MR. JOHN POELMA
Laramie County Public Works
13797 Prairie Center Circle
Cheyenne, WY 82009

SPEED STUDY



IRON MOUNTAIN ROAD (CR 215)
BETWEEN YELLOWSTONE ROAD AND POWDERHOUSE ROAD
LARAMIE COUNTY, WYOMING
JUNE 14, 2024

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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: IRON MOUNTAIN ROAD (CR 215) BETWEEN YELLOWSTONE RD. AND POWDERHOUSE RD.
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
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REVIEWED BY



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Enclosures as stated

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1.0 INTRODUCTION

Iron Mountain Road (CR 215) between Yellowstone Road and Powderhouse Road is a paved county road from Mile Point (MP) 0.0 to MP 2.0 with a speed limit of 45 mph as shown in Figure 1. The main traffic generator is residential access with some oil field traffic. The roadway width is 39 feet edge to edge with 26 feet travel way with 6 major access points and 15 minor access points which translates to 10.5 access points per mile. The type of terrain is rolling, and the adjacent land use is characterized as residential. The rolling hills create some areas of limited visibility that could be hazardous with the oil filed traffic.



Figure 1: 45 mph speed limit sign at MP 1.8.

2.0 TRAFFIC COUNT

The automated traffic counter was located at MP 1.1 and is shown on Appendix A. The traffic counter results are shown in Appendix B. The traffic count was recorded from June 4, 2024 to June 11, 2024 with a total of 9,483 vehicles. The Average Daily Traffic (ADT) was recorded at 1,186 vehicles a day and the Average Daily Truck Traffic (ADTT) was recorded at 80 trucks a day. The 85th percentile speed was calculated at 59 mph with the 50th percentile speed at 51 mph. The pace speed included 58.4% of vehicles recorded and was calculated from 47 mph to 56 mph. According to the standards, the upper bound of the recommended speed limit is the rounded 85th percentile speed that was determined at 60 mph. The lower bound is either the rounded 50th-percentile speed or lower limit of the 10-mph pace which was determined at 51 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 Iron Mountain Road (CR 215) between Yellowstone Rd. and Powderhouse Rd., a safety assessment was performed on November 13, 2023. This included a sign inventory, and crash analysis.

Table 1 shows the detailed 10 year crash history from 2013 to 2022. 6 crashes occurred with no crashes resulting in an injury. The first harmful event shows the most predominant crash was a

collision with a motor vehicle in transport on roadway with 4 instances. There was a single instance of both a collision with a deer and a jackknife. The time of day showed that 4 crashes occurred between 3:00 PM to 7:00 PM. The most crashes for a one-mile section of the road occurred between MP 0.0 to MP 1.0 and MP 1.0 to MP 2.0 where 3 crashes occurred at both locations. 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
0.0	2014	February	Saturday	3 to 3:59 PM	Property Damage Only	Motor Vehicle in Transport on Roadway
0.011	2022	March	Monday	6 to 6:59 AM	Property Damage Only	Motor Vehicle in Transport on Roadway
0.316	2020	August	Friday	8 to 8:59 PM	Property Damage Only	Deer
1.260	2014	May	Sunday	6 to 6:59 PM	Property Damage Only	Motor Vehicle in Transport on Roadway
1.580	2014	May	Monday	12:00 to 12:59 PM	Property Damage Only	Motor Vehicle in Transport on Roadway
1.819	2020	December	Saturday	12 to 12:59 PM	Property Damage Only	Jackknife

Table 2 shows the sign inventory for Iron Mountain Road (CR 215) between Yellowstone Rd. and Powderhouse Rd. Every sign on the road was inventoried, 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 8 signs located between MP 0.0 to MP 2.0. The visual inspection identified 1 sign in poor condition and all signs had reflective sheeting. The locations of all 8 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	West	R1-1	Y	Good	
0.0	No Thru Truck Traffic	East		Y	Good	
0.1	45 mph Speed Limit	East	R2-1	Y	Fair	Scratches
1.7	Stop Sign Ahead	East	W3-1	Y	Good	
1.8	45 mph Speed Limit	West	R2-1	Y	Good	
1.9	Jordan Pasture 1 mile	East		Y	Good	
1.9	Stop	East	R1-1	Y	Good	
1.9	4-way	East		Y	Poor	Faded/Cracked

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 Iron Mountain Road (CR 215) between Yellowstone Rd. and Powderhouse Rd. is between 60 and 50 mph.

It is recommended that the speed limit be posted at 60 mph due to:

- 85^{th} Percentile Speed

Post a 60 mph by replacing the existing 45 mph speed limit sign at MP 0.1 for eastbound traffic and MP 1.8 for westbound 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 60-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 215, Iron Mountain 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 45 mph. The 85th percentile speeds was recorded at 59.0 mph and the 50th percentile speed at 51 mph. The 10 mph pace speed was recorded from 47 mph to 56 mph. The roadway width is 39 feet edge to edge with a 26 feet travel way the road has 21 access points along the section which translates into 10.5 access points per mile. There were 6 crashes in the last 10 years with 0 crashes resulting in injuries.

Recommendations:

It is recommended that the speed limit be set at 60 mph for this section of the road. Post a 60 mph speed limit by replacing the existing 45 mph speed limit sign at MP 0.1 for eastbound traffic and MP 1.8 for westbound 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 11/13/2023 Data Summarized by. Daniel Hayes, P.E 6/13/2024
Printed Name Date Printed Name Date



Approved. Daniel Hayes, P.E _____ 6/13/2024
Professional Engineer P.E. Seal Date

ORDER TO ESTABLISH RESTRICTED SPEED ZONE

The County Commission approves changing the speed limit to 60 miles per hour on the paved roadway section described above.

Resolution number: _____

Date: _____

APPENDIX A

Iron Mountain Road (West) - Location Map



Maxar

0 0.2 0.4 0.6 0.8 Miles

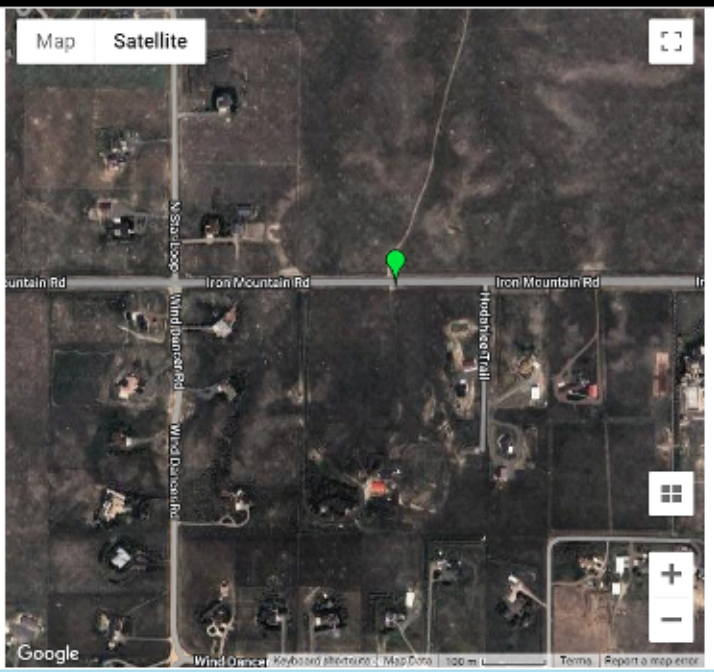
APPENDIX B

Default Report Title
Use Preferences to Define Titles

SPEED DATA ANALYSIS

Location

Latitude: 41.218331
Longitude: -104.806876



Analysis Time Period

Start	End
6/4/2024 2:54 PM	6/11/2024 11:25 AM

Vehicles Analyzed

9,483

Speed Limit



45

Total Enforceable Violations

8,425

Average Speed

52

85th Percentile Speed

59

Fastest Speed

108

10 MPH Pace Speed

47-56

Slowest Speed

1

Default Report Title
Use Preferences to Define Titles

Site Code: Iron Mountain (MP 1.1)
Station ID: ~1140 feet west of Wind Dancer Dr
Start Date: 6/4/2024
End Date: 6/11/2024

Comment 1:
Serial Number: 41395
Latitude: 41.218331
Longitude: -104.806876
GPS Accuracy: 30.75 ft

Combined Lanes 6/4/2024 to 6/11/2024

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
6/4/2024	No Volume					4:48 PM	138	4:48 PM	39	0.88
6/5/2024	7:16 AM	108	7:36 AM	33	0.82	4:01 PM	153	4:33 PM	46	0.83
6/6/2024	8:26 AM	105	8:27 AM	34	0.77	4:34 PM	142	4:34 PM	44	0.81
6/7/2024	7:31 AM	97	7:55 AM	29	0.84	3:23 PM	124	3:24 PM	36	0.86
6/8/2024	10:59 AM	84	11:24 AM	25	0.84	4:44 PM	103	5:09 PM	33	0.78
6/9/2024	10:44 AM	101	11:03 AM	31	0.81	1:42 PM	114	1:42 PM	34	0.84
6/10/2024	9:31 AM	110	10:13 AM	32	0.86	4:26 PM	153	4:42 PM	51	0.75
6/11/2024	7:35 AM	117	7:35 AM	41	0.71	No Volume				

Axle Statistics

# Axles	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Count	8846	255	267	83	13	12	6	1	0	0	0	0	0	0	0
Avg. WB	127.8	351.4	431.1	676.7	755.7	850.1	761.7	846.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Axles Per Vehicle: 2.1258

AADT

Date	Lane	Volume	x	User	x	Daily	=	ADT	x	Season	=
6/4/2024	A to B, None Specified	372		1.00		1.00		372		1.00	
6/4/2024	B to A, None Specified	276		1.00		1.00		276		1.00	
6/4/2024	Day Total	648						648			
6/5/2024	A to B, None Specified	715		1.00		1.00		715		1.00	
6/5/2024	B to A, None Specified	775		1.00		1.00		775		1.00	
6/5/2024	Day Total	1,490						1,490			
6/6/2024	A to B, None Specified	743		1.00		1.00		743		1.00	
6/6/2024	B to A, None Specified	759		1.00		1.00		759		1.00	
6/6/2024	Day Total	1,502						1,502			
6/7/2024	A to B, None Specified	701		1.00		1.00		701		1.00	
6/7/2024	B to A, None Specified	765		1.00		1.00		765		1.00	
6/7/2024	Day Total	1,466						1,466			
6/8/2024	A to B, None Specified	600		1.00		1.00		600		1.00	
6/8/2024	B to A, None Specified	587		1.00		1.00		587		1.00	
6/8/2024	Day Total	1,187						1,187			
6/9/2024	A to B, None Specified	630		1.00		1.00		630		1.00	
6/9/2024	B to A, None Specified	556		1.00		1.00		556		1.00	
6/9/2024	Day Total	1,186						1,186			
6/10/2024	A to B, None Specified	715		1.00		1.00		715		1.00	
6/10/2024	B to A, None Specified	732		1.00		1.00		732		1.00	
6/10/2024	Day Total	1,447						1,447			
6/11/2024	A to B, None Specified	201		1.00		1.00		201		1.00	
6/11/2024	B to A, None Specified	356		1.00		1.00		356		1.00	
6/11/2024	Day Total	557						557			
Total		9483						9483			
Average		1186						1186			

APPENDIX C

SPEED STUDY DATA OVERVIEW (IRON MOUNTAIN ROAD BETWEEN YELLOWSTONE RD. AND POWDERHOUSE RD. CR 215 MP 0.0 – MP 2.0)

GENERAL INFORMATION	
LOCAL JURISDICTION:	Laramie County
ROUTE:	Iron Mountain (CR215) M P0.0 to MP 2.0
LOCATION:	Iron Mountain Between Yellowstone and Powderhouse
DATE:	6/14/2024

AUTOMATED TRAFFIC COUNT VALUES	
85th PERCENTILE:	59 mph
50th PERCENTILE:	51 mph
PACE SPEED:	47-56 mph
AVERAGE DAILY TRAFFIC:	1,186 vehicles a day
AVERAGE DAILY TRUCK TRAFFIC:	80 trucks a day

ROADWAY CHARACTERISTICS	
ROADWAY LENGTH:	2 miles
NUMBER OF ACCESS POINTS:	21 access points
ACCESS POINTS PER MILE:	10.5 access points per mile
ROADWAY WIDTH:	39 feet edge to edge (26 feet travel way)
ADJACENT LAND-USE:	Residential/Agricultural
TYPE OF TERRAIN:	Rolling

HISTORICAL CRASH DATA	
FATAL:	0
INJURY:	0
PDO:	6
EPDO:	6
EPDO PER MILE:	3

RANGE OF SPEED LIMIT (MAXIMUM = 65 MPH)	
PREFERRED SPEED LIMIT:	60 mph
LOWEST ACCEPTABLE SPEED LIMIT:	50 mph

APPENDIX D

Iron Mountain Road - Crash Location Map



SEGMENT CRASH HISTORY REPORT FOR IRON MOUNTAIN RD (ML6905B) FROM MILE POST 0 TO 5.02 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 DIRECTION	VEHICLE MANEUVER	DRIVER ACTION	PERSON TYPE	SAFETY EQUIPMENT USED	INJURY STATUS	LIGHTING	WEATHER CONDITION	ROAD CONDITION	ALCOHOL INVOLVED	DRUGS INVOLVED	LATITUDE	LONGITUDE	CRASH CASE #
ML6905B	RON MOUNTAIN RI	0.000		02/22/2014	1530	PROPERTY DAMAGE ONLY	0	0	Motor Vehicle in Transport on Roadway	On Roadway	Angle (Front to Side), Opposing Direction	Non-Junction	1	North	Turning Right	1 Drove too Fast for Conditions	1 Driver	Shoulder and Lap Belt	No Apparent Injury	Daylight	Snowing	Ice/Frost	N	N	41.218340	-104.828190	14-2029
													2	West	Straight Ahead	1 Improper Parking	2 Driver	Shoulder and Lap Belt	No Apparent Injury								
																2 No Improper Driving											
ML6905B	RON MOUNTAIN RI | CR 215-2	0.011		03/01/2022	655	PROPERTY DAMAGE ONLY	0	0	Motor Vehicle in Transport on Roadway	On Roadway	Rear End (Front to Rear)	Intersection Related	1	West	Straight Ahead	1 Disregarded Traffic Signs	1 Driver	Shoulder and Lap Belt	No Apparent Injury	Daylight	Clear	Dry	N	N	41.218393	-104.828071	22-3423
													2	West	Straight Ahead	2 No Improper Driving	2 Driver	Shoulder and Lap Belt	No Apparent Injury								
ML6905B	RON MOUNTAIN RI | CR 215-2	0.316		08/21/2020	2045	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			41.218355	-104.822268	20-15677
ML6905B	RON MOUNTAIN RI	1.260		05/11/2014	1824	PROPERTY DAMAGE ONLY	0	0	Motor Vehicle in Transport on Roadway	On Roadway	Angle Same Direction (Front to Side)	Driveway Related	1	West	Overtaking/Passing	1 Improper Passing	1 Driver	Shoulder and Lap Belt	No Apparent Injury	Daylight	Snowing	Snow	N	N	41.218330	-104.804180	14-5696
													2	West	Turning Left	2 Improper Turn or No Signal	2 Driver	Shoulder and Lap Belt	No Apparent Injury		Blowing Snow	Ice/Frost					
ML6905B	RON MOUNTAIN RI	1.580		05/12/2014	1234	PROPERTY DAMAGE ONLY	0	0	Motor Vehicle in Transport on Roadway	On Roadway	Sideswipe Same Direction (Passing)	Non-Junction	1	East	Straight Ahead	1 No Improper Driving	1 Driver	Shoulder and Lap Belt	No Apparent Injury	Daylight	Clear	Ice/Frost	N	N	41.218320	-104.798060	14-5728
													2	East	Driverless Motor Vehic							Snow				
ML6905B	RON MOUNTAIN RI | CR 215-2	1.819		12/19/2020	1240	PROPERTY DAMAGE ONLY	0	0	Jacknife	On Roadway	Not a Collision w/2 Vehicles in Transport	Non-Junction	1	East	Straight Ahead	1 No Improper Driving	1 Driver	Shoulder and Lap Belt	No Apparent Injury	Daylight	Severe Wind Only	Ice/Frost	N	N	41.218339	-104.793330	2020-23194
																					Blowing Snow						
ML6905B	RON MOUNTAIN RI | CR 215-2	2.004		02/08/2019	704	SUSPECTED MINOR INJURY	0	1	Delineator Post	Off Roadway	Not a Collision w/2 Vehicles in Transport	Non-Junction	1	West	Straight Ahead	1 Drove too Fast for Conditions	1 Driver	Shoulder and Lap Belt	Suspected Minor Injury	Daylight	Clear	Snow	N	N	41.218313	-104.789775	19-2748
																1 Ran Off Road						Ice/Frost				
ML6905B	RON MOUNTAIN RI	2.120		06/09/2013	1347	POSSIBLE INJURY	0	1	Overturn/Rollover	Shoulder	Not a Collision w/2 Vehicles in Transport	Non-Junction	1	East	Straight Ahead	1 Ran Off Road	1 Driver	Shoulder and Lap Belt	Possible Injury	Daylight	Clear	Dry	N	N	41.218280	-104.787700	13-8156
ML6905B	RON MOUNTAIN RI | CR 215-2	2.504		09/27/2021	1839	PROPERTY DAMAGE ONLY	0	0	Motor Vehicle in Transport on Roadway	On Roadway	Rear End (Front to Rear)	Intersection Related	1	East	Straight Ahead	1 Other Improper Action	1 Driver	Shoulder and Lap Belt	No Apparent Injury	Daylight	Clear	Dry	N	N	41.218222	-104.780163	21-17780
													2	East	Straight Ahead	1 Disregarded Traffic Signs	2 Driver	Shoulder and Lap Belt	No Apparent Injury								
																2 No Improper Driving											
ML6905B	RON MOUNTAIN RI	2.950		12/12/2014	2123	PROPERTY DAMAGE ONLY	0	0	Other Domestic (Dog, Llama...)	On Roadway			1		Straight Ahead	1 No Improper Driving	1 Driver	Shoulder and Lap Belt	No Apparent Injury	Darkness Unlighted	Clear	Dry			41.218240	-104.779900	14-16291
																	1 Passenger	Shoulder and Lap Belt	No Apparent Injury								
ML6905B	RON MOUNTAIN RI	3.000		03/30/2016	1333	PROPERTY DAMAGE ONLY	0	0	Motor Vehicle in Transport on Roadway	Shoulder	Angle (Front to Side), Opposing Direction	Non-Junction	1	West	Straight Ahead	1 Drove too Fast for Conditions	1 Driver	Shoulder and Lap Belt	No Apparent Injury	Daylight	Blizzard	Snow	N	N	41.218120	-104.774480	16-5819
													2	East	Straight Ahead	1 Swerve Due to Wind/Slippery Surface	2 Driver	Shoulder and Lap Belt	No Apparent Injury			Mud/Dirt/Gravel					
																2 No Improper Driving											
ML6905B	RON MOUNTAIN RI	4.760		03/20/2018	1255	PROPERTY DAMAGE ONLY	0	0	Motor Vehicle in Transport on Roadway	On Roadway	Angle Same Direction (Front to Side)	Non-Junction	1	East	Entering a Traffic Lan	1 Failed to Yield ROW	1 Driver	Shoulder and Lap Belt	No Apparent Injury	Daylight	Clear	Dry	N	N	41.217910	-104.736760	18-6170
													2	East	Straight Ahead	2 No Improper Driving	2 Driver	Shoulder and Lap Belt	No Apparent Injury								
ML6905B	RON MOUNTAIN RI	5.010	WHITNEY RD	01/28/2018	2202	PROPERTY DAMAGE ONLY	0	0	Sign Support Multiple Post	Off Roadway	Not a Collision w/2 Vehicles in Transport	Intersection Related	1	East	Straight Ahead	1 Evading Law Enforcement	1 Driver	None Used	No Apparent Injury	Darkness Unlighted	Clear	Dry	N	N	41.217800	-104.731700	P2018012882
																1 Erratic/Reckless/Careless/Aggressive Speeding						Mud/Dirt/Gravel				
																1 Ran Off Road											

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 DIRECTION	VEHICLE MANEUVER	#	DRIVER ACTION	#	PERSON TYPE	SAFETY EQUIPMENT USED	INJURY STATUS	LIGHTING	WEATHER CONDITION	ROAD CONDITION	ALCOHOL INVOLVED	DRUGS INVOLVED	LATITUDE	LONGITUDE	CRASH CASE #
ML6905B	RON MOUNTAIN RI | CR 215-2	5.011		03/05/2021	2300	PROPERTY DAMAGE ONLY	0	0	Traffic Sign Support	Off Roadway	Not a Collision w/2 Vehicles in Transport	Intersection Related	1	East	Straight Ahead	1 1	Ran Off Road Disregarded Other Road Marking	1	Driver	Shoulder and Lap Belt	No Apparent Injury	Darkness Unlighted	Clear	Dry	N	Y	41.217878	-104.731921	21-4450
ML6905B	RON MOUNTAIN RI | CR 215-2	5.019	TONTO RD | CR 417	06/09/2021	2208	PROPERTY DAMAGE ONLY	0	0	Fence (including Post)	Off Roadway	Not a Collision w/2 Vehicles in Transport	Intersection	1	East	Straight Ahead	1	Disregarded Traffic Signs	1	Driver	Shoulder and Lap Belt	No Apparent Injury	Darkness Unlighted	Clear	Dry	N	N	41.217847	-104.731766	21-10256
ML6905B	RON MOUNTAIN RI | CR 215-2	5.020		12/02/2021	1815	PROPERTY DAMAGE ONLY	0	0	Fence (including Post)	Off Roadway	Not a Collision w/2 Vehicles in Transport	Intersection Related	1	East	Straight Ahead	1 1 1 1	Ran Off Road Disregarded Traffic Signs Speeding Erratic/Reckless/Careless/Aggressive	1	Driver	Shoulder and Lap Belt	No Apparent Injury	Darkness Unlighted	Clear	Dry	N	N	41.217882	-104.731732	21-22459
ML6905B	RON MOUNTAIN RI | CR 215-2	5.020	TONTO RD | CR 417	02/03/2020	1145	PROPERTY DAMAGE ONLY	0	0	Traffic Sign Support	Off Roadway	Not a Collision w/2 Vehicles in Transport	Intersection	1	East	Slowing	1	Drove too Fast for Conditions	1 1	Driver Passenger	Shoulder and Lap Belt Forward Facing Child	No Apparent Injury No Apparent Injury	Daylight	Snowing	Ice/Frost	N	N	41.217881	-104.731733	20-2360

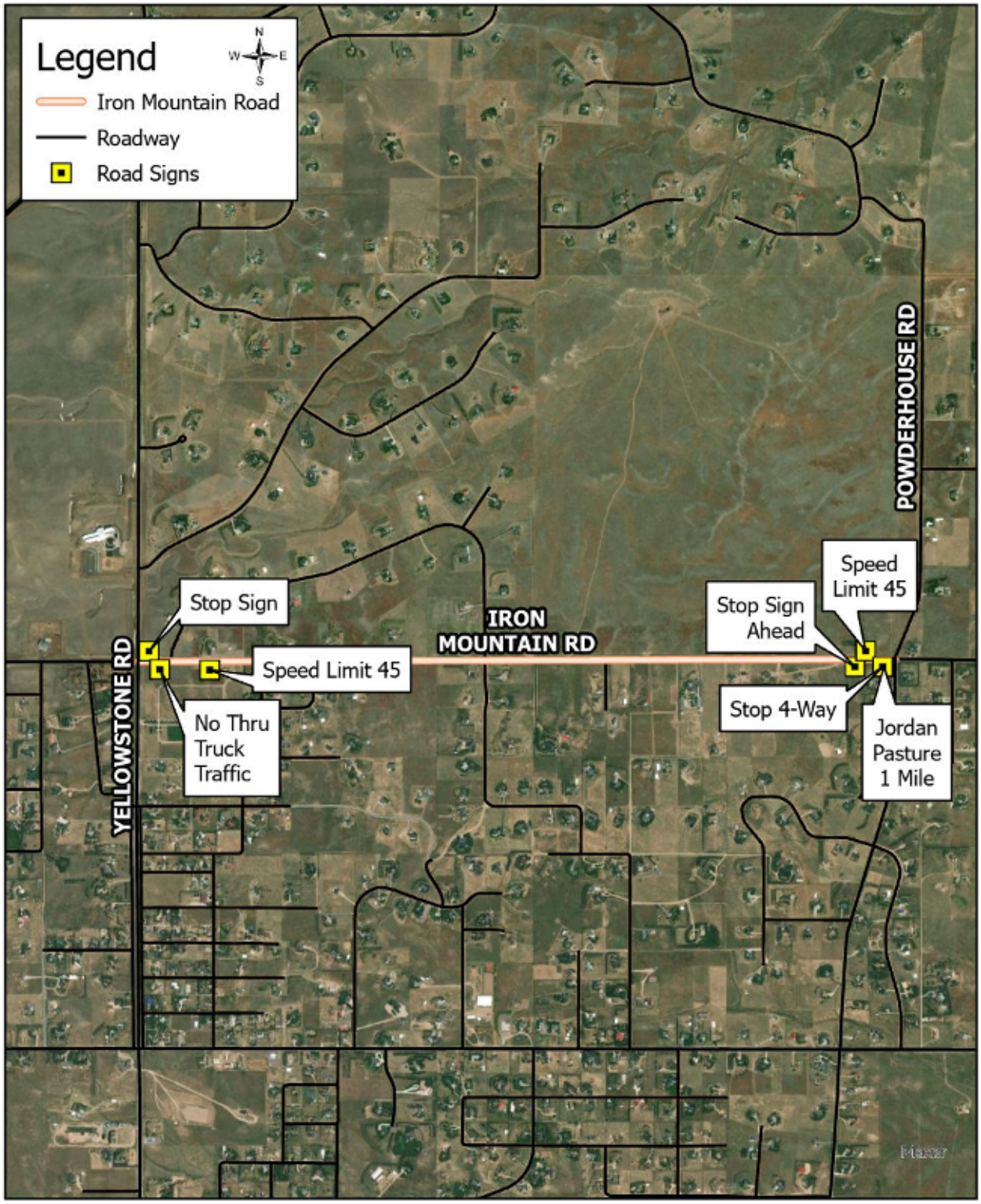
REPORT SUMMARY

TOTAL CRASHES:	**17**		
FATAL CRASHES:	**0**	**TOTAL FATALITIES:**	**0**
INJURY CRASHES:	**2**	**TOTAL INJURIES:**	**2**
PDO CRASHES:	**15**		

* 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

	CRASH COUNTS				SEVERITY COUNTS			INJURY COUNTS				
YEAR	FATAL CRASHES	INJURY CRASHES	PDO CRASHES	TOTAL CRASHES	CRITICAL CRASHES*	SERIOUS CRASHES*	DAMAGE CRASHES*	FATAL INJURIES	SERIOUS INJURIES	MINOR INJURIES	POSSIBLE INJURIES	NO INJURIES
2013	0	1	0	1	0	1	0	0	0	0	1	0
2014	0	0	4	4	0	0	4	0	0	0	0	7
2016	0	0	1	1	0	0	1	0	0	0	0	2
2018	0	0	2	2	0	0	2	0	0	0	0	3
2019	0	1	0	1	0	1	0	0	0	1	0	0
2020	0	0	3	3	0	0	3	0	0	0	0	4
2021	0	0	4	4	0	0	4	0	0	0	0	5
2022	0	0	1	1	0	0	1	0	0	0	0	2
	0	**2**	15	**17**	**0**	**2**	**15**	**0**	**0**	**1**	**1**	23

Iron Mountain Road (West) - Sign Location Map



APPENDIX F

USLIMITS2 Speed Zoning Report

Project Overview

Project Name: Laramie County Speed Studies

Analyst: Daniel Hayes

Date: 2024-06-14

Basic Project Information
Project Number: IME 23682-HE
Route Name: Iron Mountain CR215
From: MP 0.0 Yellowstone Rd.
To: MP 2.0 Powderhouse Rd.
State: Wyoming
County: Laramie County
City: Rural
Route Type: Road Section in Undeveloped Area
Route Status: Existing

Roadway Information
Section Length: 2.0 mile(s)
Statutory Speed Limit: 65 mph
Existing Speed Limit: 45 mph
Adverse Alignment: No
Divided/Undivided: Undivided
Number of Lanes: 2
Roadside Hazard Rating: 3
Transition Zone: No

Crash Data Information
Crash Data Years: 10.00
Crash AADT: 1186 veh/day
Total Number of Crashes: 6
Total Number of Injury Crashes: 0
Section Crash Rate: 69 per 100 MVM
Section Injury Crash Rate: 0 per 100 MVM
Crash Rate Average for Similar Roads: 118
Injury Rate Average for Similar Roads: 44

Traffic Information
85th Percentile Speed: 59 mph
50th Percentile Speed: 51 mph
AADT: 1186 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 = (Section AADT * 365 * Section Length * Duration of Crash Data) / (100000000)
M = (1186 * 365 * 2.0 * 10.00) / (100000000)
M = 0.0866

Crash Rate (Rc)
Rc = (Section Crash Average * 100000000) / (Section AADT * 365 * Section Length)
Rc = (0.60 * 100000000) / (1186 * 365 * 2.0)
Rc = 69.30 crashes per 100 MVM

Injury Rate (Ri)
Ri = (Section Injury Crash Average * 100000000) / (Section AADT * 365 * Section Length)
Ri = (0.00 * 100000000) / (1186 * 365 * 2.0)
Ri = 0.00 injuries per 100 MVM

Critical Crash Rate (Cc)
Cc = Crash Average of Similar Sections + 1.645 * (Crash Average of Similar Sections / Exposure) ^ (1/2) + (1 / (2 * Exposure))
Cc = 117.88 + 1.645 * (117.88 / 0.0866) ^ (1/2) + (1 / (2 * 0.0866))
Cc = 184.36 crashes per 100 MVM

Critical Injury Rate (Ic)

Ic = Injury Crash Average of Similar Sections + 1.645 * (Injury Crash Average of Similar Sections / Exposure) ^ (1/2) + (1 / (2 * Exposure))
Ic = 43.99 + 1.645 * (43.99 / 0.0866) ^ (1/2) + (1 / (2 * 0.0866))
Ic = 86.85 injuries per 100 MVM