STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION

MEMORANDUM

7/20/2016

TO: **Denise Inda, Chief Traffic Operations Engineer**

FROM: **Mark Wooster, Traffic Information Division Assistant Chief**

SUBJECT: **Speed Study IR-80, from Fernley to Nevada/Utah state line, in Lyon, Churchill, Pershing, Humboldt, Lander, Eureka, and Elko County**

In response to a request from your office, a Minimum Speed Study was conducted on the subject roadway. This study area was divided into 24 segments. Analysis of the speed data produced the following results:

1. Segment 1

Site Data: This study area is a 4 lane *Rural Interstate Highway* roadway that begins at Nevada Pacific Interchange (MP LY-4.9) and continues east to Lyon/Churchill County line (MP LY-15.9) for a segment length of 11.0 miles. This segment is a 75 MPH speed zone both directions.

Field Data:

Posted Speed Limit	75 MPH
85th Percentile Speed	76 MPH
Pace	65-75 MPH
% in the pace	64%
50th Percentile speed	71 MPH (mean)

Mitigating Factors:
None.

Objective Analysis: The following is objective analysis using predetermined formulae and field data to aid in determination of speed limits. This information is used by the engineer as a factor when determining appropriate speed limits; however, it is not the only information considered. Determination of speed limits is practice of engineering, requires consideration of many variables and mitigating factors, and is subject to the discretion of the Traffic Engineer. *The use of the Refined Study Analysis data is used as a guide only in determining roadside characteristics relative to speed.*

Analysis Method	Theoretical Limit
85th Percentile Speed[1]	76 MPH
Minimum Study Analysis[2]	74 MPH
US Limits 2[3]	* See below

2. Segment 2

Site Data: This study area is a 4 lane *Rural Interstate Highway* roadway that begins at Lyon/Churchill County line (MP LY-15.9) and continues east to US-95 Interchange (MP CH-22.1) for a segment length of 22.1 miles. This segment is a 75 MPH speed zone both directions.

Field Data:

Posted Speed Limit	75 MPH
85th Percentile Speed	79 MPH
Pace	70-80 MPH
% in the pace	60%
50th Percentile speed	73 MPH (mean)

Mitigating Factors:
None.

Objective Analysis: The following is objective analysis using predetermined formulae and field data to aid in determination of speed limits. This information is used by the engineer as a factor when determining appropriate speed limits; however, it is not the only information considered. Determination of speed limits is practice of engineering, requires consideration of many variables and mitigating factors, and is subject to the discretion of the Traffic Engineer. *The use of the Refined Study Analysis data is used as a guide only in determining roadside characteristics relative to speed.*

Analysis Method	Theoretical Limit
85th Percentile Speed[1]	79 MPH
Minimum Study Analysis[2]	78 MPH
US Limits 2[3]	* See below

3. Segment 3

Site Data: This study area is a 4 lane *Rural Interstate Highway* roadway that begins at US-95 Interchange (MP CH-22.1) and continues east to West Lovelock (MP PE-15.5) for a segment length of 21.1 miles. This segment is a 75 MPH speed zone both directions.

Field Data:

Posted Speed Limit	75 MPH
85th Percentile Speed	80 MPH
Pace	70-80 MPH
% in the pace	51%
50th Percentile speed	73 MPH (mean)

Mitigating Factors:
None.

Objective Analysis: The following is objective analysis using predetermined formulae and field data to aid in determination of speed limits. This information is used by the engineer as a factor when determining appropriate speed limits; however, it is not the only information considered. Determination of speed limits is practice of engineering, requires consideration of many variables and mitigating factors, and is subject to the discretion of the Traffic Engineer. *The use of the Refined Study Analysis data is used as a guide only in determining roadside characteristics relative to speed.*

Analysis Method	**Theoretical Limit**
85th Percentile Speed[1]	80 MPH
Minimum Study Analysis[2]	77 MPH
US Limits 2[3]	* See below

4. Segment 4

Site Data: This study area is a 4 lane *Rural Interstate Highway* roadway that begins at SR-396/Coal Canyon Interchange (MP PE-23.9) and continues east to Oreana-Rochester Interchange (MP PE-31.1) for a segment length of 7.2 miles. This segment is a 75 MPH speed zone both directions.

Field Data:

Posted Speed Limit	75 MPH
85th Percentile Speed	81 MPH
Pace	70-80 MPH
% in the pace	48%
50th Percentile speed	74 MPH (mean)

Mitigating Factors:
None.

Objective Analysis: The following is objective analysis using predetermined formulae and field data to aid in determination of speed limits. This information is used by the engineer as a factor when determining appropriate speed limits; however, it is not the only information considered. Determination of speed limits is practice of engineering, requires consideration of many variables and mitigating factors, and is subject to the discretion of the Traffic Engineer. *The use of the Refined Study Analysis data is used as a guide only in determining roadside characteristics relative to speed.*

Analysis Method	**Theoretical Limit**
85th Percentile Speed[1]	81 MPH
Minimum Study Analysis[2]	78 MPH
US Limits 2[3]	* See below

5. Segment 5

Site Data: This study area is a 4 lane *Rural Interstate Highway* roadway that begins at Oreana-Rochester Interchange (MP PE-31.1) and continues east to SR-401/Rye Patch Dam Interchange (MP PE-40.5) for a segment length of 9.4 miles. This segment is a 75 MPH speed zone both directions.

Field Data:

Posted Speed Limit	75 MPH
85th Percentile Speed	79 MPH
Pace	70-80 MPH
% in the pace	52%
50th Percentile speed	73 MPH (mean)

Mitigating Factors:
None.

Objective Analysis: The following is objective analysis using predetermined formulae and field data to aid in determination of speed limits. This information is used by the engineer as a factor when determining appropriate speed limits; however, it is not the only information considered. Determination of speed limits is practice of engineering, requires consideration of many variables and mitigating factors, and is subject to the discretion of the Traffic Engineer. *The use of the Refined Study Analysis data is used as a guide only in determining roadside characteristics relative to speed.*

Analysis Method	**Theoretical Limit**
85th Percentile Speed[1]	79 MPH
Minimum Study Analysis[2]	77 MPH
US Limits 2[3]	* See below

6. Segment 6

Site Data: This study area is a 4 lane *Rural Interstate Highway* roadway that begins at SR-401/Rye Patch Dam Interchange (MP PE-40.5) and continues east to Humboldt Interchange (MP PE-49.6) for a segment length of 9.1 miles. This segment is a 75 MPH speed zone both directions.

Field Data:

Posted Speed Limit	75 MPH
85th Percentile Speed	78 MPH
Pace	65-75 MPH
% in the pace	53%
50th Percentile speed	71 MPH (mean)

Mitigating Factors:

None.

Objective Analysis: The following is objective analysis using predetermined formulae and field data to aid in determination of speed limits. This information is used by the engineer as a factor when determining appropriate speed limits; however, it is not the only information considered. Determination of speed limits is practice of engineering, requires consideration of many variables and mitigating factors, and is subject to the discretion of the Traffic Engineer. *The use of the Refined Study Analysis data is used as a guide only in determining roadside characteristics relative to speed.*

Analysis Method	**Theoretical Limit**
85th Percentile Speed[1]	78 MPH
Minimum Study Analysis[2]	75 MPH
US Limits 2[3]	* See below

7. Segment 7

Site Data: This study area is a 4 lane *Rural Interstate Highway* roadway that begins at Humboldt Interchange (MP PE-49.6) and continues east to Imlay Interchange (MP PE-56.9) for a segment length of 7.3 miles. This segment is a 75 MPH speed zone both directions.

Field Data:

Posted Speed Limit	75 MPH
85th Percentile Speed	85 MPH
Pace	75-85 MPH
% in the pace	49%
50th Percentile speed	80 MPH (mean)

Mitigating Factors:

None.

Objective Analysis: The following is objective analysis using predetermined formulae and field data to aid in determination of speed limits. This information is used by the engineer as a factor when determining appropriate speed limits; however, it is not the only information considered. Determination of speed limits is practice of engineering, requires consideration of many variables and mitigating factors, and is subject to the discretion of the Traffic Engineer. *The use of the Refined Study Analysis data is used as a guide only in determining roadside characteristics relative to speed.*

Analysis Method	**Theoretical Limit**
85th Percentile Speed[1]	85 MPH
Minimum Study Analysis[2]	83 MPH
US Limits 2[3]	* See below

8. Segment 8

Site Data: This study area is a 4 lane *Rural Interstate Highway* roadway that begins at Imlay Interchange (MP PE-56.9) and continues east to Dun Glen Interchange (MP PE-63.0) for a segment length of 6.1 miles. This segment is a 75 MPH speed zone both directions.

Field Data:

Posted Speed Limit	75 MPH
85th Percentile Speed	81 MPH
Pace	70-80 MPH
% in the pace	51%
50th Percentile speed	74 MPH (mean)

Mitigating Factors:
None.

Objective Analysis: The following is objective analysis using predetermined formulae and field data to aid in determination of speed limits. This information is used by the engineer as a factor when determining appropriate speed limits; however, it is not the only information considered. Determination of speed limits is practice of engineering, requires consideration of many variables and mitigating factors, and is subject to the discretion of the Traffic Engineer. *The use of the Refined Study Analysis data is used as a guide only in determining roadside characteristics relative to speed.*

Analysis Method	**Theoretical Limit**
85th Percentile Speed[1]	81 MPH
Minimum Study Analysis[2]	78 MPH
US Limits 2[3]	* See below

9. Segment 9

Site Data: This study area is a 4 lane *Rural Interstate Highway* roadway that begins at Dun Glen Interchange (MP PE-63.0) and continues east to Rose Creek Interchange (MP HU-4.3) for a segment length of 16.4 miles. This segment is a 75 MPH speed zone both directions.

Field Data:

Posted Speed Limit	75 MPH
85th Percentile Speed	81 MPH
Pace	70-80 MPH
% in the pace	49%
50th Percentile speed	74 MPH (mean)

Mitigating Factors:

None.

Objective Analysis: The following is objective analysis using predetermined formulae and field data to aid in determination of speed limits. This information is used by the engineer as a factor when determining appropriate speed limits; however, it is not the only information considered. Determination of speed limits is practice of engineering, requires consideration of many variables and mitigating factors, and is subject to the discretion of the Traffic Engineer. *The use of the Refined Study Analysis data is used as a guide only in determining roadside characteristics relative to speed.*

Analysis Method	**Theoretical Limit**
85th Percentile Speed[1]	81 MPH
Minimum Study Analysis[2]	79 MPH
US Limits 2[3]	* See below

10. Segment 10

Site Data: This study area is a 4 lane *Urban Interstate Highway* roadway that begins at Rose Creek Interchange (MP HU-4.3) and continues east to East Winnemucca Interchange (MP HU-16.8) for a segment length of 12.5 miles. This segment is a 75 MPH speed zone both directions.

Field Data:

Posted Speed Limit	75 MPH
85th Percentile Speed	78 MPH
Pace	65-75 MPH
% in the pace	55%
50th Percentile speed	71 MPH (mean)

Mitigating Factors:

None.

Objective Analysis: The following is objective analysis using predetermined formulae and field data to aid in determination of speed limits. This information is used by the engineer as a factor when determining appropriate speed limits; however, it is not the only information considered. Determination of speed limits is practice of engineering, requires consideration of many variables and mitigating factors, and is subject to the discretion of the Traffic Engineer. *The use of the Refined Study Analysis data is used as a guide only in determining roadside characteristics relative to speed.*

Analysis Method	**Theoretical Limit**
85th Percentile Speed[1]	78 MPH
Minimum Study Analysis[2]	75 MPH
US Limits 2[3]	* See below

11. Segment 11

Site Data: This study area is a 4 lane *Rural Interstate Highway* roadway that begins at East Winnemucca Interchange (MP HU-16.8) and continues east to Pole Creek Cattle Pass (MP HU-29.7) for a segment length of 12.9 miles. This segment is a 75 MPH speed zone both directions.

Field Data:

Posted Speed Limit	75 MPH
85th Percentile Speed	81 MPH
Pace	70-80 MPH
% in the pace	57%
50th Percentile speed	74 MPH (mean)

Mitigating Factors:
None.

Objective Analysis: The following is objective analysis using predetermined formulae and field data to aid in determination of speed limits. This information is used by the engineer as a factor when determining appropriate speed limits; however, it is not the only information considered. Determination of speed limits is practice of engineering, requires consideration of many variables and mitigating factors, and is subject to the discretion of the Traffic Engineer. *The use of the Refined Study Analysis data is used as a guide only in determining roadside characteristics relative to speed.*

Analysis Method	**Theoretical Limit**
85th Percentile Speed[1]	81 MPH
Minimum Study Analysis[2]	78 MPH
US Limits 2[3]	* See below

12. Segment 12

Site Data: This study area is a 4 lane *Rural Interstate Highway* roadway that begins at Pole Creek Cattle Pass (MP HU-29.7) and continues east to Pumpernickel Valley Interchange (MP HU-41.5) for a segment length of 11.8 miles. This segment is a 75 MPH speed zone both directions.

Field Data:

Posted Speed Limit	75 MPH
85th Percentile Speed	81 MPH
Pace	70-80 MPH
% in the pace	50%
50th Percentile speed	74 MPH (mean)

Mitigating Factors:
None.

Objective Analysis: The following is objective analysis using predetermined formulae and field data to aid in determination of speed limits. This information is used by the engineer as a factor when determining appropriate speed limits; however, it is not the only information considered. Determination of speed limits is practice of engineering, requires consideration of many variables and mitigating factors, and is subject to the discretion of the Traffic Engineer. *The use of the Refined Study Analysis data is used as a guide only in determining roadside characteristics relative to speed.*

Analysis Method	**Theoretical Limit**
85th Percentile Speed[1]	81 MPH
Minimum Study Analysis[2]	78 MPH
US Limits 2[3]	* See below

13. Segment 13

Site Data: This study area is a 4 lane *Rural Interstate Highway* roadway that begins at Pumpernickel Valley Interchange (MP HU-41.5) and continues east to Valmy Interchange (MP HU-53.1) for a segment length of 11.6 miles. This segment is a 75 MPH speed zone both directions.

Field Data:

Posted Speed Limit	75 MPH
85th Percentile Speed	80 MPH
Pace	70-80 MPH
% in the pace	51%
50th Percentile speed	73 MPH (mean)

Mitigating Factors:
None.

Objective Analysis: The following is objective analysis using predetermined formulae and field data to aid in determination of speed limits. This information is used by the engineer as a factor when determining appropriate speed limits; however, it is not the only information considered. Determination of speed limits is practice of engineering, requires consideration of many variables and mitigating factors, and is subject to the discretion of the Traffic Engineer. *The use of the Refined Study Analysis data is used as a guide only in determining roadside characteristics relative to speed.*

Analysis Method	**Theoretical Limit**
85th Percentile Speed[1]	80 MPH
Minimum Study Analysis[2]	78 MPH
US Limits 2[3]	* See below

14. Segment 14

Site Data: This study area is a 4 lane *Rural Interstate Highway* roadway that begins at Valmy Interchange (MP HU-53.1) and continues east to West Battle Mountain Interchange (MP LA-4.8) for a segment length of 13.1 miles. This segment is a 75 MPH speed zone both directions.

Field Data:

Posted Speed Limit	75 MPH
85th Percentile Speed	79 MPH
Pace	70-80 MPH
% in the pace	59%
50th Percentile speed	72 MPH (mean)

Mitigating Factors:
None.

Objective Analysis: The following is objective analysis using predetermined formulae and field data to aid in determination of speed limits. This information is used by the engineer as a factor when determining appropriate speed limits; however, it is not the only information considered. Determination of speed limits is practice of engineering, requires consideration of many variables and mitigating factors, and is subject to the discretion of the Traffic Engineer. *The use of the Refined Study Analysis data is used as a guide only in determining roadside characteristics relative to speed.*

Analysis Method	Theoretical Limit
85th Percentile Speed[1]	79 MPH
Minimum Study Analysis[2]	77 MPH
US Limits 2[3]	* See below

15. Segment 15

Site Data: This study area is a 4 lane *Rural Interstate Highway* roadway that begins at West Battle Mountain Interchange (MP LA-4.8) and continues east to Dunphy Interchange (MP EU-2.1) for a segment length of 24.2 miles. This segment is a 75 MPH speed zone both directions.

Field Data:

Posted Speed Limit	75 MPH
85th Percentile Speed	79 MPH
Pace	70-80 MPH
% in the pace	59%
50th Percentile speed	73 MPH (mean)

Mitigating Factors:
None.

Objective Analysis: The following is objective analysis using predetermined formulae and field data to aid in determination of speed limits. This information is used by the engineer as a factor when determining appropriate speed limits; however, it is not the only information considered. Determination of speed limits is practice of engineering, requires consideration of many variables and mitigating factors, and is subject to the discretion of the Traffic Engineer. *The use of the Refined Study Analysis data is used as a guide only in determining roadside characteristics relative to speed.*

Analysis Method	Theoretical Limit
85th Percentile Speed[1]	79 MPH
Minimum Study Analysis[2]	78 MPH
US Limits 2[3]	* See below

16. Segment 16

Site Data: This study area is a 4 lane *Rural Interstate Highway* roadway that begins at Dunphy Interchange (MP EU-2.1) and continues east to Eureka/Elko County line (MP EU-25.7) for a segment length of 23.6 miles. This segment is a 75 MPH speed zone both directions.

Field Data:

Posted Speed Limit	75 MPH
85th Percentile Speed	79 MPH
Pace	70-80 MPH
% in the pace	60%
50th Percentile speed	73 MPH (mean)

Mitigating Factors:
None.

Objective Analysis: The following is objective analysis using predetermined formulae and field data to aid in determination of speed limits. This information is used by the engineer as a factor when determining appropriate speed limits; however, it is not the only information considered. Determination of speed limits is practice of engineering, requires consideration of many variables and mitigating factors, and is subject to the discretion of the Traffic Engineer. *The use of the Refined Study Analysis data is used as a guide only in determining roadside characteristics relative to speed.*

Analysis Method	**Theoretical Limit**
85th Percentile Speed[1]	79 MPH
Minimum Study Analysis[2]	78 MPH
US Limits 2[3]	* See below

17. Segment 17

Site Data: This study area is a 4 lane *Rural Interstate Highway* roadway that begins at Eureka/Elko County line (MP EU-25.7) and continues east to east of Elko West Interchange (MP EL-21.4) for a segment length of 21.4 miles. This segment is a 75 MPH speed zone both directions.

Field Data:

Posted Speed Limit	75 MPH
85th Percentile Speed	78 MPH
Pace	70-80 MPH
% in the pace	56%
50th Percentile speed	72 MPH (mean)

Mitigating Factors:
None.

Objective Analysis: The following is objective analysis using predetermined formulae and field data to aid in determination of speed limits. This information is used by the engineer as a factor when determining appropriate speed limits; however, it is not the only information considered. Determination of speed limits is practice of engineering, requires consideration of many variables and mitigating factors, and is subject to the discretion of the Traffic Engineer. *The use of the Refined Study Analysis data is used as a guide only in determining roadside characteristics relative to speed.*

Analysis Method	**Theoretical Limit**
85th Percentile Speed[1]	78 MPH
Minimum Study Analysis[2]	77 MPH
US Limits 2[3]	* See below

18. Segment 18

Site Data: This study area is a 4 lane *Rural Interstate Highway* roadway that begins at east of Elko East Interchange (MP EL-26.5) and continues east to SR-229/Halleck-Ruby Valley Interchange (MP EL-43.7) for a segment length of 17.2 miles. This segment is a 75 MPH speed zone both directions.

Field Data:

Posted Speed Limit	75 MPH
85th Percentile Speed	80 MPH
Pace	70-80 MPH
% in the pace	56%
50th Percentile speed	74 MPH (mean)

Mitigating Factors:
None.

Objective Analysis: The following is objective analysis using predetermined formulae and field data to aid in determination of speed limits. This information is used by the engineer as a factor when determining appropriate speed limits; however, it is not the only information considered. Determination of speed limits is practice of engineering, requires consideration of many variables and mitigating factors, and is subject to the discretion of the Traffic Engineer. *The use of the Refined Study Analysis data is used as a guide only in determining roadside characteristics relative to speed.*

Analysis Method	**Theoretical Limit**
85th Percentile Speed[1]	80 MPH
Minimum Study Analysis[2]	77 MPH
US Limits 2[3]	* See below

19. Segment 19

Site Data: This study area is a 4 lane *Rural Interstate Highway* roadway that begins at SR-229/Halleck-Ruby Valley Interchange (MP EL-43.7) and continues east to Deeth-Starr Valley Interchange (MP EL-56.0) for a segment length of 12.3 miles. This segment is a 75 MPH speed zone both directions.

Field Data:

Posted Speed Limit	75 MPH
85th Percentile Speed	80 MPH
Pace	68-78 MPH
% in the pace	58%
50th Percentile speed	73 MPH (mean)

Mitigating Factors:
None.

Objective Analysis: The following is objective analysis using predetermined formulae and field data to aid in determination of speed limits. This information is used by the engineer as a factor when determining appropriate speed limits; however, it is not the only information considered. Determination of speed limits is practice of engineering, requires consideration of many variables and mitigating factors, and is subject to the discretion of the Traffic Engineer. *The use of the Refined Study Analysis data is used as a guide only in determining roadside characteristics relative to speed.*

Analysis Method	**Theoretical Limit**
85th Percentile Speed[1]	80 MPH
Minimum Study Analysis[2]	77 MPH
US Limits 2[3]	* See below

20. Segment 20

Site Data: This study area is a 4 lane *Rural Interstate Highway* roadway that begins at Deeth-Starr Valley Interchange (MP EL-56.0) and continues east to West Wells Interchange (MP EL-73.1) for a segment length of 17.1 miles. This segment is a 75 MPH speed zone both directions.

Field Data:

Posted Speed Limit	75 MPH
85th Percentile Speed	78 MPH
Pace	70-80 MPH
% in the pace	61%
50th Percentile speed	72 MPH (mean)

Mitigating Factors:
None.

Objective Analysis: The following is objective analysis using predetermined formulae and field data to aid in determination of speed limits. This information is used by the engineer as a factor when determining appropriate speed limits; however, it is not the only information considered. Determination of speed limits is practice of engineering, requires consideration of many variables and mitigating factors, and is subject to the discretion of the Traffic Engineer. *The use of the Refined Study Analysis data is used as a guide only in determining roadside characteristics relative to speed.*

Analysis Method	**Theoretical Limit**
85th Percentile Speed[1]	78 MPH
Minimum Study Analysis[2]	77 MPH
US Limits 2[3]	* See below

21. Segment 21

Site Data: This study area is a 4 lane *Rural Interstate Highway* roadway that begins at West Wells Interchange (MP EL-73.1) and continues east to SR-233/Montello Rd.-Oasis Interchange (MP EL-100.9) for a segment length of 27.8 miles. This segment is a 75 MPH speed zone both directions.

Field Data:

Posted Speed Limit	75 MPH
85th Percentile Speed	77 MPH
Pace	68-78 MPH
% in the pace	46%
50th Percentile speed	68 MPH (mean)

Mitigating Factors:
None.

Objective Analysis: The following is objective analysis using predetermined formulae and field data to aid in determination of speed limits. This information is used by the engineer as a factor when determining appropriate speed limits; however, it is not the only information considered. Determination of speed limits is practice of engineering, requires consideration of many variables and mitigating factors, and is subject to the discretion of the Traffic Engineer. *The use of the Refined Study Analysis data is used as a guide only in determining roadside characteristics relative to speed.*

Analysis Method	Theoretical Limit
85th Percentile Speed[1]	77 MPH
Minimum Study Analysis[2]	74 MPH
US Limits 2[3]	* See below

22. Segment 22

Site Data: This study area is a 4 lane *Rural Interstate Highway* roadway that begins at SR-233/Montello Rd.-Oasis Interchange (MP EL-100.9) and continues east to Shafter Interchange (MP EL-109.6) for a segment length of 8.7 miles. This segment is a 75 MPH speed zone both directions.

Field Data:

Posted Speed Limit	75 MPH
85th Percentile Speed	79 MPH
Pace	70-80 MPH
% in the pace	61%
50th Percentile speed	73 MPH (mean)

Mitigating Factors:
None.

Objective Analysis: The following is objective analysis using predetermined formulae and field data to aid in determination of speed limits. This information is used by the engineer as a factor when determining appropriate speed limits; however, it is not the only information considered. Determination of speed limits is practice of engineering, requires consideration of many variables and mitigating factors, and is subject to the discretion of the Traffic Engineer. *The use of the Refined Study Analysis data is used as a guide only in determining roadside characteristics relative to speed.*

Analysis Method	Theoretical Limit
85th Percentile Speed[1]	79 MPH
Minimum Study Analysis[2]	78 MPH
US Limits 2[3]	* See below

23. Segment 23

Site Data: This study area is a 4 lane *Rural Interstate Highway* roadway that begins at Shafter Interchange (MP EL-109.6) and continues east to Pilot Peak Interchange (MP EL-120.7) for a segment length of 11.1 miles. This segment is a 75 MPH speed zone both directions.

Field Data:

Posted Speed Limit	75 MPH
85th Percentile Speed	80 MPH
Pace	70-80 MPH
% in the pace	51%
50th Percentile speed	72 MPH (mean)

Mitigating Factors:
None.

Objective Analysis: The following is objective analysis using predetermined formulae and field data to aid in determination of speed limits. This information is used by the engineer as a factor when determining appropriate speed limits; however, it is not the only information considered. Determination of speed limits is practice of engineering, requires consideration of many variables and mitigating factors, and is subject to the discretion of the Traffic Engineer. *The use of the Refined Study Analysis data is used as a guide only in determining roadside characteristics relative to speed.*

Analysis Method	**Theoretical Limit**
85th Percentile Speed[1]	80 MPH
Minimum Study Analysis[2]	77 MPH
US Limits 2[3]	* See below

24. Segment 24

Site Data: This study area is a 4 lane *Rural Interstate Highway* roadway that begins at Pilot Peak Interchange (MP EL-120.7) and continues east to Nevada/Utah state line (MP EL-132.7) for a segment length of 12.0 miles. This segment is a 75 MPH speed zone both directions.

Field Data:

Posted Speed Limit	75 MPH
85th Percentile Speed	78 MPH
Pace	65-75 MPH
% in the pace	47%
50th Percentile speed	70 MPH (mean)

Mitigating Factors:
None.

Objective Analysis: The following is objective analysis using predetermined formulae and field data to aid in determination of speed limits. This information is used by the engineer as a factor when determining appropriate speed limits; however, it is not the only information considered. Determination of speed limits is practice of engineering, requires consideration of many variables and mitigating factors, and is subject to the discretion of the Traffic Engineer. *The use of the Refined Study Analysis data is used as a guide only in determining roadside characteristics relative to speed.*

Analysis Method	**Theoretical Limit**
85th Percentile Speed[1]	78 MPH
Minimum Study Analysis[2]	74 MPH
US Limits 2[3]	* See below

CRASH DATA:

A 3-year crash rate (01/2013-01/2016) was computed for the study area and indicated the following:

Segment 1:

Total Crashes	40
Fatal Crashes	1
Crashes Per MVMT[3]	0.43

Segment 2:

Total Crashes	66
Fatal Crashes	0
Crashes Per MVMT[3]	0.35

Segment 3:

Total Crashes	55
Fatal Crashes	2
Crashes Per MVMT[3]	0.30

Segment 4:

Total Crashes	24
Fatal Crashes	1
Crashes Per MVMT[3]	0.43

Segment 5:

Total Crashes	36
Fatal Crashes	0
Crashes Per MVMT[3]	0.44

Segment 6:

Total Crashes	28
Fatal Crashes	0
Crashes Per MVMT[3]	0.35

Segment 7:

Total Crashes	23
Fatal Crashes	0
Crashes Per MVMT[3]	0.36

Segment 8:

Total Crashes	16
Fatal Crashes	1
Crashes Per MVMT[3]	0.31

Segment 9:

Total Crashes	52
Fatal Crashes	2
Crashes Per MVMT[3]	0.34

Segment 10:

Total Crashes	65
Fatal Crashes	2
Crashes Per MVMT[3]	0.65

Segment 11:

Total Crashes	38
Fatal Crashes	0
Crashes Per MVMT[3]	0.37

Segment 12:

Total Crashes	56
Fatal Crashes	1
Crashes Per MVMT[3]	0.58

Segment 13:

Total Crashes	25
Fatal Crashes	1
Crashes Per MVMT[3]	0.25

Segment 14:

Total Crashes	55
Fatal Crashes	4
Crashes Per MVMT[3]	0.48

Segment 15:

Total Crashes	87
Fatal Crashes	1
Crashes Per MVMT[3]	0.42

Segment 16:

Total Crashes	159
Fatal Crashes	5
Crashes Per MVMT[3]	0.86

Segment 17:

Total Crashes	217
Fatal Crashes	2
Crashes Per MVMT[3]	0.85

Segment 18:

Total Crashes	108
Fatal Crashes	0
Crashes Per MVMT[3]	0.68

Segment 19:

Total Crashes	36
Fatal Crashes	1
Crashes Per MVMT[3]	0.38

Segment 20:

Total Crashes	90
Fatal Crashes	3
Crashes Per MVMT[3]	0.68

Segment 21:

Total Crashes	156
Fatal Crashes	1
Crashes Per MVMT[3]	1.00

Segment 22:

Total Crashes	12
Fatal Crashes	0
Crashes Per MVMT[3]	0.27

Segment 23:

Total Crashes	42
Fatal Crashes	1
Crashes Per MVMT[3]	0.65

Segment 24:

Total Crashes	22
Fatal Crashes	0
Crashes Per MVMT[3]	0.33

Comparison rates for Rural Interstate Highway roads in the state are 0.34 per million vehicle miles traveled. Attached you will find the Crash Rates for your review.

The information in this report is based on the application of data collected to standard evaluation criteria. Final recommendations by the Chief Traffic Engineer must consider conditions unique to the area, which may include other criteria in addition to the standard evaluation criteria.

Should you require clarification, additional information, or would like to review either the raw data or analysis of the data, please contact Mark Wooster at (775) 888-7156 or Lisa Wood at (775) 888-7382.

MJW:lw

Attachments: Crash Rates
Maps

cc: Thomas Moore, Assistant Chief Traffic Operations Engineer
Hoang Hong, Principal Operations Engineer

1. ITE Speed Zoning Guidelines, Published by ITE, ITE Committee 4M-25, date unknown
2. Speed Zone Methodology, Traffic Institute, Northwestern University, date unknown
3. MVMT = Million Vehicle Miles Travelled

* US Limits 2 unavailable due to software upper limit programed at 75MPH