %)	#3.	23.8	23.4	26.8	31.8	20.2 - 30.1	58%																		
		22.9	22.7	25.6	30.1	17.2 - 27.1	55%																		

