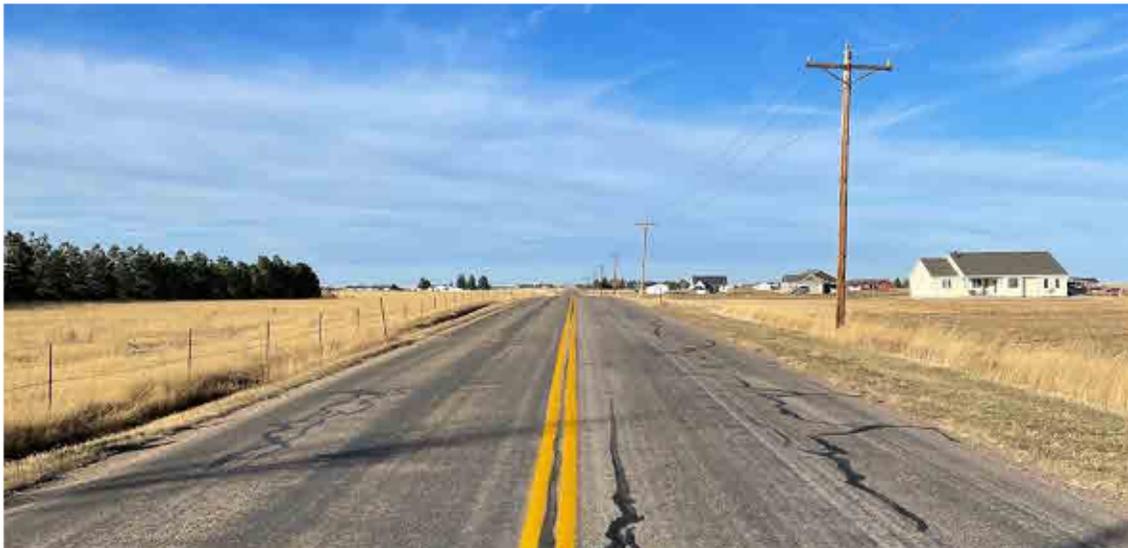




MR. JOHN POELMA

Laramie County Public Works
13797 Prairie Center Circle
Cheyenne, WY 82009

SPEED STUDY



WESTEDT ROAD (CR 132) LARAMIE COUNTY, WYOMING



INBERG-MILLER ENGINEERS

350 Parsley Blvd
Cheyenne, WY 82007
(307) 635-6827
www.inberg-miller.com

23682-HE



INBERG-MILLER ENGINEERS

Casper | Cheyenne | Gillette | Green River | Riverton | Greeley, CO

June 14, 2024

23682-HE

PDF REPORT EMAILED: JOHN.POELMA@LARAMIECOUNTYWY.GOV
THIS CONSTITUTES THE ORIGINAL

Mr. John Poelma
Assistant Director
Laramie County Public Works
13797 Prairie Center Circle
Cheyenne, Wyoming 82009

RE: WESTEDT ROAD (CR 132)
SPEED LIMIT EVALUATION REPORT
LARAMIE COUNTY, WYOMING

Dear Mr. Poelma:

This letter transmits our speed limit evaluation report for the above-referenced project. The report outlines our findings for the recommendation of speed limit as requested by Laramie County Public Works.

It has been a pleasure participating in this project.

If you have any questions or comments, please contact us at (307) 635-6827.

Sincerely,

INBERG-MILLER ENGINEERS

Daniel J. Hayes, P.E.
Civil Engineer
dhayes@inberg-miller.com

REVIEWED BY

Gary L. Steele, P.E.
Senior Civil Engineer
gsteele@inberg-miller.com

DJH:GLS:bb\P\23682-HE LARAMIE COUNTY PUBLIC WORKS County Road Speed
Studies\Civil\Christensen Rd\23682-HE Christensen Road Speed Study Report.docx

Enclosures as stated



Civil | Geotechnical | Environmental | Materials Testing | Surveying | Drilling
Scan the QR Code using your mobile device to learn more about our services.



Table of Contents

1.0 INTRODUCTION 1
2.0 TRAFFIC COUNT 1
3.0 ROADWAY SAFETY 1
4.0 DECLARATION OF SPEED LIMIT 2

APPENDICES

Appendix A- Road Overview

Appendix B- Traffic Counts

Appendix C- Speed Study Data Overview

Appendix D- Crash Data

Appendix E- Sign Locations

Appendix F- USLimits 2 Report

1.0 INTRODUCTION

Westedt Road (CR 132) is a paved county road from Mile Point (MP) 0.0 to MP 2.0 with a speed limit of 40 mph as shown in figure 1. The main traffic generator for Westedt Road is residential access. The roadway width is an average of 28 feet edge to edge with 8 major access points and 16 minor access points which translates to 12 access points per mile. The type of terrain is flat and the adjacent land use is characterized as residential.



Figure 1: 40 mph speed limit sign at MP 1.9

2.0 TRAFFIC COUNT

The automated traffic counter was located at MP 0.20 and is shown in Appendix A. The traffic counter results are shown in Appendix B. The traffic count was recorded from November 7, 2023, to November 20, 2023, with a total of 12,657 vehicles. The Average Daily Traffic (ADT) was recorded at 904 vehicles a day and the Average Daily Truck Traffic (ADTT) was recorded at 47 trucks a day. The 85th percentile speed was calculated at 52 mph with the 50th percentile speed at 44 mph. The pace speed included 53.8% of vehicles recorded and was calculated from 41 mph to 50 mph. According to the standards, the upper bound of the recommended speed limit is the rounded 85th percentile speed that was determined at 52 mph. The lower bound is either the rounded 50th-percentile speed or the lower limit of the 10-mph pace which was determined at 44 mph. Appendix C shows a table with general information, roadway characteristics, crash data, and the range of the speed limit.

3.0 ROADWAY SAFETY

Prior to conducting the speed study on Westedt Road (CR 132), a safety assessment was performed on November 10, 2023. This included a sign inventory, crash analysis, and a ball bank test.

Table 1 shows the detailed 10-year crash history from 2013 to 2022. 5 crashes occurred with 1 crash resulting in an injury. All five crashes were due to different reasons. The time of day showed that 3 crashes occurred between 10:00 PM to 12:59 AM. The most crashes for a one-mile section of the road occurred between MP 0.6 to MP 1.6 where 4 crashes occurred. The location of each crash is shown on a map in Appendix D.

Table 1: Detailed 10-Year Crash History

MP	Year	Month	Day of the Week	Time	Crash Severity	First Harmful Event
0.234	2022	August	Wednesday	6 to 6:59 PM	Property Damage Only	Delineator Post
0.626	2020	August	Saturday	12 to 12:59 AM	Property Damage Only	Deer
0.765	2022	May	Saturday	6 to 6:59 PM	Property Damage Only	Motor Vehicle in Transport on Roadway
1.491	2018	November	Thursday	10 to 10:59 PM	Property Damage Only	Other NON-Fixed Object
1.650	2022	August	Tuesday	10:00 to 10:59 PM	Suspected Minor Injury	Other Non-Collision (MC loss of Control)

Table 2 shows the sign inventory for Westedt Road (CR 132). Every sign on the road was inventoried and given a GPS location and a picture. The condition of each sign was obtained visually with the wear and type of sheeting of the sign rated. There are a total of 7 signs located between MP 0.0 to MP 2.0. The visual inspection identified 1 sign in poor condition and 6 signs had reflective sheeting. The locations of all 7 signs are shown on a map in Appendix E. All the signs in poor condition should be replaced and all the signs with old sheeting should be updated with new ASTM sheeting when the sign is replaced in the future.

Table 2: Sign Inventory

MP	Sign	Travel Direction	MUTCD	Reflectivity	Condition	Comment
0.0	Stop	South	R1-1	Y	Fair	Chips
0.0	Buckle UP Symbol	North		Y	Good	
0.0	Buckle Up State Law	North		N	Poor	Bullet, Cracked
0.1	40 mph Speed Limit	North	R2-1	Y	Good	
1.9	40 mph Speed Limit	South	R2-1	Y	Good	
1.9	Intersection Ahead	North	W2-1	Y	Good	
2.0	Stop	North	R1-1	Y	Good	

4.0 DECLARATION OF SPEED LIMIT

Posted speed limits (other than statutory speed limits) on Wyoming local roads should be documented by a Declaration of Speed Limit form as shown in Figure 2. Any speed limit change from the statutory limits shall be verified and sealed by a professional engineer in Wyoming. The form, with appropriate background information, should be presented to the county commission where a resolution approving the proposed speed limit should be approved. The resolution number should be added to the declaration of speed limit form. The form is then returned to appropriate county officials so that the necessary signing changes can be made. Enforcement of the new speed limit cannot occur until the appropriate signs giving notice of the new speed limit have been erected.

According to the speed study data overview summarized in Appendix C, the acceptable range of speed limit on Wested Road (CR 132) is between 50 and 60 mph.

It is recommended that the speed limit be posted at 50 mph due to:

- ❖ Within acceptable speed limit range.
- ❖ 85th percentile speed

Post a 50-mph speed limit sign by replacing the existing 40-mph speed limit sign at MP 0.1 for northbound traffic and MP 1.9 for southbound traffic.

A US Limits 2-speed zone report was completed through the Federal Highway Administration to verify our recommended speed limit. The USLimits 2 report came back at a 50-mph speed recommendation based on inputs from our speed study report. This report can be found in Appendix F. A Laramie County representative should consider safety measures at adverse curves such as signage, advisory speeds, delineation, shoulder widening, or guardrails.

Figure 2. Declaration of Speed Limit Form for Paved Roads

DECLARATION OF SPEED LIMIT ON PAVED ROADS

LOCATION: County Road 132, Westedt Road, MP 0.0 to MP 2.0.

Method Used: Visual inspection and engineering judgment.
Free flow spot speeds to determine 85th percentile speed and pace.
Procedures for locally establishing speed limits were followed.

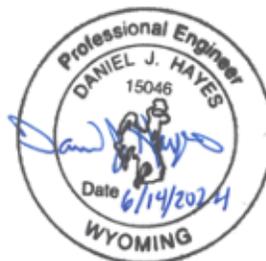
Summary of Results:

The existing speed limit is 40 mph. The 85th percentile speeds was recorded at 52.0 mph and the 50th percentile speed at 44 mph. The 10-mph pace speed was recorded from 41 mph to 50 mph. The roadway width is 28 feet and the road has 24 access points along the section which translates into 12 access points per mile. There were 5 crashes in the last 10 years with 1 crashes resulting in injuries.

Recommendations:

It is recommended that the speed limit be set at 50 mph for this section of the road. Post a 50-mph speed limit by replacing the existing 40-mph speed limit sign at MP 0.0 for northbound traffic and MP 1.9 for southbound traffic. **A Laramie County representative should consider safety measures at adverse curves such as signage, advisory speeds, delineation, shoulder widening, or guardrails.**

Data Collected by. Hayden Altenburg 11/10/2023 Data Summarized by. Daniel Hayes, P.E. 6/12/2024
Printed Name Initials Printed Name Initials



Approved. Daniel Hayes, P.E. 6/12/2024
Professional Engineer P.E. Seal Date

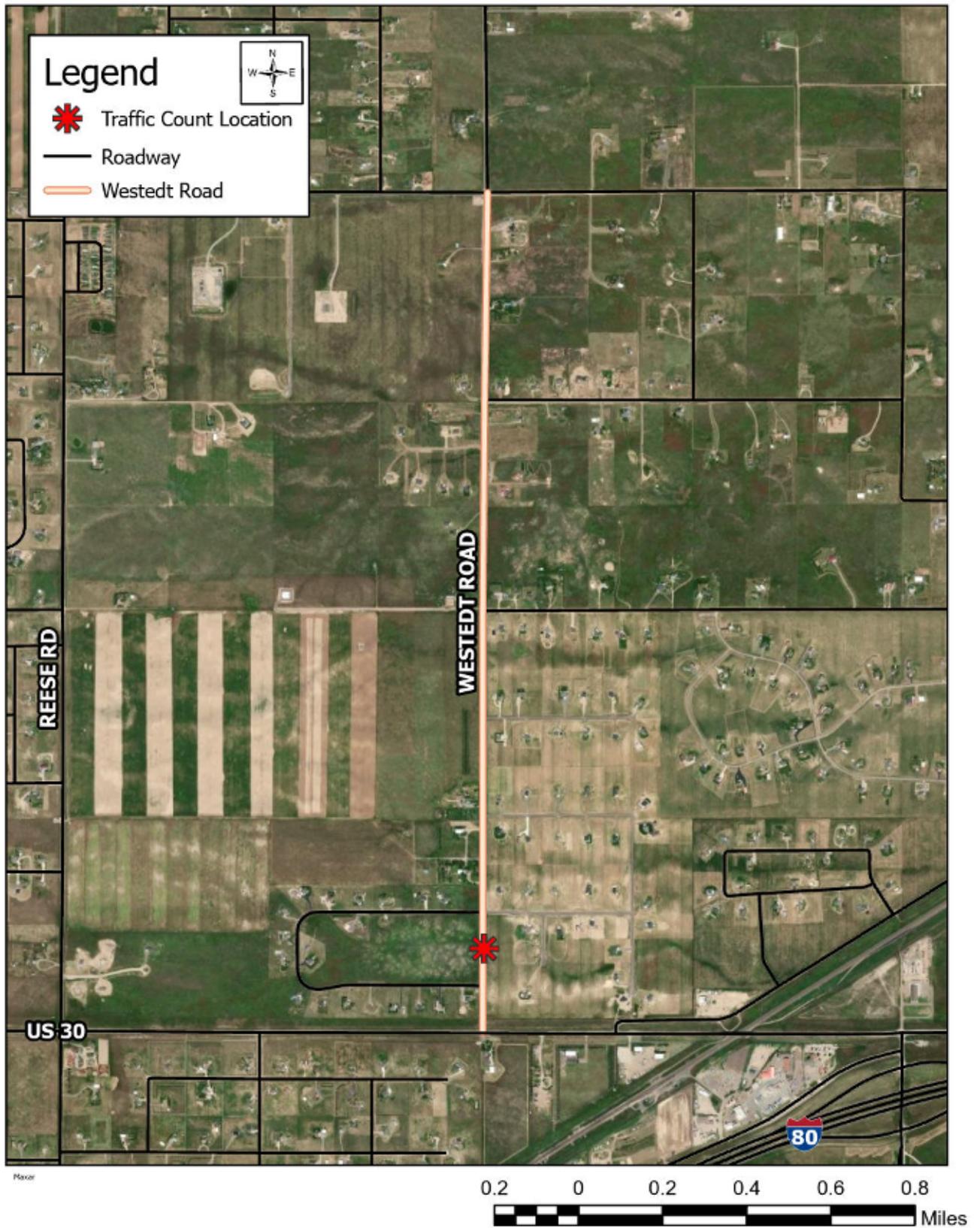
ORDER TO ESTABLISH RESTRICTED SPEED ZONE

The County Commission approves changing the speed limit to 50 miles per hour on the paved roadway section described above.

Resolution number: _____

Date: _____

Westedt Road - Location Map

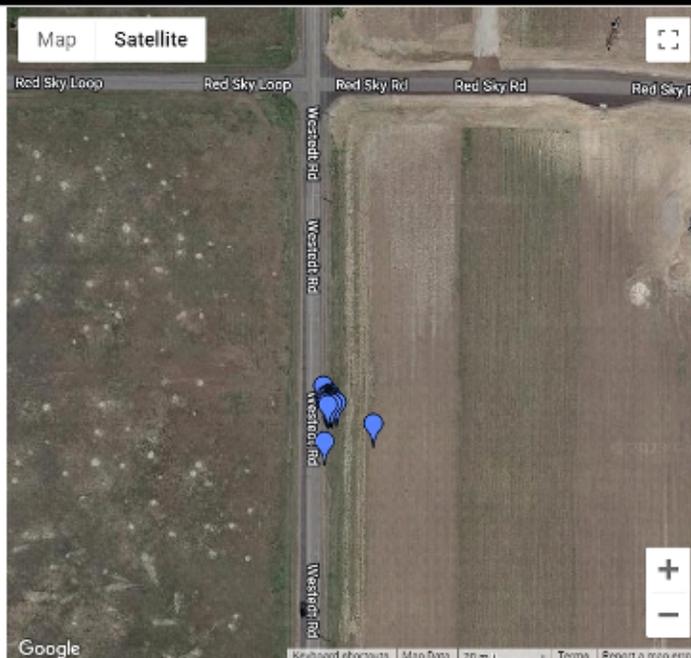


SPEED DATA ANALYSIS

Location



Latitude: 41.162301
Longitude: -104.674780



Analysis Time Period



Start: 11/7/2023 3:10 PM
End: 11/20/2023 11:55 AM

Vehicles Analyzed



12,657

Speed Limit



40

Total Enforceable Violations



9,729

Average Speed



45

85th Percentile Speed



52

Fastest Speed



90

10 MPH Pace Speed



41-50

Slowest Speed



1

Default Report Title
 Use Preferences to Define Titles

Site Code: Westedt Road
 Station ID: ~550 ft South of Red Sky Rd
 Start Date: 11/7/2023
 End Date: 11/20/2023

Comment 1:
 Serial Number: 41396
 Latitude: 41.162301
 Longitude: -104.674780
 GPS Accuracy: 17.75 ft

Combined Lanes 11/7/2023 to 11/20/2023

Peak Analysis

Classes Excluded From Peaks: None

Date	AM Peak	Hour Volume	Highest Interval Time	Highest Interval Volume	Peak Hour Factor	Pm Peak	Hour Volume	Highest Interval Time	Highest Interval Volume	Peak Hour Factor
11/7/2023	No Volume					5:28 PM	113	5:31 PM	34	0.83
11/8/2023	8:11 AM	123	8:12 AM	38	0.81	5:48 PM	111	6:12 PM	34	0.82
11/9/2023	7:42 AM	118	7:50 AM	34	0.87	5:42 PM	121	6:21 PM	43	0.70
11/10/2023	10:35 AM	76	10:45 AM	23	0.83	5:56 PM	96	6:16 PM	33	0.73
11/11/2023	10:39 AM	75	11:18 AM	24	0.78	12:25 PM	76	12:47 PM	23	0.83
11/12/2023	10:56 AM	57	11:32 AM	19	0.75	2:11 PM	84	2:11 PM	27	0.78
11/13/2023	7:59 AM	121	8:33 AM	37	0.82	5:29 PM	113	6:13 PM	40	0.71
11/14/2023	7:45 AM	116	8:27 AM	37	0.78	5:36 PM	122	6:09 PM	41	0.74
11/15/2023	8:05 AM	112	8:11 AM	35	0.80	5:07 PM	121	5:07 PM	45	0.67
11/16/2023	7:42 AM	97	8:10 AM	29	0.84	4:57 PM	118	5:13 PM	34	0.87
11/17/2023	8:01 AM	98	8:08 AM	31	0.79	5:48 PM	119	6:02 PM	39	0.76
11/18/2023	10:14 AM	57	10:42 AM	20	0.71	4:44 PM	105	5:27 PM	36	0.73
11/19/2023	10:57 AM	73	11:41 AM	32	0.57	12:35 PM	85	12:43 PM	28	0.76
11/20/2023	8:02 AM	94	8:29 AM	28	0.84	No Volume				

Axle Statistics

# Axles	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Count	11998	229	238	163	24	4	0	1	0	0	0	0	0	0	0
Avg.	127.8	310.5	442.2	682.4	727.5	763.5	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

WB
 Axles Per Vehicle: 2.1041

AADT

Date	Lane	Volume	x	User	x	Daily	=	ADT	x	Season	=
11/7/2023	A to B, None Specified	164		1.00		1.00		164		1.00	
11/7/2023	B to A, None Specified	299		1.00		1.00		299		1.00	
11/7/2023	Day Total	463						463			
11/8/2023	A to B, None Specified	542		1.00		1.00		542		1.00	
11/8/2023	B to A, None Specified	539		1.00		1.00		539		1.00	
11/8/2023	Day Total	1,081						1,081			
11/9/2023	A to B, None Specified	563		1.00		1.00		563		1.00	
11/9/2023	B to A, None Specified	555		1.00		1.00		555		1.00	
11/9/2023	Day Total	1,118						1,118			
11/10/2023	A to B, None Specified	524		1.00		1.00		524		1.00	
11/10/2023	B to A, None Specified	515		1.00		1.00		515		1.00	
11/10/2023	Day Total	1,039						1,039			
11/11/2023	A to B, None Specified	397		1.00		1.00		397		1.00	
11/11/2023	B to A, None Specified	410		1.00		1.00		410		1.00	
11/11/2023	Day Total	807						807			
11/12/2023	A to B, None Specified	380		1.00		1.00		380		1.00	
11/12/2023	B to A, None Specified	384		1.00		1.00		384		1.00	
11/12/2023	Day Total	764						764			
11/13/2023	A to B, None Specified	516		1.00		1.00		516		1.00	
11/13/2023	B to A, None Specified	519		1.00		1.00		519		1.00	
11/13/2023	Day Total	1,035						1,035			
11/14/2023	A to B, None Specified	522		1.00		1.00		522		1.00	

Default Report Title
 Use Preferences to Define Titles

Site Code: Westedt Road
 Station ID: ~550 ft South of Red Sky Rd
 Start Date: 11/7/2023
 End Date: 11/20/2023

Comment 1:
 Serial Number: 41396
 Latitude: 41.162301
 Longitude: -104.674780
 GPS Accuracy: 17.75 ft

Date	Lane	Volume	x	User	x	Daily	=	ADT	x	Season	=
11/14/2023	B to A, None Specified	515		1.00		1.00		515		1.00	
11/14/2023	Day Total	1,037						1,037			
11/15/2023	A to B, None Specified	532		1.00		1.00		532		1.00	
11/15/2023	B to A, None Specified	540		1.00		1.00		540		1.00	
11/15/2023	Day Total	1,072						1,072			
11/16/2023	A to B, None Specified	541		1.00		1.00		541		1.00	
11/16/2023	B to A, None Specified	542		1.00		1.00		542		1.00	
11/16/2023	Day Total	1,083						1,083			
11/17/2023	A to B, None Specified	549		1.00		1.00		549		1.00	
11/17/2023	B to A, None Specified	562		1.00		1.00		562		1.00	
11/17/2023	Day Total	1,111						1,111			
11/18/2023	A to B, None Specified	438		1.00		1.00		438		1.00	
11/18/2023	B to A, None Specified	438		1.00		1.00		438		1.00	
11/18/2023	Day Total	876						876			
11/19/2023	A to B, None Specified	402		1.00		1.00		402		1.00	
11/19/2023	B to A, None Specified	415		1.00		1.00		415		1.00	
11/19/2023	Day Total	817						817			
11/20/2023	A to B, None Specified	247		1.00		1.00		247		1.00	
11/20/2023	B to A, None Specified	107		1.00		1.00		107		1.00	
11/20/2023	Day Total	354						354			
Total		12657						12657			
Average		904						904			

SPEED STUDY DATA OVERVIEW (WESTEDT ROAD CR 132)

GENERAL INFORMATION	
LOCAL JURISDICTION:	Laramie County
ROUTE:	CR 132
LOCATION:	Westedt Road
DATE:	6/12/2024

AUTOMATED TRAFFIC COUNT VALUES	
85th PERCENTILE:	52.0 mph
50th PERCENTILE:	44 mph
PACE SPEED:	41 – 50 mph
AVERAGE DAILY TRAFFIC:	904 vehicles a day
AVERAGE DAILY TRUCK TRAFFIC:	47 trucks a day

ROADWAY CHARACTERISTICS	
ROADWAY LENGTH:	2.0 miles
NUMBER OF ACCESS POINTS:	24 access points
ACCESS POINTS PER MILE:	12 access points per mile
ROADWAY WIDTH:	28 feet
ADJACENT LAND-USE:	Residential/Agriculture
TYPE OF TERRAIN:	Rolling

HISTORICAL CRASH DATA	
FATAL:	0
INJURY:	1
PDO:	4
EPDO:	7.5
EPDO PER MILE:	3.75

RANGE OF SPEED LIMIT (MAXIMUM = 65 MPH)	
PREFERRED SPEED LIMIT:	55 mph
LOWEST ACCEPTABLE SPEED LIMIT:	45 mph

SEGMENT CRASH HISTORY REPORT FOR WESTEDT RD (ML6754B) FROM MILE POST 0 TO 2 FOR THE YEARS 2013 - 2022

LRS ID	CRASH STREET	MILE POST	CROSS STREET	DATE	TIME	CRASH SEVERITY	FATAL	INJURY	FIRST HARMFUL EVENT (FHE)	FHE LOCATION	MANNER OF COLLISION	JUNCTION RELATION	VEHICLE		DRIVER ACTION	PERSON TYPE	SAFETY EQUIPMENT USED	INJURY STATUS	LIGHTING	WEATHER CONDITION	ROAD CONDITION	ALCOHOL INVOLVED	DRUGS INVOLVED	LATITUDE	LONGITUDE	CRASH CASE #			
													#	DIRECTION													MANEUVER		
ML6754B	WESTEDT RD CR 132-1	0.234		08/31/2022	1803	PROPERTY DAMAGE ONLY	0	0	Delineator Post	Off Roadway	Not a Collision w/2 Vehicles in Transport	Non-Junction	1	North	Straight Ahead	1	No Improper Driving	1	Driver	Shoulder and Lap Belt	No Apparent Injury	Daylight	Clear	Dry	N	N	41.162826	-104.674855	22-16880
ML6754B	WESTEDT RD CR 132-1	0.626		08/22/2020	37	PROPERTY DAMAGE ONLY	0	0	Deer	On Roadway			1		Straight Ahead	1	No Improper Driving	1	Driver	Shoulder and Lap Belt	No Apparent Injury	Darkness Unlighted	Clear	Dry			41.168545	-104.674786	20-15684
ML6754B	WESTEDT RD CR 132-1	0.765		05/07/2022	1805	PROPERTY DAMAGE ONLY	0	0	Motor Vehicle in Transport on Roadway	On Roadway	Angle (Front to Side), Opposing Direction	Private Road Junction	1	West	Turning Left	1	Failed to Yield ROW	1	Driver	Shoulder and Lap Belt	No Apparent Injury	Daylight	Clear	Dry	N	N	41.170582	-104.674791	22-8510
													2	South	Straight Ahead	2	No Improper Driving	1	Passenger	Shoulder and Lap Belt	No Apparent Injury								
													2			2		2	Driver	Shoulder and Lap Belt	No Apparent Injury								
													2			2		2	Passenger	Shoulder and Lap Belt	No Apparent Injury								
													2			2		2	Passenger	Shoulder and Lap Belt	No Apparent Injury								
													2			2		2	Passenger	Shoulder and Lap Belt	No Apparent Injury								
ML6754B	WESTEDT RD CR 132-1	1.491		11/29/2018	2203	PROPERTY DAMAGE ONLY	0	0	Other NON-Fixed Object	Off Roadway	Not a Collision w/2 Vehicles in Transport	Non-Junction	1	North	Straight Ahead	1	Ran Off Road	1	Driver	Shoulder and Lap Belt	No Apparent Injury	Darkness Unlighted	Clear	Dry	N	N	41.181168	-104.674527	18-25816
													1			1		1	Passenger	Shoulder and Lap Belt	No Apparent Injury								
													1			1		1	Passenger	Shoulder and Lap Belt	No Apparent Injury								
ML6754B	WESTEDT RD CR 132-1	1.650		08/16/2022	2223	SUSPECTED MINOR INJURY	0	1	Other Non-Collision (MC Loss of Control)	On Roadway	Not a Collision w/2 Vehicles in Transport	Non-Junction	1	South	Straight Ahead	1	No Improper Driving	1	Driver	None Used	Suspected Minor Injury	Darkness Unlighted	Clear	Dry	N	N	41.183479	-104.674680	2022-15749

REPORT SUMMARY

TOTAL CRASHES: 5
FATAL CRASHES: 0 **TOTAL FATALITIES:** 0
INJURY CRASHES: 1 **TOTAL INJURIES:** 1
PDO CRASHES: 4

CRASH COUNTS

SEVERITY COUNTS

INJURY COUNTS

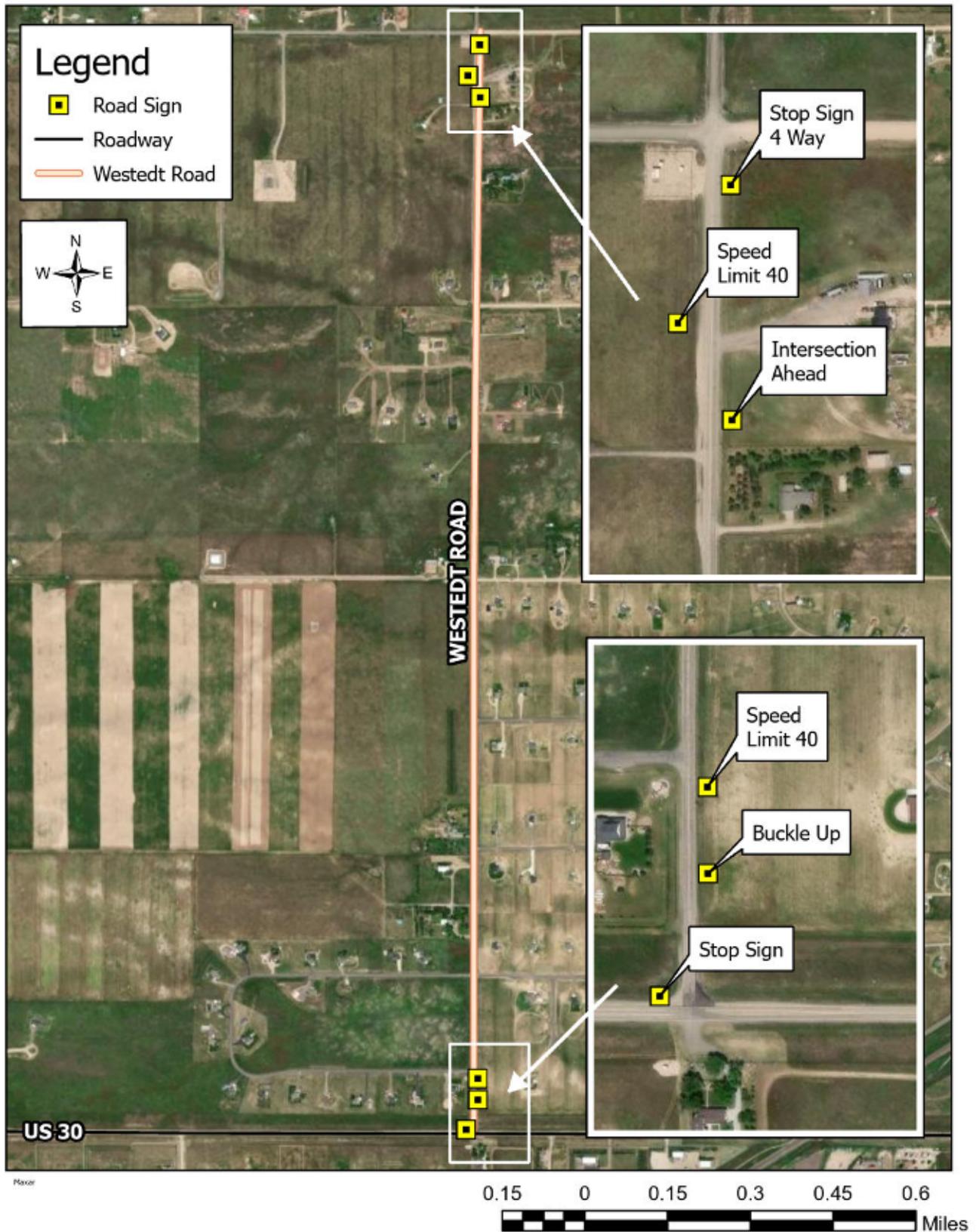
YEAR	CRASH COUNTS				SEVERITY COUNTS			INJURY COUNTS				
	FATAL CRASHES	INJURY CRASHES	PDO CRASHES	TOTAL CRASHES	CRITICAL CRASHES*	SERIOUS CRASHES*	DAMAGE CRASHES*	FATAL INJURIES	SERIOUS INJURIES	MINOR INJURIES	POSSIBLE INJURIES	NO INJURIES
2018	0	0	1	1	0	0	1	0	0	0	0	3
2020	0	0	1	1	0	0	1	0	0	0	0	1
2022	0	1	2	3	0	1	2	0	0	1	0	7
	0	1	4	5	0	1	4	0	0	1	0	11

- * PDO = Property Damage Only Crashes
- * Critical Crashes = Fatal & Suspected Serious Injury Crashes
- * Serious Crashes = Suspected Minor Injury & Possible Injury Crashes
- * Damage Crashes = No Apparent Injury & Unknown Injury Crashes

Westedt Road - Crash Location Map



Westedt Road - Sign Location Map



USLIMITS2 Speed Zoning Report

Project Overview

Project Name: Laramie County Speed Studies

Analyst: Daniel Hayes

Date: 2024-06-12

Basic Project Information

Project Number: IME 23682-HE
Route Name: Westedt Road CR 132
From: MP 0.0 U.S. Highway 30
To: MP 2.0 East Fourmile Road
State: Wyoming
County: Laramie County
City: Rural
Route Type: Road Section in Undeveloped Area
Route Status: Existing

Crash Data Information

Crash Data Years: 10.00
Crash AADT: 904 veh/day
Total Number of Crashes: 5
Total Number of Injury Crashes: 1
Section Crash Rate: 76 per 100 MVM
Section Injury Crash Rate: 15 per 100 MVM
Crash Rate Average for Similar Roads: 118
Injury Rate Average for Similar Roads: 44

Roadway Information

Section Length: 2.0 mile(s)
Statutory Speed Limit: 65 mph
Existing Speed Limit: 40 mph
Adverse Alignment: No
Divided/Undivided: Undivided
Number of Lanes: 2
Roadside Hazard Rating: 3
Transition Zone: No

Traffic Information

85th Percentile Speed: 52 mph
50th Percentile Speed: 44 mph
AADT: 904 veh/day

Recommended Speed Limit:



Disclaimer: The U.S. Government assumes no liability for the use of the information contained in this report. This report does not constitute a standard, specification, or regulation.

Equations Used in the Crash Data Calculations

Exposure (M)

$$M = (\text{Section AADT} * 365 * \text{Section Length} * \text{Duration of Crash Data}) / (100000000)$$
$$M = (904 * 365 * 2.0 * 10.00) / (100000000)$$
$$M = 0.0660$$

Crash Rate (Rc)

$$Rc = (\text{Section Crash Average} * 100000000) / (\text{Section AADT} * 365 * \text{Section Length})$$
$$Rc = (0.50 * 100000000) / (904 * 365 * 2.0)$$
$$Rc = 75.77 \text{ crashes per 100 MVM}$$

Injury Rate (Ri)

$$Ri = (\text{Section Injury Crash Average} * 100000000) / (\text{Section AADT} * 365 * \text{Section Length})$$
$$Ri = (0.10 * 100000000) / (904 * 365 * 2.0)$$
$$Ri = 15.15 \text{ injuries per 100 MVM}$$

Critical Crash Rate (Cc)

$$Cc = \text{Crash Average of Similar Sections} + 1.645 * (\text{Crash Average of Similar Sections} / \text{Exposure}) ^ (1/2) + (1 / (2 * \text{Exposure}))$$
$$Cc = 117.88 + 1.645 * (117.88 / 0.0660) ^ (1/2) + (1 / (2 * 0.0660))$$
$$Cc = 194.99 \text{ crashes per 100 MVM}$$

Critical Injury Rate (Ic)

$$I_c = \text{Injury Crash Average of Similar Sections} + 1.645 * (\text{Injury Crash Average of Similar Sections} / \text{Exposure}) ^{(1/2)} + (1 / (2 * \text{Exposure}))$$

$$I_c = 43.99 + 1.645 * (43.99 / 0.0660) ^{(1/2)} + (1 / (2 * 0.0660))$$

$$I_c = 94.04 \text{ injuries per 100 MVM}$$

