I-80 CORRIDOR STUDY TECHNICAL REPORT

Appendix H
Quick Response Freight Model

PREPARED FOR
NEVADA DEPARTMENT OF TRANSPORTATION

NEVADA DOT

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Introduction

1. Project Background

Northern Nevada is experiencing growth on a massive and unprecedented scale. A significant portion of this growth is occurring in Reno and its surrounding communities. Future growth plans include the development of major warehouse and distribution facilities, industrial and residential development, and supporting commercial development. Developing solutions for the existing deficiencies as well as a coordinated, viable, long-term plan for these developments to use the interstate system is paramount to the success of that growth. Planning for the future of the I-80 corridor through Reno will be a key component of any set of solutions. One component of planning for this future is establishing reasonable estimates of future travel demand for the corridor. In particular, the movement of freight to, from and through the corridor will be an important factor of travel demand estimates. Reasonable estimates of freight traffic along the I-80 corridor will give policy makers, business leaders and citizens information to help establish and plan for infrastructure to support, and capitalize on, future freight traffic.

2. Study Purpose

The purpose of the I-80 freight study, within the overall framework of the I-80 corridor study, is to establish reasonable estimates of future freight volumes along the study area corridor. As projections of future freight traffic are largely driven by the best available data, and are less reliable for each successive future year, the secondary purpose of the I-80 freight study is to provide planners tools from which to derive similar projections as new data becomes available and understand the limitations of current estimates.

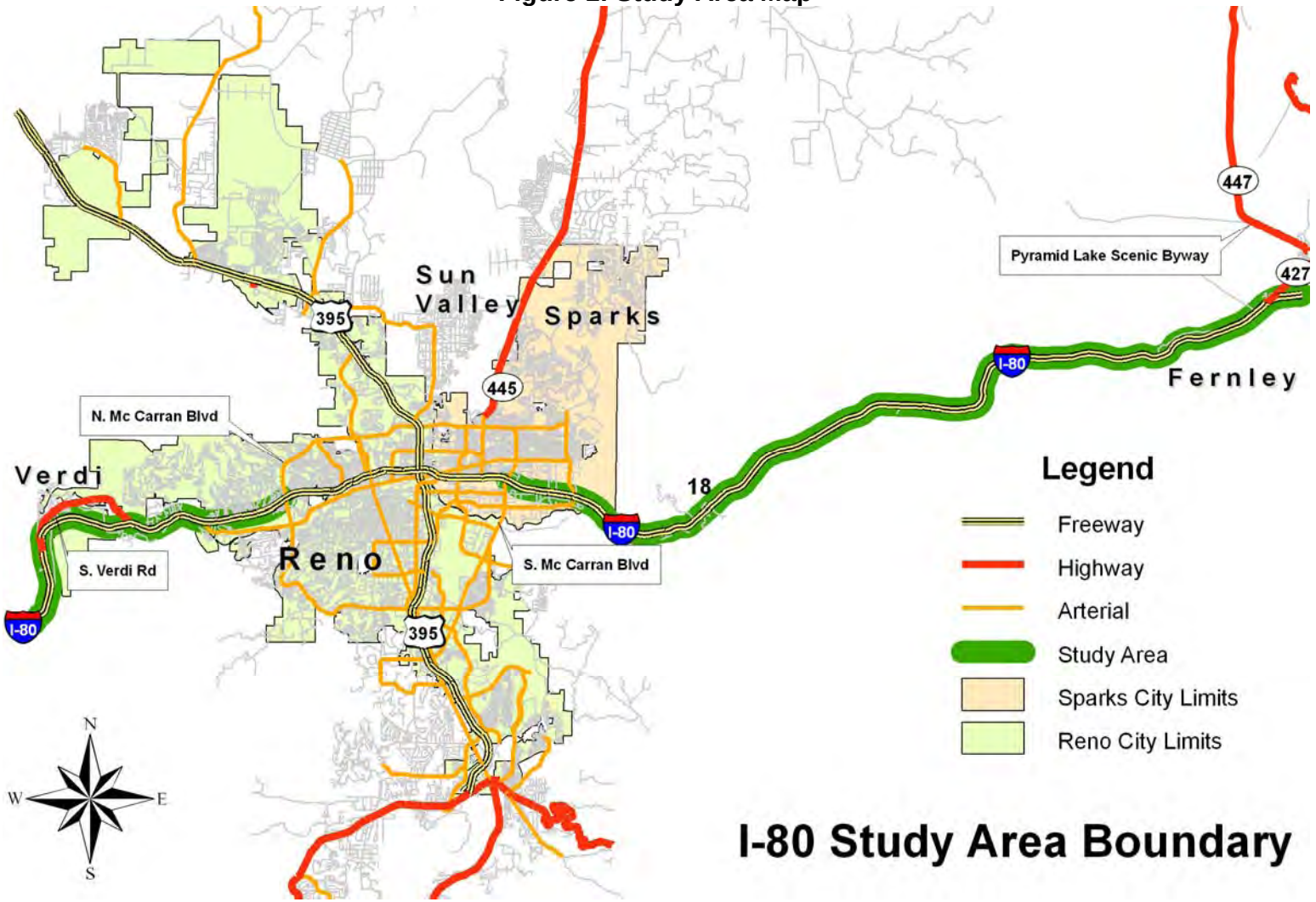
3. Study Approach

The study approach utilizes methodology outlined in the TMIP Quick Response Freight (QRF) manual. The simplest approach proposed in the QRF manual is to utilize an annualized growth factor developed from two years of truck count data. However, this approach, while simple, does not incorporate underlying factors that drive freight demand, and thus lead to an increase, or decrease, in the number of trucks on a given facility. These underlying factors include shifts in the production of and demand for products, or services, in various industries. The chosen approach, incorporates these underlying factors by assuming that growth in traffic associated with freight movement, in particular truck traffic, is related to economic growth in various industries. This, in conjunction with known historic traffic volumes and truck percentages along the corridor, along with Nevada statewide historic vehicle miles traveled (VMT) distribution by industry for trucks allows for a simple, reasonable method of estimating future truck volumes along the I-80 corridor by industry.

4. Study Area

The study area for the I-80 QRF analysis is composed of two segments of I-80 east and west of Reno, Nevada. The eastern portion of the study area encompasses I-80 from the East McCarran Blvd. interchange in the City of Sparks, to the Wadsworth-Pyramid interchange near Fernley City. The western portion of the study area encompasses I-80 from the West Verdi interchange to the West McCarran Blvd. interchange. A study area map is provided as **Figure 1**.

Figure 1: Study Area Map



Data Collection

1. Introduction

Data components of the I-80 QRF Model include:

1. Average Annual Daily Traffic Counts (AADT)
2. Trucks as a percentage of AADT
3. Truck VMT distribution by industry for the state of Nevada
4. Gross State Product (GSP) for all 50 U.S. states by industry classification

These data components are publicly available from the U.S. Bureau of Economic Analysis (BEA), U.S. Census, and the Nevada Department of Transportation (NDOT).

2. Average Annual Daily Traffic Counts (AADT)

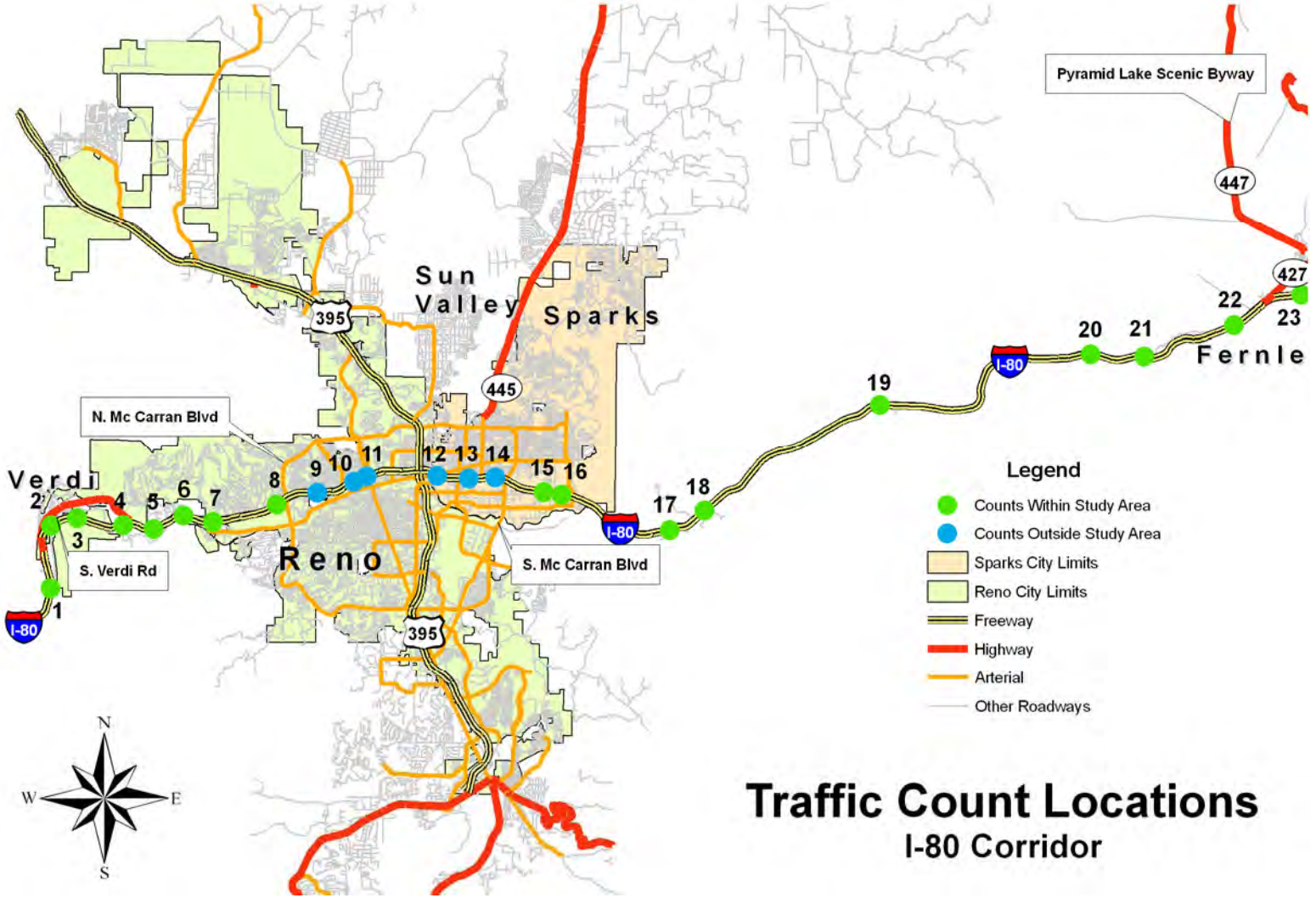
NDOT provided historic traffic counts (2000-2006) at various locations along the I-80 corridor. The AADT data, as provided, is included in **Appendix A**. From this data, the study team selected seventeen traffic count locations that are within the study area. **Table 1** presents the selected AADTs by location and **Figure 2** provides general overview of count locations both within and outside of the study area.

Table 1: 2006 AADT

Location Id	Location Description	AADT
1	I-80E; 1 mile east of the Nevada-California state line	26,600
2	I-80E; between the West Verdi interchange 'Exit 2' & the Verdi interchange 'Exit 3'	28,700
3	I-80E; .8 mile west of the Garson Rd interchange 'Exit 4'	29,100
4	I-80E; between the Garson interchange 'Exit 4' & the east Verdi interchange 'Exit 5'	32,000
5	I-80E; between the East Verdi interchange 'Exit 5' and the Mogul interchange 'Exit 7'	37,000
6	I-80E; .1 mi E of the westbound off-ramp of the Mogul interchange 'Exit 7'	39,000
7	I-80E; between the west 4th St interchange 'Exit 8' & the Robb Dr interchange 'Exit 9'	36,500
8	I-80E; .5 mi west of the West McCarran Blvd. interchange 'Exit 10'	50,500
15*	I-80E; at Sparks Blvd interchange 'Exit 20'	88,400
16	I-80E; .9 mi east of Vista Blvd. interchange	35,000
17	I-80E; .2 mi east of the Lockwood interchange 'Exit 22'	32,500
18	I-80E; .5 miles east of Mustang interchange 'Exit 23'	32,500
19	I-80E; 2 mi east of the Patrick interchange 'Exit 28'	32,500
20	I-80E; between the Thisbe-Derby Dam interchange 'Exit 36' & the Orchard interchange 'Exit 38'	26,100
21	I-80E; between the Orchard interchange 'Exit 38' & the Painted Rock interchange 'Exit 40'	26,600
22	I-80E; 1 mile west of the West Wadsworth interchange 'Exit 43'	26,600
23	I-80E; east of the West Wadsworth Interchange 'Exit 43' .9 mi east of exit 43	27,100

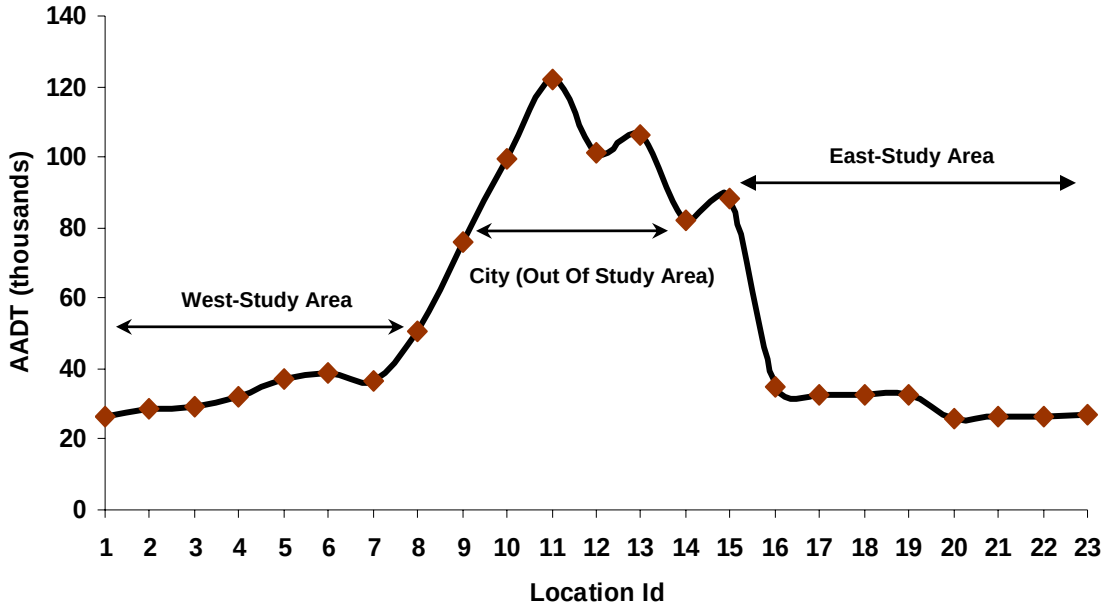
*Count location description from NDOT indicates the AADT should be the additive of the location, and the eastbound and westbound 'Exit 20' merge/diverge ramps.

Figure 2: Traffic Count Location



A review of the available AADT data shows a sharp increase in traffic between the West McCarran Blvd. interchange and the East McCarran Blvd. interchange due to localized city traffic. With the exception of location #15, the traffic flows on the east and west segments of the study area are comparable. **Figure 3** illustrates the general traffic flow between the east and west segments of study area and the city.

Figure 3: I-80 AADT Traffic Flow



3. Truck Percentages

NDOT provided truck count totals and aggregated truck percentage data for various locations along the I-80 corridor for assorted years. Truck percentage data, as provided, is included in **Appendix B.** From this data, the study team selected seven locations from which to draw estimated truck percentage summaries based on the proximity of the count location to the AADT locations. The truck & bus percentage summaries include four major classes of commercial vehicles with varying axle and trailer configurations. These categories include:

- Buses
- Single Units
- Tractor & Single Trailer
- Tractor & Multiple Trailers

The study team subtracted bus percentage/totals from the provided summaries, as buses are not considered a commercial vehicle, but rather a passenger vehicle. **Table 2** presents the truck percentages by location and year of count, along with descriptive statistics.

Table 2: Truck Percentages by Location

Location Id	Location Description	Count Year	Percentage
5	.3 mile west of SR-647 at Mogul Dr.	2000	12.58%
7*	0.9 mile east of SR-650 at McCarran Blvd.	2000	19.65%
8	Between Robb & McCarran Drive	2007	14.79%
15	Between McCarran Blvd. & Sparks	2007	14.78%
16	East of Vista Blvd.	2007	18.36%
20	.09 mile east of Thisby-Derby Dam interchange	2001	26.86%
22	.09 mile east of SR-447 at Wadsworth interchange	2000	22.75%
Descriptive Statistics			
		Mean	18.54%
		Standard Deviation	5.03%

*Probable nearest location

4. Vehicle Miles Travelled (VMT) Distribution by Industry

The U.S. Census Bureau conducts an Economic Census in five-year intervals. A Vehicle Inventory Use Survey (VIUS) is one component of this census. VIUS provides data by industry and operational characteristics of truck traffic. The study team collected VIUS annual truck VMT totals for the state of Nevada for 1977-1987 and from 1997-2002[1] and aggregated these totals to eight industry sectors to replicate sample data provided in the QRF manual[2]. Equivalent totals are not available for the 1992 VIUS. Copies of the relevant VMT tables from VIUS are included in Appendix C. **Table 3** and **Figure 4** present the eight industry categories along with the corresponding VMT total and Table 4 presents the overall percent distributions by industry and year.

[1] U.S. Census Bureau, Economic Census, Vehicle Inventory and Use Survey, www.census.gov/svsd/www/vius/products.html

[2] U.S. Department of Transportation, FHWA, TMIP Quick Response Freight Manual, Section 3.5; tmip.fhwa.dot.gov/clearinghouse/docs/quick

Table 3: Annual Truck VMT by Industry Category

Industry	Industry Code[1]	Truck Miles (millions)					
		Year					
		1977	1982	1987	1992[2]	1997	2002
Agriculture, Forestry and Lumbering	1	16.1	20.0	14.0	-	37.8	8.9
Mining	2	6.5	5.5	11.0	-	17.3	12.3
Construction	3	26.7	44.4	62.8	-	163.1	117.7
Manufacturing	4	4.2	4.1	4.7	-	20.5	7.8
Wholesale Trade	5	19.5	32.3	37.5	-	54.9	37.9
Retail Trade	6	13.5	24.4	18.5	-	60.8	28.2
For Hire Transportation and Utilities	7	10.9	46.6	51.5	-	87.9	147.1
Services	8	11.5	16.0	22.5	-	53.0*	38.0*
Gross Total[3]	-	115.4	202.1	232.0	-	576.4	418.9

[1]Industry codes are assigned based on analysis framework and are not standardized industry codes
[2] Nevada VMT in millions is unavailable for 1992
[3]Gross total includes industries not applicable to QRF analysis; industries totals excluded from analysis include: Vehicle Leasing or Rental, Personal Transportation, Not in Use and Not Reported
*Service estimates for 1997 and 2002 are estimates based on the average distribution of the Service industry from previous years

Figure 4: Annual Truck VMT by Industry Category

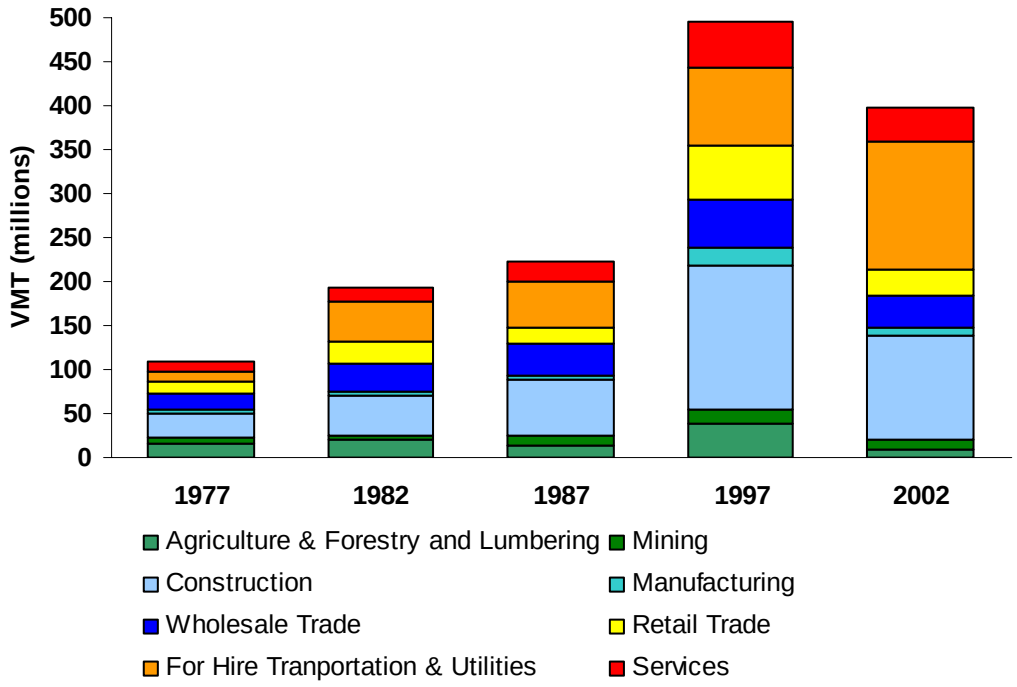


Table 4: VMT Distribution

Industry	Industry Code	Percent Distribution of VMT					Descriptive Statistics	
		Year						
		1977	1982	1987	1997	2002	Mean	Standard Deviation
Agriculture & Forestry and Lumbering	1	14.78%	10.35%	6.29%	7.63%	2.24%	8.26%	4.68%
Mining	2	5.97%	2.85%	4.94%	3.49%	3.09%	4.07%	1.34%
Construction	3	24.52%	22.97%	28.22%	32.93%	29.58%	27.64%	3.99%
Manufacturing	4	3.86%	2.12%	2.11%	4.14%	1.96%	2.84%	1.07%
Wholesale Trade	5	17.91%	16.71%	16.85%	11.08%	9.53%	14.42%	3.82%
Retail Trade	6	12.40%	12.62%	8.31%	12.28%	7.09%	10.54%	2.63%
For Hire Transportation & Utilities	7	10.01%	24.11%	23.15%	17.75%	36.97%	22.40%	9.89%
Services	8	10.56%	8.28%	10.11%	10.70%	9.55%	9.65%*	1.21%*
Total		100%	100%	100%	100%	100%	-	-

*Services distributions for 1997 and 2002 are based on study team estimates rather than literal VIUS data, the statistics for this category exclude the distribution values for these years

5. Historic Gross State Product (GSP)

The BEA provides estimates of GSP for each state by various industrial categories. GSP is the market value of labor income, business taxes and capital income of the state and provides an overall economic picture of an area. GSP categorizations utilize the North American Industry Classification System (NAICS). The study team obtained GSP data from 1997-2006 from the BEA web based data service[3] and aggregated the data by year and state, into eight industrial categories to replicate sample data provided in the QRF manual[4]. The eight industrial category totals are representative of all of the NAICs major category codes except for Government. As the QRF manual does not provide clear direction as to its proper industrial categorization within a freight analysis framework, the study team excluded this category from analysis. **Table 5** presents each of the industrial categories, its associated major NAICS category code, and industry description.

[3] www.bea.gov/regional/gsp/default.cfm?series=NAICS
[4] U.S. Department of Transportation, FHWA, TMIP Quick Response Freight Manual, Section 3.5; tmip.fhwa.dot.gov/clearinghouse/docs/quick

Table 5: GSP/VMT-NAICS Equivalency Table

GSP/VMT Industry Code	GSP/VMT Industry Description	NAICS	NAIC Industry Description
1	Agriculture & Forestry and Lumbering	3	Agriculture, forestry, fishing, and hunting
2	Mining	6	Mining
3	Construction	11	Construction
4	Manufacturing	12	Manufacturing
5	Wholesale Trade	34	Wholesale trade
6	Retail Trade	35	Retail trade
7	For Hire Transportation & Utilities	10	Utilities
		36	Transportation and warehousing, excluding Postal Service
8	Services	45	Information
		50	Finance and insurance
		55	Real estate, rental, and leasing
		58	Professional and technical services
		62	Management of companies and enterprises
		63	Administrative and waste services
		66	Educational services
		67	Health care and social assistance
		71	Arts, entertainment, and recreation
		74	Accommodation and food services
		77	Other services, except government

Annualized 1997-2006 GSP growth rates were calculated by industry for all fifty states utilizing the industry totals utilizing the compound annual growth rate (CAGR) calculation as illustrated in **Equation 1**.

Equation 1: GSP CAGR

$$GSPCAGR = \left[\left(\frac{2006 IndustryTotal}{1997 IndustryTotal} \right)^{\left(\frac{1}{2006 - 1997} \right)} \right] - 1$$

Appendix D provides the industry totals and annualized 1997-2006 growth rates for each of the fifty states. **Table 6** presents descriptive statistics derived from the annualized growth rates for all fifty states.

Table 6: GSP Annualized Growth Rate Descriptive Statistics

Industry Code	Industry Description	Years	Mean	Standard Deviation
1	Agriculture, Forestry and Lumbering	1997-2006	1.36%	2.96%
2	Mining and Quarrying	1997-2006	9.13%	5.83%
3	Construction	1997-2006	6.84%	1.97%
4	Manufacturing	1997-2006	2.64%	2.51%
5	Wholesale & Trade	1997-2006	4.79%	1.17%
6	Retail Trade	1997-2006	4.49%	1.02%
7	Transportation and Public Utilities	1997-2006	4.16%	1.03%
8	Services	1997-2006	6.17%	0.99%

Analysis Process

1. Introduction

The study team developed the I-80 QRF Model utilizing the analysis steps as described in section 3.3 of the QRF manual[5]. The analysis methodology assumes that the demand for transport of a commodity (freight) is proportional to an economic indicator variable, in this case GSP, which measures output for a commodity. With this assumption, derived GSP growth rates can be used to forecast freight traffic. The primary benefit of this approach is its ability to produce reasonable results from a small set of available data.

2. Methodology

The basic approach of the QRF manual is to:

1. Calculate base-year truck traffic from AADT data and truck percentage data.
2. Disaggregate the total by industry sector per industry VMT distributions.
3. Calculate future-year forecasts from the base-year estimates utilizing a computed annual compound rate based on the economic input variable.

Equation 2 illustrates the approach mathematically.

Equation 2: I-80 QRF Model

$$\sum_{i=1}^{8}\left[AADT \times TruckPercentage \times IndustryDistributionPercentage_i \times \left(1 + IndustryGrowthRate_i\right)^{ForecastYear-2006}\right]$$

The study team, in order to provide estimates that take full advantage of all available data and capitalize on known data variability and quantify this variability, built the basic framework of the I-80 QRF Model to utilize input variables derived from a Monte Carlo based simulation.

The I-80 QRF Model utilizes three sets of input parameters derived from Monte Carlo simulation, and include:

- Trucks as a percentage of AADT **(Table 2; Descriptive Statistics)**
- VMT distribution percentages by each of eight industries **(Table 3; Descriptive Statistics)**
- Descriptive statistics of the annualized GSP growth rates for each of the eight industries (**Table 6)**

[5] U.S. Department of Transportation, FHWA, TMIP Quick Response Freight Manual, Section 3.3; tmip.fhwa.dot.gov/clearinghouse/docs/quick

3. Monte Carlo Simulation

A Monte Carlo simulation quantifies the effect of input data variability on a model's results. The term Monte Carlo Simulation was coined in the 1940's by physicists working on nuclear weapon projects at the Los Alamos National Laboratory for a family of statistical sampling techniques. There are three key steps to this technique:

1. Define a domain of possible inputs.
2. Generate inputs randomly from the domain, and perform a deterministic computation on them.
3. Aggregate the results of the individual computations into the final results.

The second step in the Monte Carlo simulation process is to generate a large number of randomly selected QRF Model inputs for each input variable to **Equation 2** utilizing the data supplied in **Tables 2**, **3**. and **6** to define the domain of possible inputs.

The random number generator used in I-80 QRF Model Monte Carlo Simulation is designed to have a greater likelihood of producing values closer to the mean value supplied, with decreasing likelihood the further from the mean the generated value is. The rate of decrease is controlled by the standard deviation supplied to the normal distribution random number generator (RNG). It is important to note, that while the inputs are randomly selected, these inputs have the same statistical behavior as the data value samples. **Appendix E** documents the quality control process to confirm that I-80 QRF Model RNG inputs conformed to this criterion.

For example, there are seven data points for trucks as a percentage of AADT. These seven points had an arithmetic mean of 18.54% and a standard deviation of 5.03% **(Table 2)**. The second step of the Monte Carlo process randomly generates many thousands of new data points for this percentage estimate. However, the arithmetic mean and standard deviation of these many thousands of data points would be *the same* as the original seven data points.

In contrast, the common RNG exhibits a uniform distribution where all numbers in the defined universe are equally likely to be generated. This is the same type of random number generation as rolling a die or randomly picking a card—and is the type familiar to most people.

A uniform distribution RNG produces a histogram as shown in **Figure 5** and a normal distribution RNG produces a histogram as shown in **Figure 6**. In both figures, the same numbers of random samples (100,000) are graphed.

Figure 5: Histogram of values: *typical* (uniform distribution) RNG

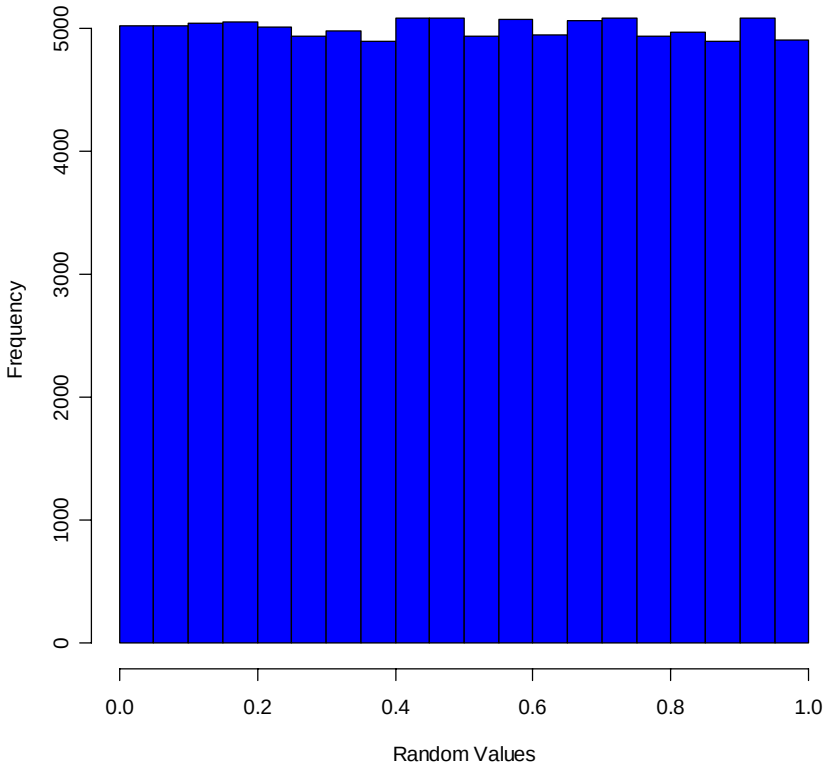
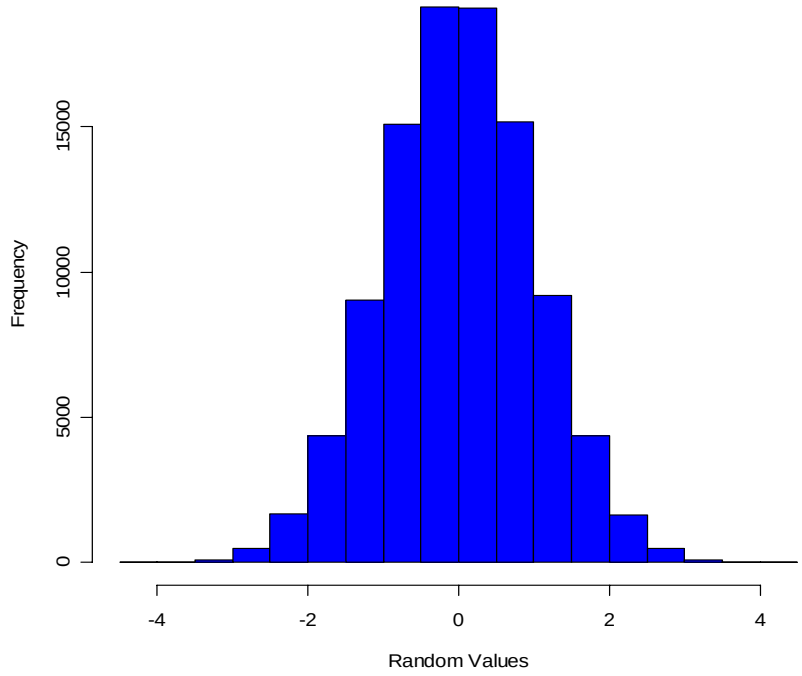


Figure 6: Histogram of values: Monte Carlo (normal distribution) RNG



Monte Carlo techniques, like most statistical techniques, provide improved answers with additional samples. With this simulation technique, the limiting factor in the precision of the answer is the amount of time available to perform the calculations. In the case of this model, each set of model inputs required separate QRF Model calculations (seven forecast years for each count location). We chose to generate 100,000 model input data sets to perform those calculations. This is a much larger number of samples than is required to produce a reasonable forecast; however, computation power has reached the point where samples of this size are feasible. The final step in the Monte Carlo simulation technique is to aggregate the results and compute the arithmetic mean and standard deviation for the model output utilizing the R statistical environment. The study team implemented this Monte Carlo simulation of the I-80 QRF Model in the R Statistical Environment[6]. All input data and model code used for this analysis is shown in **Appendix E**.

[6] R Development Core Team, R: A Language and Environment for Statistical Computing, R Foundation for Statistical Computing, Vienna, Austria, 2007, http://www.R-project.org

Quick Response Freight (QRF) Model: Forecasting Tool

1. Introduction

The QRF Forecasting Tool, **Appendix G**, is a stand-alone application of the I-80 QRF Model. The purpose of this tool is to provide a basis from which to forecast freight volumes solely based on freight count data. Whereas the I-80 QRF Model results are specific to a known location within the study area, this tool will allow planners to derive estimates for any location within the State of Nevada.

2. Methodology

The analysis methodology is similar to the I-80 QRF model. The key difference is that where the I-80 QRF Model utilizes location specific AADT data and truck percentages derived from a Monte Carlo analysis of known data, the Freight Forecasting tool substitutes these with assumed truck volumes in increments of 100 along with a Monte Carlo analysis of GSP annualized growth rates and industry distributions to generate forecasts. The result is a table of estimated truck volume means and standard deviations for each forecast year in increments of 100. Utilizing the table of values in **Appendix G**, users can develop forecasts as new data becomes available by simply interpolating the count data values between successive increments of 100 and for the desired forecast year.

Equation 3: QRF Forecasting Tool

$$\sum_{i=1}^{8}\left[TotalTrucks_n \times IndustryDistributionPercentage_i \times \left(1+IndustryGrowthRate_i\right)^{ForecastYear-2006}\right]$$

3. Example Application

One application of the Freight Forecasting Tool is to derive refined freight forecasts by interpolating between increments utilizing base-year truck count data. Outlined below is an example of this application utilizing sample data provided in **Table 7**.

In this example forecasts for the years 2010 to 2030 are desired. The initial count from which to derive the forecasts is 11,065 for a base year of 2008. The procedural steps to derive the forecasts are as follows.

Step 1: Determine the applicable Base Year Truck Estimate rows from **Appendix B**. In this case, the initial count is 11,065. Then, from **Appendix B**, select the rows that immediately precede and follow the initial value, which are 11,000 and 11,100, and shown in **Table 7**.

Table 7: Sample Estimated Truck Volume Data

Row	Base Year Truck Estimate	Forecast Years				
		5	10	15	20	25
		Mean	Mean	Mean	Mean	Mean
1	11,000	14,192	18,685	25,114	34,655	49,577
2	11,100	14,321	18,855	25,342	34,970	50,028

Step 2: Define the forecast year for each initial forecast year interval. In this case, the initial year is 2008. To define each initial forecast year, add each forecast year value to 2008.

2008 + 5 = 2013
2008 +10 = 2018
2008 +15 = 2023
2008 +20 = 2028
2008 +25 = 2033

Apply these transformations to obtain **Table 8**:

Table 8: Example Initial Year Estimated Truck Volume Data

Row	Base Year Truck Estimate	Forecast Years				
		2013	2018	2023	2028	2033
		Mean	Mean	Mean	Mean	Mean
1	**11,000**	14,192	18,685	25,114	34,655	49,577
2	11,100	14,321	18,855	25,342	34,970	50,028

Step 3: Determine the difference from the Base Year Truck Estimate in row 1 in **Table 8** and the initial count value and divide the difference by 100.

11,000 - 11,065 = 65

then;

65 / 100 = .65

Step 4: Determine the difference from rows 1 and 2 in **Table 8** for each initial forecast year value.

2013: 14,321 - 14,192 = 129
2018: 18,855 - 18,685 = 170
2023: 25,342 - 25,114 = 228
2028: 34,970 - 34,655 = 315
2033: 50,028 - 49,577 = 451

Step 5: Multiply the result in **Step 3** by each initial forecast year difference in **Step 4** for each forecast year value and round each value.

2013: 129 x .65 = 84
2018: 170 x .65 = 111
2023: 228 x .65 = 148
2028: 315 x .65 = 205
2033: 451 x .65 = 293

Step 6: Add the results in **Step 5** to row 1 in **Table 8** for each initial forecasts year.

2013: 14,192 + 84 = 14,276
2018: 18,685 + 111 = 18,796
2023: 25,114 + 148 = 25,262
2028: 34,655 + 205 = 34,860
2033: 49,577 + 293 = 49,870

Apply these calculations to obtain **Table 9**:

Table 9: Example Initial Year Estimated Truck Volume Forecasts

Base Year Truck Count 2008	Forecast Years				
	2013	**2018**	**2023**	**2028**	**2033**
	Mean	Mean	Mean	Mean	Mean
11,065	14,276	18,796	25,262	34,860	49,870

The steps to develop initial year truck volume forecasts are complete. However, the initial year forecasts do not represent the desired forecasts years, which are 2010 to 2030. The procedural steps to derive the forecasts for the desired forecast years are as follows.

Step 1: Determine the difference between each successive initial forecast year and its predecessor in **Table 9**.

2013 - 2008 = 5
2018 - 2013 = 5
2023 - 2018 = 5
2028 - 2023 = 5
2033 - 2028 = 5

Step 2: Determine the difference between each successive initial forecast year and the desired preceding forecast year.

2010 - 2008 = 2
2015 - 2013 = 2
2020 - 2018 = 2
2025 - 2023 = 2
2030 - 2028 = 2

Step 3: Divide the results in **Step 2** by the results in **Step1**.

2/5 = .4
2/5 = .4
2/5 = .4
2/5 = .4
2/5 = .4

Step 4: Determine the difference between each initial forecast year value and the preceding forecast year value in **Table 9**.

2013 - 2008: 14,276 - 11,065 = 3,211
2018 - 2013: 18,796 - 14,276 = 4,520
2023 - 2018: 25,262 - 18,796 = 6,466
2028 - 2023: 34,860 - 25,262 = 9,598
2033 - 2028: 49,870 - 34,860 = 15,010

Step 5: Multiply the results in **Step 4** by the results in **Step 3** and round.

2013 - 2008: 3,211 x .4 = 1,284
2018 - 2013: 4,520 x .4 = 1,808
2023 - 2018: 6,466 x .4 = 2,586
2028 - 2023: 9,598 x .4 = 3,839
2033 - 2028: 15,010 x .4 = 6,004

Step 6: Add the results in **Step 5** to the corresponding initial forecast year.

2010: 1,284 + 11,065 = 12,349
2015: 1,808 + 14,276 = 16,084
2020: 2,586 + 18,796 = 21,382
2025: 3,839 + 25,262 = 29,101
2030: 6,004 + 34,860 = 40,864

The steps to interpolate between the initial year values to derive desired forecast year values table is now complete. The results are shown below as **Table 10**.

Table 10: Example Desired Year Estimated Truck Volume Forecasts

Base Year Truck Count 2008	Forecast Years				
	2010	2015	2020	2025	2030
	Estimates				
11,065	12,349	16,084	21,382	29,101	40,864

Conclusion

1. Findings

Table 11 below provides summary results of the analysis. **Appendix H** presents detailed statistics and graphics of the model results. The truck forecasts in **Appendix H** show four values for each location/forecast year, arithmetic mean, lower 95% confidence value, upper 95% confidence value, and standard deviation. The first value is the arithmetic mean of the 100,000 model runs. The next two are the upper and lower 95% confidence intervals. The 95% confidence interval indicates that the *actual mean* forecast value has a 95% probability of lying between those two values. The number of samples in the data set controls the magnitude of the confidence interval. The relatively small magnitude of the confidence intervals in this analysis is related to the sample size (100,000) for each result. The final value is the standard deviation of the 100,000 model runs—this value provides an indication of the how much variance is possible in the forecast *if the true model parameters deviate from the arithmetic means*.

The model results indicate that the I-80 QRF Model provides useful forecasts up to 2025 or 2030. Up to this timeframe, the forecasts exhibit a reasonable quantity of variance; however, after 2030 the variance increases to such an extent that forecasts are of limited usefulness.

A review of the model results indicates that the predicted values for location #15 are probably significantly higher than warranted. The study team's recommendation is not to use the model results for this location, as the base AADT value for this location is significantly higher for this location than for others in the study area. This results in a correspondingly higher initial estimate of trucks. The initial high estimate of the truck volume in conjunction with the exponential nature of the I-80 QRF Model yields unreasonably high forecast values for this location. If additional forecasts are needed for this location, the collection of classification counts would be required.

Table 12 presents an average study area freight distribution forecast by industry. These forecasts indicate that Mining, as a percent of freight volume, will undergo significant growth during the forecast years, due, in large part, to the overall growth in this industry sector from 1997-2006. The growth rate for this industry sector, as **Table 6** indicates, is 2.3% greater than the next highest industry sector (Construction). The initially high growth rate and the associated degree of variance work in tandem to produce the exhibited results. Similar results are observed for the For Hire Transportation & Utilities and Agriculture & Forestry and Lumbering industry sectors although with conversely decreasing growth. However, while Mining exhibits a high degree of variance in terms of growth, For Hire Transportation & Utilities and Agriculture & Forestry and Lumbering exhibit a similar degree of variance in terms of VMT distribution as indicated in **Table 4**. Additionally, the results in **Table 12** indicate that the Construction, Manufacturing, Wholesale Trade, Retail Trade, and Services industry sectors will remain somewhat stable up to 2030. After 2030, the forecast variance increases to such an extent that these distributions are of limited usefulness.

2. Recommendations

In producing this analysis, sufficient data was available for estimating growth rates and industry percentage; however, the I-80 QRF Model would be better served by classification counts that isolate cargo vehicles as a percentage of AADT with sufficient precision to develop separate rates for the urban and rural areas of the study area. This additional count data need not be exclusively collected for the purpose of inclusion in the ***I-80 QRF Model***. The additional data can be quickly utilized within the framework of the ***QRF Freight Forecasting Tool*** to develop reasonable sketch level forecasts of freight volumes for any location along the corridor.

Table 11: I-80 QRF Model Forecasts

Section Number		Model Forecasts						
		2010	2015	2020	2025	2030	2035	2040
1	Mean	6,038	7,921	10,599	14,540	20,633	30,714	48,962
	Standard Deviation	1,818	2,424	3,405	5,246	9,629	22,759	66,693
2	Mean	6,515	8,546	11,436	15,689	22,262	33,139	52,827
	Standard Deviation	1,962	2,615	3,674	5,660	10,389	24,556	71,959
3	Mean	6,606	8,665	11,595	15,907	22,572	33,600	53,563
	Standard Deviation	1,989	2,652	3,725	5,739	10,534	24,898	72,961
4	Mean	7,264	9,529	12,751	17,493	24,821	36,949	58,901
	Standard Deviation	2,187	2,916	4,097	6,310	11,583	27,380	80,233
5	Mean	8,399	11,018	14,743	20,226	28,700	42,722	68,105
	Standard Deviation	2,529	3,372	4,737	7,296	13,393	31,658	92,769
6	Mean	8,853	11,614	15,540	21,319	30,251	45,032	71,786
	Standard Deviation	2,666	3,554	4,993	7,691	14,117	33,369	97,783
7	Mean	8,286	10,869	14,544	19,952	28,312	42,145	67,184
	Standard Deviation	2,495	3,326	4,673	7,198	13,212	31,230	91,515
8	Mean	11,464	15,038	20,122	27,605	39,171	58,310	92,953
	Standard Deviation	3,452	4,602	6,465	9,959	18,280	43,209	126,617
15	Mean	20,067	26,324	35,224	48,323	68,569	102,072	162,715
	Standard Deviation	6,042	8,055	11,317	17,433	31,999	75,637	221,642
16	Mean	7,945	10,422	13,946	19,132	27,148	40,413	64,423
	Standard Deviation	2,392	3,189	4,481	6,902	12,669	29,947	87,754
17	Mean	7,378	9,678	12,950	17,766	25,209	37,526	59,822
	Standard Deviation	2,221	2,962	4,161	6,409	11,764	27,808	81,486
18	Mean	7,378	9,678	12,950	17,766	25,209	37,526	59,822
	Standard Deviation	2,221	2,962	4,161	6,409	11,764	27,808	81,486
19	Mean	7,378	9,678	12,950	17,766	25,209	37,526	59,822
	Standard Deviation	2,221	2,962	4,161	6,409	11,764	27,808	81,486
20	Mean	5,925	7,772	10,400	14,267	20,245	30,136	48,041
	Standard Deviation	1,784	2,378	3,341	5,147	9,448	22,332	65,440
21	Mean	6,038	7,921	10,599	14,540	20,633	30,714	48,962
	Standard Deviation	1,818	2,424	3,405	5,246	9,629	22,759	66,693
22	Mean	6,038	7,921	10,599	14,540	20,633	30,714	48,962
	Standard Deviation	1,818	2,424	3,405	5,246	9,629	22,759	66,693
23	Mean	6,152	8,070	10,798	14,814	21,021	31,291	49,882
	Standard Deviation	1,852	2,469	3,469	5,344	9,810	23,187	67,947

Table 12: Freight Distribution Forecasts

Industry Code	Industry Description	Year						
		2010	2015	2020	2025	2030	2035	2040
1	Agriculture & Forestry and Lumbering	7.13%	5.96%	4.98%	4.15%	3.41%	2.73%	2.08%
2	Mining	4.80%	6.17%	8.30%	11.62%	16.74%	24.41%	35.19%
3	Construction	29.46%	31.58%	33.46%	34.88%	35.45%	34.63%	31.85%
4	Manufacturing	2.58%	2.28%	2.00%	1.74%	1.49%	1.23%	0.96%
5	Wholesale Trade	14.20%	13.73%	13.05%	12.14%	10.95%	9.44%	7.63%
6	Retail Trade	10.28%	9.79%	9.16%	8.38%	7.43%	6.30%	5.00%
7	For Hire Transportation & Utilities	21.52%	20.17%	18.57%	16.72%	14.59%	12.16%	9.49%
8	Services	10.02%	10.33%	10.47%	10.36%	9.94%	9.11%	7.81%
Sum		100%	100%	100%	100%	100%	100%	100%

Appendix A: 2000-2006 Traffic Counts

Table 1: 2006 AADT

Location Id	Location Description	AADT
1	I-80E; 1 mile east of the Nevada-California state line	26,600
2	I-80E; between the West Verdi interchange 'Exit 2' & the Verdi interchange 'Exit 3'	28,700
3	I-80E; .8 mile west of the Garson Rd interchange 'Exit 4'	29,100
4	I-80E; between the Garson interchange 'Exit 4' & the east Verdi interchange 'Exit 5'	32,000
5	I-80E; between the East Verdi interchange 'Exit 5' and the Mogul interchange 'Exit 7'	37,000
6	I-80E; .1 mi E of the westbound off-ramp of the Mogul interchange 'Exit 7'	39,000
7	I-80E; between the west 4th St interchange 'Exit 8' & the Robb Dr interchange 'Exit 9'	36,500
8	I-80E; .5 mi west of the West McCarran Blvd. interchange 'Exit 10'	50,500
15*	I-80E; at Sparks Blvd interchange 'Exit 20'	88,400
16	I-80E; .9 mi east of Vista Blvd. interchange	35,000
17	I-80E; .2 mi east of the Lockwood interchange 'Exit 22'	32,500
18	I-80E; .5 miles east of Mustang interchange 'Exit 23'	32,500
19	I-80E; 2 mi east of the Patrick interchange 'Exit 28'	32,500
20	I-80E; between the Thisbe-Derby Dam interchange 'Exit 36' & the Orchard interchange 'Exit 38'	26,100
21	I-80E; between the Orchard interchange 'Exit 38' & the Painted Rock interchange 'Exit 40'	26,600
22	I-80E; 1 mile west of the West Wadsworth interchange 'Exit 43'	26,600
23	I-80E; east of the West Wadsworth Interchange 'Exit 43' .9 mi east of exit 43	27,100

*Count location description from NDOT indicates the AADT should be the additive of the location, and the eastbound and westbound ‘Exit 20’ merge/diverge ramps.

State of Nevada Department of Transportation

Annual Average Daily Traffic Count Stations

County Name WASHOE

Station Num	Route Loc		1997 AADT	1998 AADT	1999 AADT	2000 AADT	2001 AADT	2002 AADT	2003 AADT	2004 AADT	2005 AADT	2006 AADT
0310001	IR80E, W/B on-ramp of the W Verdi Intch 'Exit 2' 100' N of W/B IR-80.		1,670	1,715	1,570	2,140	2,300	2,550	2,400	2,550	2,150	2,100
0310002	IR80E, W/B off-ramp of the W Verdi Intch 'Exit 1'.		50	60	60	65	65	60	60	80	60	70
0310003	SR425, .1 mi E of the W/B offf-ramp 'Exit 2'		1,800	2,050	2,000	2,550	3,200	3,500	3,500*	3,150	3,100	2,850
0310004	IR80E, W/B off-ramp of the W Verdi Intch 'Exit 2'.		1,150	1,335	1,570	2,140*	2,300*	2,450	2,280*	3,350	2,800	2,500
0310007	SR425, .2 mi W of Tenaya Ln		920	790	800	1,100	1,200	1,400	1,300	1,400	1,500	1,550
0310008	US395S, S/B off-ramp at S Virginia St Intch 'Exit 57B' 200' N of S/B lanes of SR-430.		15,525	15,215	16,300	16,260*	16,100	16,200	16,300	16,800	16,900	18,200
0310009	IR80E, E/B on-ramp of the W Verdi Intch 'Exit 2' 50' S of E/B lanes of IR-80.		650	665	1,050	1,050*	1,500	1,300	1,300*	1,250	1,200	1,050
0310010	IR80E, E/B off-ramp of the W Verdi Intch 'Exit 2' at the end of off-ramp.		830	850	680	765	860	920	890	930	790	810
0310011	IR80E, W/B off-ramp of the Verdi Intch 'Exit 3' .		165	185	160	170	170	270	240	220	330	300
0310012	SR425, .2 mi W of Bridge St		1,250	1,200	1,150	1,400	1,500	1,750	1,650	1,700	1,750	1,900
0310013	US395N, .2 mi S of the S/B off-ramp at S Virginia Intch 'Exit 57B'.		15,680	15,160	16,770	16,670*	16,240*	16,130*	16,480*	15,900	17,000	18,300
0310014	US395S, S/B off-ramp of the Mt Rose Intch 'Exit 56' (to W/B SR-431) .2 mi N of SR-431.		7,175	7,270	7,350	7,950	7,600	7,650	7,600	8,050	8,050	8,800
0310015	US395S, S/B off-ramp of the Mt Rose Intch 'Exit 56' (to E/B SR-431) .2 mi N of SR-431.		1,000	640	650	750	670	590	620	1,250	580	790
0310016	IR80E, E/B on-ramp of the Verdi Intch 'Exit 3' 200' E of IR-80.		160	160	150	155	160	210	210	200	310	290
0310017	IR80E, E/B off-ramp of the Garson Intch 'Exit 4'.		1,230	1,280	1,170	1,300	1,300	1,250	1,300*	1,000	1,150	1,150
0310018	IR80E, E/B on-ramp of the Garson Intch 'Exit 4' 300' W of E/B IR-80.		2,245	2,545	2,260	2,280*	2,500	2,600	2,300	2,300	2,300	2,350
0310019	SR431, .3 mi W of S/B off-ramp at IR-580-Mt Rose Intch ' Exit 56'.		13,800	16,100	16,500	16,800*	17,600*	17,600*	16,400	16,000*	15,600	17,100
0310020	IR80E, W/B off-ramp of the Garson Intch 'Exit 4' 550' W of the cross traffic rd.		3,050	3,480	2,700	3,200	3,200	3,050	2,800	2,950	3,100	3,050
0310021	IR80E, W/B on-ramp of the Garson Intch 'Exit 4' 015 mi. W of the cross traffic rd.		2,130	1,855	2,400	2,100	2,200	2,500	2,400*	1,700	1,750	1,750

* Data Adjusted or Estimated

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Annual Average Daily Traffic Count Stations

County Name WASHOE

Station Num	Route Loc	1997 AADT	1998 AADT	1999 AADT	2000 AADT	2001 AADT	2002 AADT	2003 AADT	2004 AADT	2005 AADT	2006 AADT
0310022	IR80E, W/B off-ramp of the E Verdi Intch 'Exit 5' 50' W of IR-80.	1,770	1,805	2,100	2,000	2,100*	2,300	2,200	2,200	1,850	1,900
0310023	SR425, 0.4 mi W of W/B off-ramp of the E Verdi Intch 'Exit 5'.	3,580	4,550	4,250	4,000	4,270	4,600*	4,400*	4,400*	3,350	3,350
0310024	IR80E, E/B on-ramp of the E Verdi Intch 'Exit 5' 50' W of IR-80.	1,810	1,760	2,110	1,900	2,170*	2,300	2,200	2,200	1,850	2,000
0310025	US395N, N/B on-ramp of Mt Rose Intch 'Exit 56'	7,100	7,075	8,550	7,750	7,890	7,800	8,250	9,050	8,750	8,700
0310026	US395N, N/B on-ramp at Mt Rose Intch 'Exit 56' .1 mi N of W/B SR-431.	400	175	220	270*	80	90	80	70	120	490
0310027	IR80E, E/B off-ramp of the Mogul Intch 'Exit 7'.	460	250	250	250	250*	270	250	280	290	300
0310028	US395N, N/B on-ramp of S Virginia St Intch 'Exit 57' .25 mi N of N/B lanes of S Virginia St.	17,800	18,220	19,000	19,455*	18,500	18,400	19,200	18,800	20,100	21,200
0310029	IR80E, E/B on-ramp of the Mogul Intch 'Exit 7' 200' E of the cross traffic rd.	1,330	1,300	1,380	1,380	1,390*	1,450	1,350	1,450	1,350	1,350
0310030	US395S, S/B off-ramp of the S Virginia St Intch 'Exit 57A' .2 mi S of S/B lanes of US-395.	810	305	390	390*	130	200	190	210	230	280
0310031	IR80E, W/B off-ramp of the Mogul Intch 'Exit 7' 300' NW of IR-80.	1,275	1,320	1,340	1,380*	1,300	1,400	1,300	1,400	1,250	1,300
0310032	US395N, 1.4 mi N of N/B on-ramp at Damonte Ranch Intch 'Exit 59'.	49,815	48,900	52,460	52,775*	58,800*	65,210	66,500	68,500	69,500	76,500
0310033	IR80E, W/B on-ramp of the Mogul Intch 'Exit 7' 50' E of IR-80.	220	220	200	200	240	250	220	250	290	310
0310034	IR80E, E/B off-ramp of the W 4th St Intch 'Exit 8'.	1,110	1,100	900	1,050	1,200	1,300	1,200	1,450	1,300	1,400
0310035	IR80E, W/B on-ramp of the W 4th St Intch 'Exit 8' 200' W of the Ranch Rd.	1,150	1,045	1,020	1,200*	1,200	1,200	1,250	1,550	1,350	1,450
0310036	IR80E, E/B off-ramp of the Keystone Intch 'Exit 12' 120' W of 'Exit 12' sign.	3,035	2,845	3,200	3,200	3,000	3,400	3,600	3,600	3,300	3,600
0310037	IR80E, W/B on-ramp of the Keystone Intch 'Exit 12' .3 mi W of Keystone Av.	3,320	2,895	3,250	3,500	3,500*	3,600	17,500	4,150	3,250	3,950
0310038	US395N, N/B off-ramp of the S Meadows Pk Intch 'Exit 60' .1 mi N of N/B Ins of US-395.	665	860	1,070	1,500*	1,800	1,800	1,800	2,050	2,150	2,450

* Data Adjusted or Estimated

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Annual Average Daily Traffic Count Stations

County Name WASHOE

Station Num	Route Loc	1997 AADT	1998 AADT	1999 AADT	2000 AADT	2001 AADT	2002 AADT	2003 AADT	2004 AADT	2005 AADT	2006 AADT
0310039	US395N, N/B on-ramp of the S Meadows Pk Intch 'Exit 60' 200' N of S Meadows Pk.	2,015	5,100	5,550	7,200*	7,400*	8,750*	11,000	10,400	10,800	11,100
0310040	IR80E, E/B on-ramp of the E McCarran Intch 'Exit 19' 240' from end of on-ramp.	4,190	4,000	3,450	2,675	2,600*	3,050	3,550	3,500	3,500	4,600
0310041	US395S, S/B off-ramp of the S Meadows Pk Intch 'Exit 60' .1 mi S of S/B lanes of US-395.	1,570	4,000	5,520	7,100	7,400	8,750	9,650	9,950	10,600	11,300
0310042	IR80E, W/B off-ramp of the E McCarran Intch 'Exit 19'.	4,070	4,660	3,610	3,000	3,100	3,075	3,750	3,750	3,550	4,100
0310043	US395S, S/B on-ramp of the S Meadows Pk Intch 'Exit 60' .2 mi S of cross traffic rd.	375	640	800	1,500	1,600	1,800*	1,550	1,750	1,900*	2,200*
0310044	IR80E, E/B off-ramp of the Vista Intch 'Exit 21'.	5,745	6,375	7,000	7,700	7,800	8,900	9,350	9,200	6,800	9,000
0310046	Greg St, .1 mi S of the E/B on-ramp of the Vista Intch 'Exit 21'.	9,600	9,800	11,700	12,500	13,000	13,000*	13,600	15,400	15,100	12,000
0310047	IR80E, E/B on-ramp of the Vista Intch 'Exit 21' .1 mi E of Vista Bl.	1,620	2,175	1,870	1,900	2,115*	2,470	2,850	3,150	2,650	3,550
0310048	IR80E, W/B off-ramp of the Pyramid Intch 'Exit 18'.				1,200	1,400	1,505	1,500*	1,700	1,850	1,700
0310049	IR80E, W/B off-ramp of the Vista Intch 'Exit 21' 220' E of the cross traffic rd.	1,540	1,860	1,870	1,900	2,200	2,650	3,000*	2,550	2,250	2,900
0310050	Vista Bl, 100' N of the W/B off-ramp of Vista Intch 'Exit 21'.	18,200	20,600	20,500	19,600	22,000	22,000*	26,000	25,000	26,300	27,200
0310051	US395S, Fire Creek Intch 'Exit 63' off-ramp from IR-580 to Kietzke Ln.	4,050	4,635	4,840	5,300	5,400	6,200	6,700	7,050	6,850	6,850
0310052	IR80E, W/B on-ramp of the Vista Intch 'Exit 21' 200' from the end of the ramp.	6,555	6,185	7,020	7,700	8,000	9,100	9,550*	9,250	7,100	9,700
0310053	Sunset Mountain Rd, 250' S of old US-395 (N Virginia St).	375	350	400	400	400*	400*	400	440	440	380
0310054	IR80E, E/B off-ramp of the Lockwood Intch 'Exit 22' 175' W of cross traffic rd.	1,515	1,595	1,500	1,600	1,700	1,420	1,875*	1,750*	1,100*	2,100*
0310055	IR80E, E/B on-ramp of the Pyramid Intch 'Exit 18' 610' W of Pyramid Wy.				1,200*	1,500	1,350	1,800	1,700	1,600	1,950
0310056	IR80E, E/B on-ramp of the Lockwood Intch 'Exit 22' 150' E of cross traffic rd.	160	225	150	110	110*	130	130	180	130	180

* Data Adjusted or Estimated

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Annual Average Daily Traffic Count Stations

County Name WASHOE

Station Num	Route Loc		1997 AADT	1998 AADT	1999 AADT	2000 AADT	2001 AADT	2002 AADT	2003 AADT	2004 AADT	2005 AADT	2006 AADT
0310057	Link Ln, 195' N of Newport Ln.									140	160	150
0310058	IR80E, W/B off-ramp of the Lockwood Intch 'Exit 22' 50' E of the cross traffic rd.		115	220	120	110	90	110	110	140	90	160
0310060	IR80E, W/B on-ramp of the Lockwood Intch 'Exit 22' 75' W of cross traffic rd.		1,425	1,495	1,510	1,595	2,000	1,715	2,090*	1,750*	1,100	2,950
0310061	IR80E, E/B off-ramp of the Mustang Intch 'Exit 23' 250' W of IR-80 cross over.		640	725	780	770*	430	470*	520	680*	340*	1,150*
0310062	FRWA12, .1 mi E of the cross traffic rd of the Mustang Intch 'Exit 23'.		1,080	1,075	1,020	820	820	810	980	980*	1,200*	2,000*
0310063	IR80E, E/B on-ramp of the Mustang Intch 'Exit 23' 75' W of cross traffic rd.		90	115	90	90	80	100	110	150*	160*	530*
0310064	Ranger Rd, 186' S of Panther Dr.						3,800	3,800*	3,800		4,200	4,500
0310065	IR80E, W/B off-ramp of the Mustang Intch 'Exit 23' 50' W of the N frontage rd.		75	110	100	80	80	100	110*	150	160	210
0310066	Parr Cr, 180' S of Parr Bl.						210	740	1,050		1,000	1,250
0310067	FRWA10, 200' E of the underpass of the Mustang Intch 'Exit 23'.		630	630	480	480*	370	430	490	660	440	510
0310069	IR80E, W/B on-ramp of the Mustang Intch 'Exit 23' 50' W of W/B lanes of IR-80.		700	680	780	650	430	470	500	680	570	730
0310070	IR80E, .2 mi E of the Lockwood Intch 'Exit 22'.		19,545	22,240	22,060	22,310*	22,380*	23,715*	24,100*	26,700	28,000*	32,500*
0310071	IR80E, .5 miles E of Mustang Intch 'Exit 23'.		18,370	21,060	20,690	21,060*	21,680*	22,975	23,200*	26,200	26,000*	32,500*
0310072	Comstock Dr, .35 miles N of N Virginia St (US-395) at the RxR tracks N of McCarran Bl.									1,700	1,900	1,050
0310073	IR80E, E/B off-ramp of the Patrick Intch 'Exit 28' .1 mi W of cross traffic rd.		370	425	380	350	600	530	780	980	820	970
0310074	FRWA14, 400' W of the cross traffic rd of the Patrick Intch 'Exit 28'.		300	340	60	40	50	60	50	50*	50*	40*
0310075	IR80E, E/B on-ramp of the Patrick Intch 'Exit 28' 290' E of cross traffic rd.		95	85	70	70	120	120	130	170	160	170
0310076	IR80E, W/B off-ramp of the Patrick Intch 'Exit 28' 120' W of FR13 WA at mp 4.		125	110	220	70*	110	110	120	150	140	140

* Data Adjusted or Estimated

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Annual Average Daily Traffic Count Stations

County Name WASHOE

Station Num	Route Loc	1997 AADT	1998 AADT	1999 AADT	2000 AADT	2001 AADT	2002 AADT	2003 AADT	2004 AADT	2005 AADT	2006 AADT
0310077	IR80E, W/B on-ramp of the Patrick Intch 'Exit 28' 120' W of FR13 WA at mp 4.	160	380	360	350	600	550	650	810	630	770
0310078	IR80E, 2 mi E of the Patrick Intch 'Exit 28'.	18,060	20,460	20,240	20,500	20,710	22,025	22,100	24,600	25,000*	32,500*
0310079	IR80E, E/B off-ramp of the Tracy-Clark Intch 'Exit 32' 100' E of E/B lanes of IR-80.	215	235	200	180	180	190	180	180*	300	700
0310081	FRWA15, Eagle Pitcher Rd 450' W of the cross traffic rd of the Tracy-Clark Intch 'Exit 32'.	380	320	300	300	300*	270	250	260	390	770
0310082	IR80E, E/B on-ramp of the Tracy-Clark Intch 'Exit 32' 700' E of FR-15WA to Clark Station.	100	110	90	100	110	100	110	100	160	280
0310083	IR80E, W/B off-ramp of the Tracy-Clark Intch 'Exit 32' .2 mi W of the structure.	85	90	80	90	90	90	90	90	140	250
0310084	IR80E, W/B on-ramp of the Tracy-Clark Intch 'Exit 32' .2 mi W of the structure.	200	215	180	190	170	170	180*	180	300	680
0310085	FRWA16, 100' S of the E/B on-ramp of the Tracy-Clark Intch 'Exit 32'.				240	200	250	230	230*	230*	1,500*
0310087	IR80E, E/B off-ramp of the Thisbe-Derby Dam Intch 'Exit 36' .1 mi E of IR-80.	55	50	60	80	60	60*	70	60	60	70
0310088	Jodi Av, 118' E of Evans Av (U.N.R. Area-off Bartlet St).								1,300	1,350	1,250
0310089	Highland Av, 201' E of Evans Av (U.N.R. Area).								2,500	2,850	2,350
0310090	IR80E, E/B on-ramp of the Thisbe-Derby Dam Intch 'Exit 36' .1 mi E of the overpass.	50	55	60	60	40	60	60	50	50	60
0310091	Ninth St, 364' E of Evans Av (U.N.R Area).								1,100	1,350	1,100
0310092	IR80E, W/B off-ramp of the Thisbe-Derby Dam Intch 'Exit 36' 100' W of the overpass.	50	60	65	60	20	40	40	40	40	50
0310093	IR80E, W/B on-ramp of the Thisbe-Derby Dam Intch 'Exit 36' 125' W of the overpass.	55	55	65	90	40	55	50	50	50	60
0310094	IR80E, E/B off-ramp of the Orchard Intch 'Exit 38' 500' W of the underpass.	15	25	25	20	10	20	20	20	20	20
0310095	Eighth St, E of Evans Av 100' W of Tracks.(U.N.R. Area).					380	380*	440		410	440
0310096	IR80E, E/B on-ramp of the Orchard Intch 'Exit 38'.	40	45	45	20	20	20	20	20	10	20

* Data Adjusted or Estimated

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0310097	SR443, 100' N of McCarran Bl.							8,500	7,650	6,950	6,950
0310098	IR80E, W/B off-ramp of the Orchard Intch 'Exit 38' 100' W of exit from IR-80.	40	50	50	20*	10	20	20	10	10	20
0310099	IR80E, W/B on-ramp of the Orchard Intch 'Exit 38' 250' W of the cross traffic lanes of IR-80.	15	25	25	20	20*	20	20	10	20	20
0310100	IR80E, E/B off-ramp of the Painted Rock Intch 'Exit 40' 275' E of IR-80.	60	60	60	50	50	50	50	40	40	60
0310101	Seventh St, E of Evans Av 200' W of Tracks. (U.N.R.Area).					480	780	460		450	410
0310102	IR80E, E/B on-ramp of the Painted Rock Intch 'Exit 40' 350' E of S cross traffic rd.	80	65	65	70	50	60	50*	50	50	50
0310103	Echo St, 300' W of Mt. Anderson St.						530	530*		600	1,300
0310104	IR80E, W/B off-ramp of the Painted Rock Intch 'Exit 40' 25' W of IR-80.	80	90	90	90	50	60	50	50	50	50
0310105	IR80E, W/B on-ramp of the Painted Rock Intch 'Exit 40' 300' W of the cross traffis rd.	60	65	65	60	50*	50	40	40	40	60
0310106	N Virginia St, 750' N of Security Circle (N Junction).					5,700	5,700*	5,100		5,500	5,500
0310107	Crystal Peak Rd, 40' E of Quilici Ranch Rd.					270	250	240		270	250
0310108	IR80E, 1 mi W of the W Wadsworth Intch 'Exit 43'.	17,910	20,300	20,110	20,320	20,520	21,860	21,700*	23,800	23,400	26,600
0310109	IR80E, E/B off-ramp of the W Wadsworth Intch 'Exit 43' .1 mi from W end of ramp.	665	650	700	720	735*	730	590	590	560	620
0310110	Bridge St, 125' N of S Verdi Rd at the RxR tracks.					540	590	470		690	470
0310111	Mogul Rd, 12' S of the Mogul Intch (Exit 7) at the RxR tracks.					120	150	150*		60	60
0310112	IR80E, E/B on-ramp of the W Wadsworth Intch 'Exit 43' .1 mi E of the cross traffic rd.	245	305	320	300	250	260	270	240	190	220
0310113	Woodland Av, .1 mile S of (Old US-40) W of Reno at the RxR tracks.								3,900	3,800	4,650
0310114	IR80E, W/B off-ramp of the W Wadsworth Intch 'Exit 43'.	250	310	330	300	280	270	290	260	200	210

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0310115	IR80E, W/B on-ramp of the W Wadsworth Intch 'Exit 43' .2 mi W of the cross traffic rd.	695	695	700	720*	765	780	660	680	590	720
0310116	IR80E, E of the W Wadsworth Intch 'Exit 43' .9 mi E of exit 43.	17,045	19,480	19,360	19,480	19,560*	20,880	21,700	23,000*	22,700	27,100
0310117	SR427, .3 mi W of SR-447.	1,800	1,920	1,900	1,700	1,700	1,800	1,500	1,500*	1,600	1,850
0310118	US395S, S/B off-ramp of the Eastlake Bl. 'Exit 44'	215	200	240	200	210	210	230	240	220	220
0310119	Del Curto Dr, .1 mile S of (Old US-40) W of Reno at the N side of the RxR tracks.								190	210	200
0310121	US395S, S/B on-ramp of the Lakeview Intch 'Exit 44' 200' S of the cattle guard.	2,320	2,350	2,100	2,200	2,000	2,050	2,110*	2,450	2,150	2,100
0310122	West St, 75 ' S of 3rd St at the RxR tracks.								6,000	5,950	6,000
0310123	US395N, N/B off-ramp of the Eastlake Bl. 'Exit 44', 15' N of the 'Exit 42' sign.	1,980	1,965	1,780	1,750	1,700	1,500	2,105*	2,000	1,750	1,800
0310124	US395N, N/B on-ramp of the Eastlake Bl. 'Exit 44'	220	205	250	220	220	240	220	280	240	240
0310126	SR429, On Washoe County line.	1,900	1,800	1,700	1,950	1,600	1,700	1,700*	2,000	1,750	1,400
0310127	SR877, .1 mi N of the jct with SR-429 (Bowers Rd).	530	530	570	540	470	560	540	560	540	650
0310128	SR429, .475 mi N of SR-877 (Franktown Rd) at mp 2.	1,450	1,400	1,300	1,600	1,300	1,350	1,550	1,600*	1,450	1,700
0310129	SR877, .2 mi S of SR-429 (Bowers Rd).	440	440	420	410	340	380	390	400	360	390
0310130	SR429, .6 mi N of SR-877 (Franktown Rd).	1,400	1,300	1,300	1,400	1,200	1,200	1,500	1,450	1,200	1,200
0310131	Sage St, S of 4th, 30' N of Tracks.					2,300	2,450	2,450*		2,800	2,550
0310132	SR430, .7 mi S of E Lake Bl at Washoe Hill.	30,200	30,800	31,000	32,500	32,000	33,000	33,500	33,000	33,000	34,500
0310133	Eastlake Bl, .9 mi S of US-395.	4,200	4,350	4,450	4,500	4,400	4,250	4,350	4,450	4,350	4,650
0310135	SR430, 1.0 mi S of SR-431 (Mt Rose Hw).	32,600	35,700	38,000	38,000	39,500	40,000	41,000	41,000*	41,000	42,500
0310136	SR431, .2 mi W of US-395.	5,800	5,900	6,200	6,200	6,600	6,600*	5,750	5,750	5,800*	6,950*
0310137	SR341, .4 mi E of US-395-SR-430.	11,400	11,900	11,500	11,500*	12,800	13,400*	12,500	13,700	15,300	16,100
0310139	SR430, .3 mi N of Foothill Rd & S Meadows Pk.	19,800	19,500	19,500	22,200	22,200*	25,500	27,200	27,000	27,000	29,100
0310140	SR671, .1 mi W of SR-430 (S Virginia St).	2,600	2,650	2,450	2,850	3,100	3,050	3,250	3,650	3,850	3,750
0310141	SR671, .1 mi W of Thomas Creek Rd.	2,150	1,700*	1,650	2,150	2,100	2,250	2,450	2,400	2,650	2,750

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Station Num	Route Loc	1997 AADT	1998 AADT	1999 AADT	2000 AADT	2001 AADT	2002 AADT	2003 AADT	2004 AADT	2005 AADT	2006 AADT
0310294	IR80E, W/B on-ramp of the Rock Bl Intch 'Exit 17'.	9,385	8,785	8,330	8,220	8,800	8,600	6,400	6,850	8,200*	8,200*
0310295	IR80E, E/B off-ramp of the Rock Bl Intch 'Exit 17'.	7,040	6,975	6,530	6,450	6,600	6,900	3,100	3,900	4,100	6,650
0310296	IR80E, E/B on-ramp of the Rock Bl Intch 'Exit 17'.	3,865	3,310	3,480	3,750	3,900	4,350	3,500	4,200	3,000*	3,050*
0310298	SR668, 200' N of SR-648 (Glendale Av) & 50' S of Shaber Av.	24,400	25,100	25,900	25,500	25,000	25,400	27,600	27,600*	32,000*	25,200*
0310299	Victorian Av, 250' W of SR-668 (Rock Bl).	9,300	9,500	9,000	9,150	8,900	8,850	8,400*	8,400*	10,000	9,500
0310300	Victorian Av, 100' E of SR-668 (Rock Bl).	10,600	10,500	10,100	10,400	8,900	8,950	8,950*	9,000*	12,000	9,850
0310304	IR80E, W/B on-ramp of the Pyramid Intch 'Exit 18'.	11,115	10,450	11,130	10,905*	10,900*	10,800	11,100	10,600	10,000*	8,050*
0310306	IR80E, E/B off-ramp of the Pyramid Intch 'Exit 18' 30' E of E/B IR-80.	10,590	9,955	11,000	11,545*	11,300	11,400	10,700	10,200	9,400	7,800
0310310	IR80E, E/B off-ramp of the E McCarran Intch 'Exit 19'.	11,550	8,380	11,580	11,935	12,100	11,800	11,900*	12,650*	12,000*	9,750*
0310311	IR80E, W/B on-ramp of the E McCarran Intch 'Exit 19'.	8,820	7,605	8,810	7,975	8,600	7,700	7,850	7,750	8,000*	9,800*
0310312	SR647, 250' W of Stanford Wy & 50' E of First St.	9,800	8,900	7,600	7,350	6,900	7,150	7,400	7,500	7,950	7,400
0310314	Prater Wy, 150' E of SR-650 (McCarran Bl).	21,200	20,900	21,200	21,200*	20,000	19,600	21,000*	21,400	22,500	22,400
0310316	SR650, 150' W of York Wy.	16,900	17,900	17,200	16,500	17,000	17,900	19,700	19,500	20,200	20,800
0310317	SR667, 1000' N. of Galletti.	14,700	14,700	15,500	15,200	15,000	16,300	15,400	15,000*	15,000*	18,000*
0310318	SR663, 200' N of Sadlier Wy.	11,100	11,200	11,800	11,600	10,000	11,000	12,900	13,000	13,000*	13,000*
0310319	Sutro St, 300' N of Oddie Bl.	13,700	13,700	16,400	15,700	15,000	15,000*	16,000*	17,200	18,700	17,800
0310321	SR663, 250' W of the S/B off-ramp to US-395.	15,100	15,700	15,900	17,000	15,000	16,500	18,000	17,100	15,000*	17,100*
0310322	US395S, S/B off-ramp of the Oddie Bl Intch 'Exit 69'	2,115	2,125	2,400	2,400	2,400*	2,700	2,650	2,650*	2,800*	2,750*
0310323	US395S, S/B loop on-ramp of the Oddie Bl Intch 'Exit 69'.	6,350	5,685	6,450	6,450*	6,450*	5,650	6,150	7,950		5,800
0310324	US395N, N/B on-ramp of the Oddie Bl Intch 'Exit 69' .1 mi N of Oddie Bl.	2,005	2,250	2,600	2,150	2,670	2,800	2,800*	2,800*	2,900*	2,900*
0310325	US395N, N/B off-ramp of the Oddie Bl Intch 'Exit 69' 200' N of US-395.	9,695	8,290	8,770	8,000	7,800	7,930*	8,800	9,050	9,000*	5,950*
0310328	SR663, .1 mi W of Silverada Bl.	26,300	27,300	27,500	27,100	26,000	26,500	29,000	31,000	28,000*	24,800*

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Station Num	Route Loc	1997 AADT	1998 AADT	1999 AADT	2000 AADT	2001 AADT	2002 AADT	2003 AADT	2004 AADT	2005 AADT	2006 AADT
0310361	US395S, S/B off-ramp of the Parr Bl Intch 'Exit 72' .2 mi N of cross traffic rd.	600	840	1,030	900	1,140	1,200	1,300	1,650	1,800	1,800
0310362	Parr Bl, 100' W of the S/B ramps of the Parr Bl Intch 'Exit 72'.	6,300	7,750	9,700	9,000	8,700	8,700*	8,500	10,300	12,300	11,600
0310364	US395S, S/B off-ramp of the Panther Valley Intch 'Exit 72 A' .2 mi W of the N/B US-395.	4,330	4,600	4,710	4,400	4,600	5,050	5,050*	6,400	7,200	7,100
0310365	US395S, S/B on-ramp of the Panther Valley Intch 'Exit 72A' .2 mi W of US-395.	2,100	1,730	1,770	1,720*	1,800	1,850	1,850*	1,850	1,650	1,950
0310366	US395N, N/B off-ramp of the Panther Valley Intch 'Exit 72A' 300' W of the US-395 overpass.	1,565	1,585	1,700	1,600	1,780	1,850	1,800	1,800	1,650	1,900
0310367	US395N, N/B on-ramp of the Panther Valley Intch 'Exit 72A' 300' W of the US-395 overpass.	4,550	4,735	4,750	4,440*	5,830	5,930*	6,300	6,950	7,900	8,500
0310368	SR431, .1 mi E of Joy Lake Rd.	5,600	6,200	6,300	6,300	6,500	6,800*	7,000*	8,150	8,200	9,350
0310369	SR431, .1 mi E of New Sky Tavern Ski Area.	5,400	5,850	5,950	5,950	5,700	5,800	6,000*	5,700	5,850	6,350
0310370	SR878, .3 mi E of Mt Rose Hw.	105	90	80	90	90	80	80	100	80	130
0310372	SR431, 100' E of SR-28 (Tahoe Bl).	5,300	5,800	5,900	5,850	5,600	5,300	5,650	5,450	5,000*	5,050*
0310373	SR28, .1 mi E of SR-431 (Mt Rose Hw).	12,200	11,500	12,200	11,800	11,800*	12,100	13,100	12,000	10,900	9,700
0310374	SR28, 450' W of SR-431 (Mt Rose Hw).	12,800	12,100	12,100	12,100	12,000	11,800*	14,000	12,300	11,500	10,500
0310375	IR80E, W/B on-ramp of the Kietzke St Intch to US-395 north and southbound										3,100
0310379	SR28, 200' E of Village Bl.	12,200	11,900	11,900	11,900	12,000	12,100	12,700	11,800	10,900	11,100
0310380	SR28, .2 mi W of the E end of Lakeshore Bl.	5,800	5,450	6,200	5,800	6,200	5,750*	5,950	5,750	5,050	5,050
0310381	Lakeshore Bl, .1 mi W of SR-28 (Tahoe Bl).	1,700	1,850	1,850	1,850	1,700	1,560*	1,500	1,700	1,800	2,300
0310382	SR28, 200' E of the E end of Lakeshore Bl.	6,400	6,000	7,300	6,700	7,300	6,600	6,800*	6,950	6,250	5,900
0310385	County Rd to Vya, 1.4 mi N of SR-447.				120	150	150*	150*	150*	250	380
0310388	SR447, .1 mi N of Flanigan Rd.	215	215	220	180	180	300	230	350	350	450
0310401	IR80E, .8 mi W of the Garson Rd Intch 'Exit 4'.	25,350	25,275	28,050	29,060*	29,260	30,030	29,100	30,000	28,900	29,100
0310402	US395N, .5 mi N of the Bellevue Rd 'Exit 46'.	26,790	27,285	28,860	28,825	29,380	30,600*	31,000	32,000*	32,000	30,500
0310404	SR429, .2 mi S of US-395.	1,700	1,600	1,600	1,700	1,300	1,450	1,150	1,650	1,400	1,600

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0310409	US395N, N/B off-ramp of the McCarran Intch 'Exit 70' 500' N of the N/B lanes.	16,790	17,595	18,500	18,400*	18,000	18,500*	19,600	18,800	21,000*	20,000*
0310410	US395S, S/B on-ramp of the McCarran Bl Intch 'Exit 70'.	17,265	19,535	18,500	18,400	18,000	21,000	20,500	20,500*	21,000*	20,000*
0310411	US395S, S/B off-ramp of the McCarran Bl Intch 'Exit 70' 200' N of McCarran Bl.	4,130	4,685	5,050	5,050*	5,200	5,550	6,050	6,000*	6,600*	6,400*
0310412	US395N, N/B on-ramp of the McCarran Intch 'Exit 70' 300' N of McCarran Bl.	3,900	4,350	5,000	5,000*	6,600	6,700	7,300	7,300*	8,000*	7,700*
0310414	SR650, .1 mi E of US-395.	31,800	30,500	32,000	31,700	31,700*	31,700	39,700	39,700*	41,000*	38,500*
0310416	SR651, .1 mi W of Clear Acre Ln East of Hug High School.	21,500	22,500	24,700	22,200	22,200*	22,200*	25,100	23,000	24,500	22,100
0310417	SR430, .2 mi N of Panther Valley & Virginia St.	12,545	14,530	12,930	13,800	13,000	13,500	14,300	15,800	18,900	17,600
0310418	US395N, .4 mi N of the N/B on-ramp of the Parr Intch 'Exit 71'.	45,620	45,750	46,620	49,140	51,435*	54,500*	56,900*	56,500	62,000	60,500
0310419	US395N, N/B off-ramp of the Bellevue Intch 'Exit 46' North of N/B US-395.	180	160	200	180	180	190	220	260	190	200
0310420	US395N, N/B on-ramp of the Bellevue Intch 'Exit 44' 300' S of cross traffic rd.	170	200	220	190	170	210	210	240	210	220
0310423	US395S, S/B off-ramp of the Bellevue Intch 'Exit 44'	170	200	170	150	150	160	210	210	200	200
0310425	US395S, S/B on-ramp of the Bellevue Intch 'Exit 44'	120	120	150	130	130*	140	180	250	150	150
0310426	SR447, 200' S of the RxR crossing .1 mi E of Gerlach.	650	700	730	600	550	760	630	760	570	710
0310427	SR663, 275' E of 12th St.	9,600	10,000	9,800	9,600*	9,900	9,600	11,100	11,400	11,000*	11,600*
0310428	IR80E, E/B on-ramp of the Keystone Av Intch 'Exit 12' 350' E of Keystone Av.	18,220	18,075	18,200	17,900*	17,000	17,410	17,500	17,300	15,400	16,000
0310430	IR80E, W/B off-ramp of the Keystone Av Intch 'Exit 12' 500' E of the cross traffic rd.	16,945	16,825	17,000	16,730*	16,000	17,000	16,200	16,100	14,200	14,800
0310431	IR80E, .5 miles W of the Keystone Av Intch 'Exit 12'.	53,415	55,895	59,290	64,250	64,820*	67,050	67,000*	71,500*	69,000*	76,000*
0310432	IR80E, E of the Keystone Av Intch 'Exit 12'.	82,225	85,055	88,040	92,180	91,320*	94,460	94,000	97,000	91,000*	99,500*

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0310459	US395N, N/B on-ramp of the Glendale Av Intch 'Exit 67' 50' E of the N/B IR-580.		5,970	5,000	4,850	5,750	5,500	5,450	6,050	6,050	5,900	5,000
0310460	US395S, S/B off-ramp of the Glendale Av Intch 'Exit 67'.		7,200	5,725	6,000	6,700	6,300	6,155	6,650	6,650	6,850	5,450
0310461	IR580N, N of the Glendale Av Intch 'Exit 67' .2 mi N of Glendale Av.		142,315	136,515	133,750	145,120*	144,290*	148,735*	153,100*	153,000*	146,000*	150,000*
0310462	US395N, 200' N of the IR-80 Intch 'Exit 68' (add 31-0325 N/B, 31-0326 S/B).		92,970	92,980	93,500	94,250*	95,295*	98,380*	101,900*	102,500*	103,000*	98,500*
0310464	SR651, .1 mi E of N Virginia St.		15,100	17,000	17,800	17,500	17,500*	17,800*	17,800*	19,700	21,100	19,300
0310466	SR650, 250' W of Probasco Wy.		19,700	20,400	17,800	17,600	17,600*	19,600	22,100	22,000	21,600	20,000
0310467	SR650, 300' E of SR-445 (Pyramid Wy).		20,800	22,900	20,000	20,100	21,000	21,500	24,900	23,800	24,800	21,400
0310468	US395N, btwn McCarran Intch 'Exit 70' & Parr Intch 'Exit 71'		52,420	53,190	54,030	55,300	57,585	60,850	63,800*	64,500*	65,000*	67,500*
0310469	IR80E, W/B loop on-ramp of the E McCarran Av Intch 'Exit 19' 275' E of McCarran Bl.		3,510	3,015	3,450	3,450	3,400	3,400	3,450*	3,400	3,500*	3,550*
0310470	US395N, N/B off-ramp of the Red Rock Intch 'Exit 78' .1 mi S of the cross traffic rd.		3,255	3,310	3,455	3,600	3,800	3,900*	4,200	4,400	4,600	4,650
0310472	Silver Lake Rd, Red Rock Intch 'Exit 78' 450' S of the Red Rock Rd.			2,800	2,900	3,150	3,300	3,200	3,200*	4,600	4,400	4,450
0310473	Red Rock Rd, .1 mi E of Moya Bl.		3,700	4,100	4,150	4,100	4,100*	4,100*	4,250	4,600	4,500	4,350
0310474	US395N, N/B on-ramp of the Red Rock Intch 'Exit 78'.		705	505	595	600*	650	790	920	1,050	1,050	930
0310476	US395S, S/B off-ramp of the Red Rock Intch 'Exit 78' .1 mi N of the cross traffic rd.		575	500	600	600	720	700	730	860	880	830
0310477	US395S, S/B on-ramp of the Red Rock Intch 'Exit 78'.		3,155	3,215	3,437	3,500	3,730	3,800	4,100	4,250	4,450	4,500
0310480	FRWA23, 100' S of the cross traffic rd of the Red Rock Rd Intch 'Exit 78'.			520	520*	530	630	630*	700	780	930	990
0310481	US395N, 1.14 mi N of the Red Rock Intch		14,385	14,660	15,473	15,600	17,200*	18,030*	18,800	21,300	21,000	19,000
0310485	W 7th St, 50' W of Wyoming Av.		8,100	8,000	8,400	9,350	9,350*	9,600	9,900	10,100	10,500	10,500
0310487	W 7th St, 300' W of Keystone Av.		12,800	13,100	13,000	13,000*	12,000	13,100	13,500	13,600	13,500	14,100

* Data Adjusted or Estimated

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Station Num	Route Loc	1997 AADT	1998 AADT	1999 AADT	2000 AADT	2001 AADT	2002 AADT	2003 AADT	2004 AADT	2005 AADT	2006 AADT
0310639	US395S, S/B on-ramp of the Plumb-Villanova Intch 300' N of S/B lanes 'Exit 65A'.	8,310	8,175	8,470	8,950*	9,100	9,650	9,650*	9,900	11,200	11,000
0310640	US395N, N/B off-ramp of the Plumb-Villanova Intch 'Exit 65' 250' N of the N/B lanes.	8,010	7,625	7,600	9,000	8,700	9,350	9,300	9,550	10,400	11,100
0310641	E Frontage Rd (N/B One-Way), btwn Villanova & Plumb Ln of the Plumb-Villanova Intch 'Exit 65'.	13,100	13,100	13,100	11,000	11,000*	11,000*	10,200	10,900	10,500	10,100
0310643	US395N, N/B on-ramp of the Plumb-Villanova Intch 'Exit 65' 200' S of the N/B lanes.	14,500	13,400	13,000	13,000	13,000*	13,000	12,200	12,700	11,900	12,300
0310644	IR580N, btwn the Moana Ln Intch 'Exit 64' & the Plumb-Villanova Intch 'Exit 65'.	113,390	112,545	114,840	122,150*	120,210*	130,730*	134,800*	136,500*	133,000*	139,000*
0310645	US395S, S/B off-ramp of the Moana Ln Intch 'Exit 64' .1 mi S of the S/B lanes of 'Exit 64'.	15,275	15,275	13,910	15,150	15,000	15,200	14,700	14,100	13,600	13,400
0310646	Moana Ln, 300' W of the S/B ramps of IR-580.		27,600	31,200	31,200*	31,200*	34,300*	34,000	33,000	33,500	33,000
0310647	US395S, S/B on-ramp of the Moana Ln Intch 'Exit 64' .1 mi S of Moana Ln.	3,000	3,205	3,280	3,450	3,700	3,600	4,000	3,900	4,750	4,850
0310648	US395N, N/B off-ramp of the Moana Ln Intch 'Exit 64'.	3,130	3,325	3,000	3,150*	3,800	4,250	4,250*	4,500	4,950	5,250
0310649	Moana Ln, 250' W of Neil Rd.	15,700	15,500*	15,500*	15,200	15,200*	15,100	15,100	14,300	13,100	13,600
0310650	US395N, N/B on-ramp of the Moana Intch 'Exit 64' 100' S of the N/B Lanes.	16,925	15,230	14,500	15,100*	15,000	15,000*	15,700	15,300	13,700	13,700
0310651	IR580N, 291' S of Moana Ln btwn S/B off & on-ramps of Moana Intch 'Exit 64'	84,580	88,570	92,710	98,500	97,710	108,380*	112,700*	116,000*	115,000*	122,000*
0310652	S McCarran Bl, .1 mi E Neil Rd.	13,200	15,800	15,600	15,500	17,000	16,700*	17,200	18,200	19,100	18,100
0310653	S McCarran Bl, .1 mi W of Neil Rd.	16,500	19,000	18,800	18,800	19,000	18,800*	20,600	21,200	21,900	20,700
0310654	S McCarran Bl, E of S Virginia St./300' W of Smithridge Dr.	35,500	35,500	40,900	40,900*	29,000	29,000*	30,000	27,700	29,700	27,600
0310656	SR651, 335' S of E/B off-ramp at W McCarran Bl Intch 'Exit 10'.	23,800	23,800	26,300	35,000	35,000*	33,000	41,000	44,000	40,000	41,500
0310657	IR80E, E/B off-ramp of the W McCarran Bl Intch 'Exit 10'.	2,575	2,710	2,680	3,230*	3,300	4,000	4,050	5,050	5,150	5,100
0310658	IR80E, E/B on-ramp of the W McCarran Bl Intch 'Exit 10'.	11,840	11,785	12,270	13,480*	13,000	14,300	13,800	14,300	14,000*	13,400*

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County Name WASHOE

Station Num	Route Loc		1997 AADT	1998 AADT	1999 AADT	2000 AADT	2001 AADT	2002 AADT	2003 AADT	2004 AADT	2005 AADT	2006 AADT
0310660	IR80E, W/B on-ramp of the W McCarran Bl Intch 'Exit 10'.		2,720	2,845	2,860	3,250*	3,400	4,000	4,050*	4,750	4,950	5,050
0310661	IR80E, W/B off-ramp of the W McCarran Bl Intch 'Exit 10'.		11,350	11,295	11,050	13,780*	13,000	14,000	14,000	15,200	13,000*	13,100*
0310662	SR651, 545' N of IR-80 W/B ramps of the W McCarran Intch 'Exit 10'.		29,200	28,100	31,000	36,000	37,000	34,800*	36,000	41,000	41,000*	39,500*
0310663	SR651, 364' N of W 7th St.		16,800	16,800	17,700	20,800	20,000	21,400	20,900	22,000*	22,000*	21,100*
0310664	SR651, 638' W of SR-430 (N Virginia St).		14,900	14,900	16,100	18,000	18,000	19,200	19,600	22,600	23,300	22,100
0310666	S McCarran Bl, .1 mi N of Rio Poco Rd.		16,000	17,500	17,000	17,900	19,000	19,600	23,600	25,000*	24,800	23,600
0310671	IR80E, Between the East Verdi Int (Exit 5) and the Mogul Int (Exit 7)		30,865	31,730	33,650	35,040*	35,730	36,530	34,800*	37,000	35,500	37,000
0310672	SR430, 200' N of McCarran Bl (add 31-0774 to N/B).		29,300	30,800	32,000	35,000	35,800	48,000	52,000	48,500	43,000	41,500
0310673	US395N, .6 mi N of the Bellevue Intch 'Exit 44'.		26,830	27,405	28,900	28,855	29,390	30,640	31,000	30,500	31,000	30,500
0310674	SR650, .3 mi E of El Rancho Dr.		26,100	27,000	24,200	26,400	26,000	27,200	27,200*	31,000	32,000*	28,100*
0310675	SR650, .2 mi E of Sullivan Ln.		30,000	31,600	29,300	29,500	29,000	32,000	35,500	36,500	38,000*	32,500*
0310677	SR650, .2 mi E of SR-668 (Rock Bl).		31,100	32,400	31,600	32,500	30,000	31,500	34,600*	37,500	37,500	33,500
0310678	S McCarran Bl, .1 mi N of Mira Loma.		17,800	19,400	18,500	18,900	20,000	21,200	24,700	25,600	25,700	26,100
0310681	US395S, S/B off-ramp of the Stead Bl Intch 'Exit 76' 50' S of 'Exit' sign.		435	435	530	350	490	540	550	660	670	670
0310682	US395N, N/B on-ramp of the Stead Bl Intch 'Exit 76' 10' S of the RxR Underpass.		535	535	600	500	530	620	680	780	740	730
0310683	SR430, 251' S of 9th St.		15,300	17,800*	17,500*	17,500*	17,500*	17,500*	16,500	16,500*	16,700	16,000
0310684	E Prater Wy, 150' W of Greenbrae Dr.		18,000	18,400	17,000	17,200	18,000	18,000*	19,300	18,900	20,000*	19,100*
0310687	E Prater Wy, .2 mi E of Sparks Bl.		9,400	9,550	9,650	9,650*	10,000	12,600	12,500	12,400	13,400	12,400
0310688	SR651, 200' W of Lakeside Dr.		20,800	21,000	21,700	23,600	21,000	21,000*	23,300	25,300	26,600	26,500
0310689	Neil Rd, .1 mi S of SR-650 (S McCarran Bl).		11,500	11,700	11,900	10,700	10,000	10,100	11,600	11,500*	12,300	13,700
0310690	Neil Rd, 515' N of DeLucchi Ln.		4,500	4,600	5,200	4,700*	4,900	6,000	7,350	7,300	7,950	8,900
0310694	Pembroke Dr, 115' E of Sinelio Dr.		5,200	5,600	6,600	5,350*	5,400	5,900	6,200	6,300	6,300*	5,450*

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County Name WASHOE

Station Num	Route Loc	1997 AADT	1998 AADT	1999 AADT	2000 AADT	2001 AADT	2002 AADT	2003 AADT	2004 AADT	2005 AADT	2006 AADT
0310792	IR80E, W/B on-ramp of the Sparks Blvd Intch 'Exit 20' .2 mi W of the cross traffic rd.	8,725	8,270	9,380	9,600	10,400	9,950	9,250	9,800	9,800	10,800
0310793	Evans St, S of Enterprise Rd.	1,500	2,850	3,050	3,300	3,300*	3,300*	2,800	2,700	3,050	3,100
0310794	SR671, 242' E of Meadow Vista Dr.	2,900	2,800	2,550	3,600	3,400	3,950	3,900	4,050	4,300	4,650
0310795	US395S, S/B on-ramp of the Golden Valley Intch 'Exit 73' 200' N of S/B US-395.	4,605	4,885	4,920	5,310	5,500	5,890*	5,950	5,900	6,200*	6,550*
0310796	US395S, S/B off-ramp of the Golden Valley Intch 'Exit 73'.	1,590	1,540	1,585	1,780	1,800	2,050	2,250	2,400	2,600	2,700
0310797	US395N, N/B on-ramp of the Golden Valley Intch 'Exit 73' 125' S of N/B US-395.	2,000	1,790	1,900	2,030	2,000	2,310	2,650	2,850	3,150	3,150
0310798	US395N, N/B off-ramp of the Golden Valley Intch 'Exit 73'.	4,390	5,190	5,300	5,460*	5,700	6,100	6,100*	6,300	6,700	6,700
0310799	Golden Valley Rd, 75' W of the S/B ramps of the Golden Valley Intch 'Exit 73'.	6,155	6,500	7,300	7,900*	6,900	7,550	8,050	7,800	7,950	7,750
0310800	Golden Valley Rd, 300' W of N Hills Bl.	10,400	11,400	12,900	13,900*	12,000	12,000*	13,000*	15,000	16,800	17,100
0310801	US395S, S/B off-ramp of the Plumb-Villanva Intch 'Exit 65' to the airport 'Exit 65B'.	3,720	3,685	3,840	3,750	3,700	3,200	3,150	3,350	3,350	3,500
0310802	US395N, N/B on-ramp of the Plumb-Villanova Intch 'Exit 65' from the airport.	2,270	2,300	2,300	2,300	2,200	1,850	1,850*	2,150	2,000	2,250
0310803	IR80E, E/B off-ramp of the Nugget Intch 'Exit 17' onto Nugget Av.	4,305	4,105	4,000	3,630*	3,300	3,300*	5,700	3,000*	1,900	4,650
0310804	IR80E, btwn the W Verdi Intch 'Exit 2' & the Verdi Intch 'Exit 3'.	25,025	24,930	27,740	28,735*	28,930	29,550*	28,700*	29,500	29,000*	28,700*
0310805	IR80E, btwn the Garson Intch 'Exit 4' & the E Verdi Intch 'Exit 5'.	27,285	28,165	29,440	31,140*	31,460*	31,930	30,500*	32,500*	31,500	32,000
0310806	IR80E, .1 mi E of the W/B off-ramp of the Mogul Intch 'Exit 7'.	32,790	33,880	25,920	37,350	37,930	38,860	37,000	40,000	37,000	39,000
0310807	IR80E, btwn the W 4th St Intch 'Exit 8' & the Robb Dr Intch 'Exit 9'.	30,530	31,735	34,000	35,100*	35,530*	36,360	34,500	37,000	34,000*	36,500*
0310808	IR80E, btwn the E 4th St Intch 'Exit 16' & Rock Bl Intch 'Exit 17'.	102,190	91,565	104,240	103,550*	104,695*	104,260*	100,500*	97,500*	92,000*	101,000*

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County Name WASHOE

Station Num	Route Loc		1997 AADT	1998 AADT	1999 AADT	2000 AADT	2001 AADT	2002 AADT	2003 AADT	2004 AADT	2005 AADT	2006 AADT
0310809	IR80E, btwn the Rock Bl Intch 'Exit 17' & Pyramid Wy Intch 'Exit 18'.		84,415	76,505	90,950	92,400	93,795	93,660*	92,000*	92,600*	86,000*	106,000*
0310810	IR80E, at Sparks Bl Intch 'Exit 20'. (add 31-0830 EB & 31-0792 WB)		47,115	48,390	52,040	54,665*	56,095*	57,540*	57,700*	59,800*	57,000*	67,500*
0310811	IR80E, btwn the Thisbe-Derby Dam Intch 'Exit 36' & the Orchard Intch 'Exit 38'.		17,820	20,220	20,080	20,270*	20,520	21,840	21,800	24,400	23,000*	26,100*
0310812	IR80E, btwn the Orchard Intch 'Exit 38' & the Painted Rock Intch 'Exit 40'.		17,870	20,265	20,080	20,270*	20,520	21,840	21,700*	24,100	23,300	26,600
0310814	IR80E, E/B on-ramp of the Sparks Bl Intch 'Exit 20'.		980	1,160	870	800	800*	850	930	1,200	1,000	1,500
0310815	IR80E, W/B off-ramp of the Sparks Bl Intch 'Exit 20'.		690	665	620	620	870	850	830	1,100	880	1,350
0310819	US395S, S/B on-ramp of the Neil Rd Intch 'Exit 62'.		8,110	7,315	7,765	8,070*	10,200	10,800*	10,900	12,000	11,600	12,000
0310820	US395N, N/B off-ramp of the Neil Rd Intch 'Exit 62'.		6,000	6,100	6,450	6,700	9,300	9,850	10,300	11,000	10,900	11,500
0310823	US395N, N/B on-ramp of the S Virginia St Intch 'Exit 61' from S/B S Virginia St.		3,500	2,900	3,535	3,800	3,700	3,600	3,350	3,350	3,650	3,650
0310824	US395N, N/B off-ramp of the S Virginia St Intch 'Exit 61'.		2,390	2,300	2,460	2,450*	2,880	2,880*	3,700	3,050	3,300	3,500
0310825	US395N, N/B on-ramp of the S Virginia St Intch 'Exit 61' from N/B Virginia St.		2,550	2,150	2,175	2,425	2,000	2,000*	2,700	3,000	3,000	3,150
0310826	US395S, S/B on-ramp of the S Virginia St Intch 'Exit 61'.		1,165	2,170	2,300	2,300*	2,120*	2,150	2,200	2,350	2,900	3,300
0310827	US395S, S/B off-ramp of the S Virginia St Intch 'Exit 61'.		4,300	6,315	7,000	6,420	6,300	6,300*	6,300	6,500	7,050	7,000
0310828	US395N, S of S Virginia St Intch 'Exit 61'.		52,360	56,500	61,660	64,125*	70,200*	79,110*	83,350*	85,000*	88,000*	93,000*
0310830	IR80E, E/B off-ramp of the Sparks Bl Intch 'Exit 20'.		8,710	8,535	9,070	9,600	10,000	9,900	9,450	9,650	9,600*	10,100*
0310833	Kings Row, 250' NW of Majestic Dr.		6,600	6,900	6,900	6,700	6,700*	6,700*	7,550	7,450	7,350	7,350
0310834	Spanish Springs Rd, .5 mi N of Goldy Wy.		2,000	1,950	2,000	2,000	2,000*	1,950	2,200*	2,500	2,150	2,150

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Station Num	Route Loc	1997 AADT	1998 AADT	1999 AADT	2000 AADT	2001 AADT	2002 AADT	2003 AADT	2004 AADT	2005 AADT	2006 AADT
0310932	Sierra Highlands Dr, 165' W of N McCarran Bl.			4,800	6,850	6,800	6,850	6,750	6,400	6,400*	6,450*
0310933	IR80E, W/B on-ramp of the Robb Dr Intch 'Exit 9' 400' W of the cross traffic rd.	480	525	760	840	970	1,100	1,150	1,200	1,750	1,850
0310934	IR80E, W/B off-ramp of the Robb Dr Intch 'Exit 9' 350' W of the W/B lanes.	3,550	3,685	4,330	4,810	5,700*	6,000	7,200	7,750	8,900	9,550
0310935	IR80E, E/B on-ramp of the Robb Dr Intch 'Exit 9' 50' W of the E/B lanes.	2,350	3,900	4,600	5,130	6,100	6,360	8,050*	8,850	9,750	10,600
0310936	IR80E, E/B off-ramp of the Robb Dr Intch 'Exit 9'.	420	425	660	730*	840	870	740	1,000	1,350	1,400
0310937	IR80E, .5 mi W of the W McCarran Bl Intch 'Exit 10'.	35,520	38,370	41,510	43,470*	45,520*	46,750*	47,800*	55,500	50,000*	50,500*
0310938	Mae Anne Av, 578' E of Robb Dr.			11,100	11,100	9,900	11,100	12,700	13,000*	14,000	15,000
0310939	Moya Bl, .1 mi S of Red Rock Rd.	2,450	2,650	3,050	3,050	3,050*	3,150	3,150	4,400	3,850	4,800
0310940	Moya Bl, .1 mi S of Lear Bl.	1,750	1,850	1,850	2,000	2,000*	2,000	2,000*	2,650	2,350	2,900
0310941	Lear Bl, 350' S of Stead Bl.	3,000	3,100	3,800	3,800	3,200	3,350	3,750	4,050	3,900	4,150
0310942	Lear Bl, 500' N of Stead Bl.	3,700	3,800	3,500	3,300	3,100	3,100*	3,000	3,200	3,100	3,600
0310944	Lemmon Dr, .6 mi E of Military Rd.	10,800	10,800	11,100	10,200	10,000	10,100*	11,100	11,900	11,500	11,500
0310950	Bravo Av, 200' E of Mt Charleston St.	210	170	200	200	200*	200*	160	240	180	210
0310957	Gleeson Wy, 50' W of Tanglewood Dr.(local)	850	800	800	800*	710	820	840	850	820	1,150
0310959	Spanish Springs Rd, .25 mi S of Sparks Bl.	900	800	900	860	860*	860*	970	1,100	850	930
0310963	Howard Dr, 75' N of Greenbrae Dr.(local)	2,850	2,800	2,700	2,600	2,600*	2,600	2,650	2,800	2,550	2,600
0310993	Seneca Dr, .3 miles W of Virginia St at the RxR tracks.	580	570	570	600	630	630*	730	660	660	600
0310994	Robb Dr, .1 mi N of Mae Anne Av.		2,450*	4,500	5,300	4,400	4,900	6,700	6,700	7,650	7,650
0310995	Alpha Av, 25' E of Mt Vida St.		520	600	630	630*	630*	630*	140	150	110
0310996	Silver Lake Rd, .2 mi N of Stead Bl.		6,300	6,600	6,500	6,900	6,900*	6,650	6,600*	9,450	10,200
0310997	Mt Anderson St, .1 mi W of Mt Bismark St.		540	880*	1,500	1,300	1,300*	1,100	1,300	1,300	1,450
0310998	Stead Bl, .1 mi N of Lear Bl.		5,700	5,800	5,800*	5,800*	5,800*	6,300	7,200	6,750	6,950
0310999	Mt Vida St, 50' S of Echo St.		570	1,180*	1,100	1,300	1,200	1,250	1,400	1,250	1,150
0311000	Sullivan Ln, 259' N of Prater Wy.		7,800	8,100	7,600	7,200	7,850	7,850*	7,750	9,600	9,000
0311001	Sullivan Ln, 137' N of Wedekind Rd.		3,100	3,200	3,000	3,200	3,150	3,000	3,200	3,950	4,000

* Data Adjusted or Estimated

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State of Nevada Department of Transportation

Annual Average Daily Traffic Count Stations

County Name WASHOE

Station Num	Route Loc	1997 AADT	1998 AADT	1999 AADT	2000 AADT	2001 AADT	2002 AADT	2003 AADT	2004 AADT	2005 AADT	2006 AADT
0311110	IR80E, .9 mi E of Vista Bl Intch.	22,210	24,885	23,510	25,285	25,880	26,510	27,685	29,956	29,900	35,000
0311120	IR80E, 1 mi E of the NV-CA State line.	25,675	25,435	27,305	28,385	27,965	29,210	29,040	29,165	29,100	26,600
0311210	IR80E, .1 mi W of the US-395 Intch	110,765	111,960	114,465	116,530	117,835	119,205	118,015	118,000*	114,000*	122,000*
0311220	IR80E, 0.5 mi E of SR-445 Pyramid Wy Intch	62,735	58,100	68,820	72,350	74,495	74,315	73,555	74,997	70,000*	82,000*
0311230	US395N, 0.6 Mi. S. of the Neil Rd. Intch.	59,155	63,395	69,605	72,020	74,700	85,975	89,790	92,331	95,500	101,000
0312110	US395N, 630 Ft S of the NV-CA State line.	8,620	8,660	8,620	8,515	8,600	9,175	9,200	9,321	8,500	9,150
0312120	US395N, 0.2 Mi. S. of the Golden Valley Intch.	50,835	51,770	52,610	54,660	58,285	61,785	64,560	67,417	68,490	72,500
0312210	SR667, 0.15 mi S of Galletti Wy.	14,450	14,435	15,045	14,540	15,140	15,790	15,115	17,543	17,900	17,100
0312220	SR651, 0.1 Mi. N. of Mae Anne Dr.	20,560	20,615	22,115	22,850	23,485	23,780	25,285	26,860	26,700	26,300
0312230	SR663, 0.1 mi W of SR-668 (Rock Bl.)	11,950	12,460	13,035	12,735	13,015	13,450	14,955	15,166	15,400	14,500
0312240	SR28, 0.2 mi N of Lakeshore Dr.	14,190	13,755	13,655	14,080	14,040	14,230	14,310	14,067	13,500	11,700
0312250	SR648, .1 mi W of 21st St.	19,190	19,010	18,610	17,835	17,505	18,660	20,905	20,079	17,700	17,500
0312260	SR430, 0.15 mi N of Gentry Wy.	28,650	30,600	29,090	32,075	33,150	34,490	33,655	33,413	33,500	33,000
0312270	SR445, 0.6 mi N of Calle De La Plata Dr	4,100	4,550	4,650	4,400	4,400*	3,500	3,795	4,419	4,650	5,050
0312280	SR430, 200' N of N McCarran Bl.					19,445	19,120	20,635	24,102	27,100	26,200
0312290	IR80E, 1.1 mi E of the Tracey-Clark Intch.					20,650*	21,855	22,570	24,261	25,400	26,400
0312300	Sparks Bl, 0.2 mi S of Prater Way.	16,800	18,400	18,900	20,200*	20,000	19,385	21,685	22,932	23,500	22,100
0312310	US395N, 0.35 miles N of I-580	13,700	12,500	12,500	12,500	10,000	15,450	15,380	16,028	14,800	16,800
0312320	E McCarran Bl, 0.18 mi N of Prater Way	22,300	24,200	23,300	22,000	22,000	24,885	25,615	25,800	26,100	24,800
0312330	Clear Acre Ln, 210 FT N. of Wedekind Rd	5,800	5,400	5,600	6,200	6,200	5,495	5,950	6,476	6,300	5,850
0312350	SR430, SR-430 (US-395) 1.4 Mi. N. of East Lake Blvd. Jct.										38,500
0317120	SR431, 4.8 mi W of SR-430 (US-395)	7,930	8,350	8,720	9,260	9,765	10,190	10,550	11,080	10,400	10,800

* Data Adjusted or Estimated

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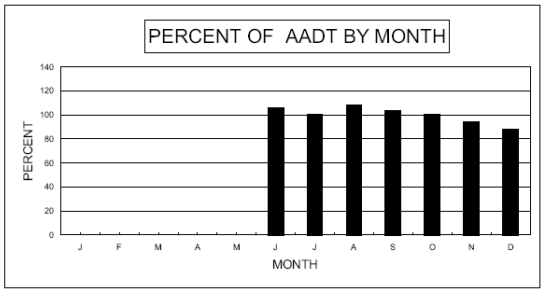
ATR 0311110

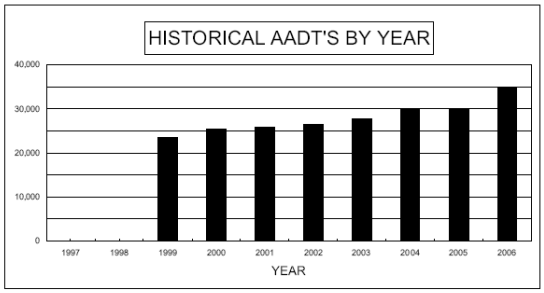
I-80 0.9 MI E. OF THE VISTA INTCH.

MONTHLY PERCENT		
MONTH	MADT	% OF AADT
JANUARY		
FEBRUARY		
MARCH		
APRIL		
MAY		
JUNE	36,948	106.1%
JULY	35,001	100.5%
AUGUST	37,598	108.0%
SEPTEMBER	36,030	103.5%
OCTOBER	34,959	100.4%
NOVEMBER	32,700	93.9%
DECEMBER	30,553	87.7%

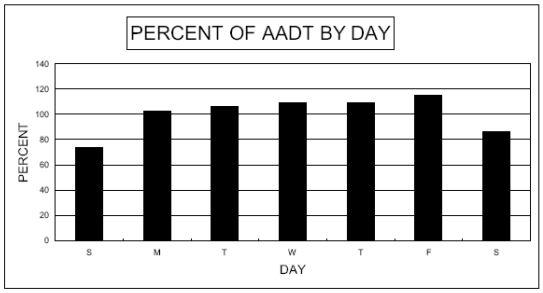


DATA MISSING DUE TO CONSTRUCTION

HISTORICAL RECORD		
YEAR	AADT	% OF PREVIOUS YEAR
2006	34,827	116.1%
2005	30,000	100.1%
2004	29,956	108.2%
2003	27,685	104.4%
2002	26,510	102.4%
2001	25,880	102.4%
2000	25,285	107.5%
1999	23,510	
1998		
1997		



DAY OF WEEK		
DAY	ADT	% OF AADT
SUN	25,620	73.6%
MON	35,630	102.3%
TUE	36,866	105.9%
WED	37,854	108.7%
THU	37,841	108.7%
FRI	40,070	115.1%
SAT	29,908	85.9%
AVG WEEKDAY	37,048	106.4%
AVG WEEKEND	27,764	79.7%



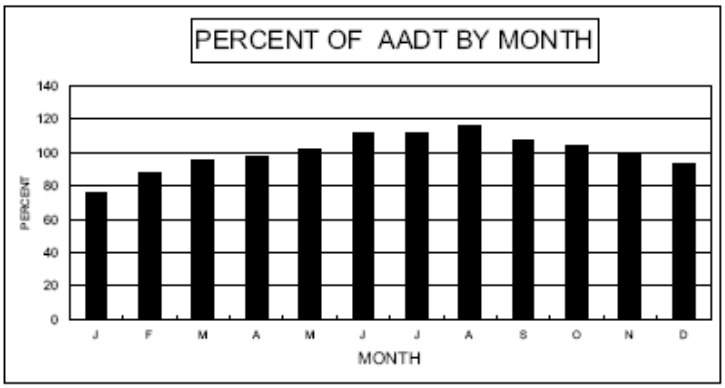
PERCENT DESIGN HOUR VOLUME (DHV) IS OF ANNUAL AVERAGE	8.8%
PERCENT HIGH DIRECTION IS OF DHV	55.3%

84

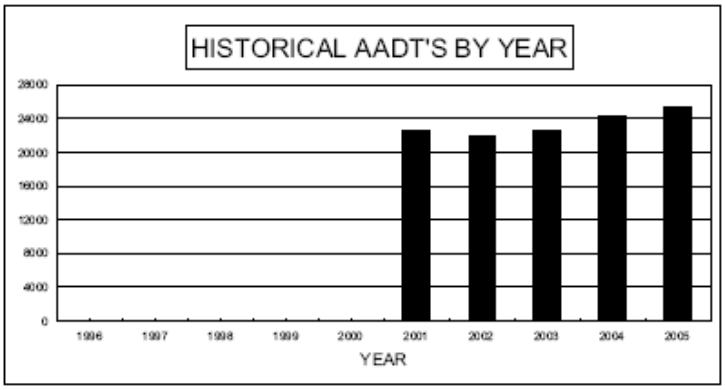
ATR 3122909

I-80 1.1 MI E. OF THE TRACY CLARK INTERCHANGE

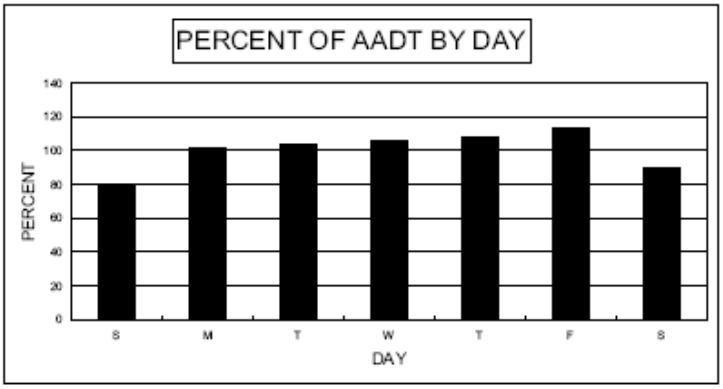
MONTHLY PERCENT		
MONTH	MADT	% OF AADT
JANUARY	19,241	75.7%
FEBRUARY	22,333	87.9%
MARCH	24,316	95.7%
APRIL	24,724	97.3%
MAY	25,848	101.7%
JUNE	28,283	111.3%
JULY	28,430	111.9%
AUGUST	29,389	115.7%
SEPTEMBER	27,154	106.9%
OCTOBER	26,404	103.9%
NOVEMBER	25,152	99.0%
DECEMBER	23,664	93.1%



HISTORICAL RECORD		
YEAR	AADT	% OF PREVIOUS YEAR
2005	25,411	104.7%
2004	24,261	107.5%
2003	22,570	103.3%
2002	21,855	96.9%
2001	22,560	
2000		
1999		
1998		
1997		
1996		



DAY OF WEEK		
DAY	ADT	% OF AADT
SUN	20,187	79.4%
MON	25,704	101.2%
TUE	26,239	103.3%
WED	26,800	105.5%
THU	27,372	107.7%
FRI	28,760	113.2%
SAT	22,818	89.8%
AVG WEEKDAY	26,529	104.4%
AVG WEEKEND	21,503	84.6%



PERCENT DESIGN HOUR VOLUME (DHV) IS OF ANNUAL AVERAGE	9.4%
PERCENT HIGH DIRECTION IS OF DHV	65.7%

96

Appendix B: Truck Count Data

Corresponding AADT Location: #5

Nevada Department of Transportation

Site Specific Vehicle Distribution Report

Month: July

Station #: 606 Direction Eastbound County Washoe **Func:** 01 **Method:** AVC 07/11/2000 Thru 07/18/2000

Location: ON ROUTE # 00000080, 0.48 KM WEST OF SR-647 IR-80 at Mogul

	Pass	Busses		Single Unit				Single Trailers					Multiple Trailers				Totals	
		2AX	3AX	2SD	CAMP(MH)	O3S	O4S+	3AX	4AX	3S2	5AX	6AX+	5AX	6AX	7AX	8AX+	Truck & Bus	All Veh
Total	124809	155	653	3023	0	376	14	659	632	10730	280	111	1379	402	119	35	18568	143377
Percents	87.05%	0.11%	0.46%	2.11%	0%	0.26%	0.01%	0.46%	0.44%	7.48%	0.2%	0.08%	0.96%	0.28%	0.08%	0.02%	12.95%	

Station #: 607 Direction Westbound County Washoe **Func:** 01 **Method:** AVC 07/11/2000 Thru 07/18/2000

Location: ON ROUTE # 00000080, 0.48 KM WEST OF SR-647 IR-80 at Mogul

	Pass	Busses		Single Unit				Single Trailers					Multiple Trailers				Totals	
		2AX	3AX	2SD	CAMP(MH)	O3S	O4S+	3AX	4AX	3S2	5AX	6AX+	5AX	6AX	7AX	8AX+	Truck & Bus	All Veh
Total	124338	121	679	2887	0	381	11	420	505	11759	264	106	1375	456	119	39	19122	143460
Percents	86.67%	0.08%	0.47%	2.01%	0%	0.27%	0.01%	0.29%	0.35%	8.2%	0.18%	0.07%	0.96%	0.32%	0.08%	0.03%	13.33%	

COMPOSITE OF STATIONS: 606 & 607 County Washoe **Func:** 01 **Method:** AVC 07/11/2000 Thru 07/18/2000

Location: ON ROUTE # 00000080, 0.48 KM WEST OF SR-647 IR-80 at Mogul

	Pass	Busses		Single Unit				Single Trailers					Multiple Trailers				Totals	
		2AX	3AX	2SD	CAMP(MH)	O3S	O4S+	3AX	4AX	3S2	5AX	6AX+	5AX	6AX	7AX	8AX+	Truck & Bus	All Veh
Total	249147	276	1332	5910	0	757	25	1079	1137	22489	544	217	2754	858	238	74	37690	286837
Percents	86.86%	0.1%	0.46%	2.06%	0%	0.26%	0.01%	0.38%	0.4%	7.84%	0.19%	0.08%	0.96%	0.3%	0.08%	0.03%	13.14%	

Corresponding AADT Location: #7

Nevada Department of Transportation

Site Specific Vehicle Distribution Report

Month: July

Station #: 630 Direction Eastbound County Washoe **Func:** 11 **Method:** AVC 07/12/2000 Thru 07/18/2000

Location: ON ROUTE # 00000080, 1.5 KM EAST OF SR-650 IR-80 at McCarran Blvd.

	Pass	Busses		Single Unit				Single Trailers					Multiple Trailers				Totals	
		2AX	3AX	2SD	CAMP(MH)	O3S	O4S+	3AX	4AX	3S2	5AX	6AX+	5AX	6AX	7AX	8AX+	Truck & Bus	All Veh
Total	75104	140	224	2564	0	914	22	659	331	9513	320	193	775	117	1948	510	18230	93334
Percents	80.47%	0.15%	0.24%	2.75%	0%	0.98%	0.02%	0.71%	0.35%	10.19%	0.34%	0.21%	0.83%	0.13%	2.09%	0.55%	19.53%	

Station #: 631 Direction Westbound County Washoe **Func:** 11 **Method:** AVC 07/12/2000 Thru 07/18/2000

Location: ON ROUTE # 00000080, 1.5 KM EAST OF SR-650 IR-80 at McCarran Blvd.

	Pass	Busses		Single Unit				Single Trailers					Multiple Trailers				Totals	
		2AX	3AX	2SD	CAMP(MH)	O3S	O4S+	3AX	4AX	3S2	5AX	6AX+	5AX	6AX	7AX	8AX+	Truck & Bus	All Veh
Total	76172	119	224	2773	0	859	64	466	313	10839	324	185	836	162	1985	519	19668	95840
Percents	79.48%	0.12%	0.23%	2.89%	0%	0.9%	0.07%	0.49%	0.33%	11.31%	0.34%	0.19%	0.87%	0.17%	2.07%	0.54%	20.52%	

COMPOSITE OF STATIONS: 630 & 631 County Washoe **Func:** 11 **Method:** AVC 07/12/2000 Thru 07/18/2000

Location: ON ROUTE # 00000080, 1.5 KM EAST OF SR-650 IR-80 at McCarran Blvd.

	Pass	Busses		Single Unit				Single Trailers					Multiple Trailers				Totals	
		2AX	3AX	2SD	CAMP(MH)	O3S	O4S+	3AX	4AX	3S2	5AX	6AX+	5AX	6AX	7AX	8AX+	Truck & Bus	All Veh
Total	151276	259	448	5337	0	1773	86	1125	644	20352	644	378	1611	279	3933	1029	37898	189174
Percents	79.97%	0.14%	0.24%	2.82%	0%	0.94%	0.05%	0.59%	0.34%	10.76%	0.34%	0.2%	0.85%	0.15%	2.08%	0.54%	20.03%	

Corresponding AADT Location: #8 Eastbound

DCI TRAFFIC & TRANSIT DATA SERVICES

PROJECT: 2007-1007-001EB

DATE: 11/14/2007 Location: 1-80 FREEWAY BTN ROBB & MACCARRAN WEST[EB]

SOUTHBOUND

TIME	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10	#11	#12	#13	TOTAL
00:00 AM	0	96	6	0	0	1	0	0	38	0	0	3	0	144
01:00	0	76	2	0	1	0	0	2	44	0	1	4	1	131
02:00	0	77	8	0	0	1	1	2	33	0	0	5	3	130
03:00	0	106	6	6	0	2	1	0	44	1	1	6	2	175
04:00	0	176	8	16	0	0	0	1	77	0	2	6	0	286
05:00	0	513	70	8	3	2	0	0	92	0	1	30	1	720
06:00	0	1101	94	16	8	39	1	1	187	0	0	32	0	1479
07:00	3	1405	128	6	11	55	1	1	164	1	2	32	0	1809
08:00	6	983	123	22	8	62	7	1	113	0	0	16	2	1343
09:00	6	541	190	21	7	51	0	0	87	1	1	16	0	921
10:00	8	668	211	10	6	50	4	1	92	0	0	19	1	1070
11:00	3	1160	220	10	10	58	7	1	75	0	1	16	2	1563
12:00 PM	9	2079	235	25	8	54	10	1	92	1	4	16	0	2534
13:00	7	1795	170	15	6	60	8	0	80	0	0	19	0	2160
14:00	6	1512	247	12	6	32	6	1	66	6	0	6	1	1901
15:00	4	2003	286	16	9	10	9	1	85	20	1	6	2	2452
16:00	5	1576	409	9	7	10	10	1	82	27	2	4	0	2142
17:00	3	954	205	10	8	10	6	1	83	16	1	6	2	1305
18:00	6	483	104	12	5	11	6	1	89	17	1	7	0	742
19:00	1	275	118	16	8	23	9	1	162	7	0	4	1	625
20:00	1	276	36	18	11	8	6	1	101	1	2	3	0	464
21:00	1	213	12	10	0	10	3	1	91	2	8	0	0	351
22:00	0	162	11	15	7	9	10	1	99	1	3	5	0	323
23:00	0	143	13	7	6	2	9	1	76	1	3	5	1	267
TOTAL	**69**	**18373**	**2912**	**280**	**135**	**560**	**114**	**21**	**2152**	**102**	**34**	**266**	**19**	**25037**
% OF TOTAL	0%	73%	12%	1%	1%	2%	0%	0%	9%	0%	0%	1%	0%	100%
% AM	0%	28%	4%	0%	0%	1%	0%	0%	4%	0%	0%	1%	0%	39%
AM PEAK HOUR	10:00	07:00	11:00	08:00	07:00	08:00	08:00	01:00	06:00	03:00	04:00	06:00	02:00	07:00
VOLUME	8	1405	220	22	11	62	7	2	187	1	2	32	3	1809
% PM	0%	46%	7%	1%	0%	1%	0%	0%	4%	0%	0%	0%	0%	61%
PM PEAK HOUR	12:00	12:00	16:00	12:00	20:00	13:00	12:00	12:00	19:00	16:00	21:00	13:00	15:00	12:00
VOLUME	9	2079	409	25	11	60	10	1	162	27	8	19	2	2534

SUMMARY	CLASS TYPE	TOTAL	PERCENT OF TOTAL VEHICLES			PERCENT OF CLASS		
	TOTAL VEHICLES	25037	TOTAL%	AM%	PM%	TOTAL%	AM%	PM%
	CLASS #1	69	0.3%	0.1%	0.2%	100.0%	37.7%	62.3%
	CLASS #2	18373	73.4%	27.6%	45.8%	100.0%	37.6%	62.4%
	CLASS #3	2912	11.6%	4.3%	7.4%	100.0%	36.6%	63.4%
	CLASS #4 THRU #13	3683	14.7%	7.1%	7.6%	100.0%	48.2%	51.8%

1: MOTORCYCLES - 2 AXLES **5: SINGLE UNIT - 2 AXLES & 6 TIRES** **9: DOUBLE UNIT - 5 AXLES** **13: MULTI UNIT - >6 AXLES**

2: PASSENGER CARS - 2 AXLES **6: SINGLE UNIT TRUCK - 3 AXLES** **10: DOUBLE UNIT - >5 AXLES**

3: PICKUP TRUCKS & VANS - 2 AXLES **7: SINGLE UNIT - 4 AXLES** **11: MULTI UNIT - <6 AXLES**

4: BUSES **8: DOUBLE UNIT - <5 AXLES** **12: MULTI UNIT - 6 AXLES**

Corresponding AADT Location: #8 Westbound

DCI TRAFFIC & TRANSIT DATA SERVICES

PROJECT: 2007-1007-001WB

DATE: 11/14/2007

Location: 1-80 FREEWAY BTN ROBB & MACCARRAN WEST[WB]

SOUTHBOUND

TIME	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10	#11	#12	#13	TOTAL
00:00 AM	0	53	1	0	0	1	0	0	52	0	1	9	3	120
01:00	0	73	1	0	0	2	0	0	60	1	0	9	7	153
02:00	0	85	0	1	1	0	1	2	66	0	2	23	7	188
03:00	0	93	3	0	2	1	2	1	68	2	1	25	13	211
04:00	0	198	8	1	0	0	3	2	47	1	1	18	6	285
05:00	2	528	9	0	2	3	1	0	116	1	1	19	11	693
06:00	1	1418	48	0	1	31	3	2	182	2	3	19	11	1721
07:00	1	1497	82	1	0	34	2	0	152	2	7	25	10	1813
08:00	0	1314	124	15	1	53	1	1	149	2	2	17	13	1692
09:00	2	1252	135	18	0	57	0	2	147	1	5	20	10	1649
10:00	3	1048	100	14	0	54	5	1	151	1	1	11	9	1398
11:00	2	1046	123	20	2	52	1	2	165	1	4	23	14	1455
12:00 PM	3	2119	106	46	1	55	1	1	147	4	3	23	11	2520
13:00	3	1820	109	35	0	61	1	1	163	1	4	21	12	2231
14:00	2	1720	110	29	0	73	2	2	168	0	5	22	13	2146
15:00	3	1968	173	43	0	54	2	1	150	1	5	18	14	2432
16:00	3	1827	171	20	1	40	6	0	113	2	4	23	16	2226
17:00	6	1310	132	20	1	35	2	2	103	1	3	14	11	1640
18:00	2	728	104	9	0	31	1	1	108	1	6	28	14	1033
19:00	4	286	60	24	1	22	2	4	95	1	5	22	12	538
20:00	0	289	17	8	0	12	4	1	106	1	8	15	14	475
21:00	0	181	8	6	3	0	2	1	62	0	23	26	11	323
22:00	0	117	8	1	2	1	6	1	60	0	8	13	8	225
23:00	0	93	2	4	3	2	6	3	84	1	10	18	11	237
TOTAL	**37**	**21063**	**1634**	**315**	**21**	**674**	**54**	**31**	**2714**	**27**	**112**	**461**	**261**	**27404**
% OF TOTAL	0%	77%	6%	1%	0%	2%	0%	0%	10%	0%	0%	2%	1%	100%
% AM	0%	31%	2%	0%	0%	1%	0%	0%	5%	0%	0%	1%	0%	42%
AM PEAK HOUR	10:00	07:00	09:00	11:00	03:00	09:00	10:00	02:00	06:00	03:00	07:00	03:00	11:00	07:00
VOLUME	3	1497	135	20	2	57	5	2	182	2	7	25	14	1813
% PM	0%	45%	4%	1%	0%	1%	0%	0%	5%	0%	0%	1%	1%	58%
PM PEAK HOUR	17:00	12:00	15:00	12:00	21:00	14:00	16:00	19:00	14:00	12:00	21:00	18:00	16:00	12:00
VOLUME	6	2119	173	46	3	73	6	4	168	4	23	28	16	2520

SUMMARY	CLASS TYPE	TOTAL	PERCENT OF TOTAL VEHICLES			PERCENT OF CLASS		
			TOTAL%	AM%	PM%	TOTAL%	AM%	PM%
	TOTAL VEHICLES	27404						
	CLASS #1	37	0.1%	0.0%	0.1%	100.0%	29.7%	70.3%
	CLASS #2	21063	76.9%	31.4%	45.5%	100.0%	40.9%	59.1%
	CLASS #3	1634	6.0%	2.3%	3.6%	100.0%	38.8%	61.2%
	CLASS #4 THRU #13	4670	17.0%	7.8%	9.3%	100.0%	45.6%	54.4%

1: MOTORCYCLES - 2 AXLES
2: PASSENGER CARS - 2 AXLES
3: PICKUP TRUCKS & VANS - 2 AXLES
4: BUSES
5: SINGLE UNIT - 2 AXLES & 6 TIRES
6: SINGLE UNIT TRUCK - 3 AXLES
7: SINGLE UNIT - 4 AXLES
8: DOUBLE UNIT - <5 AXLES
9: DOUBLE UNIT - 5 AXLES
10: DOUBLE UNIT - >5 AXLES
11: MULTI UNIT - <6 AXLES
12: MULTI UNIT - 6 AXLES
13: MULTI UNIT - >6 AXLES

Corresponding AADT Location: #15 Eastbound

DCI TRAFFIC & TRANSIT DATA SERVICES

PROJECT: 2007-1007-002EB

DATE: 11/14/2007

Location: 1-80 FREEWAY BTN MACCARRAN EAST & SPARKS[EB]

SOUTHBOUND

TIME	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10	#11	#12	#13	TOTAL
00:00 AM	0	82	9	0	0	0	0	0	29	2	0	8	0	130
01:00	1	72	3	0	5	2	7	0	20	1	1	3	0	115
02:00	0	101	3	1	1	4	0	0	20	3	1	5	0	139
03:00	0	128	2	3	3	6	3	1	73	1	2	6	0	228
04:00	0	196	14	1	2	5	0	1	96	3	2	10	1	331
05:00	0	693	86	6	3	10	4	1	98	3	1	27	5	937
06:00	3	1204	105	16	14	14	4	3	209	1	2	21	4	1600
07:00	3	1436	136	16	14	53	5	0	154	0	1	35	18	1871
08:00	8	1130	171	23	0	64	5	2	143	1	0	21	11	1579
09:00	0	1060	238	15	7	61	7	0	94	3	2	17	6	1510
10:00	1	1054	257	6	4	62	11	3	82	2	0	10	2	1494
11:00	0	1188	237	12	5	70	11	1	87	1	2	20	5	1639
12:00 PM	2	1321	224	9	3	93	12	2	97	0	5	14	4	1786
13:00	7	1352	212	37	3	117	26	1	183	2	7	14	2	1963
14:00	6	1907	268	7	7	112	23	1	232	1	21	12	2	2599
15:00	4	2221	342	14	7	88	17	1	180	3	22	27	1	2927
16:00	7	2064	368	11	3	39	11	0	180	1	26	30	4	2744
17:00	2	1885	278	6	5	34	8	2	127	1	11	11	3	2373
18:00	6	984	145	8	6	25	8	1	104	2	6	9	3	1307
19:00	5	557	116	9	5	29	7	0	103	1	9	14	4	859
20:00	4	475	44	4	5	19	2	1	111	3	7	10	2	687
21:00	1	388	16	8	6	15	6	1	111	1	9	6	1	569
22:00	1	311	9	5	3	10	8	2	91	2	5	16	1	464
23:00	1	159	11	4	5	9	5	1	57	3	4	9	1	269
TOTAL	**62**	**21968**	**3294**	**221**	**116**	**941**	**190**	**25**	**2681**	**41**	**146**	**355**	**80**	**30120**
% OF TOTAL	0%	73%	11%	1%	0%	3%	1%	0%	9%	0%	0%	1%	0%	100%
% AM	0%	28%	4%	0%	0%	1%	0%	0%	4%	0%	0%	1%	0%	38%
AM PEAK HOUR	08:00	07:00	10:00	08:00	06:00	11:00	10:00	06:00	06:00	02:00	03:00	07:00	07:00	07:00
VOLUME	8	1436	257	23	14	70	11	3	209	3	2	35	18	1871
% PM	0%	45%	7%	0%	0%	2%	0%	0%	5%	0%	0%	1%	0%	62%
PM PEAK HOUR	13:00	15:00	16:00	13:00	14:00	13:00	13:00	12:00	14:00	15:00	16:00	16:00	12:00	15:00
VOLUME	7	2221	368	37	7	117	26	2	232	3	26	30	4	2927

SUMMARY	CLASS TYPE	TOTAL	PERCENT OF TOTAL VEHICLES			PERCENT OF CLASS		
			TOTAL%	AM%	PM%	TOTAL%	AM%	PM%
	TOTAL VEHICLES	30120						
	CLASS #1	62	0.2%	0.1%	0.2%	100.0%	25.8%	74.2%
	CLASS #2	21968	72.9%	27.7%	45.2%	100.0%	38.0%	62.0%
	CLASS #3	3294	10.9%	4.2%	6.7%	100.0%	38.3%	61.7%
	CLASS #4 THRU #13	4796	15.9%	6.5%	9.4%	100.0%	40.7%	59.3%

1: MOTORCYCLES - 2 AXLES
2: PASSENGER CARS - 2 AXLES
3: PICKUP TRUCKS & VANS - 2 AXLES
4: BUSES
5: SINGLE UNIT - 2 AXLES & 6 TIRES
6: SINGLE UNIT TRUCK - 3 AXLES
7: SINGLE UNIT - 4 AXLES
8: DOUBLE UNIT - <5 AXLES
9: DOUBLE UNIT - 5 AXLES
10: DOUBLE UNIT - >5 AXLES
11: MULTI UNIT - <6 AXLES
12: MULTI UNIT - 6 AXLES
13: MULTI UNIT - >6 AXLES

Corresponding AADT Location: #15 Westbound

DCI TRAFFIC & TRANSIT DATA SERVICES

PROJECT: 2007-1007-002WB

DATE: 11/14/2007 Location: 1-80 FREEWAY BTN MACCARRAN EAST & SPARKS[WB]

SOUTHBOUND

TIME	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10	#11	#12	#13	TOTAL
00:00 AM	2	121	1	0	5	1	6	0	74	0	1	7	3	221
01:00	0	132	9	1	0	3	2	1	71	3	2	8	6	238
02:00	2	140	13	1	2	7	1	0	88	1	0	5	5	265
03:00	0	190	3	1	1	5	2	1	69	2	1	4	7	286
04:00	1	283	7	2	2	21	7	0	79	6	0	5	4	417
05:00	1	653	29	14	0	9	3	2	130	1	1	4	6	853
06:00	3	1529	112	3	3	14	7	2	184	2	0	18	7	1884
07:00	4	2517	109	13	8	48	6	1	204	3	3	40	4	2960
08:00	3	2129	110	13	1	38	16	6	187	4	5	21	1	2534
09:00	10	1701	140	5	6	46	6	1	165	4	0	20	4	2108
10:00	7	1441	144	7	1	41	7	0	162	0	5	20	1	1836
11:00	9	1337	132	8	5	40	7	1	177	3	3	24	4	1750
12:00 PM	6	1256	145	3	2	26	2	1	161	1	0	19	8	1630
13:00	9	1423	126	7	5	31	2	0	162	5	4	19	25	1818
14:00	9	1574	110	10	3	27	4	2	179	0	3	12	5	1938
15:00	4	1693	164	7	3	24	3	1	159	6	1	18	5	2088
16:00	9	1884	183	4	5	42	3	1	142	2	2	19	4	2300
17:00	2	2164	133	7	4	33	4	1	132	2	3	14	5	2504
18:00	2	1288	118	4	2	20	1	0	133	5	2	18	8	1601
19:00	3	659	73	7	1	19	3	1	142	3	2	17	8	938
20:00	3	330	24	4	3	8	3	3	121	5	4	22	4	534
21:00	1	241	27	5	3	2	2	0	111	4	1	20	5	422
22:00	0	211	16	2	4	9	1	1	101	1	4	12	4	366
23:00	0	172	12	2	4	3	4	1	90	4	0	18	5	315
TOTAL	**90**	**25068**	**1940**	**130**	**73**	**517**	**102**	**27**	**3223**	**67**	**47**	**384**	**138**	**31806**
% OF TOTAL	0%	79%	6%	0%	0%	2%	0%	0%	10%	0%	0%	1%	0%	100%
% AM	0%	38%	3%	0%	0%	1%	0%	0%	5%	0%	0%	1%	0%	48%
AM PEAK HOUR	09:00	07:00	10:00	05:00	07:00	07:00	08:00	08:00	07:00	04:00	08:00	07:00	03:00	07:00
VOLUME	10	2517	144	14	8	48	16	6	204	6	5	40	7	2960
% PM	0%	41%	4%	0%	0%	1%	0%	0%	5%	0%	0%	1%	0%	52%
PM PEAK HOUR	13:00	17:00	16:00	14:00	13:00	16:00	14:00	20:00	14:00	15:00	13:00	20:00	13:00	17:00
VOLUME	9	2164	183	10	5	42	4	3	179	6	4	22	25	2504

SUMMARY	CLASS TYPE	TOTAL	PERCENT OF TOTAL VEHICLES			PERCENT OF CLASS		
			TOTAL%	AM%	PM%	TOTAL%	AM%	PM%
	TOTAL VEHICLES	31806						
	CLASS #1	90	0.3%	0.1%	0.2%	100.0%	46.7%	53.3%
	CLASS #2	25068	78.8%	38.3%	40.5%	100.0%	48.6%	51.4%
	CLASS #3	1940	6.1%	2.5%	3.6%	100.0%	41.7%	58.3%
	CLASS #4 THRU #13	4708	14.8%	7.3%	7.5%	100.0%	49.4%	50.6%

1: MOTORCYCLES - 2 AXLES
2: PASSENGER CARS - 2 AXLES
3: PICKUP TRUCKS & VANS - 2 AXLES
4: BUSES
5: SINGLE UNIT - 2 AXLES & 6 TIRES
6: SINGLE UNIT TRUCK - 3 AXLES
7: SINGLE UNIT - 4 AXLES
8: DOUBLE UNIT - <5 AXLES
9: DOUBLE UNIT - 5 AXLES
10: DOUBLE UNIT - >5 AXLES
11: MULTI UNIT - <6 AXLES
12: MULTI UNIT - 6 AXLES
13: MULTI UNIT - >6 AXLES

Corresponding AADT Location: #16 Eastbound

DCI TRAFFIC & TRANSIT DATA SERVICES

PROJECT: 2007-1007-003EB

DATE: 11/14/2007 Location: 1-80 FREEWAY BTN E/O VISTA[EB]

SOUTHBOUND

TIME	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10	#11	#12	#13	TOTAL
00:00 AM	0	71	5	0	0	0	0	0	36	1	0	5	4	122
01:00	2	63	4	0	0	1	0	0	38	2	0	9	6	125
02:00	0	72	6	0	0	3	1	0	34	0	0	6	3	125
03:00	0	104	3	0	0	1	0	0	38	0	0	2	4	152
04:00	0	140	11	2	0	0	1	1	76	2	0	7	14	254
05:00	0	580	81	5	0	4	0	0	89	0	0	21	5	785
06:00	3	1200	71	10	2	34	1	0	199	1	0	24	2	1547
07:00	2	1480	122	16	6	56	0	0	155	0	0	39	3	1879
08:00	7	1017	133	17	4	62	8	1	124	0	0	18	2	1393
09:00	0	455	193	10	7	52	1	1	88	2	1	8	1	819
10:00	2	419	211	11	10	50	5	0	81	0	0	9	2	800
11:00	0	464	209	16	6	59	4	0	77	2	3	21	6	867
12:00 PM	3	595	231	17	7	58	1	0	86	0	0	10	1	1009
13:00	8	555	169	31	13	67	4	0	78	3	3	5	2	938
14:00	7	702	247	16	5	84	11	0	64	19	0	5	0	1160
15:00	6	977	282	10	10	101	20	0	86	27	1	4	0	1524
16:00	6	1063	373	11	10	56	11	1	77	18	0	4	0	1630
17:00	5	1066	275	9	8	38	4	1	83	12	0	5	1	1507
18:00	1	540	118	20	3	23	7	0	87	13	1	7	0	820
19:00	2	304	89	17	3	15	1	1	98	11	1	4	2	548
20:00	2	294	27	20	4	6	2	1	104	5	0	10	0	475
21:00	2	214	14	20	2	1	5	1	101	2	1	5	1	369
22:00	0	188	7	4	5	3	3	1	87	1	0	4	2	305
23:00	0	122	11	1	1	6	3	1	54	1	1	4	1	206
TOTAL	**58**	**12685**	**2892**	**263**	**106**	**780**	**93**	**10**	**2040**	**122**	**12**	**236**	**62**	**19359**
% OF TOTAL	0%	66%	15%	1%	1%	4%	0%	0%	11%	1%	0%	1%	0%	100%
% AM	0%	31%	5%	0%	0%	2%	0%	0%	5%	0%	0%	1%	0%	46%
AM PEAK HOUR	08:00	07:00	10:00	08:00	10:00	08:00	08:00	04:00	06:00	01:00	11:00	07:00	04:00	07:00
VOLUME	7	1480	211	17	10	62	8	1	199	2	3	39	14	1879
% PM	0%	34%	10%	1%	0%	2%	0%	0%	5%	1%	0%	0%	0%	54%
PM PEAK HOUR	13:00	17:00	16:00	13:00	13:00	15:00	15:00	16:00	20:00	15:00	13:00	12:00	13:00	16:00
VOLUME	8	1066	373	31	13	101	20	1	104	27	3	10	2	1630

SUMMARY	CLASS TYPE	TOTAL	PERCENT OF TOTAL VEHICLES			PERCENT OF CLASS		
	TOTAL VEHICLES	19359	TOTAL%	AM%	PM%	TOTAL%	AM%	PM%
	CLASS #1	58	0.3%	0.1%	0.2%	100.0%	27.6%	72.4%
	CLASS #2	12685	65.5%	31.3%	34.2%	100.0%	47.8%	52.2%
	CLASS #3	2892	14.9%	5.4%	9.5%	100.0%	36.3%	63.7%
	CLASS #4 THRU #13	3724	19.2%	9.0%	10.3%	100.0%	46.7%	53.3%

1: MOTORCYCLES - 2 AXLES **5: SINGLE UNIT - 2 AXLES & 6 TIRES** **9: DOUBLE UNIT - 5 AXLES** **13: MULTI UNIT - >6 AXLES**
2: PASSENGER CARS - 2 AXLES **6: SINGLE UNIT TRUCK - 3 AXLES** **10: DOUBLE UNIT - >5 AXLES**
3: PICKUP TRUCKS & VANS - 2 AXLES **7: SINGLE UNIT - 4 AXLES** **11: MULTI UNIT - <6 AXLES**
4: BUSES **8: DOUBLE UNIT - <5 AXLES** **12: MULTI UNIT - 6 AXLES**

Corresponding AADT Location: #16 Westbound

DCI TRAFFIC & TRANSIT DATA SERVICES

PROJECT: 2007-1007-003WB

DATE: 11/14/2007 Location: 1-80 FREEWAY BTN E/O VISTA[WB]

SOUTHBOUND

TIME	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10	#11	#12	#13	TOTAL
00:00 AM	0	54	1	0	0	2	1	0	52	0	0	6	6	122
01:00	0	72	1	0	0	2	2	0	51	0	0	2	5	135
02:00	0	72	0	0	0	4	1	1	68	0	0	12	3	161
03:00	0	85	2	0	0	4	0	0	43	0	0	11	10	155
04:00	0	187	9	0	5	6	6	3	66	0	0	6	10	298
05:00	0	541	9	0	2	6	1	0	117	3	0	11	5	695
06:00	2	1524	46	0	0	26	2	0	172	2	0	13	8	1795
07:00	2	1393	83	3	1	32	3	1	158	5	0	16	7	1704
08:00	1	1236	131	2	0	54	2	4	154	2	0	7	10	1603
09:00	1	990	147	9	0	53	1	0	157	2	0	17	2	1379
10:00	5	809	111	0	2	53	4	1	152	1	0	13	2	1153
11:00	3	709	120	5	0	53	0	0	170	2	0	8	4	1074
12:00 PM	1	776	113	5	0	48	1	3	150	6	0	12	8	1123
13:00	1	725	102	4	0	64	5	0	160	4	0	20	2	1087
14:00	1	1006	119	10	0	71	6	0	165	13	0	17	8	1416
15:00	4	1409	177	16	0	53	2	0	147	7	0	19	9	1843
16:00	4	1310	194	16	1	41	2	0	101	3	0	25	11	1708
17:00	2	1224	145	8	0	36	1	1	108	0	0	28	5	1558
18:00	2	690	118	13	1	32	0	0	106	1	1	21	6	991
19:00	0	360	76	16	0	22	2	1	86	1	1	30	6	601
20:00	0	185	26	2	1	19	1	2	79	1	0	21	7	344
21:00	0	144	27	0	2	10	2	1	81	1	1	28	6	303
22:00	0	129	16	1	0	2	1	1	81	2	2	21	6	262
23:00	0	110	15	3	1	5	0	1	82	0	0	24	5	246
TOTAL	**29**	**15740**	**1788**	**113**	**16**	**698**	**46**	**20**	**2706**	**56**	**5**	**388**	**151**	**21756**
% OF TOTAL	0%	72%	8%	1%	0%	3%	0%	0%	12%	0%	0%	2%	1%	100%
% AM	0%	35%	3%	0%	0%	1%	0%	0%	6%	0%		1%	0%	47%
AM PEAK HOUR	10:00	06:00	09:00	09:00	04:00	08:00	04:00	08:00	06:00	07:00		09:00	03:00	06:00
VOLUME	5	1524	147	9	5	54	6	4	172	5		17	10	1795
% PM	0%	37%	5%	0%	0%	2%	0%	0%	6%	0%	0%	1%	0%	53%
PM PEAK HOUR	15:00	15:00	16:00	15:00	21:00	14:00	14:00	12:00	14:00	14:00	22:00	19:00	16:00	15:00
VOLUME	4	1409	194	16	2	71	6	3	165	13	2	30	11	1843

SUMMARY	CLASS TYPE	TOTAL	PERCENT OF TOTAL VEHICLES			PERCENT OF CLASS		
	TOTAL VEHICLES	21756	TOTAL%	AM%	PM%	TOTAL%	AM%	PM%
	CLASS #1	29	0.1%	0.1%	0.1%	100.0%	48.3%	51.7%
	CLASS #2	15740	72.3%	35.3%	37.1%	100.0%	48.7%	51.3%
	CLASS #3	1788	8.2%	3.0%	5.2%	100.0%	36.9%	63.1%
	CLASS #4 THRU #13	4199	19.3%	8.9%	10.4%	100.0%	45.9%	54.1%

1: MOTORCYCLES - 2 AXLES
2: PASSENGER CARS - 2 AXLES
3: PICKUP TRUCKS & VANS - 2 AXLES
4: BUSES
5: SINGLE UNIT - 2 AXLES & 6 TIRES
6: SINGLE UNIT TRUCK - 3 AXLES
7: SINGLE UNIT - 4 AXLES
8: DOUBLE UNIT - <5 AXLES
9: DOUBLE UNIT - 5 AXLES
10: DOUBLE UNIT - >5 AXLES
11: MULTI UNIT - <6 AXLES
12: MULTI UNIT - 6 AXLES
13: MULTI UNIT - >6 AXLES

Corresponding AADT Location: #20

Nevada Department of Transportation

Site Specific Vehicle Distribution Report

Month: May

Station #: 012 Direction Eastbound County Washoe **Func:** 01 **Method:** PORT 05/02/2001 Thru 05/03/2001

Location: ON ROUTE # 00000080, 0.16 KM EAST OF THE THISBY-DERBY DAM INTG IR-80 at Thisby-Derby Damn

	Pass	Busses		Single Unit				Single Trailers					Multiple Trailers				Totals	
		2AX	3AX	2SD	CAMP(MH)	O3S	O4S+	3AX	4AX	3S2	5AX	6AX+	5AX	6AX	7AX	8AX+	Truck & Bus	All Veh
Total	15640	75	26	279	303	111	1	74	66	3467	67	60	145	53	307	109	5143	20783
Percents	75.25%	0.36%	0.13%	1.34%	1.46%	0.53%	0%	0.36%	0.32%	16.68%	0.32%	0.29%	0.7%	0.26%	1.48%	0.52%	24.75%	

Station #: 013 Direction Westbound County Washoe **Func:** 01 **Method:** PORT 07/08/1999 Thru 09/25/2001

Location: ON ROUTE # 00000080, 0.16 KM EAST OF THE THISBY-DERBY DAM INTG IR-80 at Thisby-Derby Damn

	Pass	Busses		Single Unit				Single Trailers					Multiple Trailers				Totals	
		2AX	3AX	2SD	CAMP(MH)	O3S	O4S+	3AX	4AX	3S2	5AX	6AX+	5AX	6AX	7AX	8AX+	Truck & Bus	All Veh
Total	23606	95	45	442	831	124	1	71	93	6491	93	132	309	79	506	281	9593	33199
Percents	71.1%	0.29%	0.14%	1.33%	2.5%	0.37%	0%	0.21%	0.28%	19.55%	0.28%	0.4%	0.93%	0.24%	1.52%	0.85%	28.9%	

COMPOSITE OF STATIONS: 012 & 013 County Washoe **Func:** 01 **Method:** PORT 05/02/1999 Thru 09/25/2001

Location: ON ROUTE # 00000080, 0.16 KM EAST OF THE THISBY-DERBY DAM INTG IR-80 at Thisby-Derby Damn

	Pass	Busses		Single Unit				Single Trailers					Multiple Trailers				Totals	
		2AX	3AX	2SD	CAMP(MH)	O3S	O4S+	3AX	4AX	3S2	5AX	6AX+	5AX	6AX	7AX	8AX+	Truck & Bus	All Veh
Total	39246	170	71	721	1134	235	2	145	159	9958	160	192	454	132	813	390	14736	53982
Percents	72.7%	0.31%	0.13%	1.34%	2.1%	0.44%	0%	0.27%	0.29%	18.45%	0.3%	0.36%	0.84%	0.24%	1.51%	0.72%	27.3%	

Corresponding AADT Location: #22

Nevada Department of Transportation

Site Specific Vehicle Distribution Report

Month: May

Station #: 816 Direction Eastbound County Washoe **Func:** 01 **Method:** AVC 05/02/2000 Thru 05/08/2000

Location: ON ROUTE # 00000080, 0.16 KM EAST OF SR-447 IR-80 at W. Wadsworth Intg.

	Pass	Busses		Single Unit				Single Trailers					Multiple Trailers				Totals	
		2AX	3AX	2SD	CAMP(MH)	O3S	O4S+	3AX	4AX	3S2	5AX	6AX+	5AX	6AX	7AX	8AX+	Truck & Bus	All Veh
Total	50748	118	142	1780	0	187	4	451	194	10036	212	115	499	128	793	335	14994	65742
Percents	77.19%	0.18%	0.22%	2.71%	0%	0.28%	0.01%	0.69%	0.3%	15.27%	0.32%	0.17%	0.76%	0.19%	1.21%	0.51%	22.81%	

Station #: 817 Direction Westbound County Washoe **Func:** 01 **Method:** AVC 05/02/2000 Thru 05/08/2000

Location: ON ROUTE # 00000080, 0.16 KM EAST OF SR-447 IR-80 at W. Wadsworth Intg.

	Pass	Busses		Single Unit				Single Trailers					Multiple Trailers				Totals	
		2AX	3AX	2SD	CAMP(MH)	O3S	O4S+	3AX	4AX	3S2	5AX	6AX+	5AX	6AX	7AX	8AX+	Truck & Bus	All Veh
Total	50121	123	146	1855	0	219	9	310	199	10377	192	123	539	166	812	327	15397	65518
Percents	76.5%	0.19%	0.22%	2.83%	0%	0.33%	0.01%	0.47%	0.3%	15.84%	0.29%	0.19%	0.82%	0.25%	1.24%	0.5%	23.5%	

COMPOSITE OF STATIONS: 816 & 817 County Washoe **Func:** 01 **Method:** AVC 05/02/2000 Thru 05/08/2000

Location: ON ROUTE # 00000080, 0.16 KM EAST OF SR-447 IR-80 at W. Wadsworth Intg.

	Pass	Busses		Single Unit				Single Trailers					Multiple Trailers				Totals	
		2AX	3AX	2SD	CAMP(MH)	O3S	O4S+	3AX	4AX	3S2	5AX	6AX+	5AX	6AX	7AX	8AX+	Truck & Bus	All Veh
Total	100869	241	288	3635	0	406	13	761	393	20413	404	238	1038	294	1605	662	30391	131260
Percents	76.85%	0.18%	0.22%	2.77%	0%	0.31%	0.01%	0.58%	0.3%	15.55%	0.31%	0.18%	0.79%	0.22%	1.22%	0.5%	23.15%	

Appendix C: Vehicle Inventory Use Survey Data

1977 Vehicle Inventory Use Survey[1]

Table 2. **Trucks, Truck Miles, and Average Annual Miles: 1977**

VEHICULAR AND OPERATIONAL CHARACTERISTICS	TRUCKS AND TRUCK MILES[1]						TRUCKS AND TRUCK MILES, EXCLUDING PICKUPS, PANELS, AND WALK-INS[1]					
	TRUCKS (THOUSANDS)	STANDARD ERROR (THOUSANDS)	TRUCK MILES (MILLIONS)	STANDARD ERROR (MILLIONS)	AVERAGE MILES PER TRUCK (THOUSANDS)	STANDARD ERROR (THOUSANDS)	TRUCKS (THOUSANDS)	STANDARD ERROR (THOUSANDS)	TRUCK MILES (MILLIONS)	STANDARD ERROR (MILLIONS)	AVERAGE MILES PER TRUCK (THOUSANDS)	STANDARD ERROR (THOUSANDS)
TOTAL TRUCKS	138.1	-	1,430.8	39.9	10.4	.3	9.8	.3	115.4	6.5	11.8	.6
MAJOR USE												
AGRICULTURE	6.9	1.1	63.8	12.8	9.3	1.0	2.1	.1	14.3	2.4	6.9	1.1
FORESTRY AND LUMBERING	.3	.3	3.0	1.6	8.8	3.9	.1	-	1.8	1.0	20.6	9.1
MINING AND QUARRYING	.6	.3	14.3	7.8	25.1	3.6	.3	.1	6.5	2.0	22.2	5.4
CONSTRUCTION	11.4	1.4	131.9	19.4	11.6	.8	2.5	.2	26.7	2.9	10.6	1.0
MANUFACTURING	.5	.3	7.2	3.2	13.9	1.9	.3	.1	4.2	1.2	16.4	3.2
WHOLESALE TRADE	3.6	.8	58.2	13.9	16.3	2.3	.9	.1	19.5	3.0	21.2	2.4
RETAIL TRADE	5.6	1.1	80.6	17.8	14.4	1.6	1.0	.3	13.5	3.2	13.2	1.1
FOR HIRE TRANSPORTATION	1.0	.4	14.9	4.4	14.5	1.9	.4	.1	7.3	1.8	17.2	3.2
UTILITIES	2.3	.7	23.2	8.1	10.2	1.6	.5	.1	3.6	.7	7.6	.9
SERVICES	8.2	1.3	119.3	23.0	14.6	1.5	.9	.1	11.5	2.2	12.9	2.0
DAILY RENTAL	.1	-	1.5	.5	11.5	1.8	.1	-	1.4	.5	11.8	1.9
PERSONAL TRANSPORTATION	95.3	2.4	903.2	39.2	9.5	.3	.2	-	.7	.2	3.4	.8
OTHER	1.0	.5	9.6	3.6	9.5	2.0	.2	.1	4.2	1.8	17.9	6.5
NOT IN USE	1.3	.5	-	-	-	-	.2	.1	-	-	-	-
NOT REPORTED	-	-	.1	.1	7.0	-	-	-	.1	.1	7.0	-
BODY TYPE												
PICKUP	100.3	2.3	964.4	39.3	9.6	.3	-	-	-	-	-	-
PANEL OR VAN	26.7	2.3	339.2	35.9	12.7	.8	-	-	-	-	-	-
MULTISTOP OR WALK-IN	1.3	.5	11.7	5.2	8.8	3.0	-	-	-	-	-	-
PLATFORM WITH ADDED DEVICES	1.2	.1	11.0	1.9	9.4	1.4	1.2	.1	11.0	1.9	9.4	1.4
LOW BOY OR DEPRESSED CENTER	.1	-	3.0	1.3	20.3	6.9	.1	-	3.0	1.3	20.3	6.9
OTHER PLATFORM	2.7	.3	22.0	3.5	8.1	.7	2.7	.3	22.0	3.5	8.1	.7
CATTLE RACK	.7	.1	4.9	1.1	6.8	1.3	.7	.1	4.9	1.1	6.8	1.3
INSULATED NONREFRIGERATED VAN	.2	-	3.9	1.3	24.7	5.0	.2	-	3.9	1.3	24.7	5.0
INSULATED REFRIGERATED VAN	.3	.1	9.0	2.3	29.4	5.2	.3	.1	9.0	2.3	29.4	5.2
FURNITURE VAN	.3	.1	3.4	1.0	13.3	2.6	.3	.1	3.4	1.0	13.3	2.6
OPEN TOP VAN	.1	-	.7	.6	11.3	8.3	.1	-	.7	.6	11.3	8.3
OTHER ENCLOSED VANS	.6	.1	12.9	2.7	21.5	3.5	.6	.1	12.9	2.7	21.5	3.5
BEVERAGE	.2	-	1.9	.6	9.8	2.1	.2	-	1.9	.6	9.8	2.1
UTILITY	.4	.1	2.8	.6	7.4	1.0	.4	.1	2.8	.6	7.4	1.0
WINCH OR CRANE	.2	-	1.3	.6	6.6	2.4	.2	-	1.3	.6	6.6	2.4
WRECKER	.3	.1	5.9	1.9	22.1	5.5	.3	.1	5.9	1.9	22.1	5.5
POLE OR LOGGING	-	-	-	-	-	-	-	-	-	-	-	-
AUTO TRANSPORT	-	-	.5	.4	40.1	-	-	-	.5	.4	40.1	-
BOAT TRANSPORT	-	-	-	-	-	-	-	-	-	-	-	-
MOBILE HOME PULLER	-	-	.8	.5	20.7	3.7	-	-	.8	.5	20.7	3.7
GARBAGE HAULER:												
FRONT LOADER	-	-	.1	.1	8.4	-	-	-	.1	.1	8.4	-
REAR LOADER	.1	-	.5	.2	7.8	1.8	.1	-	.5	.2	7.8	1.8
ROLL OFF	-	-	.6	.4	22.5	-	-	-	.6	.4	22.5	-
NOT SPECIFIED	-	-	.2	.2	20.0	-	-	-	.2	.2	20.0	-
DUMP	1.4	.1	17.4	2.7	12.1	1.6	1.4	.1	17.4	2.7	12.1	1.6
TANK FOR LIQUIDS	.6	.1	7.6	1.7	12.2	2.3	.6	.1	7.6	1.7	12.2	2.3
TANK FOR DRY BULK	-	-	1.4	1.3	55.3	36.1	-	-	1.4	1.3	55.3	36.1
CONCRETE MIXER:												
FRONT DISCHARGER	-	-	.2	.2	19.0	-	-	-	.2	.2	19.0	-
REAR DISCHARGER	.3	.1	3.4	.7	10.3	1.1	.3	.1	3.4	.7	10.3	1.1
NOT SPECIFIED	-	-	-	-	-	-	-	-	-	-	-	-
OTHER	-	-	-	-	-	-	-	-	-	-	-	-
NOT REPORTED	-	-	-	-	-	-	-	-	-	-	-	-
ANNUAL MILES												
LESS THAN 5,000	32.6	2.3	73.9	6.7	2.3	-	4.0	.2	7.2	.5	1.8	.1
5,000 TO 9,999	36.1	2.5	252.2	17.9	7.0	-	2.1	.1	14.0	1.0	6.8	.1
10,000 TO 19,999	53.6	2.8	682.4	36.2	12.7	.2	2.1	.3	26.6	3.3	12.8	.3
20,000 TO 29,999	11.4	1.5	253.8	34.6	22.3	.4	.8	.1	19.1	2.2	23.0	.3
30,000 TO 49,999	3.9	.9	130.4	30.8	33.1	.9	.4	.1	12.6	2.2	35.7	.9
50,000 TO 74,999	.3	.1	17.8	3.3	56.0	1.1	.3	.1	16.5	3.2	56.2	1.2
75,000 OR MORE	.2	-	20.3	4.6	92.3	2.1	.2	-	19.3	4.5	93.0	1.8
RANGE OF OPERATION												
LOCAL	117.5	2.0	1,162.0	40.6	9.9	.3	7.3	.3	71.0	4.8	9.8	.4
SHORT RANGE (200 MILES OR LESS)	11.7	1.6	157.3	22.4	13.4	.9	1.0	.1	21.2	3.5	21.1	2.7
LONG RANGE (MORE THAN 200 MILES)	3.8	.9	80.9	19.5	21.1	2.7	.4	.1	17.4	3.6	40.7	5.4
OFF-THE-ROAD	3.8	.8	28.5	7.6	7.4	1.0	1.0	.1	5.8	1.1	6.1	1.0
NOT REPORTED	1.2	.5	2.1	1.8	1.8	1.3	.1	-	-	-	-	-
BASE OF OPERATION												
PERCENTAGE OF MILES TRAVELED IN BASE-OF-OPERATION STATE:												
LESS THAN 25 PERCENT	.8	.4	17.2	7.6	21.3	3.2	.2	.1	6.1	2.2	26.4	7.2
25 TO 49 PERCENT	2.8	.8	46.3	13.2	16.7	2.5	.2	-	8.7	2.7	50.7	9.4
50 TO 74 PERCENT	17.1	1.9	225.5	29.0	13.2	.9	.7	.1	15.6	2.6	22.0	2.5
75 TO 100 PERCENT	117.3	2.0	1,141.7	40.2	9.7	.3	8.6	.3	85.0	5.3	9.9	.5
NOT REPORTED	.1	-	-	-	-	-	.1	-	-	-	-	-
VEHICLE SIZE												
LIGHT	129.6	.5	1,324.3	39.8	10.2	.3	2.8	.3	22.7	3.8	8.0	.9
MEDIUM	4.6	.5	41.4	6.1	9.0	.9	3.2	.2	27.9	2.5	8.8	.6
LIGHT-HEAVY	1.6	.1	16.7	2.0	10.7	.9	1.5	.1	16.4	2.0	10.7	1.0
HEAVY-HEAVY	2.3	.1	48.4	5.1	21.1	1.8	2.3	.1	48.4	5.1	21.1	1.8

SEE FOOTNOTES AT END OF TABLE.

[1] U.S. Census; Economic Census; Vehicle Survey: www.census.gov/svsd/www/vius/products.html

1982 Vehicle Inventory Use Survey

Table 2. Trucks, Truck Miles, and Average Annual Miles: 1982

[Data relate to State of registration. Detail may not add to total because of rounding. For meaning of abbreviations and symbols, see introductory text]

Vehicular and operational characteristics	Trucks and truck miles[1]			Trucks and truck miles, excluding pickups, panels, utilities, and station wagons[1]			Relative standard error of estimate (percent) for column—					
	Trucks (thousands)	Truck miles (millions)	Average miles per truck (thousands)	Trucks (thousands)	Truck miles (millions)	Average miles per truck (thousands)						
	A	B	C	D	E	F	A	B	C	D	E	F
Total trucks	183.9	1,776.5	9.7	14.7	202.1	13.7	(Z)	5	5	1	4	4
MAJOR USE												
Agriculture	6.2	53.1	8.6	1.9	19.9	10.3	31	32	18	9	19	17
Forestry and lumbering	.1	.1	2.3	.1	.1	2.3	56	65	31	56	65	31
Mining and quarrying	6.5	93.7	14.4	.4	5.5	12.5	35	38	15	19	31	27
Construction	22.5	279.5	12.4	4.4	44.4	10.1	16	25	19	5	8	6
Manufacturing	2.7	27.5	10.2	.3	4.1	15.6	52	61	37	25	33	26
Wholesale trade	5.0	88.7	17.9	1.5	32.3	21.4	35	42	24	10	13	9
Retail trade	5.5	73.0	13.3	1.3	24.4	19.4	34	32	12	12	18	14
For-hire transportation	3.1	57.0	18.4	1.5	37.2	25.2	37	33	24	10	13	10
Utilities	2.3	32.4	13.9	.6	9.4	15.1	49	56	30	17	21	13
Services	14.2	146.9	10.3	1.5	16.0	10.6	23	30	20	11	15	11
Daily rental	2.0	28.6	14.6	.2	1.9	12.2	65	70	16	32	41	32
Personal transportation	108.3	888.6	8.2	.8	3.5	4.4	5	8	6	15	22	16
Other	(Z)	.6	30.0	(Z)	.6	30.0	98	96	(Z)	98	98	(Z)
Not in use	5.5	6.6	1.2	.3	2.7	9.4	38	59	56	25	84	80
Not reported	(Z)	(Z)	(Z)	(Z)	(Z)	(Z)	(Z)	(Z)	(Z)	(Z)	(Z)	(Z)
BODY TYPE												
Pickup	123.5	1,156.2	9.4	[illegible]	[illegible]	[illegible]	1	7	7	[illegible]	[illegible]	[illegible]
Panel or van	21.7	214.9	9.9				16	21	14			
Utility	15.0	120.4	8.0				21	29	19			
Station wagon	8.9	83.0	9.3				30	36	19			
Multistop or walk-in	.7	8.9	12.7	.7	8.9	12.7	17	22	15	17	22	15
Platform with added devices	.9	8.4	9.8	.9	8.4	9.8	14	23	18	14	23	18
Low boy or depressed center	.1	1.7	17.0	.1	1.7	17.0	33	49	41	33	49	41
Basic platform	4.8	61.8	12.9	4.8	61.8	12.9	5	10	9	5	10	9
Livestock truck	.7	4.6	6.8	.7	4.6	6.8	17	30	26	17	30	26
Insulated nonrefrigerated van	(Z)	1.0	26.1	(Z)	1.0	26.1	70	73	33	70	73	33
Insulated refrigerated van	.5	16.7	30.9	.5	16.7	30.9	18	23	19	18	23	19
Drop-frame van	.1	2.4	23.7	.1	2.4	23.7	43	51	46	43	51	46
Open-top van	(Z)	.1	8.0	(Z)	.1	8.0	93	93	(Z)	93	93	(Z)
Basic enclosed van	1.7	24.2	14.1	1.7	24.2	14.1	10	13	10	10	13	10
Beverage	.3	5.1	16.2	.3	5.1	16.2	24	32	22	24	32	22
Public utility	.4	3.7	10.1	.4	3.7	10.1	22	27	15	22	27	15
Winch or crane	.2	1.7	8.8	.2	1.7	8.8	30	41	32	30	41	32
Wrecker	.5	4.3	9.1	.5	4.3	9.1	20	29	21	20	29	21
Pole or logging	(Z)	(Z)	4.4	(Z)	(Z)	4.4	93	93	(Z)	93	93	(Z)
Auto transport	(Z)	.3	13.0	(Z)	.3	13.0	98	98	(Z)	98	98	(Z)
Service truck	.4	4.8	12.5	.4	4.8	12.5	22	29	19	22	29	19
Yard tractor	(Z)	(Z)	.9	(Z)	(Z)	.9	76	92	28	76	92	28
Oilfield truck	.1	.2	4.3	.1	.2	4.3	53	55	47	53	55	47
Cargo container chassis	.1	2.0	28.7	.1	2.0	28.7	51	55	43	51	55	43
Grain body	.1	2.5	30.4	.1	2.5	30.4	43	60	41	43	60	41
Garbage hauler	.3	6.2	22.8	.3	6.2	22.8	24	29	17	24	29	17
Dump truck	1.7	23.0	13.9	1.7	23.0	13.9	9	12	9	9	12	9
Tank truck (liquids or gases)	.7	12.3	16.5	.7	12.3	16.5	15	27	23	15	27	23
Tank truck (dry bulk)	(Z)	.6	17.7	(Z)	.6	17.7	60	66	19	60	66	19
Concrete mixer	.5	4.8	10.6	.5	4.8	10.6	17	21	13	17	21	13
Other	.1	.8	11.8	.1	.8	11.8	51	51	8	51	51	8
Not reported	(Z)	(Z)	(Z)	(Z)	(Z)	(Z)	(Z)	(Z)	(Z)	(Z)	(Z)	(Z)
ANNUAL MILES[1]												
Less than 5,000	51.0	101.8	2.0	5.0	10.4	2.1	10	14	10	5	7	4
5,000 to 9,999	51.3	344.6	6.7	3.3	22.3	6.8	11	11	2	7	7	2
10,000 to 19,999	62.7	784.8	12.5	3.4	43.5	12.9	9	9	2	7	7	1
20,000 to 29,999	13.9	300.7	21.7	1.4	32.7	22.5	22	22	2	10	10	1
30,000 to 49,999	3.6	129.0	36.3	1.0	34.3	35.9	43	43	4	13	13	2
50,000 to 74,999	1.1	76.4	68.9	.3	19.9	59.4	71	74	3	20	20	3
75,000 or more	.4	39.1	105.8	.4	39.1	105.8	18	18	4	18	18	4
RANGE OF OPERATION												
Local	136.5	1,315.8	9.6	9.7	104.7	10.8	4	7	6	3	5	4
Short-range (Less than 201 miles)	15.7	209.3	13.4	2.5	46.3	18.7	21	21	9	8	11	8
Long-range (201 miles or more)	11.9	173.7	14.6	1.0	44.4	44.9	25	25	15	12	14	11
Off-the-road	17.4	77.7	4.5	1.5	6.6	4.3	20	36	29	10	17	14
Not reported	2.5	(Z)	(Z)	.1	(Z)	(Z)	55	(Z)	(Z)	41	(Z)	(Z)
BASE OF OPERATION												
Percentage of miles traveled outside base-of-operation State:												
Less than 25 percent	134.8	1,258.1	9.3	11.0	123.1	11.2	4	8	7	2	5	5
25 to 49 percent	14.6	177.7	12.2	.5	10.7	20.8	23	28	16	19	25	17
50 to 74 percent	5.9	65.2	11.0	.7	29.0	43.4	36	32	27	15	19	15
75 to 100 percent	5.7	104.7	18.2	.5	15.1	31.0	37	37	12	17	21	14
Not reported	22.9	170.8	7.5	2.0	24.1	11.8	17	21	13	9	12	9
VEHICLE SIZE												
Light	174.2	1,619.4	9.3	5.1	45.1	8.9	(Z)	6	6	5	8	7
Medium	4.3	37.4	8.7	4.3	37.4	8.8	6	10	9	6	10	9
Light-heavy	1.4	15.6	10.8	1.4	15.6	10.8	11	16	12	11	16	12
Heavy-heavy	4.0	104.1	26.2	4.0	104.1	26.2	3	7	6	3	7	6

See footnotes at end of table.

TRANSPORTATION—TRUCK INVENTORY AND USE SURVEY NEV.—3

1987 Vehicle Inventory Use Survey

Table 2. Trucks, Truck Miles, and Average Annual Miles: 1987

[Data relate to State of registration. Detail may not add to total because of rounding. For meaning of abbreviations and symbols, see introductory text]

Vehicular and operational characteristics	Trucks and truck miles			Trucks and truck miles, excluding pickups, panels, utilities, and station wagons			Relative standard error of estimate (percent) for column—					
	Trucks (thousands)	Truck miles (millions)	Average miles per truck (thousands)	Trucks (thousands)	Truck miles (millions)	Average miles per truck (thousands)						
	A	B	C	D	E	F	A	B	C	D	E	F
Total trucks	**248.9**	**2 558.4**	**10.3**	**14.0**	**232.0**	**16.5**	**.4**	**2.8**	**2.8**	**2.8**	**3.2**	**2.8**
MAJOR USE												
Agriculture	6.5	58.4	9.1	1.5	12.9	8.5	21.0	26.8	16.2	9.3	12.4	12.1
Forestry and lumbering	.1	1.1	18.2	.1	1.1	18.2	49.8	69.2	71.7	49.8	69.2	71.7
Mining and quarrying	1.9	23.7	12.3	.4	11.0	26.3	39.1	36.1	27.2	14.7	19.3	17.4
Construction	27.5	357.1	13.0	4.5	62.8	14.1	10.1	12.5	7.6	4.6	5.7	4.8
Manufacturing	1.8	29.3	16.4	.3	4.7	15.0	41.2	46.1	19.9	20.2	20.3	16.5
Wholesale trade	3.4	71.0	21.1	1.5	37.5	24.6	24.6	27.4	17.2	8.9	9.2	7.1
Retail trade	7.4	96.0	13.0	1.1	18.5	17.5	20.5	22.7	12.0	11.0	13.6	10.8
For-hire transportation	1.5	60.3	41.6	1.1	49.4	45.5	25.7	19.2	8.4	7.2	7.7	5.9
Utilities	.9	21.0	23.9	.1	2.1	15.5	59.8	74.2	37.6	33.0	34.8	29.0
Services	16.9	265.5	15.7	1.6	22.5	14.4	13.8	17.3	10.5	24.7	20.2	10.4
Daily rental	1.5	21.2	14.5	.3	5.5	16.3	44.4	48.1	22.3	20.0	23.1	15.2
One way rental	(Z)	.2	34.4	(Z)	.2	34.4	92.9	92.9	(Z)	92.9	92.9	(Z)
Personal transportation	179.0	1 553.1	8.7	1.1	3.4	3.0	2.3	4.0	3.3	12.0	17.9	14.0
Other	(Z)	(Z)	(Z)	(Z)	(Z)	(Z)	(Z)	(Z)	(Z)	(Z)	(Z)	(Z)
Not in use	.8	.5	.6	.4	.5	1.1	47.5	52.3	68.9	19.3	52.3	51.2
Not reported	(Z)	(Z)	(Z)	(Z)	(Z)	(Z)	(Z)	(Z)	(Z)	(Z)	(Z)	(Z)
BODY TYPE												
Pickup	170.9	1 647.7	9.6	(Z)	(Z)	(Z)	.7	3.8	3.7	(Z)	(Z)	(Z)
Mini-van	6.6	86.7	13.2	(Z)	(Z)	(Z)	22.5	26.7	14.4	(Z)	(Z)	(Z)
Panel or van	19.3	214.6	11.1	(Z)	(Z)	(Z)	11.6	14.8	9.3	(Z)	(Z)	(Z)
Utility	25.3	244.4	9.7	(Z)	(Z)	(Z)	9.5	12.8	8.7	(Z)	(Z)	(Z)
Station wagon	12.8	132.9	10.4	(Z)	(Z)	(Z)	15.3	20.4	13.5	(Z)	(Z)	(Z)
Multistop or walk-in	1.6	17.2	10.9	1.6	17.2	10.9	24.6	25.3	8.2	24.6	25.3	8.2
Platform with added devices	.6	5.1	8.3	.6	5.1	8.3	14.7	19.2	16.1	14.7	19.2	16.1
Low boy or depressed center	.3	7.3	24.1	.3	7.3	24.1	12.6	16.3	12.6	12.6	16.3	12.6
Basic platform	4.8	60.5	12.6	4.8	60.5	12.6	4.5	6.8	6.2	4.5	6.8	6.2
Livestock truck	.4	2.8	7.9	.4	2.8	7.9	20.3	24.9	24.3	20.3	24.9	24.3
Insulated nonrefrigerated van	.1	7.2	49.1	.1	7.2	49.1	29.0	24.2	22.3	29.0	24.2	22.3
Insulated refrigerated van	.4	12.1	31.4	.4	12.1	31.4	15.9	15.7	14.2	15.9	15.7	14.2
Drop-frame van	.2	2.4	14.1	.2	2.4	14.1	25.8	28.0	24.7	25.8	28.0	24.7
Open-top van	(Z)	1.2	41.5	(Z)	1.2	41.5	69.5	70.4	17.5	69.5	70.4	17.5
Basic enclosed van	1.7	36.4	21.9	1.7	36.4	21.9	8.6	9.3	7.7	8.6	9.3	7.7
Beverage	.2	3.7	17.1	.2	3.7	17.1	20.5	25.7	18.0	20.5	25.7	18.0
Public utility	.1	.8	9.0	.1	.8	9.0	45.2	57.4	32.4	45.2	57.4	32.4
Winch or crane	.2	2.3	11.5	.2	2.3	11.5	27.1	33.6	21.9	27.1	33.6	21.9
Wrecker	.1	1.1	21.8	.1	1.1	21.8	42.5	48.5	26.4	42.5	48.5	26.4
Pole or logging	(Z)	.7	40.6	(Z)	.7	40.6	53.8	56.5	37.1	53.8	56.5	37.1
Auto transport	(Z)	.1	4.6	(Z)	.1	4.6	53.8	63.2	37.3	53.8	63.2	37.3
Service truck	.2	2.8	11.6	.2	2.8	11.6	25.2	29.4	20.4	25.2	29.4	20.4
Yard tractor	(Z)	.6	16.4	(Z)	.6	16.4	61.2	88.1	34.7	61.2	88.1	34.7
Oilfield truck	(Z)	.6	49.6	(Z)	.6	49.6	66.4	85.3	39.4	66.4	85.3	39.4
Grain body	(Z)	1.6	45.1	(Z)	1.6	45.1	34.4	40.6	27.7	34.4	40.6	27.7
Garbage hauler	.1	3.6	24.8	.1	3.6	24.8	20.6	25.5	22.9	20.6	25.5	22.9
Dump truck	2.2	39.9	18.5	2.2	39.9	18.5	6.2	7.5	7.3	6.2	7.5	7.3
Tank truck (liquids or gases)	.6	17.5	27.9	.6	17.5	27.9	11.5	13.2	10.2	11.5	13.2	10.2
Tank truck (dry bulk)	(Z)	3.2	70.2	(Z)	3.2	70.2	27.8	32.8	17.2	27.8	32.8	17.2
Concrete mixer	.1	1.4	14.6	.1	1.4	14.6	23.2	29.9	17.0	23.2	29.9	17.0
Other	(Z)	.1	24.1	(Z)	.1	24.1	88.6	88.6	(Z)	88.6	88.6	(Z)
Not reported	(Z)	(Z)	(Z)	(Z)	(Z)	(Z)	(Z)	(Z)	(Z)	(Z)	(Z)	(Z)
ANNUAL MILES												
Less than 5,000	67.6	140.0	2.1	4.8	8.0	1.7	6.2	7.7	4.5	4.5	6.5	4.8
5,000 to 9,999	60.9	425.2	7.0	2.7	18.3	6.8	6.7	6.9	1.6	6.7	6.9	1.6
10,000 to 19,999	88.8	1 117.2	12.6	3.0	38.8	12.7	5.1	5.2	1.2	13.3	11.5	2.5
20,000 to 29,999	21.8	471.9	21.7	1.3	28.3	22.6	12.1	12.2	1.4	9.3	9.2	1.1
30,000 to 49,999	8.6	304.1	35.5	1.1	38.7	36.0	19.3	19.5	3.3	8.9	8.9	1.4
50,000 to 74,999	.6	33.1	58.3	.6	33.1	58.3	9.4	9.2	1.2	9.4	9.2	1.2
75,000 or more	.7	66.9	102.5	.7	66.9	102.5	7.3	7.6	1.9	7.3	7.6	1.9
RANGE OF OPERATION												
Local	189.7	1 903.8	10.0	9.0	109.4	12.2	2.1	3.9	3.3	4.7	5.3	3.5
Short-range	30.6	351.6	11.5	2.1	41.4	20.0	10.0	11.9	7.1	7.1	8.1	7.1
Long-range	16.1	232.5	14.4	1.5	71.9	48.9	14.1	13.7	9.1	7.6	6.9	6.5
Off-the-road	10.7	67.4	6.3	1.3	9.1	7.2	17.2	22.7	15.2	9.9	14.9	13.1
Not reported	1.7	3.0	1.8	.2	.2	.7	43.1	94.6	81.7	25.2	84.1	86.2
BASE OF OPERATION												
Percentage of miles traveled outside base-of-operation State:												
Less than 25 percent	199.1	1 974.0	9.9	11.2	138.2	12.3	1.9	3.8	3.3	3.7	4.5	3.3
25 to 49 percent	11.3	123.4	11.0	.4	11.0	28.7	17.5	19.3	10.1	16.3	15.6	13.6
50 to 74 percent	10.1	153.7	15.2	.8	33.0	41.2	18.0	19.6	12.4	10.9	9.9	9.6
75 to 100 percent	9.6	121.1	12.6	.6	29.3	45.7	18.7	18.8	11.6	11.9	11.6	10.8
Not reported	18.7	186.1	9.9	1.0	20.6	20.2	13.2	14.7	7.8	11.1	12.7	11.4

See footnotes at end of table.

2002 Vehicle Inventory Use Survey (includes 1997 data)

Table 3a. Trucks, Truck Miles, and Average Annual Miles for Trucks, Excluding Pickups, Minivans, Other Light Vans, and Sport Utilities: 2002 and 1997

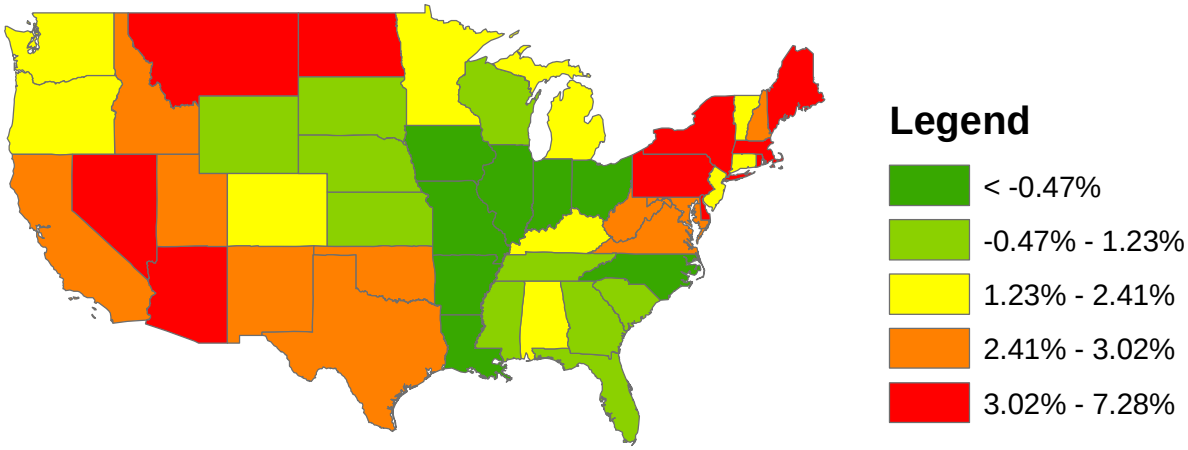
[Estimates are based on data from the 2002 and 1997 Vehicle Inventory and Use Surveys. Because of rounding, estimates may not be additive]

Vehicular and operational characteristics	2002 trucks (thousands)	1997 trucks (thousands)	Percent change	2002 truck miles (millions)	1997 truck miles (millions)	Percent change	2002 average miles per truck (thousands)	1997 average miles per truck (thousands)	Percent change
	A	B	C	D	E	F	G	H	I
Total	20.8	29.1	–28.4	418.9	576.4	–27.3	20.1	19.8	1.4
BUSINESS[1]									
For-hire transportation or warehousing	3.5	1.5	130.7	140.8	70.6	99.4	40.4	46.7	–13.6
Vehicle leasing or rental	1.0	3.3	–68.9	21.3	69.6	–69.4	20.8	21.1	–1.4
Agriculture, forestry, fishing, or hunting	.4	1.7	–74.8	8.9	37.8	–76.5	20.2	21.7	–6.9
Mining	.5	.9	–41.8	12.3	17.3	–29.0	25.6	21.0	22.2
Utilities	.7	1.3	–47.4	6.3	17.3	–63.8	9.3	13.5	–31.2
Construction	6.3	10.4	–39.6	117.7	163.1	–27.8	18.8	15.7	19.5
Manufacturing	.5	.8	–33.3	7.8	20.5	–61.9	14.6	25.6	–42.8
Wholesale trade	1.8	1.9	–8.6	37.9	54.9	–31.0	21.3	28.2	–24.5
Retail trade	1.5	2.8	–45.4	28.2	60.8	–53.6	18.5	21.8	–14.9
Information services	.1	N	N	S	N	N	S	N	N
Waste management, landscaping, or administrative/support services	.8	N	N	10.1	N	N	13.2	N	N
Arts, entertainment, or recreation services	.1	N	N	S	N	N	S	N	N
Accommodation or food services	.5	N	N	8.0	N	N	16.8	N	N
Other services	.6	N	N	9.8	N	N	17.5	N	N
Personal transportation	V	.6	N	S	5.3	S	S	9.2	S
Not reported	.6	V	N	7.1	V	N	12.2	V	N
Not applicable[2]	S	.9	S	S	S	S	S	S	S
BODY TYPE									
Single-unit trucks	16.1	23.8	–32.2	288.8	359.5	–33.6	14.8	15.1	–2.1
Armored	.1	N	N	1.1	N	N	12.4	N	N
Beverage	.3	.4	–11.7	3.3	5.7	–42.7	9.8	15.2	–35.1
Concrete mixer	.8	1.1	–28.6	14.2	16.9	–16.2	18.3	15.6	17.4
Concrete pumper	S	N	N	S	N	N	S	N	N
Crane	.1	.2	–58.3	S	2.3	S	S	9.9	S
Curtainside	S	N	N	S	N	N	S	N	N
Dump	1.4	2.2	–38.1	17.8	29.9	–40.7	12.8	13.4	–4.2
Flatbed, stake, or platform	4.6	7.9	–42.3	36.9	112.7	–67.2	8.1	14.2	–43.2
Low boy	V	.2	N	V	S	S	V	S	S
Pole, logging, pulpwood, or pipe	V	S	S	V	S	S	V	S	S
Service, utility	.6	.5	18.4	3.6	5.4	–33.6	5.7	10.1	–43.9
Service, other	.7	1.2	–45.9	8.1	16.1	–50.0	12.4	13.4	–7.5
Street sweeper	S	N	N	S	N	N	S	N	N
Tank, dry bulk	S	S	S	S	S	S	S	S	S
Tank, liquids or gases	1.6	1.5	7.7	20.5	17.2	19.0	13.0	11.7	10.5
Tow/Wrecker	.3	.2	78.5	6.4	4.4	46.8	20.8	25.4	–17.8
Trash, garbage, or recycling	.3	.7	–60.7	3.6	15.8	–77.3	14.0	24.3	–42.3
Vacuum	.1	N	N	1.4	N	N	12.7	N	N
Van, basic enclosed	2.1	2.3	–10.5	32.9	49.5	–33.5	15.9	21.4	–25.6
Van, insulated nonrefrigerated	S	S	S	S	S	S	S	S	S
Van, insulated refrigerated	.6	.3	87.0	10.8	7.4	46.3	17.9	22.9	–21.8
Van, open top	S	S	S	S	S	S	S	S	S
Van, step, walk-in, or multistop	S	4.3	S	S	64.3	S	S	15.0	S
Van, other	.1	N	N	S	N	N	S	N	N
Other	V	N	N	V	N	N	V	N	N
Truck-tractors	4.7	5.3	–11.2	180.1	216.8	–17.0	38.3	40.9	–6.5
Automobile carrier	.1	S	S	1.4	S	S	20.3	S	S
Beverage	.1	.3	–60.4	1.6	3.9	–58.1	14.8	14.0	5.7
Curtainside	V	N	N	V	N	N	V	N	N
Dump	1.6	1.4	10.2	61.0	51.9	17.6	38.9	36.5	6.6
Flatbed, stake, or platform	1.1	1.1	.2	34.3	42.4	–19.1	31.8	39.4	–19.3
Livestock	.1	.1	–59.6	S	5.0	S	S	39.8	S
Low boy	.2	.4	–44.5	9.5	11.1	–14.5	46.5	30.2	54.2
Mobile home toter	S	N	N	S	N	N	S	N	N
Open top	V	.1	N	S	S	S	S	S	S
Pole, logging, pulpwood, or pipe	V	S	S	V	S	S	V	S	S
Tank, dry bulk	S	.1	S	S	4.7	S	S	59.0	S
Tank, liquids or gases	.2	.3	–31.4	7.4	15.8	–53.5	42.5	62.7	–32.2
Van, basic enclosed	.8	1.2	–29.1	46.0	56.3	–18.2	55.5	48.1	15.4
Van, drop-frame	V	.1	N	S	1.9	S	S	32.6	S
Van, insulated nonrefrigerated	S	S	S	S	V	S	S	S	S
Van, insulated refrigerated	.3	.3	7.4	11.9	16.1	–25.9	40.4	58.6	–31.0
Other	V	N	N	S	N	N	S	N	N
Not applicable[3]	.1	N	N	V	N	N	V	N	N
ANNUAL MILES									
Less than 5,000	4.1	5.5	–25.4	7.7	9.7	–21.0	1.9	1.8	5.9
5,000 to 9,999	2.4	3.6	–32.4	17.3	24.4	–29.0	7.1	6.8	4.9
10,000 to 19,999	4.8	9.8	–51.3	66.6	133.2	–50.0	14.0	13.6	2.5
20,000 to 29,999	2.7	3.9	–31.6	62.2	91.7	–32.2	23.2	23.4	–.9
30,000 to 49,999	3.2	2.7	16.1	127.5	98.8	28.9	40.3	36.2	11.1
50,000 to 74,999	.8	1.4	–44.4	45.4	82.1	–44.7	58.9	59.2	–.5
75,000 or more	.9	1.4	–33.5	91.9	136.4	–32.6	101.3	100.0	1.4
Not applicable[2]	S	.8	S	S	V	S	S	V	S

See footnotes at end of table.

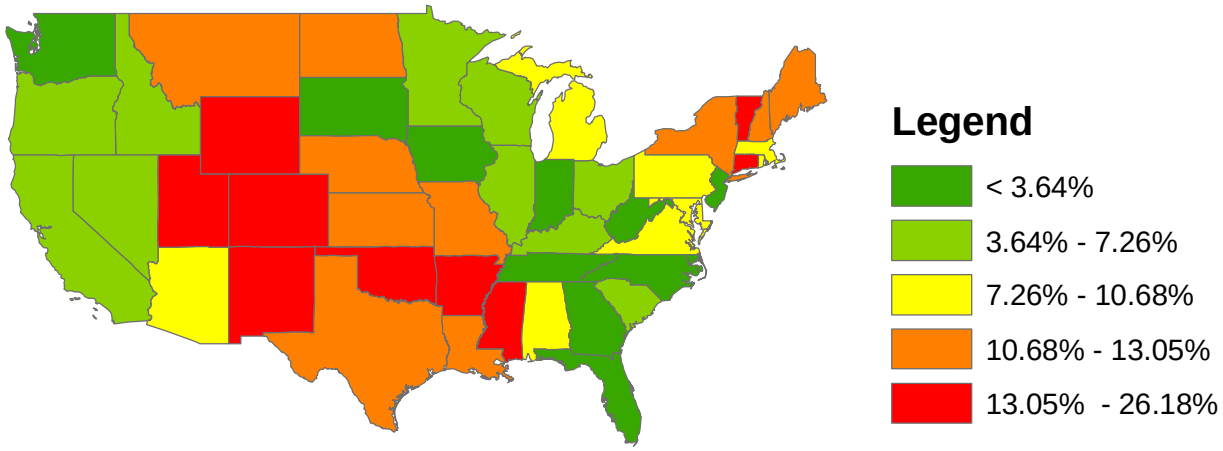
Appendix D: Gross State Product: Annualized Growth Rate Data and Maps

Gross State Product, Annualized Growth 1997-2006: Agriculture, Forestry and Lumbering



State	Annualized Growth Rate	Total Gross State Product (millions)		State	Annualized Growth Rate	Total Gross State Product (millions)	
		1997	2006			1997	2006
Alabama	2.41%	1991	2466	Montana	3.16%	968	1281
Alaska	-8.59%	687	306	Nebraska	0.34%	3392	3496
Arizona	3.56%	1548	2121	Nevada	3.85%	173	243
Arkansas	-2.51%	2898	2306	New Hampshire	2.96%	170	221
California	2.85%	18808	24222	New Jersey	1.37%	568	642
Colorado	2.41%	1550	1920	New Mexico	3.02%	908	1187
Connecticut	2.41%	285	353	New York	4.72%	1382	2093
Delaware	7.19%	213	398	North Carolina	-1.97%	4269	3570
Florida	1.23%	5654	6313	North Dakota	4.80%	1085	1655
Georgia	-0.04%	3268	3255	Ohio	-3.33%	2743	2023
Hawaii	-0.47%	363	348	Oklahoma	2.96%	1565	2035
Idaho	2.83%	1752	2253	Oregon	2.05%	3140	3768
Illinois	-6.89%	3795	1996	Pennsylvania	3.07%	2140	2809
Indiana	-2.48%	2242	1788	Rhode Island	7.28%	51	96
Iowa	-3.05%	5355	4051	South Carolina	0.84%	1068	1152
Kansas	1.10%	2803	3092	South Dakota	0.82%	1809	1947
Kentucky	1.60%	2080	2400	Tennessee	0.40%	1343	1392
Louisiana	-1.13%	1469	1326	Texas	2.48%	6691	8339
Maine	3.38%	484	653	Utah	2.99%	454	592
Maryland	2.47%	610	760	Vermont	2.25%	280	342
Massachusetts	5.23%	519	821	Virginia	2.43%	1226	1522
Michigan	1.83%	1804	2123	Washington	2.22%	4393	5355
Minnesota	2.14%	3078	3724	West Virginia	2.49%	222	277
Mississippi	-0.27%	2052	2003	Wisconsin	0.82%	2721	2929
Missouri	-1.53%	2235	1946	Wyoming	0.28%	430	441
GSP Growth Rate Mean: 1.36%							
GSP Growth Rate Standard Deviation: 2.96%							

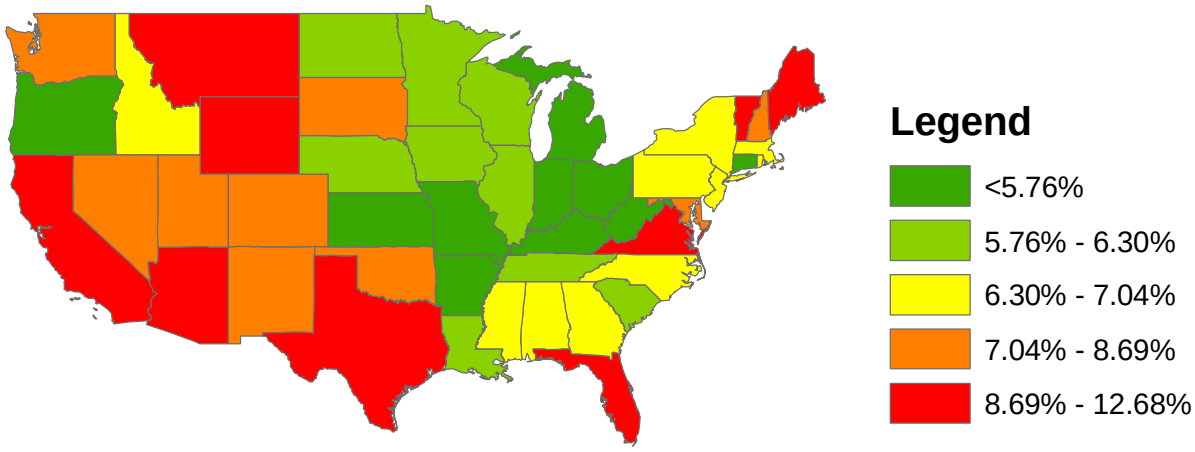
Gross State Product, Annualized Growth 1997-2006: Mining



State	Annualized Growth Rate	Total Gross State Product (millions)		State	Annualized Growth Rate	Total Gross State Product (millions)	
		1997	2006			1997	2006
Alabama	8.15%	1272	2574	Montana	11.83%	672	1838
Alaska	9.53%	5349	12133	Nebraska	11.92%	41	113
Arizona	7.97%	1677	3343	Nevada	4.30%	1401	2047
Arkansas	17.58%	301	1293	New Hampshire	10.82%	25	63
California	7.26%	6895	12954	New Jersey	1.89%	191	226
Colorado	26.18%	1576	12775	New Mexico	18.88%	2538	12040
Connecticut	14.23%	29	96	New York	12.42%	333	955
Delaware*	-	-	-	North Carolina	-0.87%	461	426
Florida	3.13%	610	805	North Dakota	12.30%	359	1020
Georgia	0.83%	956	1030	Ohio	6.99%	1183	2173
Hawaii	9.67%	17	39	Oklahoma	21.62%	3586	20882
Idaho	6.95%	165	302	Oregon	4.83%	106	162
Illinois	5.85%	1058	1765	Pennsylvania	7.69%	1879	3659
Indiana	3.64%	651	898	Rhode Island	10.22%	10	24
Iowa	2.44%	165	205	South Carolina	4.49%	163	242
Kansas	13.05%	855	2578	South Dakota	-0.55%	125	119
Kentucky	5.14%	2412	3788	Tennessee	1.94%	423	503
Louisiana	11.21%	10543	27431	Texas	12.80%	34048	100653
Maine	11.51%	3	8	Utah	13.63%	984	3108
Maryland	10.68%	120	299	Vermont	18.36%	25	114
Massachusetts	10.15%	80	191	Virginia	8.19%	878	1783
Michigan	10.68%	636	1585	Washington	1.21%	298	332
Minnesota	6.46%	623	1094	West Virginia	3.03%	2932	3834
Mississippi	17.63%	516	2225	Wisconsin	5.09%	206	322
Missouri	10.75%	377	945	Wyoming	13.59%	2869	9033
GSP Growth Rate Mean: 9.13%							
GSP Growth Rate Standard Deviation: 5.83%							

*Data Unavailable

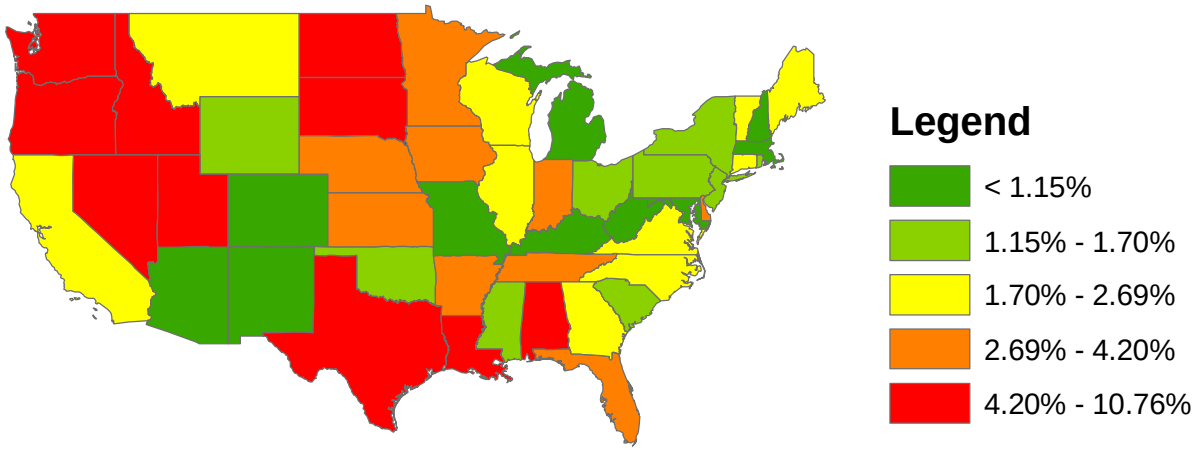
Gross State Product, Annualized Growth 1997-2006: Construction



State	Annualized Growth Rate	Total Gross State Product (millions)		State	Annualized Growth Rate	Total Gross State Product (millions)	
		1997	2006			1997	2006
Alabama	6.59%	4554	8085	Montana	8.90%	1003	2160
Alaska	6.27%	1089	1882	Nebraska	5.79%	1970	3270
Arizona	11.78%	6643	18096	Nevada	7.51%	6190	11881
Arkansas	5.34%	2553	4079	New Hampshire	7.22%	1459	2733
California	9.57%	36325	82664	New Jersey	6.63%	10703	19068
Colorado	8.69%	6747	14278	New Mexico	7.93%	1830	3637
Connecticut	5.68%	4091	6726	New York	6.87%	17691	32181
Delaware*	-	-	-	North Carolina	6.76%	10381	18703
Florida	12.68%	19076	55839	North Dakota	6.24%	725	1250
Georgia	7.04%	10730	19793	Ohio	3.75%	13087	18230
Hawaii	8.33%	1687	3465	Oklahoma	7.33%	2731	5162
Idaho	6.46%	1911	3357	Oregon	3.42%	5372	7273
Illinois	6.11%	16443	28041	Pennsylvania	6.67%	13393	23957
Indiana	3.60%	7880	10835	Rhode Island	6.39%	1321	2307
Iowa	5.86%	3109	5191	South Carolina	6.27%	5293	9146
Kansas	4.52%	2999	4465	South Dakota	7.20%	733	1371
Kentucky	4.02%	4291	6118	Tennessee	5.77%	6316	10465
Louisiana	5.90%	5338	8939	Texas	9.60%	25333	57804
Maine	8.97%	1170	2535	Utah	7.27%	3321	6247
Maryland	8.26%	7775	15876	Vermont	8.76%	608	1295
Massachusetts	6.36%	8463	14745	Virginia	8.69%	9240	19568
Michigan	3.07%	12155	15958	Washington	7.19%	7876	14713
Minnesota	6.30%	6506	11275	West Virginia	4.05%	1771	2532
Mississippi	6.33%	2465	4281	Wisconsin	5.78%	6195	10270
Missouri	5.76%	6543	10835	Wyoming	9.63%	771	1763
GSP Growth Rate Mean: 6.84%							
GSP Growth Rate Standard Deviation: 1.97%							

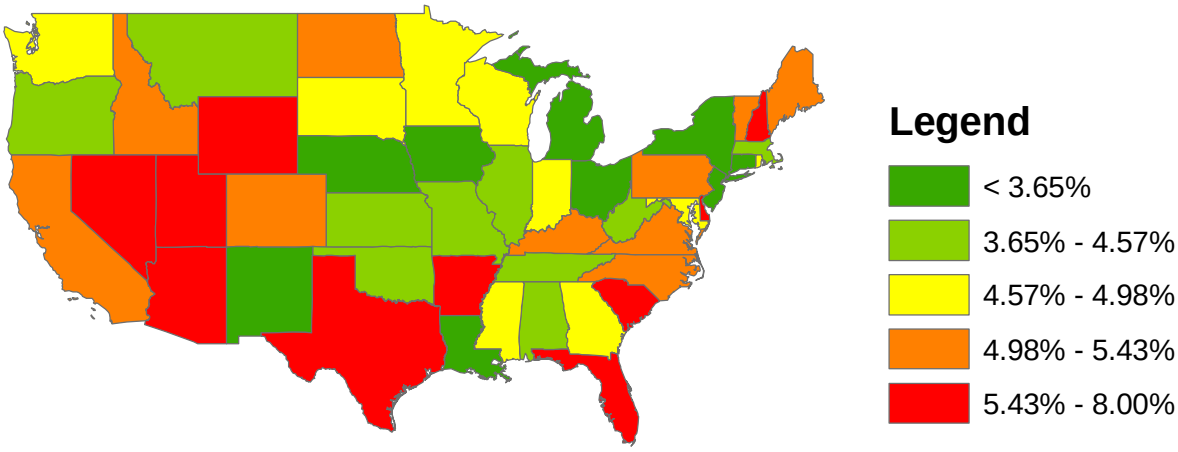
*Data Unavailable

Gross State Product, Annualized Growth 1997-2006: Manufacturing



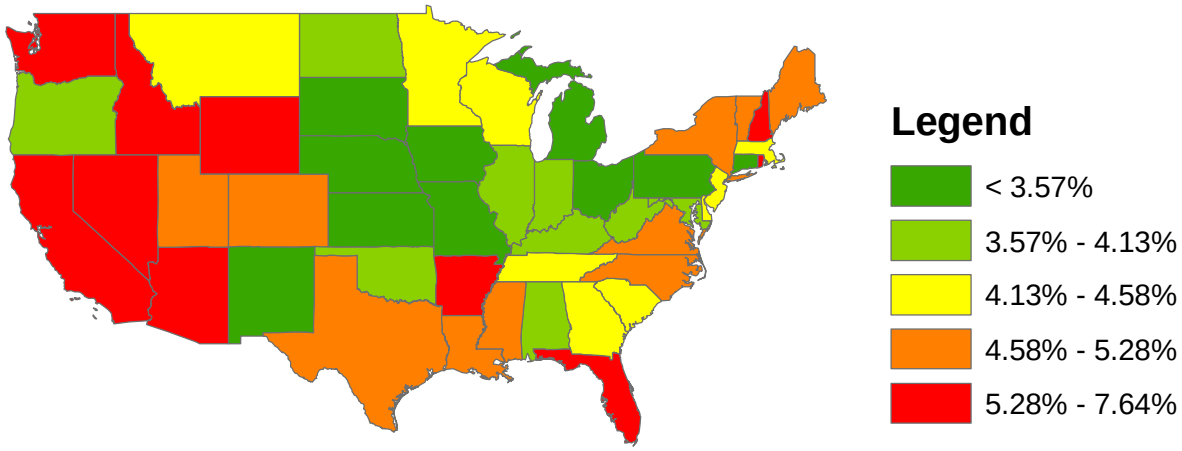
State	Annualized Growth Rate	Total Gross State Product (millions)		State	Annualized Growth Rate	Total Gross State Product (millions)	
		1997	2006			1997	2006
Alabama	4.65%	19902	29971	Montana	2.50%	1179	1473
Alaska	3.91%	660	932	Nebraska	3.52%	6537	8922
Arizona	-0.21%	19187	18827	Nevada	10.76%	2296	5760
Arkansas	3.66%	13047	18029	New Hampshire	-2.29%	8133	6603
California	2.66%	133431	168976	New Jersey	1.22%	37258	41559
Colorado	0.87%	13892	15012	New Mexico	-3.23%	9855	7337
Connecticut	1.81%	20042	23547	New York	1.68%	55199	64142
Delaware	3.21%	3427	4554	North Carolina	2.33%	60143	74014
Florida	2.99%	27510	35860	North Dakota	4.67%	1657	2498
Georgia	2.49%	39275	49001	Ohio	1.22%	80055	89320
Hawaii	1.69%	858	998	Oklahoma	1.68%	12052	13999
Idaho	7.54%	3739	7192	Oregon	4.49%	17847	26494
Illinois	1.99%	65052	77641	Pennsylvania	1.70%	64755	75372
Indiana	4.20%	48370	70040	Rhode Island	1.48%	3946	4505
Iowa	3.88%	18511	26068	South Carolina	1.44%	23081	26254
Kansas	3.12%	11607	15309	South Dakota	4.42%	2287	3375
Kentucky	-0.80%	29378	27328	Tennessee	3.34%	31535	42383
Louisiana	10.15%	16976	40514	Texas	4.70%	92408	139686
Maine	1.81%	4566	5366	Utah	4.45%	7418	10980
Maryland	1.06%	12786	14059	Vermont	1.96%	2461	2930
Massachusetts	1.00%	30476	33320	Virginia	2.65%	27004	34163
Michigan	0.02%	68232	68355	Washington	5.96%	19549	32920
Minnesota	3.25%	25411	33876	West Virginia	0.09%	6087	6134
Mississippi	1.26%	11512	12886	Wisconsin	2.69%	37166	47207
Missouri	1.15%	30933	34286	Wyoming	1.25%	889	994
GSP Growth Rate Mean: 2.64%							
GSP Growth Rate Standard Deviation: 2.51%							

Gross State Product, Annualized Growth 1997-2006: Wholesale Trade



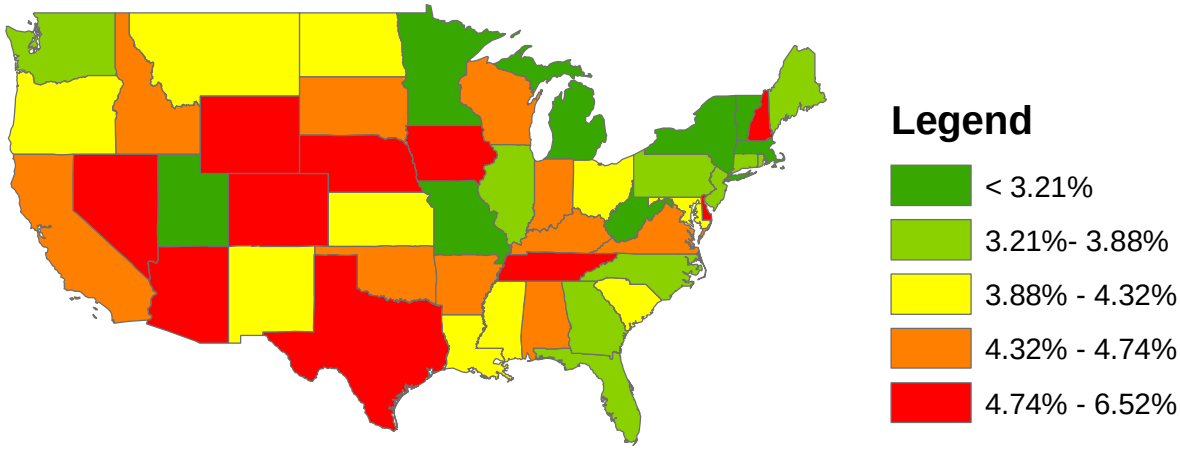
State	Annualized Growth Rate	Total Gross State Product (millions)		State	Annualized Growth Rate	Total Gross State Product (millions)	
		1997	2006			1997	2006
Alabama	4.46%	6198	9180	Montana	4.45%	1168	1729
Alaska	2.82%	627	805	Nebraska	2.70%	3508	4458
Arizona	6.59%	7642	13575	Nevada	7.13%	2692	5005
Arkansas	5.92%	3729	6260	New Hampshire	6.18%	2119	3634
California	5.21%	64436	101757	New Jersey	3.63%	26453	36464
Colorado	5.16%	7974	12544	New Mexico	3.63%	1873	2581
Connecticut	3.15%	8598	11363	New York	3.65%	37434	51691
Delaware	8.00%	1133	2264	North Carolina	5.32%	13070	20833
Florida	6.25%	27253	47023	North Dakota	5.43%	1290	2076
Georgia	4.96%	19551	30236	Ohio	3.21%	21483	28561
Hawaii	4.62%	1331	1998	Oklahoma	4.57%	4299	6430
Idaho	5.39%	1694	2716	Oregon	3.88%	7214	10161
Illinois	4.07%	29536	42284	Pennsylvania	5.42%	19231	30915
Indiana	4.71%	9303	14078	Rhode Island	4.98%	1498	2319
Iowa	3.22%	5394	7177	South Carolina	6.13%	5303	9056
Kansas	3.84%	5025	7055	South Dakota	4.61%	1211	1817
Kentucky	5.36%	5715	9140	Tennessee	4.48%	10950	16246
Louisiana	3.28%	6563	8773	Texas	5.88%	42293	70755
Maine	5.14%	1601	2514	Utah	5.62%	3017	4935
Maryland	4.64%	8795	13231	Vermont	5.38%	794	1273
Massachusetts	3.83%	14770	20715	Virginia	4.98%	10450	16182
Michigan	2.85%	18208	23441	Washington	4.61%	12163	18246
Minnesota	4.97%	11456	17719	West Virginia	4.57%	1915	2864
Mississippi	4.71%	3056	4624	Wisconsin	4.83%	8743	13365
Missouri	4.00%	10362	14749	Wyoming	7.18%	584	1090
GSP Growth Rate Mean: 4.79%							
GSP Growth Rate Standard Deviation: 1.17%							

Gross State Product, Annualized Growth 1997-2006: Retail Trade



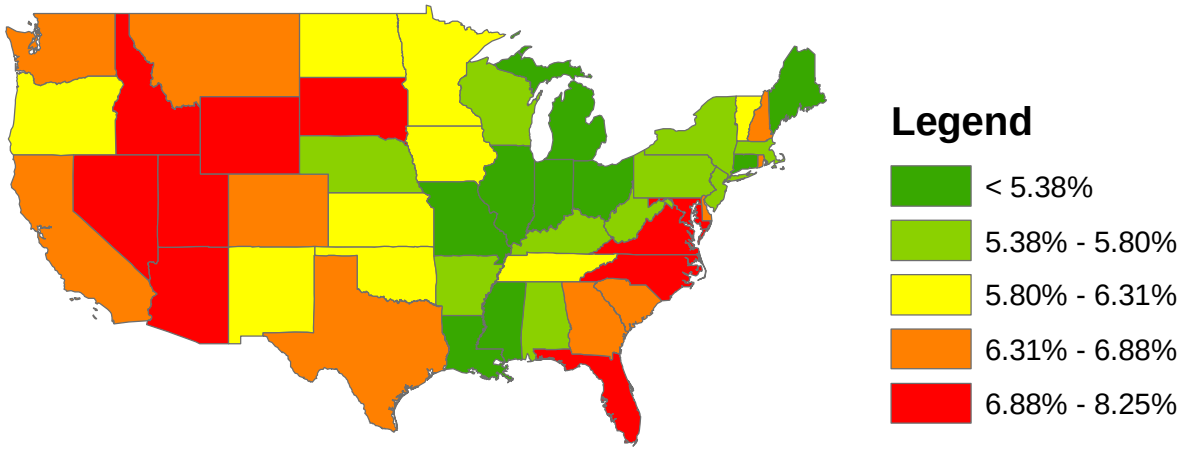
State	Annualized Growth Rate	Total Gross State Product (millions)		State	Annualized Growth Rate	Total Gross State Product (millions)	
		1997	2006			1997	2006
Alabama	4.13%	8804	12673	Montana	4.35%	1565	2296
Alaska	3.60%	1368	1881	Nebraska	3.55%	3488	4775
Arizona	7.35%	10518	19908	Nevada	7.64%	4676	9067
Arkansas	5.52%	4222	6847	New Hampshire	5.37%	2944	4714
California	5.62%	73177	119716	New Jersey	4.31%	19429	28413
Colorado	4.60%	9218	13816	New Mexico	3.50%	3437	4683
Connecticut	3.57%	8554	11725	New York	4.95%	35195	54378
Delaware	4.58%	1673	2504	North Carolina	4.84%	15684	23992
Florida	6.01%	33453	56573	North Dakota	3.74%	1353	1883
Georgia	4.57%	16963	25370	Ohio	3.09%	23538	30957
Hawaii	4.20%	2955	4279	Oklahoma	3.81%	6407	8967
Idaho	6.53%	2437	4307	Oregon	3.87%	6155	8662
Illinois	3.98%	23835	33874	Pennsylvania	3.36%	24126	32475
Indiana	3.59%	11507	15804	Rhode Island	5.45%	1756	2832
Iowa	3.57%	5497	7537	South Carolina	4.31%	8203	11996
Kansas	3.41%	5593	7566	South Dakota	3.55%	1693	2317
Kentucky	3.68%	7305	10115	Tennessee	4.37%	13513	19852
Louisiana	4.97%	8290	12826	Texas	4.85%	43916	67262
Maine	4.60%	2782	4169	Utah	4.87%	4722	7242
Maryland	4.10%	11288	16202	Vermont	5.28%	1265	2010
Massachusetts	4.28%	12220	17826	Virginia	5.27%	14083	22354
Michigan	2.53%	20671	25881	Washington	5.29%	13456	21392
Minnesota	4.33%	10065	14738	West Virginia	3.87%	3132	4407
Mississippi	4.59%	5011	7505	Wisconsin	4.24%	9825	14278
Missouri	3.54%	11350	15527	Wyoming	5.33%	1021	1629
GSP Growth Rate Mean: 4.49%							
GSP Growth Rate Standard Deviation: 1.02%							

Gross State Product, Annualized Growth 1997-2006: Transportation and Public Utilities



State	Annualized Growth Rate	Total Gross State Product (millions)		State	Annualized Growth Rate	Total Gross State Product (millions)	
		1997	2006			1997	2006
Alabama	4.56%	5910	8825	Montana	4.08%	1775	2545
Alaska	2.51%	3183	3977	Nebraska	6.52%	3998	7060
Arizona	6.23%	5941	10235	Nevada	5.15%	3333	5237
Arkansas	4.38%	4304	6332	New Hampshire	6.27%	1713	2961
California	4.56%	44816	66936	New Jersey	3.55%	16093	22036
Colorado	4.94%	5938	9168	New Mexico	4.24%	2364	3434
Connecticut	3.80%	4706	6585	New York	3.21%	26880	35711
Delaware	5.91%	1066	1787	North Carolina	3.31%	11058	14825
Florida	3.58%	21770	29879	North Dakota	4.01%	1223	1742
Georgia	3.60%	15028	20656	Ohio	4.02%	17179	24497
Hawaii	2.07%	2489	2994	Oklahoma	4.43%	4901	7238
Idaho	4.74%	1514	2296	Oregon	4.13%	4464	6428
Illinois	3.76%	24331	33914	Pennsylvania	3.60%	20903	28749
Indiana	4.42%	9925	14642	Rhode Island	3.34%	1151	1547
Iowa	5.40%	4284	6880	South Carolina	4.32%	5252	7682
Kansas	4.20%	4451	6445	South Dakota	4.55%	989	1476
Kentucky	4.71%	6077	9194	Tennessee	5.47%	7957	12848
Louisiana	4.27%	7710	11233	Texas	5.93%	40409	67863
Maine	3.88%	1445	2036	Utah	3.13%	3480	4592
Maryland	4.10%	8430	12104	Vermont	3.05%	822	1077
Massachusetts	2.98%	7565	9851	Virginia	4.35%	10458	15343
Michigan	3.21%	13440	17856	Washington	3.42%	7928	10734
Minnesota	2.00%	8225	9827	West Virginia	3.14%	3573	4721
Mississippi	4.24%	3632	5276	Wisconsin	4.44%	7446	11012
Missouri	2.87%	9122	11763	Wyoming	5.19%	1895	2989
GSP Growth Rate Mean: 4.16%							
GSP Growth Rate Standard Deviation: 1.03%							

Gross State Product, Annualized Growth 1997-2006: Services



State	Annualized Growth Rate	Total Gross State Product (millions)		State	Annualized Growth Rate	Total Gross State Product (millions)	
		1997	2006			1997	2006
Alabama	5.80%	37701	62609	Montana	6.85%	7622	13832
Alaska	5.92%	7103	11918	Nebraska	5.63%	20270	33180
Arizona	8.25%	57944	118250	Nevada	8.23%	33072	67383
Arkansas	5.66%	20838	34201	New Hampshire	6.68%	16854	30164
California	6.88%	527447	960194	New Jersey	5.61%	158963	259767
Colorado	6.78%	68982	124464	New Mexico	6.06%	16508	28028
Connecticut	5.20%	79455	125392	New York	5.71%	411776	678837
Delaware	6.34%	23727	41242	North Carolina	8.09%	85093	171335
Florida	7.69%	206513	402337	North Dakota	6.11%	5991	10216
Georgia	6.56%	102384	181349	Ohio	5.11%	137897	216035
Hawaii	5.38%	19554	31343	Oklahoma	5.90%	29486	49388
Idaho	7.33%	11201	21180	Oregon	5.96%	40275	67822
Illinois	5.00%	201912	313263	Pennsylvania	5.54%	161688	262604
Indiana	5.05%	61879	96392	Rhode Island	6.37%	15213	26522
Iowa	6.31%	30326	52596	South Carolina	6.36%	34634	60329
Kansas	5.93%	28914	48569	South Dakota	7.53%	8192	15750
Kentucky	5.80%	33974	56426	Tennessee	6.15%	63834	109207
Louisiana	4.35%	42396	62199	Texas	6.73%	245257	440670
Maine	5.24%	14584	23088	Utah	7.26%	24950	46891
Maryland	7.06%	77306	142855	Vermont	6.04%	7035	11921
Massachusetts	5.76%	127210	210513	Virginia	7.80%	99318	195263
Michigan	3.68%	133416	184675	Washington	6.33%	86526	150372
Minnesota	6.16%	74008	126783	West Virginia	5.39%	13353	21424
Mississippi	4.72%	20589	31194	Wisconsin	5.68%	62728	103122
Missouri	5.11%	70021	109692	Wyoming	7.21%	4169	7804
GSP Growth Rate Mean: 6.17%							
GSP Growth Rate Standard Deviation: .99%							

Appendix E: Monte Carlo Simulation Quality Control Data

Table 1 shows the descriptive statistics (arithmetic mean and standard deviation) for the observed datum and the 100,000 generated model inputs. As this table shows, the model inputs closely comply with the characteristics of the observed datum.

Table 1; Observed Datum and Model Inputs

	Observed Datum			Model Inputs	
	Mean	**Standard Deviation**		**Mean**	**Standard Deviation**
Truck Percentage	18.54%	5.03%		18.55%	5.04%
Industry Growth Rates					
1. Agriculture, Forestry and Lumbering	1.36%	2.96%		1.34%	2.96%
2. Mining and Quarrying	9.13%	5.83%		9.13%	5.85%
3. Construction	6.84%	1.97%		6.84%	1.97%
4. Manufacturing	2.64%	2.51%		2.63%	2.50%
5. Wholesale & Trade	4.79%	1.17%		4.79%	1.17%
6. Retail Trade	4.49%	1.02%		4.49%	1.01%
7. Transportation and Public Utilities	4.16%	1.03%		4.15%	1.02%
8. Service	6.17%	0.99%		6.17%	0.99%
Industry Distribution Percentage					
1. Agriculture, Forestry and Lumbering	8.26%	4.68%		8.24%	4.70%
2. Mining and Quarrying	4.07%	1.34%		4.07%	1.33%
3. Construction	27.64%	3.99%		27.62%	3.98%
4. Manufacturing	2.84%	1.07%		2.84%	1.07%
5. Wholesale & Trade	14.42%	3.82%		14.40%	3.84%
6. Retail Trade	10.54%	2.63%		10.54%	2.64%
7. Transportation and Public Utilities	22.40%	9.89%		22.36%	9.89%
8. Service	9.65%	1.21%		9.65%	1.21%

Appendix F: I-80 Quick Response Freight Model Code

I-80 QRF Model: Code

```
# Program:            2008-01-29-MonteCarloSimulation.R
# Created by:         Walter Anderson
# Created on:         4  January 2008
# Last modified on:   31 January 2008
# Purpose:
#       This code is designed to perform a Monte Carlo Simulation of the Quick Response Freight
# Model.  The purpose is to produce future year forecasts of the number of trucks for a given
# roadway segment, using a few pieces of data.  The MC simulation technique extends the standard
# QRF model by providing an indication of the degree of variability in the forecast volumes given
# the uncertainty in the imput variables.


# The industry sectors and the code used to identify them within this analysis
# Code  Industry Sector
# 1     Agriculture, Forestry and Lumbering
# 2     Mining and Quarrying
# 3     Construction
# 4     Manufacturing
# 5     Wholesale & Trade
# 6     Retail Trade
# 7     Transportation and Public Utilities
# 8     Service
```

```
# ------------------------------------------------------------------------------------------
#
# DEFINE FUNCTIONS TO BE USED DURING THE ANALYSIS
#
# ------------------------------------------------------------------------------------------

#
# This function implements the TMIP Quick Response Freight Model
#
# aadt -- base year average annual traffic count
# tp   -- percent of aadt that are truck traffic
# id   -- industry distribution percentage (8 element vector)
# agr  -- anualized growth rate (8 element vector)
# yrs  -- number of years to grow truck traffic
truck.estimate <- function (aadt, tp, id, agr, yrs) {
   tcnt <- (rep((aadt * tp),8)) * id
   years <- rep(yrs,8)
   projected <- round((tcnt * ((1+agr)^years)),digits=0)
   return_value <- sum(projected)
   return(return_value)
}
```

```
#
# This function creates and returns a data frame with fields for all model inputs and forecasts
# for a specified number of interations of the Monte Carlo analysis
#
# pct_trucks_mean -- the mathematical average of the percent of aadt that are trucks
# pct_trucks_sd   -- the standard deviation of the percent of aadt that are trucks
# ind_gf          -- the mean and standard deviation of the 8 industry growth factors used for
#                    the model
# ind_dist        -- the mean and standard deviation of the percentage distribution that are use
#                    to divide the base year trucks into the 8 indutries
# nitr            -- number of iterations to be analyzed.  This is the number of rows in the
#                    resulting data.frame
df_setup <- function(pct_trucks_mean, pct_trucks_sd, ind_gf, ind_dist, nitr=100000) {
   return (data.frame(cbind(
      trk_pct=rnorm(nitr, mean=pct_trucks_mean,sd=pct_trucks_sd),
      gr1=rnorm(nitr, mean=ind_gf$mean[1], sd=ind_gf$sd[1]),
      gr2=rnorm(nitr, mean=ind_gf$mean[2], sd=ind_gf$sd[2]),
      gr3=rnorm(nitr, mean=ind_gf$mean[3], sd=ind_gf$sd[3]),
      gr4=rnorm(nitr, mean=ind_gf$mean[4], sd=ind_gf$sd[4]),
      gr5=rnorm(nitr, mean=ind_gf$mean[5], sd=ind_gf$sd[5]),
      gr6=rnorm(nitr, mean=ind_gf$mean[6], sd=ind_gf$sd[6]),
      gr7=rnorm(nitr, mean=ind_gf$mean[7], sd=ind_gf$sd[7]),
      gr8=rnorm(nitr, mean=ind_gf$mean[8], sd=ind_gf$sd[8]),
      ind_dst1=rnorm(nitr, mean=ind_dist$mean[1], sd=ind_dist$sd[1]),
      ind_dst2=rnorm(nitr, mean=ind_dist$mean[2], sd=ind_dist$sd[2]),
      ind_dst3=rnorm(nitr, mean=ind_dist$mean[3], sd=ind_dist$sd[3]),
      ind_dst4=rnorm(nitr, mean=ind_dist$mean[4], sd=ind_dist$sd[4]),
      ind_dst5=rnorm(nitr, mean=ind_dist$mean[5], sd=ind_dist$sd[5]),
      ind_dst6=rnorm(nitr, mean=ind_dist$mean[6], sd=ind_dist$sd[6]),
      ind_dst7=rnorm(nitr, mean=ind_dist$mean[7], sd=ind_dist$sd[7]),
      ind_dst8=rnorm(nitr, mean=ind_dist$mean[8], sd=ind_dist$sd[8])
    )))
}
```

```
#
# This function performs a Monte Carlo simulation of the TMIP Quick Response Freight Model (QRF)
#
# base_aadt     -- the base average annual daily traffic count for the segment we are predicting
#                  future truck traffic on
# inputs        -- a data frame containing the randomly generated inputs to use for the Monte
#                  Carlo Analysis
# nitr          -- the number of interations to perform for the Monte Carlo simulation
qrf_mc <- function (base_aadt, inputs, nitr=100000) {
   # initialize output data tables
        dt <- data.frame(cbind(
        tf10=rep(0,nitr),
        tf15=rep(0,nitr),
        tf20=rep(0,nitr),
        tf25=rep(0,nitr),
        tf30=rep(0,nitr),
        tf35=rep(0,nitr),
        tf40=rep(0,nitr)
        ))
        # Monte Carlo Simulation
        for (tpl in 1:nitr) { # Monte Carlo Iterations Loop
             cat(tpl, "\n")
             ind_pct <- c(
                inputs$ind_dst1[tpl],
                inputs$ind_dst2[tpl],
                inputs$ind_dst3[tpl],
                inputs$ind_dst4[tpl],
                inputs$ind_dst5[tpl],
                inputs$ind_dst6[tpl],
                inputs$ind_dst7[tpl],
                inputs$ind_dst8[tpl]
             )
             gr <- c(
                inputs$gr1[tpl],
                inputs$gr2[tpl],
                inputs$gr3[tpl],
                inputs$gr4[tpl],
                inputs$gr5[tpl],
                inputs$gr6[tpl],
                inputs$gr7[tpl],
                inputs$gr8[tpl]
             )
             # QRF calculations
             dt$tf10[tpl] <-
                truck.estimate(base_aadt, inputs$trk_pct[tpl], ind_pct, gr, (2010-2006))
             dt$tf15[tpl] <-
                truck.estimate(base_aadt, inputs$trk_pct[tpl], ind_pct, gr, (2015-2006))
             dt$tf20[tpl] <-
                truck.estimate(base_aadt, inputs$trk_pct[tpl], ind_pct, gr, (2020-2006))
             dt$tf25[tpl] <-
                truck.estimate(base_aadt, inputs$trk_pct[tpl], ind_pct, gr, (2025-2006))
             dt$tf30[tpl] <-
                truck.estimate(base_aadt, inputs$trk_pct[tpl], ind_pct, gr, (2030-2006))
             dt$tf35[tpl] <-
                truck.estimate(base_aadt, inputs$trk_pct[tpl], ind_pct, gr, (2035-2006))
             dt$tf40[tpl] <-
                truck.estimate(base_aadt, inputs$trk_pct[tpl], ind_pct, gr, (2040-2006))
        } # Monte Carlo Iterations Loop
        return(dt)
}
```

```
#
# This function will write the results data frame to a data file with a time stamp and a standard
# name
# sec_id -- the section id number of the model results (used in the file name)
# dt     -- the data frame that contains the model results
write.qrf <- function(sec_id, dt) {
        fd <- paste(
                format(Sys.time(), format="%Y-%m-%d_%H-%M"),"section",
                sprintf("%02d", sec_id), "simulation_results.dat",sep="_")
        cat(fd,"\n")
        write.table(dt, file=fd, quote=FALSE, sep='\t')
}
```

```
#
# This function will calculate the summary results for a single simulation and write the results
# to the appropriate data file
# sec_id -- the section id number of the model results (used in the file name)
# dt     -- the data frame that contains the model results
summary.qrf <- function(sec_id, dt, nitr=100000) {
        result <- data.frame(cbind(
                year=c(2010,2015,2020,2025,2030,2035,2040),
                mean =  c(
                                round(mean(dt$tf10)),
                                round(mean(dt$tf15)),
                                round(mean(dt$tf20)),
                                round(mean(dt$tf25)),
                                round(mean(dt$tf30)),
                                round(mean(dt$tf35)),
                                round(mean(dt$tf40))
                        ),
                sd =    c(
                                round(sd(dt$tf10)),
                                round(sd(dt$tf15)),
                                round(sd(dt$tf20)),
                                round(sd(dt$tf25)),
                                round(sd(dt$tf30)),
                                round(sd(dt$tf35)),
                                round(sd(dt$tf40))
                        )
        ))
        result$li <- round(result$mean - (result$sd/((nitr)^0.5)))
        result$ui <- round(result$mean + (result$sd/((nitr)^0.5)))
        cwd <- getwd()
        setwd(
           "R:\\Trans-Planning\\D_ClientsAndProjects\\NDOT_Reno\\06_Deliverables\\FreightModel"
        )
        fd <- paste("section", sprintf("%02d", sec_id), "_model_results.dat", sep="")
        write.table(result, file=fd, quote=FALSE, sep='\t')
        setwd(cwd)
        return(result)
}
```

```
#
# This function will calculate the mean and standard deviation for all input variables used in
# the Monte Carlo simulations.
# dt     -- the data frame that contains the monte carlo generated inputs
qc.qrf <- function(dt) {
        return(data.frame(cbind(
                c(
                        trk_pct_mean = mean(dt$trk_pct),
                        trk_pct_sd = sd(dt$trk_pct),
                        gr1_mean = mean(dt$gr1),
                        gr1_sd = sd(dt$gr1),
                        gr2_mean = mean(dt$gr2),
                        gr2_sd = sd(dt$gr2),
                        gr3_mean = mean(dt$gr3),
                        gr3_sd = sd(dt$gr3),
                        gr4_mean = mean(dt$gr4),
                        gr4_sd = sd(dt$gr4),
                        gr5_mean = mean(dt$gr5),
                        gr5_sd = sd(dt$gr5),
                        gr6_mean = mean(dt$gr6),
                        gr6_sd = sd(dt$gr6),
                        gr7_mean = mean(dt$gr7),
                        gr7_sd = sd(dt$gr7),
                        gr8_mean = mean(dt$gr8),
                        gr8_sd = sd(dt$gr8),
                        ind_dst1_mean = mean(dt$ind_dst1),
                        ind_dst1_sd = sd(dt$ind_dst1),
                        ind_dst2_mean = mean(dt$ind_dst2),
                        ind_dst2_sd = sd(dt$ind_dst2),
                        ind_dst3_mean = mean(dt$ind_dst3),
                        ind_dst3_sd = sd(dt$ind_dst3),
                        ind_dst4_mean = mean(dt$ind_dst4),
                        ind_dst4_sd = sd(dt$ind_dst4),
                        ind_dst5_mean = mean(dt$ind_dst5),
                        ind_dst5_sd = sd(dt$ind_dst5),
                        ind_dst6_mean = mean(dt$ind_dst6),
                        ind_dst6_sd = sd(dt$ind_dst6),
                        ind_dst7_mean = mean(dt$ind_dst7),
                        ind_dst7_sd = sd(dt$ind_dst7),
                        ind_dst8_mean = mean(dt$ind_dst8),
                        ind_dst8_sd = sd(dt$ind_dst8)
                )
        )))
}
```

```
# ------------------------------------------------------------------------------------------------
#
# CODE TO INITIALIZE THE R ENVIRONMENT FOR ANALYSIS
#
# ------------------------------------------------------------------------------------------------

setwd("R:/Trans-Planning/D_ClientsAndProjects/NDOT_Reno/07_SupportingAnalysis/QuickResponse")

# Read input data files

# Define the 2006 base traffic counts for each of the segments
aadt_base <- read.table("2008-01-10_I_80_aadt_2006.dat")

# Define the mean and standard deviation for the percent of aadt that are trucks
pct_trucks_mean <- 0.1854
pct_trucks_sd <- 0.0503

# Read data file containing the percent distributions for the eight industries
industry_dist <- read.table("2008-01-30_I_80_vmt_distribution.dat")

# Read data file containing mean and standard deviation growth rates for each of the 8 industries
industry_gf <- read.table("2008-01-30_I_80_industry_annualized_growth_rates.dat")

input_variables <- read.table("2008-01-30_monte_carlo_input_variables.dat")
```

Appendix G: Quick Response Freight Forecasting Tool

Base Year Truck Estimate	Forecast Years									
	5		10		15		20		25	
	$\bar{x}$	σ	$\bar{x}$	σ	$\bar{x}$	σ	$\bar{x}$	σ	$\bar{x}$	σ
100	129	16	170	24	228	40	315	79	451	185
200	258	33	340	48	457	80	630	157	901	371
300	387	49	510	72	685	120	945	236	1352	556
400	516	66	679	96	913	160	1260	314	1803	742
500	645	82	849	120	1,142	200	1,575	393	2,254	927
6,00	774	99	1,019	144	1,370	240	1,890	471	2,704	1,112
700	903	115	1,189	168	1,598	280	2,205	550	3,155	1,298
800	1,032	132	1,359	192	1,826	320	2,520	628	3,606	1,483
900	1,161	148	1,529	215	2,055	360	2,835	707	4,056	1,669
1,000	**1,290**	**164**	**1,699**	**239**	**2,283**	**400**	**3,150**	**785**	**4,507**	**1,854**
1,100	1,419	181	1,869	263	2,511	440	3,466	864	4,958	2,039
1,200	1,548	197	2,038	287	2,740	480	3,781	942	5,408	2,225
1,300	1,677	214	2,208	311	2,968	520	4,096	1,021	5,859	2,410
1,400	1,806	230	2,378	335	3,196	560	4,411	1,099	6,310	2,596
1,500	1,935	247	2,548	359	3,425	600	4,726	1,178	6,761	2,781
1,600	2,064	263	2,718	383	3,653	640	5,041	1,256	7,211	2,966
1,700	2,193	280	2,888	407	3,881	680	5,356	1,335	7,662	3,152
1,800	2,322	296	3,058	431	4,110	720	5,671	1,413	8,113	3,337
1,900	2,451	312	3,227	455	4,338	760	5,986	1,492	8,563	3,522
2,000	**2,580**	**329**	**3,397**	**479**	**4,566**	**801**	**6,301**	**1,570**	**9,014**	**3,708**
2,100	2,709	345	3,567	503	4,794	841	6,616	1,649	9,465	3,893
2,200	2,838	362	3,737	527	5,023	8,81	6,931	1,727	9,915	4,079
2,300	2,967	378	3,907	551	5,251	921	7,246	1,806	10,366	4,264
2,400	3,096	395	4,077	575	5,479	961	7,561	1,884	10,817	4,449
2,500	3,225	411	4,247	598	5,708	1,001	7,876	1,963	11,268	4,635

Base Year Truck Estimate	Forecast Years									
	5		10		15		20		25	
	$\bar{x}$	σ	$\bar{x}$	σ	$\bar{x}$	σ	$\bar{x}$	σ	$\bar{x}$	σ
2,600	3,354	427	4,416	622	5,936	1,041	8,191	2,041	11,718	4,820
2,700	3,483	444	4,586	646	6,164	1,081	8,506	2,120	12,169	5,006
2,800	3,612	460	4,756	670	6,393	1,121	8,821	2,198	12,620	5,191
2,900	3,741	477	4,926	694	6,621	1,161	9,136	2,277	13,070	5,376
3,000	**3,870**	**493**	**5,096**	**718**	**6,849**	**1,201**	**9,451**	**2,355**	**13,521**	**5,562**
3,100	3,999	510	5,266	742	7,078	1,241	9,766	2,434	13,972	5,747
3,200	4,129	526	5,436	766	7,306	1,281	10,082	2,512	14,422	5,933
3,300	4,258	543	5,606	790	7,534	1,321	10,397	2,591	14,873	6,118
3,400	4,387	559	5,775	814	7,762	1,361	10,712	2,669	15,324	6,303
3,500	4,516	575	5,945	838	7,991	1,401	11,027	2,748	15,775	6,489
3,600	4,645	592	6,115	862	8,219	1,441	11,342	2,826	16,225	6,674
3,700	4,774	608	6,285	886	8,447	1,481	11,657	2,905	16,676	6,860
3,800	4,903	625	6,455	910	8,676	1,521	11,972	2,983	17,127	7,045
3,900	5,032	641	6,625	934	8,904	1,561	12,287	3,062	17,577	7,230
4,000	**5,161**	**658**	**6,795**	**958**	**9,132**	**1,601**	**12,602**	**3,140**	**18,028**	**7,416**
4,100	5,290	674	6,964	981	9,361	1,641	12,917	3,219	17,749	7,601
4,200	5,419	691	7,134	1,005	9,589	1,681	13,232	3,297	18,929	7,787
4,300	5,548	707	7,304	1,029	9,817	1,721	13,547	3,376	19,380	7,972
4,400	5,677	723	7,474	1,053	10,046	1,761	13,862	3,454	19,831	8,157
4,500	5,806	740	7,644	1,077	10,274	1,801	14,177	3,533	20,282	8,343
4,600	5,935	756	7,814	1,101	10,502	1,841	14,492	3,611	20,732	8,528
4,700	6,064	773	7,984	1,125	10,730	1,881	14,807	3,690	21,183	8,714
4,800	6,193	789	8,153	1,149	10,959	1,921	15,122	3,768	21,634	8,899
4,900	6,322	806	8,323	1,173	11,187	1,961	15,437	3,847	22,084	9,084
5,000	**6,451**	**822**	**8,493**	**1,197**	**11,415**	**2,001**	**15,752**	**3,925**	**22,535**	**9,270**

Base Year Truck Estimate	Forecast Years									
	5		10		15		20		25	
	$\bar{x}$	σ	$\bar{x}$	σ	$\bar{x}$	σ	$\bar{x}$	σ	$\bar{x}$	σ
5,100	6,580	839	8,663	1,221	11,644	2,041	16,067	4,004	22,986	9,455
5,200	6,709	855	8,833	1,245	11,872	2,081	16,382	4,082	23,437	9,640
5,300	6,838	871	9,003	1,269	12,100	2,121	16,697	4,161	23,887	9,826
5,400	6,967	888	9,173	1,293	12,329	2,161	17,013	4,239	24,338	10,011
5,500	7,096	904	9,343	1,317	12,557	2,201	17,328	4,318	24,789	10,197
5,600	7,225	921	9,512	1,341	12,785	2,241	17,643	4,396	25,239	10,382
5,700	7,354	937	9,682	1,364	13,014	2,281	17,958	4,475	25,690	10,567
5,800	7,483	954	9,852	1,388	13,242	2,321	18,273	4,553	26,141	10,753
5,900	7,612	970	10,022	1,412	13,470	2,361	18,588	4,632	26,591	10,938
6,000	**7,741**	**986**	**10,192**	**1,436**	**13,698**	**2,402**	**18,903**	**4,710**	**27,042**	**11,124**
6,100	7,870	1,003	10,362	1,460	13,927	2,442	19,218	4,789	27,493	11,309
6,200	7,999	1,019	10,532	1,484	14,155	2,482	19,533	4,867	27,944	11,494
6,300	8,128	1,036	10,701	1,508	14,383	2,522	19,848	4,946	28,394	11,680
6,400	8,257	1,052	10,871	1,532	14,612	2,562	20,163	5,024	28,845	11,865
6,500	8,386	1,069	11,041	1,556	14,840	2,602	20,478	5,103	29,296	12,051
6,600	8,515	1,085	11,211	1,580	15,068	2,642	20,793	5,181	29,746	12,236
6,700	8,644	1,102	11,381	1,604	15,297	2,682	21,108	5,260	30,197	12,421
6,800	8,773	1,118	11,551	1,628	15,525	2,722	21,423	5,339	30,648	12,607
6,900	8,902	1,134	11,721	1,652	15,753	2,762	21,738	5,417	31,098	12,792
7,000	**9,031**	**1,151**	**11,890**	**1,676**	**15,982**	**2,802**	**22,053**	**5,496**	**31,549**	**12,978**
7,100	9,160	1,167	12,060	1,700	16,210	2,842	22,368	5,574	32,000	13,163
7,200	9,289	1,184	12,230	1,724	16,438	2,882	22,683	5,653	32,451	13,348
7,300	9,418	1,200	12,400	1,748	16,666	2,922	22,998	5,731	32,901	13,534
7,400	9,547	1,217	12,570	1,771	16,895	2,962	23,313	5,810	33,352	13,719
7,500	9,676	1,233	12,740	1,795	17,123	3,002	23,629	5,888	33,803	13,905

Base Year Truck Estimate	Forecast Years									
	5		10		15		20		25	
	$\bar{x}$	σ	$\bar{x}$	σ	$\bar{x}$	σ	$\bar{x}$	σ	$\bar{x}$	σ
7,600	9,805	1,250	12,910	1,819	17,351	3,042	23,944	5,967	34,253	14,090
7,700	9,934	1,266	13,080	1,843	17,580	3,082	24,259	6,045	34,704	14,275
7,800	10,063	1,282	13,249	1,867	17,808	3,122	24,574	6,124	35,155	14,461
7,900	10,192	1,299	13,419	1,891	18,036	3,162	24,889	6,202	35,605	14,646
8,000	**10,321**	**1,315**	**13,589**	**1,915**	**18,265**	**3,202**	**25,204**	**6,281**	**36,056**	**14,832**
8,100	10,450	1,332	13,759	1,939	18,493	3,242	25,519	6,359	36,507	15,017
8,200	10,579	1,348	13,929	1,963	18,721	3,282	25,834	6,438	36,958	15,202
8,300	10,708	1,365	14,099	1,987	18,950	3,322	26,149	6,516	37,408	15,388
8,400	10,837	1,381	14,269	2,011	19,178	3,362	26,464	6,595	37,859	15,573
8,500	10,966	1,398	14,438	2,035	19,406	3,402	26,779	6,673	38,310	15,758
8,600	11,095	1,414	14,608	2,059	19,634	3,442	27,094	6,752	38,760	15,944
8,700	11,224	1,430	14,778	2,083	19,863	3,482	27,409	6,830	39,211	16,129
8,800	11,353	1,447	14,948	2,107	20,091	3,522	27,724	6,909	39,662	16,315
8,900	11,482	1,463	15,118	2,131	20,319	3,562	28,039	6,987	40,112	16,500
9,000	**11,611**	**1,480**	**15,288**	**2,154**	**20,548**	**3,602**	**28,354**	**7,066**	**40,563**	**16,685**
9,100	11,740	1,496	15,458	2,178	20,776	3,642	28,669	7,144	41,014	16,871
9,200	11,869	1,513	15,628	2,202	21,004	3,682	28,984	7,223	41,465	17,056
9,300	11,998	1,529	15,797	2,226	21,233	3,722	29,299	7,301	41,915	17,242
9,400	12,128	1,545	15,967	2,250	21,461	3,762	29,614	7,380	42,366	17,427
9,500	12,257	1,562	16,137	2,274	21,689	3,802	29,929	7,458	42,817	17,612
9,600	12,386	1,578	16,307	2,298	21,918	3,842	30,245	7,537	43,267	17,798
9,700	12,515	1,595	16,477	2,322	22,146	3,882	30,560	7,615	43,718	17,983
9,800	12,644	1,611	16,647	2,346	22,374	3,922	30,875	7,694	44,169	18,169
9,900	12,773	1,628	16,817	2,370	22,602	3,963	31,190	7,772	44,620	18,354
10,000	**12,902**	**1,644**	**16,986**	**2,394**	**22,831**	**4,003**	**31,505**	**7,851**	**45,070**	**18,539**

Base Year Truck Estimate	Forecast Years									
	5		10		15		20		25	
	$\bar{x}$	σ	$\bar{x}$	σ	$\bar{x}$	σ	$\bar{x}$	σ	$\bar{x}$	σ
10,100	13,031	1,661	17,156	2,418	23,059	4,043	31,820	7,929	45,521	18,725
10,200	13,160	1,677	17,326	2,442	23,287	4,083	32,135	8,008	45,972	18,910
10,300	13,289	1,693	17,496	2,466	23,516	4,123	32,450	8,086	46,422	19,096
10,400	13,418	1,710	17,666	2,490	23,744	4,163	32,765	8,165	46,873	19,281
10,500	13,547	1,726	17,836	2,514	23,972	4,203	33,080	8,243	47,324	19,466
10,600	13,676	1,743	18,006	2,537	24,201	4,243	33,395	8,322	47,774	19,652
10,700	13,805	1,759	18,175	2,561	24,429	4,283	33,710	8,400	48,225	19,837
10,800	13,934	1,776	18,345	2,585	24,657	4,323	34,025	8,479	48,676	20,023
10,900	14,063	1,792	18,515	2,609	24,886	4,363	34,340	8,557	49,127	20,208
11,000	**14,192**	**1,809**	**18,685**	**2,633**	**25,114**	**4,403**	**34,655**	**8,636**	**49,577**	**20,393**
11,100	14,321	1,825	18,855	2,657	25,342	4,443	34,970	8,714	50,028	20,579
11,200	14,450	1,841	19,025	2,681	25,570	4,483	35,285	8,793	50,479	20,764
11,300	14,579	1,858	19,195	2,705	25,799	4,523	35,600	8,871	50,929	20,950
11,400	14,708	1,874	19,365	2,729	26,027	4,563	35,915	8,950	51,380	21,135
11,500	14,837	1,891	19,534	2,753	26,255	4,603	36,230	9,028	51,831	21,320
11,600	14,966	1,907	19,704	2,777	26,484	4,643	36,545	9,107	52,281	21,506
11,700	15,095	1,924	19,874	2,801	26,712	4,683	36,861	9,185	52,732	21,691
11,800	15,224	1,940	20,044	2,825	26,940	4,723	37,176	9,264	53,183	21,876
11,900	15,353	1,957	20,214	2,849	27,169	4,763	37,491	9,342	53,634	22,062
12,000	**15,482**	**1,973**	**20,384**	**2,873**	**27,397**	**4,803**	**37,806**	**9,421**	**54,084**	**22,247**
12,100	15,611	1,989	20,554	2,897	27,625	4,843	38,121	9,499	54,535	22,433
12,200	15,740	2,006	20,723	2,920	27,854	4,883	38,436	9,578	54,986	22,618
12,300	15,869	2,022	20,893	2,944	28,082	4,923	38,751	9,656	55,436	22,803
12,400	15,998	2,039	21,063	2,968	28,310	4,963	39,066	9,735	55,887	22,989
12,500	16,127	2,055	21,233	2,992	28,538	5,003	39,381	9,813	56,338	23,174

Base Year Truck Estimate	Forecast Years									
	5		10		15		20		25	
	$\bar{x}$	σ	$\bar{x}$	σ	$\bar{x}$	σ	$\bar{x}$	σ	$\bar{x}$	σ
12,600	16,256	2,072	21,403	3,016	28,767	5,043	39,696	9,892	56,788	23,360
12,700	16,385	2,088	21,573	3,040	28,995	5,083	40,011	9,970	57,239	23,545
12,800	16,514	2,105	21,743	3,064	29,223	5,123	40,326	10,049	57,690	23,730
12,900	16,643	2,121	21,912	3,088	29,452	5,163	40,641	10,127	58,141	23,916
13,000	**16,772**	**2,137**	**22,082**	**3,112**	**29,680**	**5,203**	**40,956**	**10,206**	**58,591**	**24,101**
13,100	16,901	2,154	22,252	3,136	29,908	5,243	41,271	10,284	59,042	24,287
13,200	17,030	2,170	22,422	3,160	30,137	5,283	41,586	10,363	59,493	24,472
13,300	17,159	2,187	22,592	3,184	30,365	5,323	41,901	10,442	59,943	24,657
13,400	17,288	2,203	22,762	3,208	30,593	5,363	42,216	10,520	60,394	27,843
13,500	17,417	2,220	22,932	3,232	30,822	5,403	42,531	10,599	60,845	25,028
13,600	17,546	2,236	23,102	3,256	31,050	5,443	42,846	10,677	61,295	25,214
13,700	17,675	2,252	23,271	3,280	31,278	5,483	43,161	10,756	61,746	25,399
13,800	17,804	2,269	23,441	3,304	31,506	5,524	43,477	10,834	62,197	25,584
13,900	17,933	2,285	23,611	3,327	31,735	5,564	43,792	10,913	62,648	25,770
14,000	**18,062**	**2,302**	**23,781**	**3,351**	**31,963**	**5,604**	**44,107**	**10,991**	**63,098**	**25,955**
14,100	18,191	2,318	23,951	3,375	32,191	5,644	44,422	11,070	63,549	26,141
14,200	18,320	2,335	24,121	3,399	32,420	5,684	44,737	11,148	64,000	26,326
14,300	18,449	2,351	24,291	3,423	32,648	5,724	45,052	11,227	64,450	26,511
14,400	18,578	2,368	24,460	3,447	32,876	5,764	45,367	11,305	64,901	26,697
14,500	18,707	2,384	24,630	3,471	33,105	5,804	45,682	11,384	65,352	26,882
14,600	18,836	2,400	24,800	3,495	33,333	5,844	45,997	11,462	65,803	27,068
14,700	18,965	2,417	24,970	3,519	33,561	5,884	46,312	11,541	66,253	27,253
14,800	19,094	2,433	25,140	3,543	33,790	5,924	46,627	11,619	66,704	27,438
14,900	19,223	2,450	25,310	3,567	34,018	5,964	46,942	11,698	67,155	27,624
15,000	**19,352**	**2,466**	**25,480**	**3,591**	**34,246**	**6,004**	**47,257**	**11,776**	**67,605**	**27,809**

Base Year Truck Estimate	Forecast Years									
	5		10		15		20		25	
	$\bar{x}$	σ	$\bar{x}$	σ	$\bar{x}$	σ	$\bar{x}$	σ	$\bar{x}$	σ
15,100	19,481	2,483	25,650	3,615	34,474	6,044	47,572	11,855	68,056	27,994
15,200	19,610	2,499	25,819	3,639	34,703	6,084	47,887	11,933	68,507	28,180
15,300	19,739	2,516	25,989	3,663	34,931	6,124	48,202	12,012	68,957	28,365
15,400	19,868	2,532	26,159	3,687	35,159	6,164	48,517	12,090	69,408	28,551
15,500	19,997	2,548	26,329	3,710	35,388	6,204	48,832	12,169	69,859	28,736
15,600	20,127	2,565	26,499	3,734	35,616	6,244	49,147	12,247	70,310	28,921
15,700	20,256	2,581	26,669	3,758	35,844	6,284	49,462	12,326	70,760	29,107
15,800	20,285	2,598	26,839	3,782	36,073	6,324	49,777	12,404	71,211	29,292
15,900	20,514	2,614	27,008	3,806	36,301	6,364	50,092	12,483	71,662	29,478
16,000	**20,643**	**2,631**	**27,178**	**3,830**	**36,529**	**6,404**	**50,408**	**12,561**	**72,112**	**29,663**
16,100	20,772	2,647	27,348	3,854	36,758	6,444	50,723	12,640	72,563	29,848
16,200	20,901	2,664	27,518	3,878	36,986	6,484	51,038	12,718	73,014	30,034
16,300	21,030	2,680	27,688	3,902	37,214	6,524	51,353	12,797	73,464	30,219
16,400	21,159	2,696	27,858	3,926	37,442	6,564	51,668	12,875	73,915	30,405
16,500	21,288	2,713	28,028	3,950	37,671	6,604	51,983	12,954	74,366	30,590
16,600	21,417	2,729	28,197	3,974	37,899	6,644	52,298	13,032	74,817	30,775
16,700	21,546	2,746	28,367	3,998	38,127	6,684	52,613	13,111	75,267	30,961
16,800	21,675	2,762	28,537	4,022	38,356	6,724	52,928	13,189	75,718	31,146
16,900	21,804	2,779	28,707	4,046	38,584	6,764	53,243	13,268	76,169	31,332
17,000	**21,933**	**2,795**	**28,877**	**4,070**	**38,812**	**6,804**	**53,558**	**13,346**	**76,619**	**31,517**
17,100	22,062	2,811	29,047	4,093	39,041	6,844	53,873	13,425	77,070	31,702
17,200	22,191	2,828	29,217	4,117	39,269	6,884	54,188	13,503	77,521	31,888
17,300	22,320	2,844	29,387	4,141	39,497	6,924	54,503	13,582	77,971	32,073
17,400	22,449	2,861	29,556	4,165	39,726	6,964	54,818	13,660	78,422	32,259
17,500	22,578	2,877	29,726	4,189	39,954	7,004	55,133	13,739	78,873	32,444

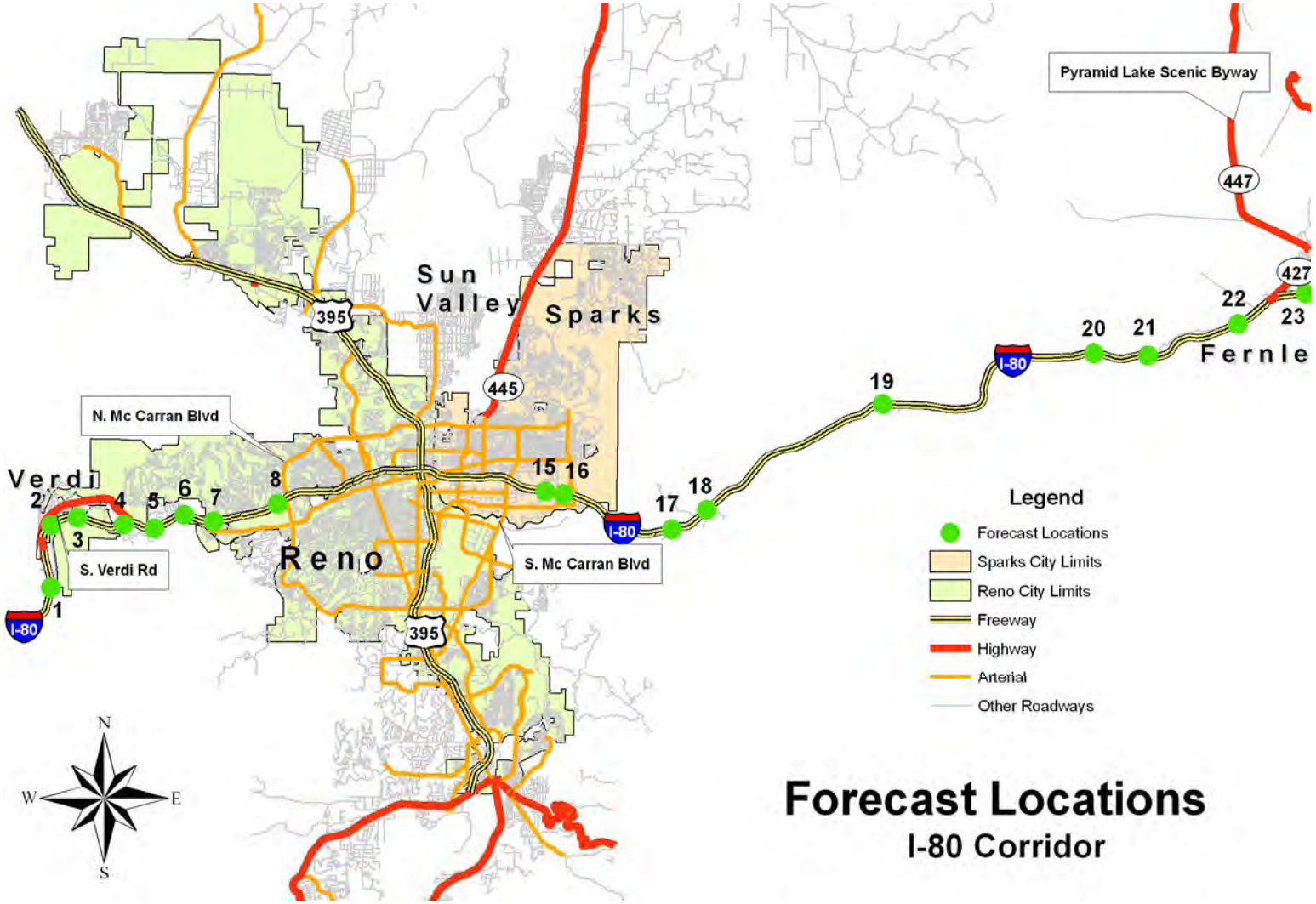
Base Year Truck Estimate	Forecast Years									
	5				5				5	
	$\bar{x}$		$\bar{x}$		$\bar{x}$		$\bar{x}$		$\bar{x}$	
17,600	22,707	17,600	22,707	17,600	22,707	17,600	22,707	17,600	22,707	17,600
17,700	22,836	17,700	22,836	17,700	22,836	17,700	22,836	17,700	22,836	17,700
17,800	22,965	17,800	22,965	17,800	22,965	17,800	22,965	17,800	22,965	17,800
17,900	23,094	17,900	23,094	17,900	23,094	17,900	23,094	17,900	23,094	17,900
18,000	**23,223**	**18,000**	**23,223**	**18,000**	**23,223**	**18,000**	**23,223**	**18,000**	**23,223**	**18,000**
18,100	23,352	18,100	23,352	18,100	23,352	18,100	23,352	18,100	23,352	18,100
18,200	23,481	18,200	23,481	18,200	23,481	18,200	23,481	18,200	23,481	18,200
18,300	23,610	18,300	23,610	18,300	23,610	18,300	23,610	18,300	23,610	18,300
18,400	23,739	18,400	23,739	18,400	23,739	18,400	23,739	18,400	23,739	18,400
18,500	23,868	18,500	23,868	18,500	23,868	18,500	23,868	18,500	23,868	18,500
18,600	23,997	18,600	23,997	18,600	23,997	18,600	23,997	18,600	23,997	18,600
18,700	24,126	18,700	24,126	18,700	24,126	18,700	24,126	18,700	24,126	18,700
18,800	24,255	18,800	24,255	18,800	24,255	18,800	24,255	18,800	24,255	18,800
18,900	24,384	18,900	24,384	18,900	24,384	18,900	24,384	18,900	24,384	18,900
19,000	**24,513**	**19,000**	**24,513**	**19,000**	**24,513**	**19,000**	**24,513**	**19,000**	**24,513**	**19,000**
19,100	24,642	19,100	24,642	19,100	24,642	19,100	24,642	19,100	24,642	19,100
19,200	24,771	19,200	24,771	19,200	24,771	19,200	24,771	19,200	24,771	19,200
19,300	24,900	19,300	24,900	19,300	24,900	19,300	24,900	19,300	24,900	19,300
19,400	25,029	19,400	25,029	19,400	25,029	19,400	25,029	19,400	25,029	19,400
19,500	25,158	19,500	25,158	19,500	25,158	19,500	25,158	19,500	25,158	19,500
19,600	25,287	19,600	25,287	19,600	25,287	19,600	25,287	19,600	25,287	19,600
19,700	25,416	19,700	25,416	19,700	25,416	19,700	25,416	19,700	25,416	19,700
19,800	25,545	19,800	25,545	19,800	25,545	19,800	25,545	19,800	25,545	19,800
19,900	25,674	19,900	25,674	19,900	25,674	19,900	25,674	19,900	25,674	19,900
20,000	**25,803**	**20,000**	**25,803**	**20,000**	**25,803**	**20,000**	**25,803**	**20,000**	**25,803**	**20,000**

Base Year Truck Estimate	Forecast Years									
	5		10		15		20		25	
	$\bar{x}$	σ	$\bar{x}$	σ	$\bar{x}$	σ	$\bar{x}$	σ	$\bar{x}$	σ
20,100	25,932	3,305	34,143	4,812	45,890	8,045	63,324	15,780	90,591	37,264
20,200	26,061	3,321	34,313	4,836	46,118	8,085	63,640	15,859	91,042	37,450
20,300	26,190	3,338	34,482	4,860	46,346	8,125	63,955	15,937	91,493	37,635
20,400	26,319	3,354	34,652	4,883	46,575	8,165	64,270	16,016	91,943	37,820
20,500	26,448	3,370	34,822	4,907	46,803	8,205	64,585	16,094	92,394	38,006
20,600	26,577	3,387	34,992	4,931	47,031	8,245	64,900	16,173	92,845	38,191
20,700	26,706	3,403	35,162	4,955	47,260	8,285	65,215	16,251	93,295	38,377
20,800	26,835	3,420	35,332	4,979	47,488	8,325	65,530	16,330	93,746	38,562
20,900	26,964	3,436	35,502	5,003	47,716	8,365	65,845	16,408	94,197	38,747
21,000	**27,093**	**3,453**	**35,671**	**5,027**	**47,945**	**8,405**	**66,160**	**16,487**	**94,647**	**38,933**
21,100	27,222	3,469	35,841	5,051	48,173	8,445	66,475	16,565	95,098	39,118
21,200	27,351	3,486	36,011	5,075	48,401	8,485	66,790	16,644	95,549	39,304
21,300	27,480	3,502	36,181	5,099	48,630	8,525	67,105	16,722	96,000	39,489
21,400	27,609	3,518	36,351	5,123	48,858	8,565	67,420	16,801	96,450	39,674
21,500	27,738	3,535	36,521	5,147	49,086	8,605	67,735	16,879	96,901	39,860
21,600	27,867	3,551	36,691	5,171	49,314	8,645	68,050	16,958	97,352	40,045
21,700	27,996	3,568	36,861	5,195	49,543	8,686	68,365	17,036	97,802	40,230
21,800	28,126	3,584	37,030	5,219	49,771	8,726	68,680	17,115	98,253	40,416
21,900	28,255	3,601	37,200	5,243	49,999	8,766	68,995	17,193	98,704	40,601
22,000	**28,384**	**3,617**	**37,370**	**5,266**	**50,228**	**8,806**	**69,310**	**17,272**	**99,154**	**40,787**
22,100	28,513	3,634	37,540	5,290	50,456	8,846	69,625	17,350	99,605	40,972
22,200	28,642	3,650	37,710	5,314	50,684	8,886	69,940	17,429	100,056	41,157
22,300	28,771	3,666	37,880	5,338	50,913	8,926	70,256	17,507	100,507	41,343
22,400	28,900	3,683	38,050	5,362	51,141	8,966	70,571	17,586	100,957	41,528
22,500	29,029	3,699	38,219	5,386	51,369	9,006	70,886	17,664	101,408	41,714

Base Year Truck Estimate	Forecast Years									
	5		10		15		20		25	
	$\bar{x}$	σ	$\bar{x}$	σ	$\bar{x}$	σ	$\bar{x}$	σ	$\bar{x}$	σ
22,600	29,158	3,716	38,389	5,410	51,598	9,046	71,201	17,743	101,859	41,899
22,700	29,287	3,732	38,559	5,434	51,826	9,086	71,516	17,821	102,309	42,084
22,800	29,416	3,749	38,729	5,458	52,054	9,126	71,831	17,900	102,760	42,270
22,900	29,545	3,765	38,899	5,482	52,282	9,166	72,146	17,978	103,211	42,455
23,000	**29,674**	**3,782**	**39,069**	**5,506**	**52,511**	**9,206**	**72,461**	**18,057**	**103,661**	**42,641**
23,100	29,803	3,798	39,239	5,530	52,739	9,246	72,776	18,135	104,112	42,826
23,200	29,932	3,814	39,409	5,554	52,967	9,286	73,091	18,214	104,563	43,011
23,300	30,061	3,831	39,578	5,578	53,196	9,326	73,406	18,292	105,014	43,197
23,400	30,190	3,847	39,748	5,602	53,424	9,366	73,721	18,371	105,464	43,382
23,500	30,319	3,864	39,918	5,626	53,652	9,406	74,036	18,449	105,915	43,568
23,600	30,448	3,880	40,088	5,649	53,881	9,446	74,351	18,528	106,366	43,753
23,700	30,577	3,897	40,258	5,673	54,109	9,486	74,666	18,606	106,816	43,938
23,800	30,706	3,913	40,428	5,697	54,337	9,526	74,981	18,685	107,267	44,124
23,900	30,835	3,930	40,598	5,721	54,566	9,566	75,296	18,763	107,718	44,309
24,000	**30,964**	**3,946**	**40,767**	**5,745**	**54,794**	**9,606**	**75,611**	**18,842**	**108,169**	**44,495**
24,100	31,093	3,962	40,937	5,769	55,022	9,646	75,926	18,920	108,619	44,680
24,200	31,222	3,979	41,107	5,793	55,250	9,686	76,241	18,999	109,070	44,865
24,300	31,351	3,995	41,277	5,817	55,479	9,726	76,556	19,077	109,521	45,051
24,400	31,480	4,012	41,447	5,841	55,707	9,766	76,872	19,156	109,971	45,236
24,500	31,609	4,028	41,617	5,865	55,935	9,806	77,187	19,234	110,422	45,421
24,600	31,738	4,045	41,787	5,889	56,164	9,846	77,502	19,313	110,873	45,607
24,700	31,867	4,061	41,956	5,913	56,392	9,886	77,817	19,391	111,323	45,792
24,800	31,996	4,077	42,126	5,937	56,620	9,926	78,132	19,470	111,774	45,978
24,900	32,125	4,094	42,296	5,961	56,849	9,966	78,447	19,548	112,225	46,163
25,000	**32,254**	**4,110**	**42,466**	**5,985**	**57,077**	**10,006**	**78,762**	**19,627**	**112,676**	**46,348**

Appendix H: Detailed Forecasts by Location

Figure 1: Forecast Location Map

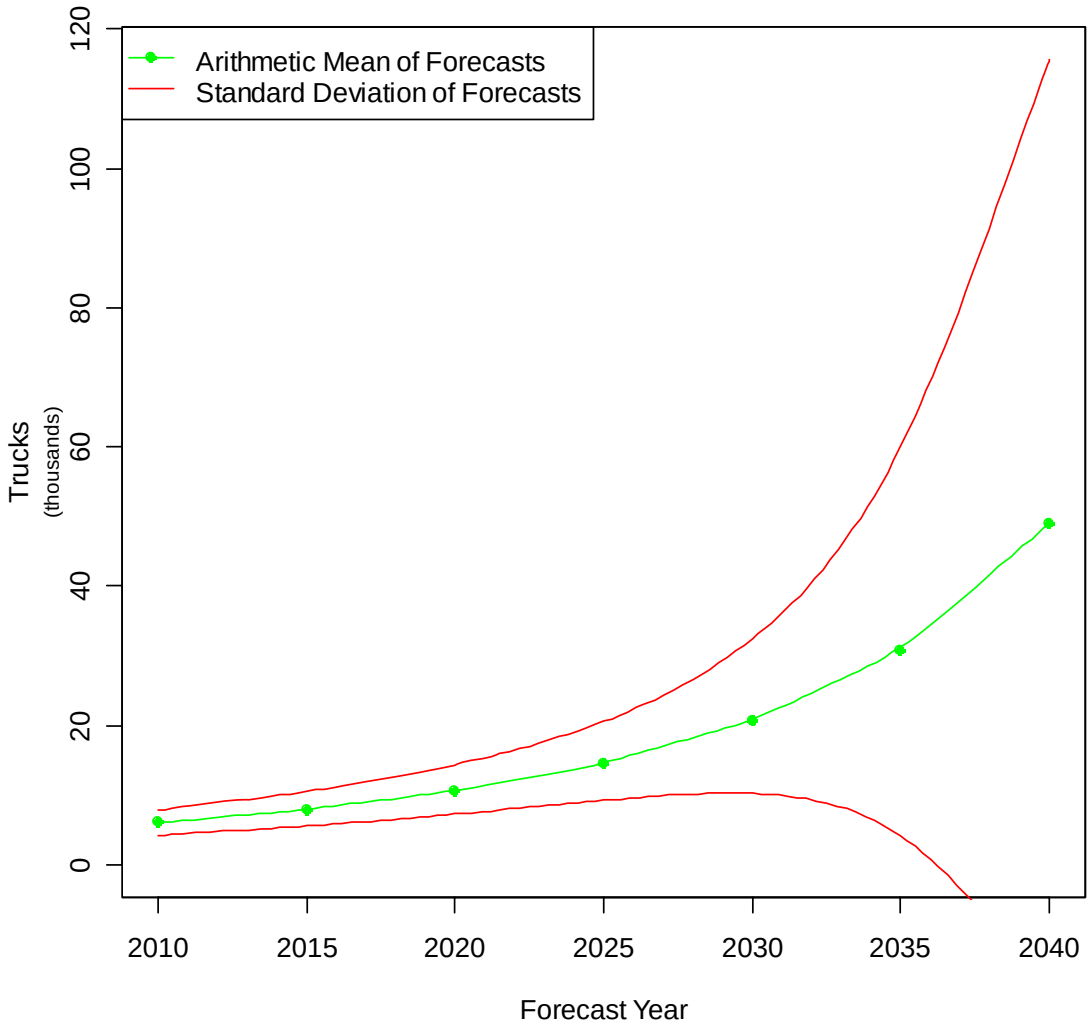


I-80 Corridor QRF Model Truck Forecast

Segment Number: 1
From: IR80E; 1 mi E of the NV-CA State line.
To: IR80E; Between the W Verdi interchange 'Exit 2' & the Verdi interchange 'Exit 3'.

Model Forecast

Forecast Year	Arithmetic Mean	Lower 95% Confidence Interval	Upper 95% Confidence Interval	Standard Deviation
2010	6,038	6,032	6,044	1,818
2015	7,921	7,913	7,929	2,424
2020	10,599	10,588	10,610	3,405
2025	14,540	14,524	14,558	5,246
2030	20,633	20,603	20,663	9,629
2035	30,714	30,642	30,786	22,759
2040	48,962	48,751	49,173	66,693

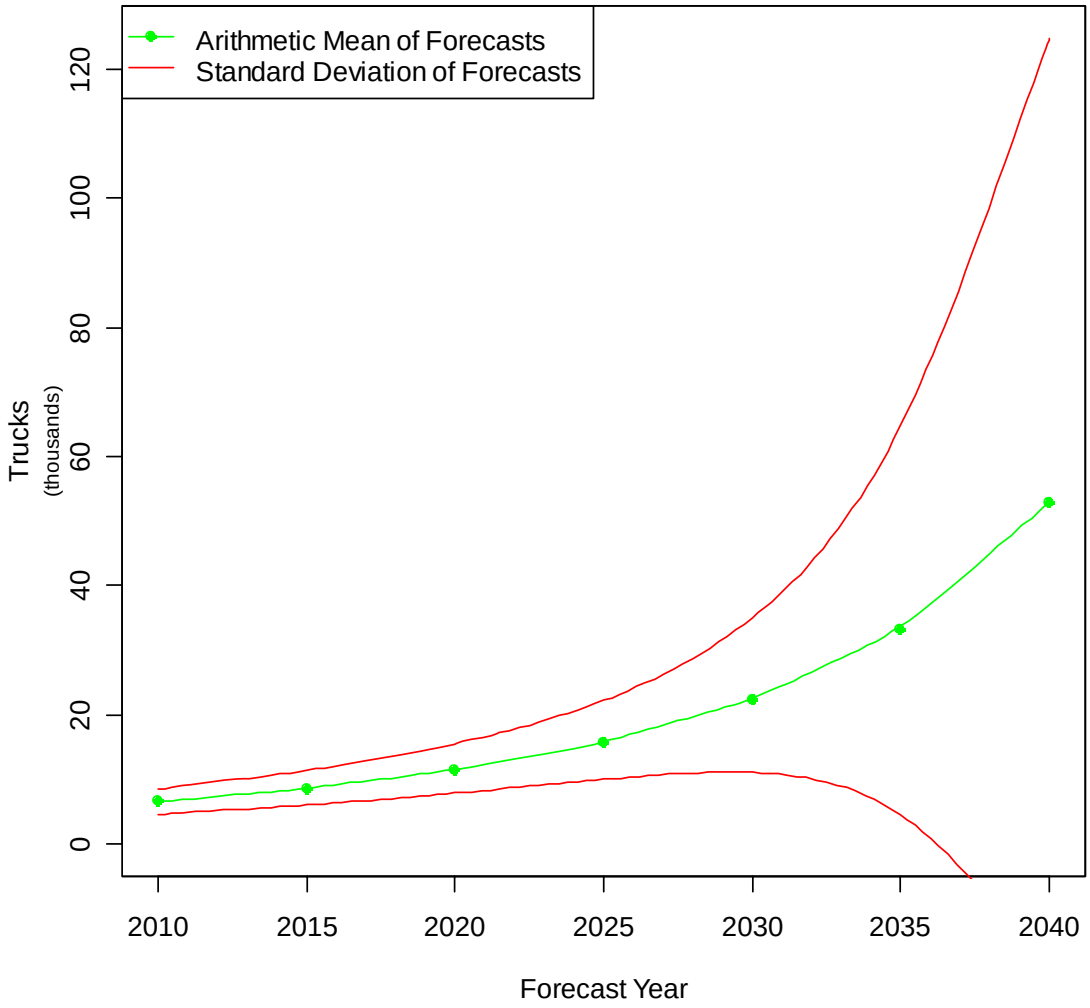


I-80 Corridor QRF Model Truck Forecast

Segment Number: 2
From: IR80E; Between the W Verdi interchange 'Exit 2' & the Verdi interchange 'Exit 3'
To: IR80E; .8 mi W of the Garson Rd interchange 'Exit 4'

Model Forecast

Forecast Year	Arithmetic Mean	Lower 95% Confidence Interval	Upper 95% Confidence Interval	Standard Deviation
2010	6,515	6,509	6,521	1,962
2015	8,546	8,538	8,554	2,615
2020	11,436	11,424	11,448	3,674
2025	15,689	15,671	15,707	5,660
2030	22,262	22,229	22,295	10,389
2035	33,139	33,061	33,217	24,556
2040	52,827	52,599	53,055	71,959

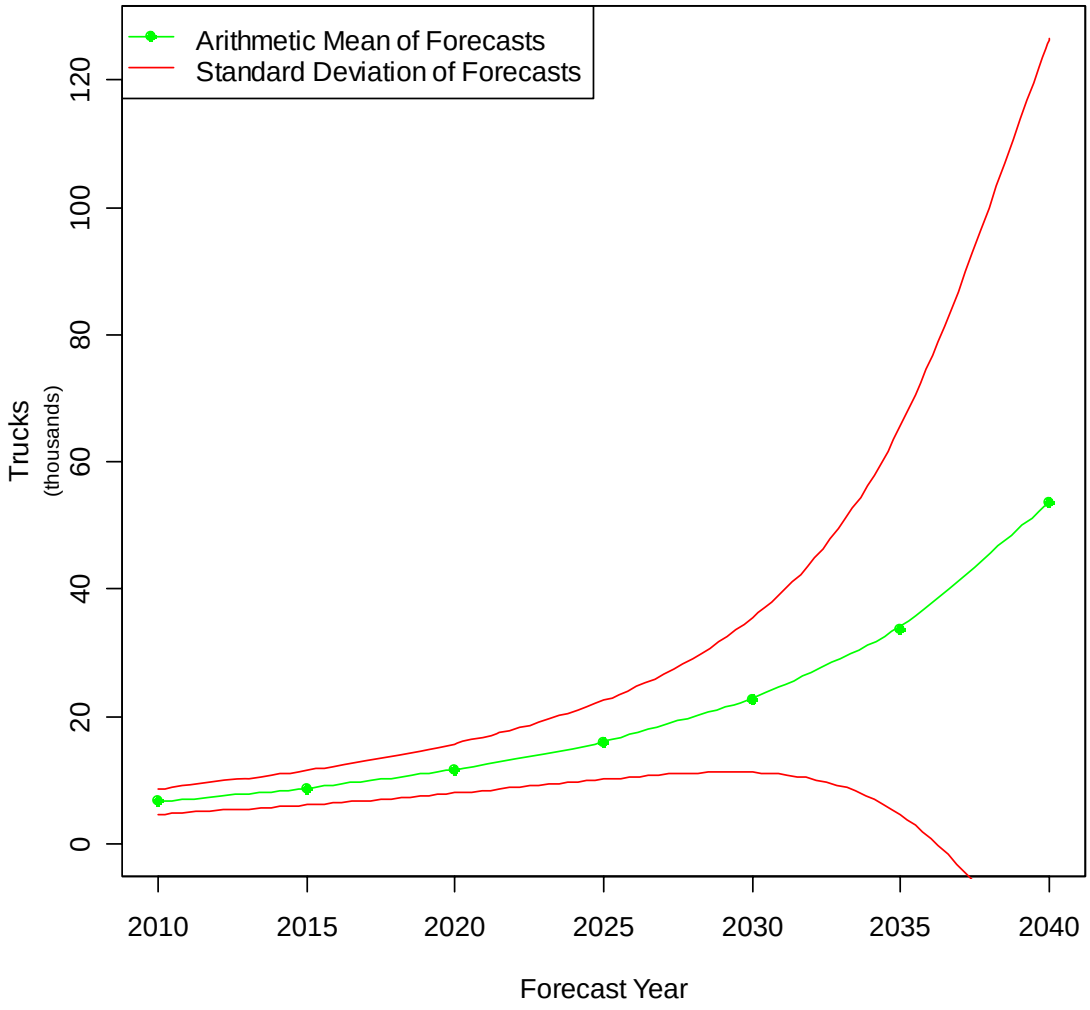


I-80 Corridor QRF Model Truck Forecast

Segment Number: 3
From: IR80E; .8 mi W of the Garson Rd interchange 'Exit 4'
To: IR80E; Between the Garson interchange 'Exit 4' & the E Verdi interchange 'Exit 5'

Model Forecast

Forecast Year	Arithmetic Mean	Lower 95% Confidence Interval	Upper 95% Confidence Interval	Standard Deviation
2010	6,606	6,600	6,612	1,989
2015	8,665	8,657	8,673	2,652
2020	11,595	11,583	11,607	3,725
2025	15,907	15,889	15,925	5,739
2030	22,572	22,539	22,605	10,534
2035	33,600	33,521	33,679	24,898
2040	53,563	53,332	53,794	72,961

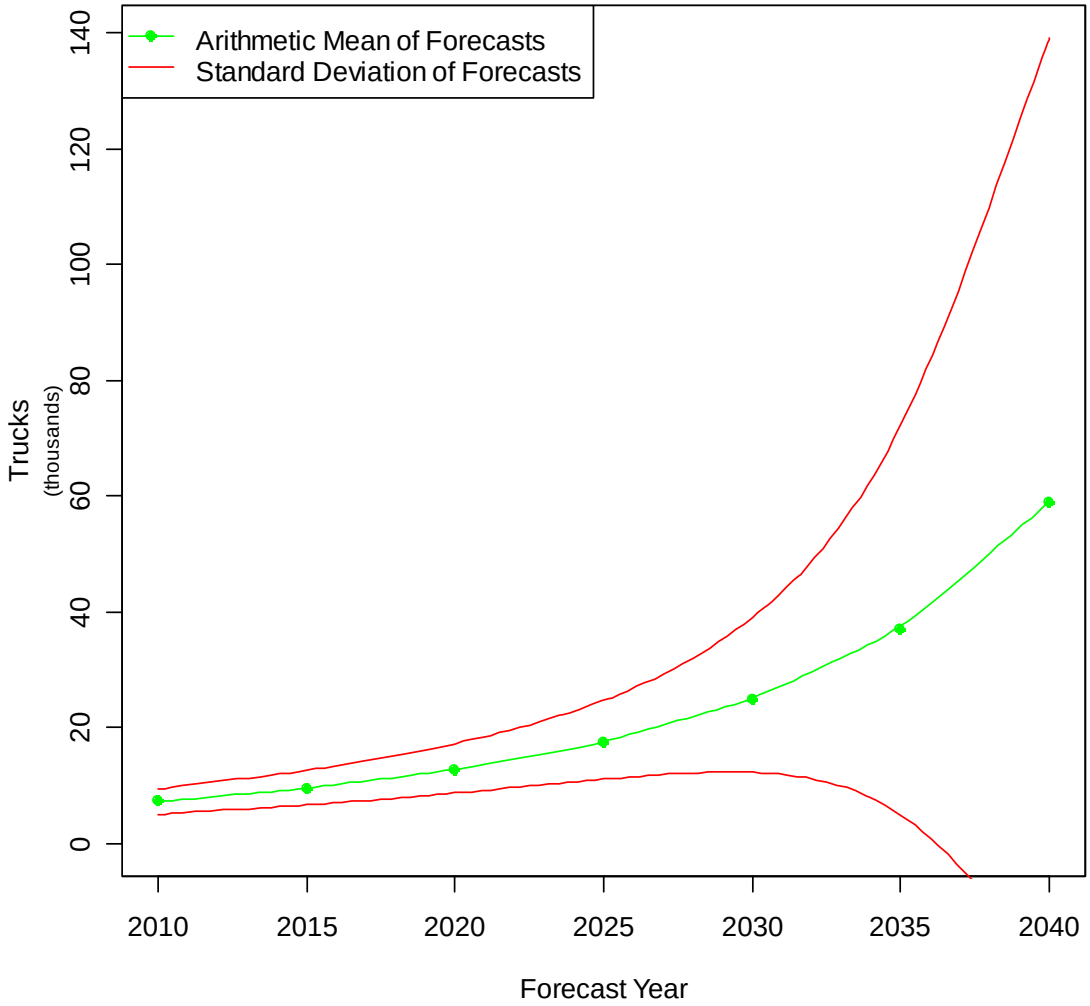


I-80 Corridor QRF Model Truck Forecast

Segment Number: 4
From: IR80E; Between the Garson interchange 'Exit 4' & the E Verdi interchange ' Exit 5'
To: IR80E; Between the East Verdi interchange (Exit 5) and the Mogul interchange (Exit 7)

Model Forecast

Forecast Year	Arithmetic Mean	Lower 95% Confidence Interval	Upper 95% Confidence Interval	Standard Deviation
2010	7,264	7,257	7,271	2,187
2015	9,529	9,520	9,538	2,916
2020	12,751	12,738	12,764	4,097
2025	17,493	17,473	17,513	6,310
2030	24,821	24,784	24,858	11,583
2035	36,949	36,862	37,036	27,380
2040	58,901	58,647	59,155	80,233

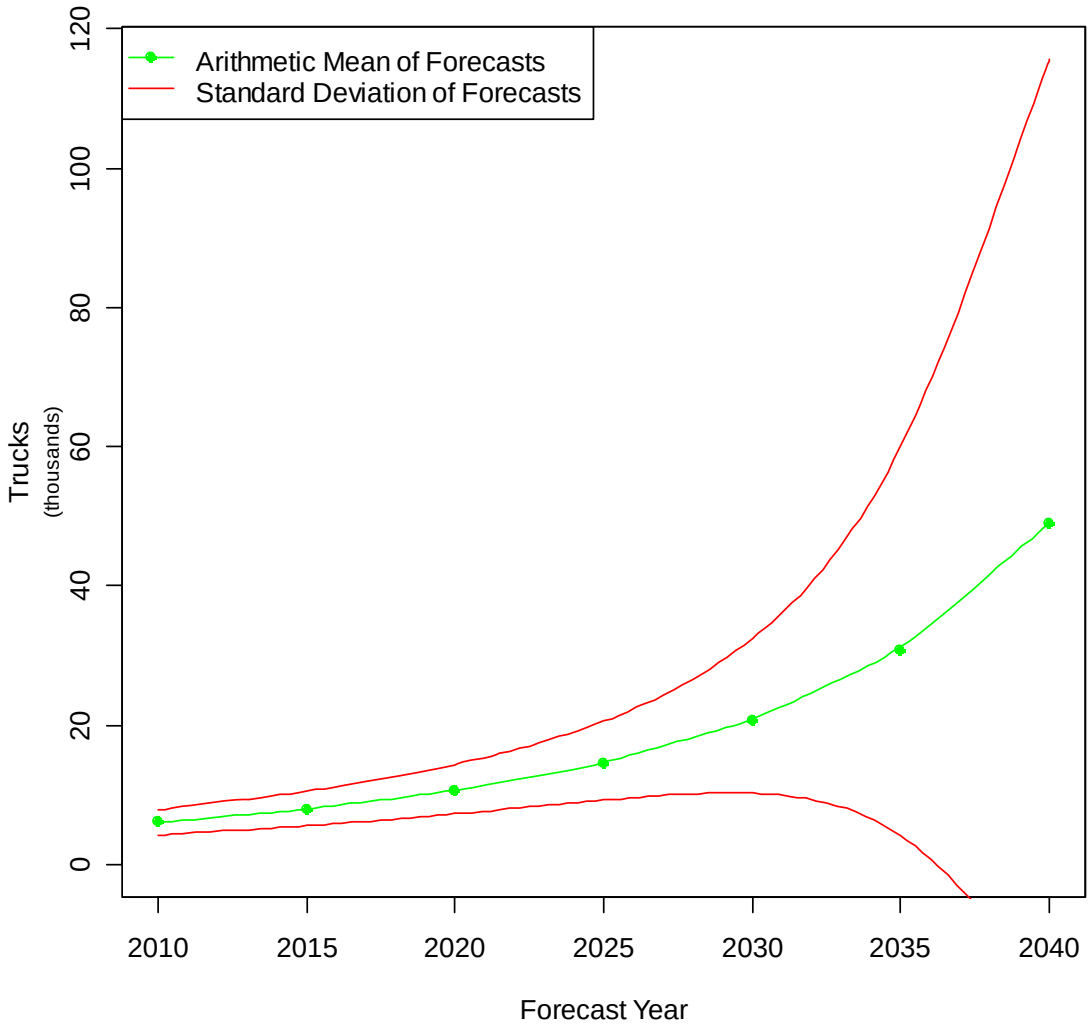


I-80 Corridor QRF Model Truck Forecast

Segment Number: 5
From: IR80E; Between the East Verdi interchange (Exit 5) and the Mogul interchange (Exit 7)
To: IR80E; .1 mi E of the W/B off-ramp of the Mogul interchange 'Exit 7'

Model Forecast

Forecast Year	Arithmetic Mean	Lower 95% Confidence Interval	Upper 95% Confidence Interval	Standard Deviation
2010	8,399	8,391	8,407	2,529
2015	11,018	11,007	11,029	3,372
2020	14,743	14,728	14,758	4,737
2025	20,226	20,203	20,249	7,296
2030	28,700	28,658	28,742	13,393
2035	42,722	42,622	42,822	31,658
2040	68,105	67,812	68,398	92,769

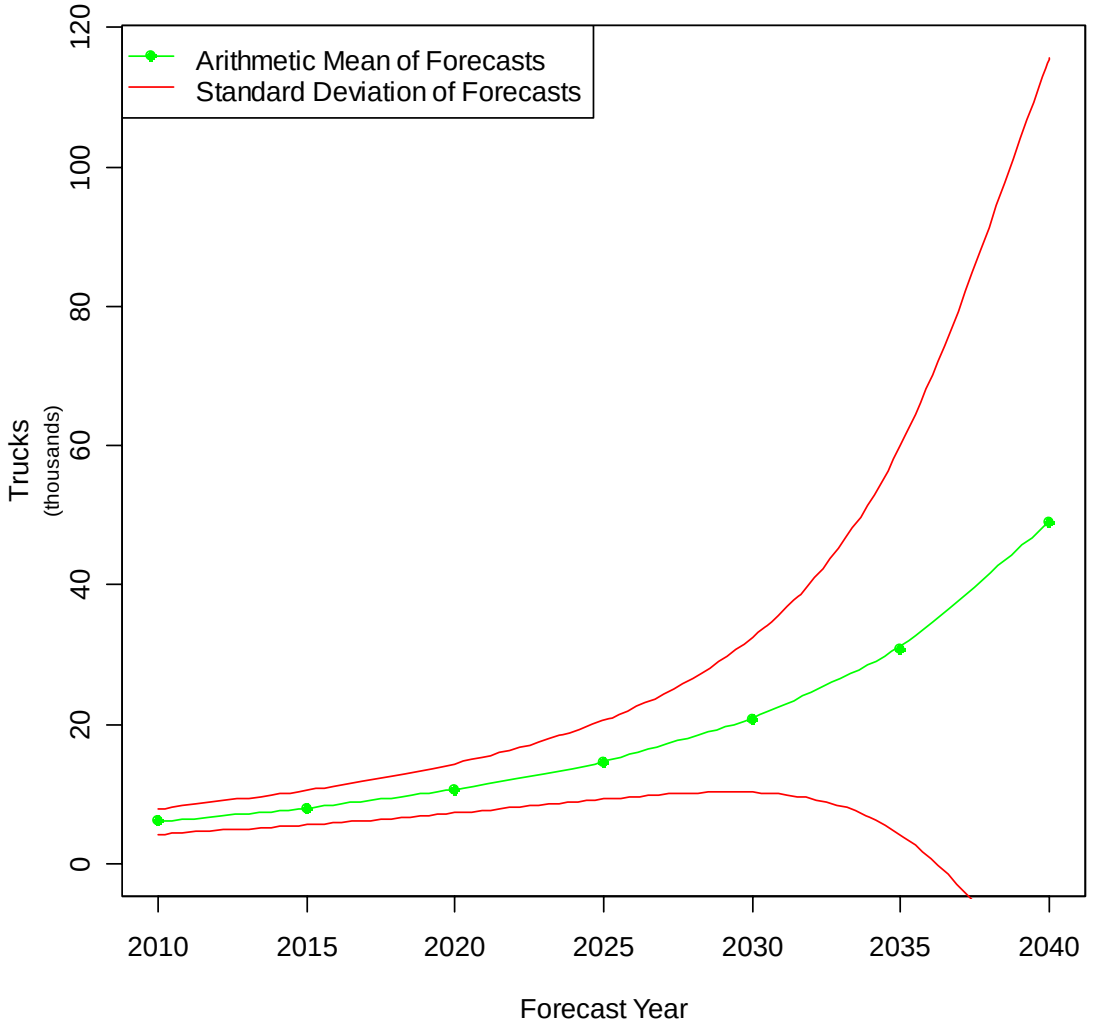


I-80 Corridor QRF Model Truck Forecast

Segment Number: 6
From: IR80E; .1 mi E of the W/B off-ramp of the Mogul interchange 'Exit 7'
To: IR80E; Between the W 4th St interchange 'Exit 8' & the Robb Dr interchange ‘Exit 9’

Model Forecast

Forecast Year	Arithmetic Mean	Lower 95% Confidence Interval	Upper 95% Confidence Interval	Standard Deviation
2010	8,853	8,845	8,861	2,666
2015	11,614	11,603	11,625	3,554
2020	15,540	15,524	15,556	4,993
2025	21,319	21,295	21,343	7,691
2030	30,251	30,206	30,296	14,117
2035	45,032	44,926	45,138	33,369
2040	71,786	71,477	72,095	97,783

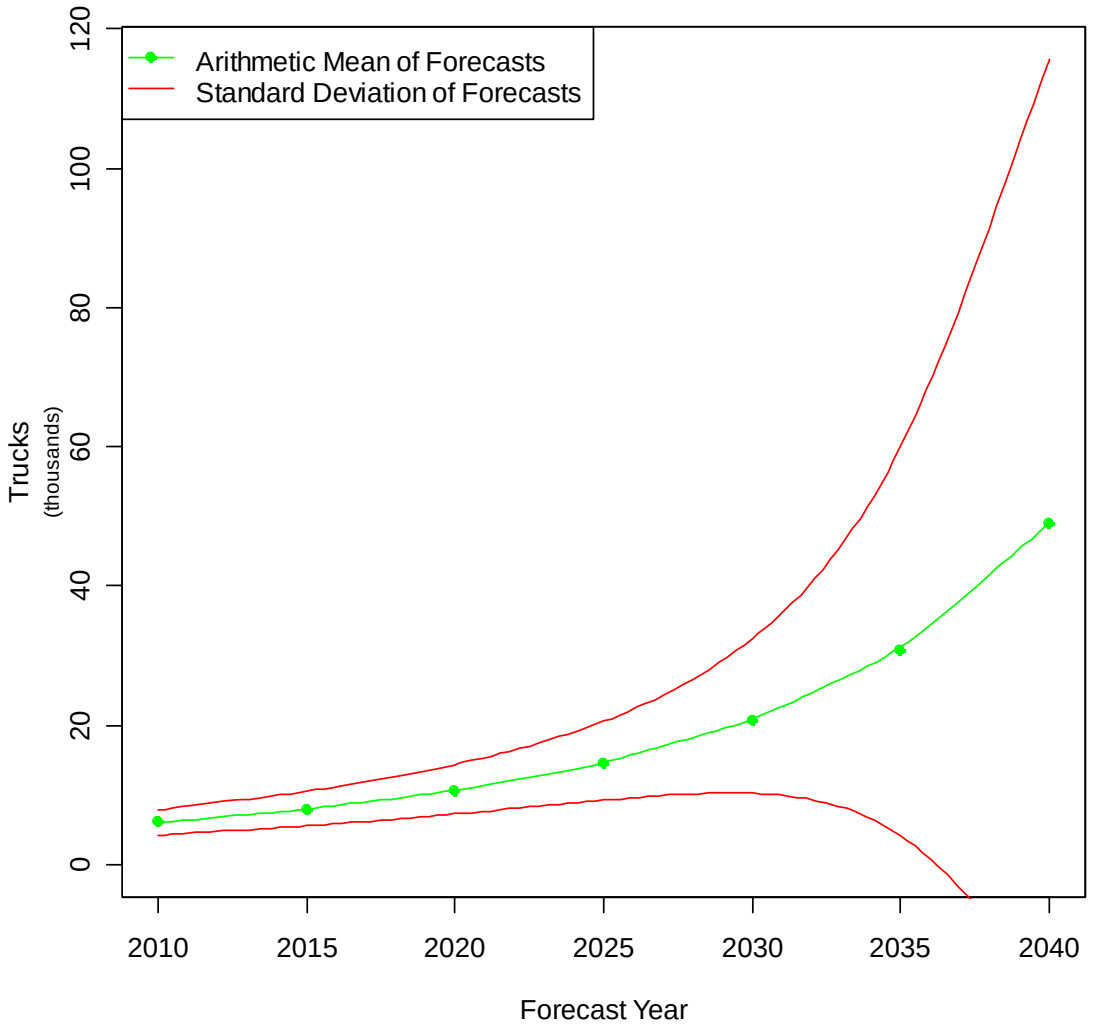


I-80 Corridor QRF Model Truck Forecast

Segment Number: 7
From: IR80E; Between the W4th St interchange 'Exit 8' & the Robb Dr interchange 'Exit 9'
To: IR80E; .5 mi W of the W McCarran Blvd interchange 'Exit 10'

Model Forecast

Forecast Year	Arithmetic Mean	Lower 95% Confidence Interval	Upper 95% Confidence Interval	Standard Deviation
2010	8,286	8,278	8,294	2,495
2015	10,869	10,858	10,880	3,326
2020	14,544	14,529	14,559	4,673
2025	19,952	19,929	19,975	7,198
2030	28,312	28,270	28,354	13,212
2035	42,145	42,046	42,244	31,230
2040	67,184	66,895	67,473	91,515

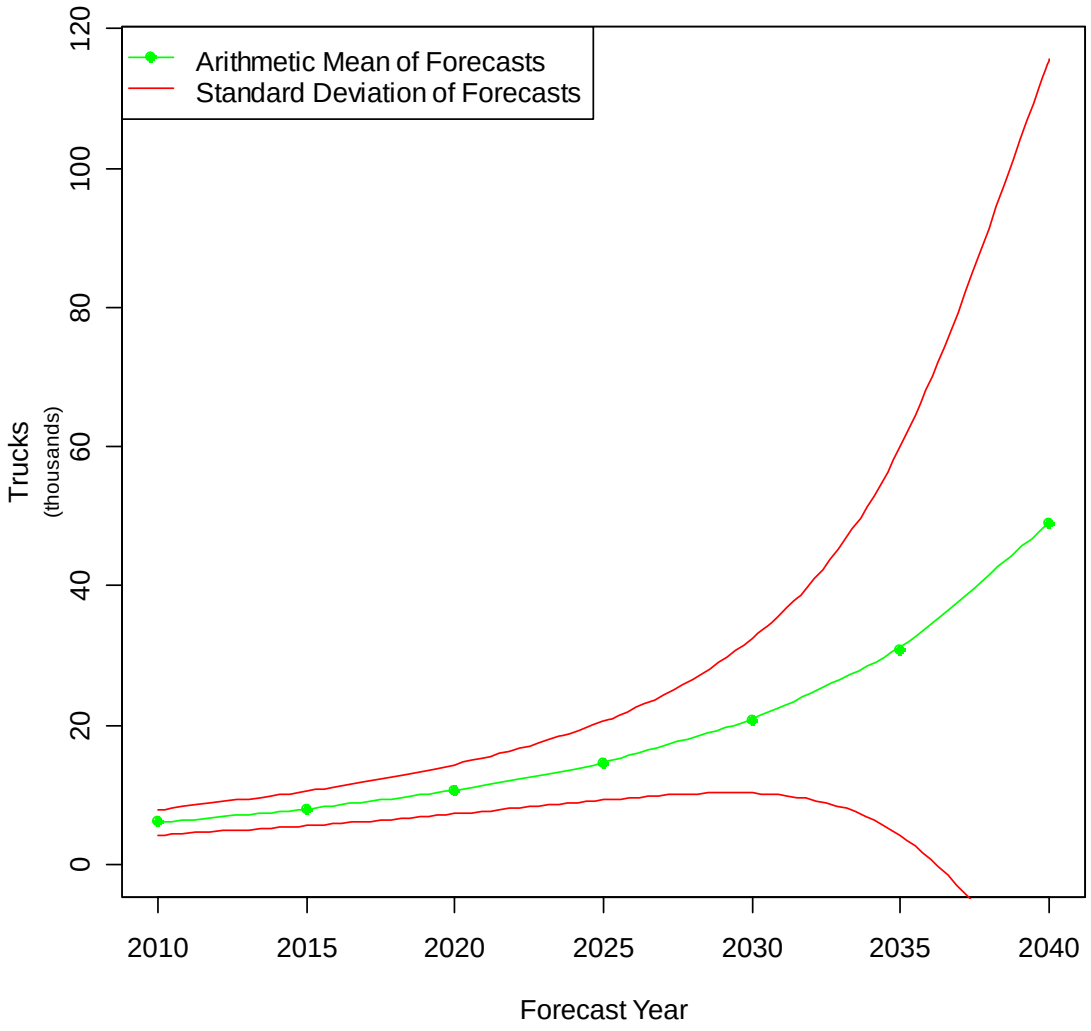


I-80 Corridor QRF Model Truck Forecast

Segment Number: 8
From: IR80E; .5 mi W of the W McCarran Blvd interchange 'Exit 10'
To: IR80E; .5 miles W of the Keystone Av interchange 'Exit 12'

Model Forecast

Forecast Year	Arithmetic Mean	Lower 95% Confidence Interval	Upper 95% Confidence Interval	Standard Deviation
2010	11,464	11,453	11,475	3,452
2015	15,038	15,023	15,053	4,602
2020	20,122	20,102	20,142	6,465
2025	27,605	27,574	27,636	9,959
2030	39,171	39,113	39,229	18,280
2035	58,310	58,173	58,447	43,209
2040	92,953	92,553	93,353	126,617

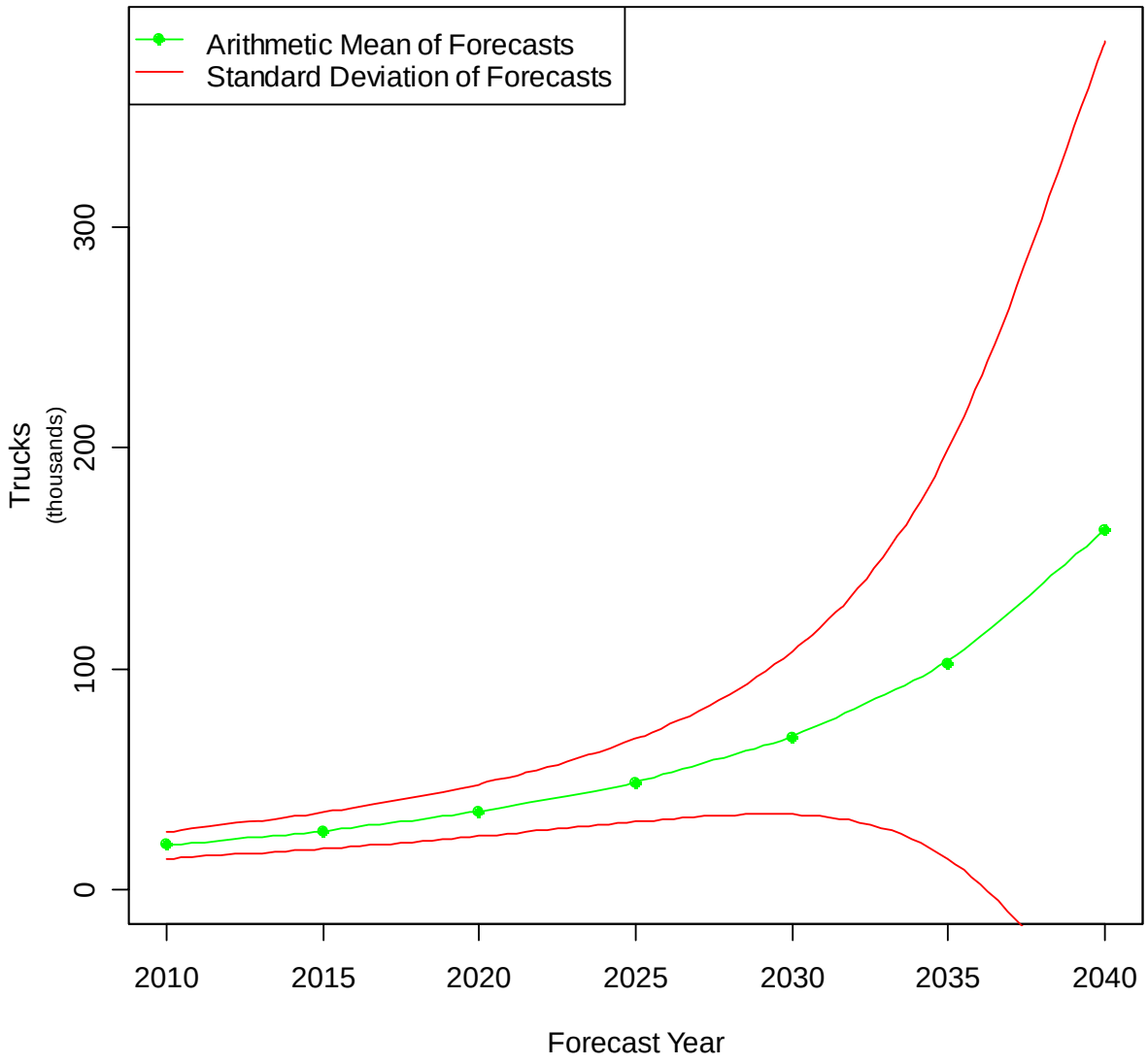


I-80 Corridor QRF Model Truck Forecast

Segment Number: 15
From: I-80E; at Sparks Blvd interchange 'Exit 20'
To:

Model Forecast

Forecast Year	Arithmetic Mean	Lower 95% Confidence Interval	Upper 95% Confidence Interval	Standard Deviation
2010	20,067	20,048	20,086	6,042
2015	26,324	26,299	26,349	8,055
2020	35,224	35,188	35,260	11,317
2025	48,323	48,268	48,378	17,433
2030	68,569	68,468	68,670	31,999
2035	102,072	101,833	102,311	75,637
2040	162,715	162,014	163,416	221,642

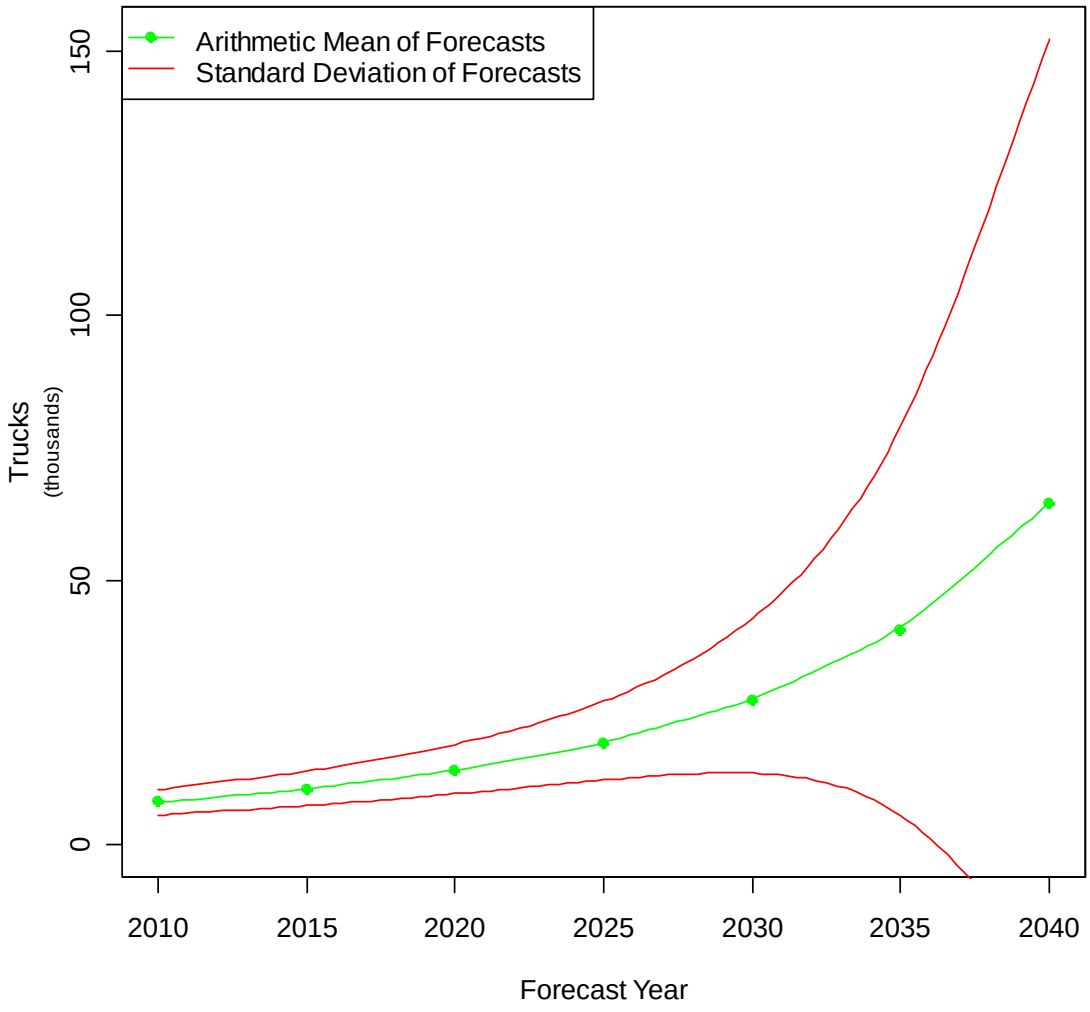


I-80 Corridor QRF Model Truck Forecast

Segment Number: 16
From: IR80E; .9 mi E of Vista Blvd interchange
To: IR80E; .2 mi E of the Lockwood interchange 'Exit 22'

Model Forecast

Forecast Year	Arithmetic Mean	Lower 95% Confidence Interval	Upper 95% Confidence Interval	Standard Deviation
2010	7,945	7,937	7,953	2,392
2015	10,422	10,412	10,432	3,189
2020	13,946	13,932	13,960	4,481
2025	19,132	19,110	19,154	6,902
2030	27,148	27,108	27,188	12,669
2035	40,413	40,318	40,508	29,947
2040	64,423	64,145	64,701	87,754

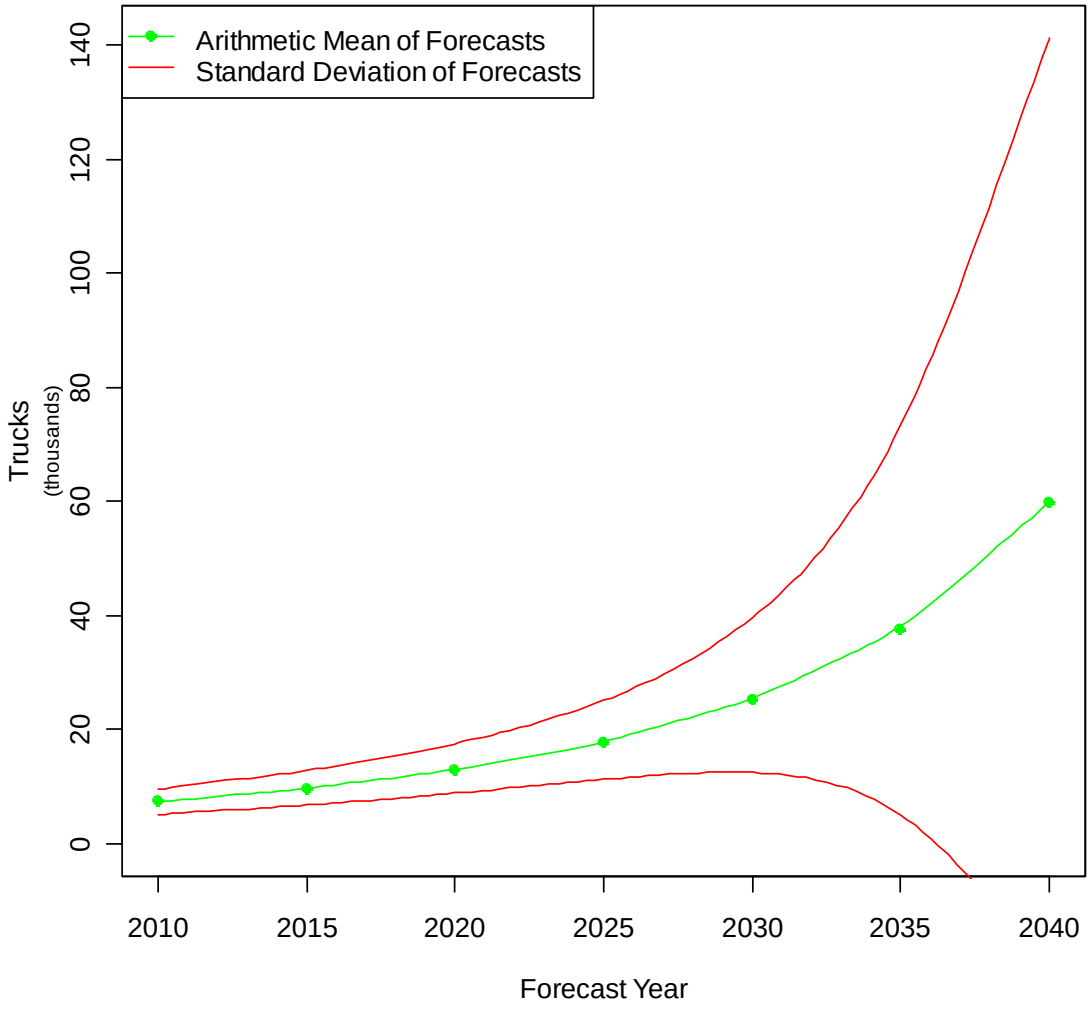


I-80 Corridor QRF Model Truck Forecast

Segment Number: 17
From: IR80E; .2 mi E of the Lockwood interchange 'Exit 22'
To: IR80E; .5 miles E of Mustang interchange 'Exit 23'

Model Forecast

Forecast Year	Arithmetic Mean	Lower 95% Confidence Interval	Upper 95% Confidence Interval	Standard Deviation
2010	7,378	7,371	7,385	2,221
2015	9,678	9,669	9,687	2,962
2020	12,950	12,937	12,963	4,161
2025	17,766	17,746	17,786	6,409
2030	25,209	25,172	25,246	11,764
2035	37,526	37,438	37,614	27,808
2040	59,822	59,564	60,080	81,486

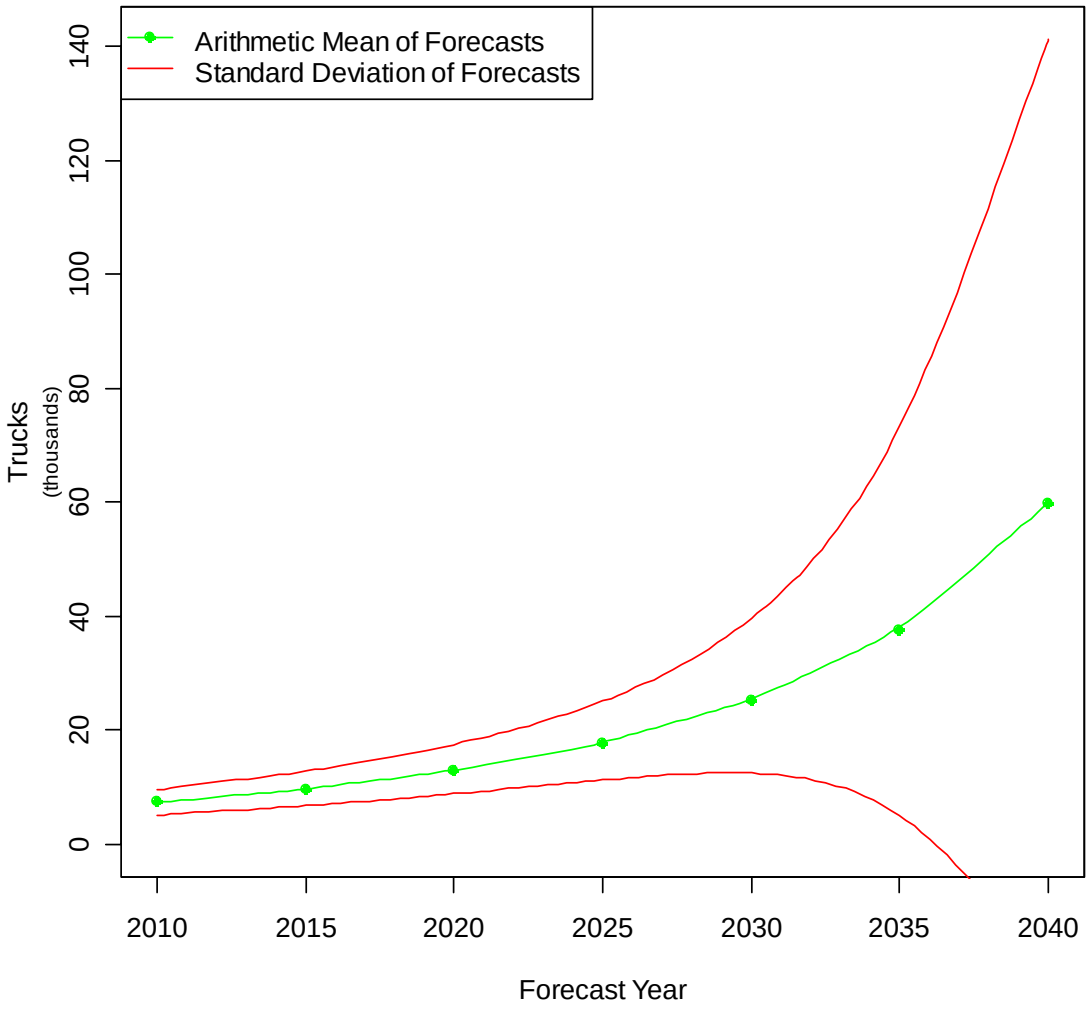


I-80 Corridor QRF Model Truck Forecast

Segment Number: 18
From: IR80E; .5 miles E of Mustang interchange 'Exit 23'
To: IR80E; 2 mi E of the Patrick interchange 'Exit 28'

Model Forecast

Forecast Year	Arithmetic Mean	Lower 95% Confidence Interval	Upper 95% Confidence Interval	Standard Deviation
2010	7,378	7,371	7,385	2,221
2015	9,678	9,669	9,687	2,962
2020	12,950	12,937	12,963	4,161
2025	17,766	17,746	17,786	6,409
2030	25,209	25,172	25,246	11,764
2035	37,526	37,438	37,614	27,808
2040	59,822	59,564	60,080	81,486

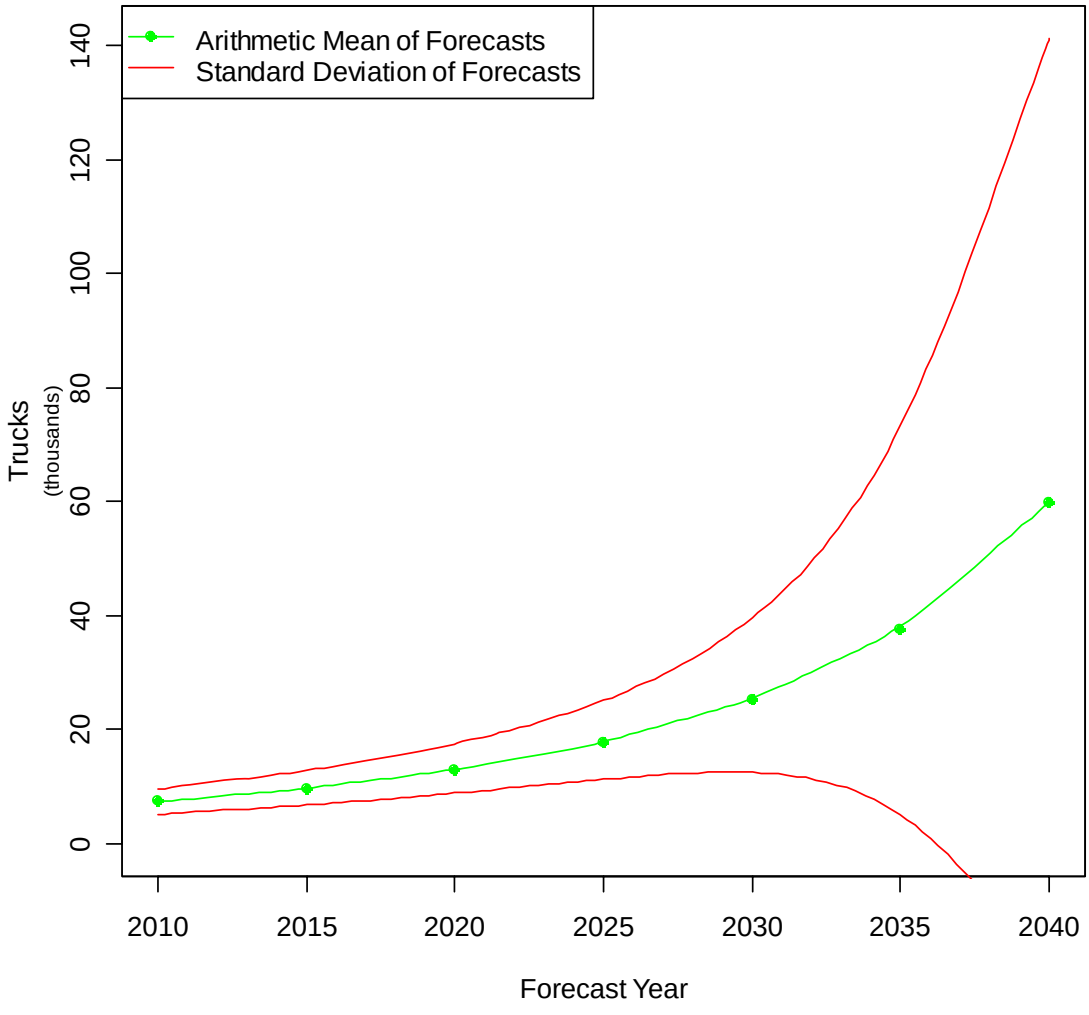


I-80 Corridor QRF Model Truck Forecast

Segment Number: 19
From: IR80E; 2 mi E of the Patrick interchange 'Exit 28'
To: IR80E; Between the Thisbe-Derby Dam interchange 'Exit 36' & the Orchard interchange 'Exit 38'

Model Forecast

Forecast Year	Arithmetic Mean	Lower 95% Confidence Interval	Upper 95% Confidence Interval	Standard Deviation
2010	7,378	7,371	7,385	2,221
2015	9,678	9,669	9,687	2,962
2020	12,950	12,937	12,963	4,161
2025	17,766	17,746	17,786	6,409
2030	25,209	25,172	25,246	11,764
2035	37,526	37,438	37,614	27,808
2040	59,822	59,564	60,080	81,486

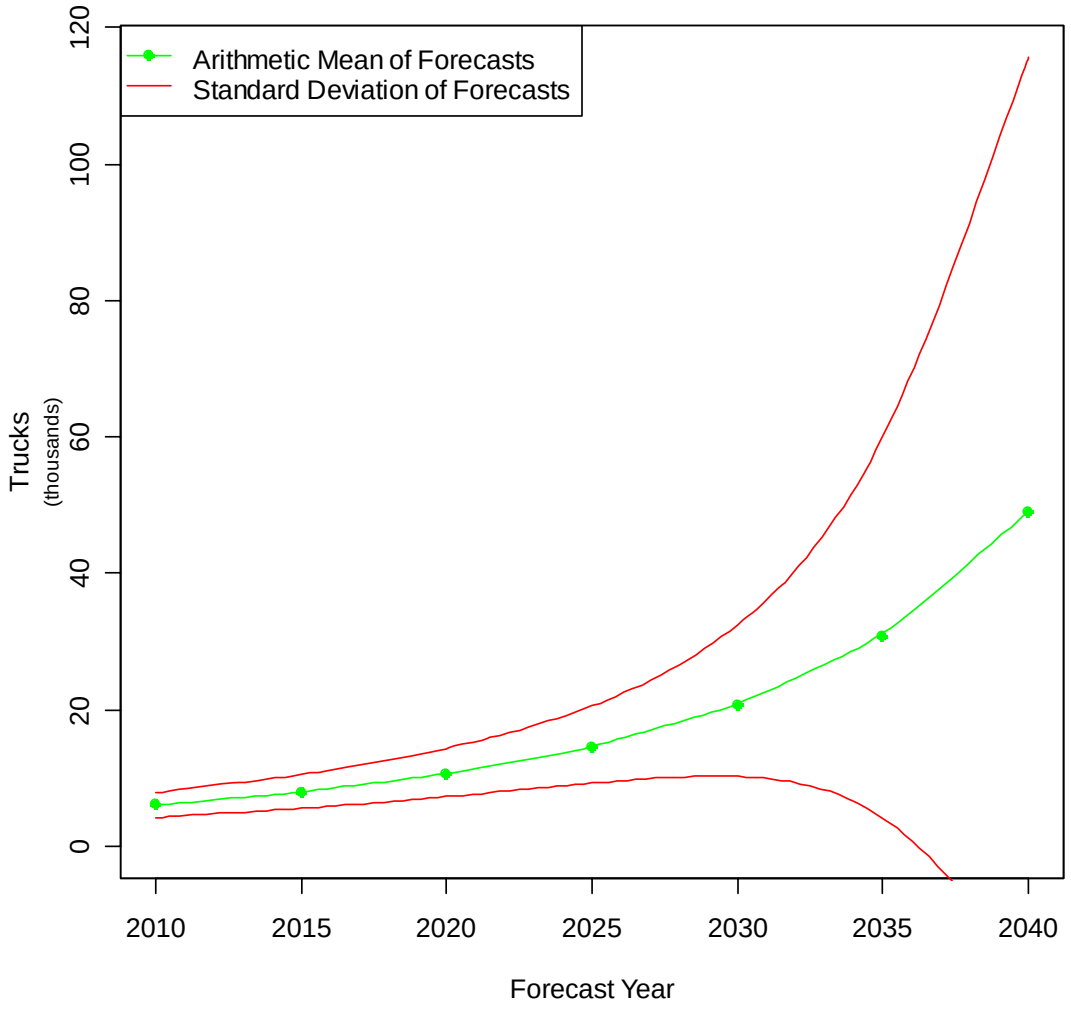


I-80 Corridor QRF Model Truck Forecast

Segment Number: 20
From: IR80E; Between the Thisbe-Derby Dam Intch 'Exit 36' & the Orchard interchange 'Exit 38'
To: IR80E; Between the Orchard interchange 'Exit 38' & the Painted Rock interchange 'Exit 40'

Model Forecast

Forecast Year	Arithmetic Mean	Lower 95% Confidence Interval	Upper 95% Confidence Interval	Standard Deviation
2010	5,925	5,919	5,931	1,784
2015	7,772	7,764	7,780	2,378
2020	10,400	10,389	10,411	3,341
2025	14,267	14,251	14,283	5,147
2030	20,245	20,215	20,275	9,448
2035	30,136	30,065	30,065	22,332
2040	48,041	47,834	47,834	65,440

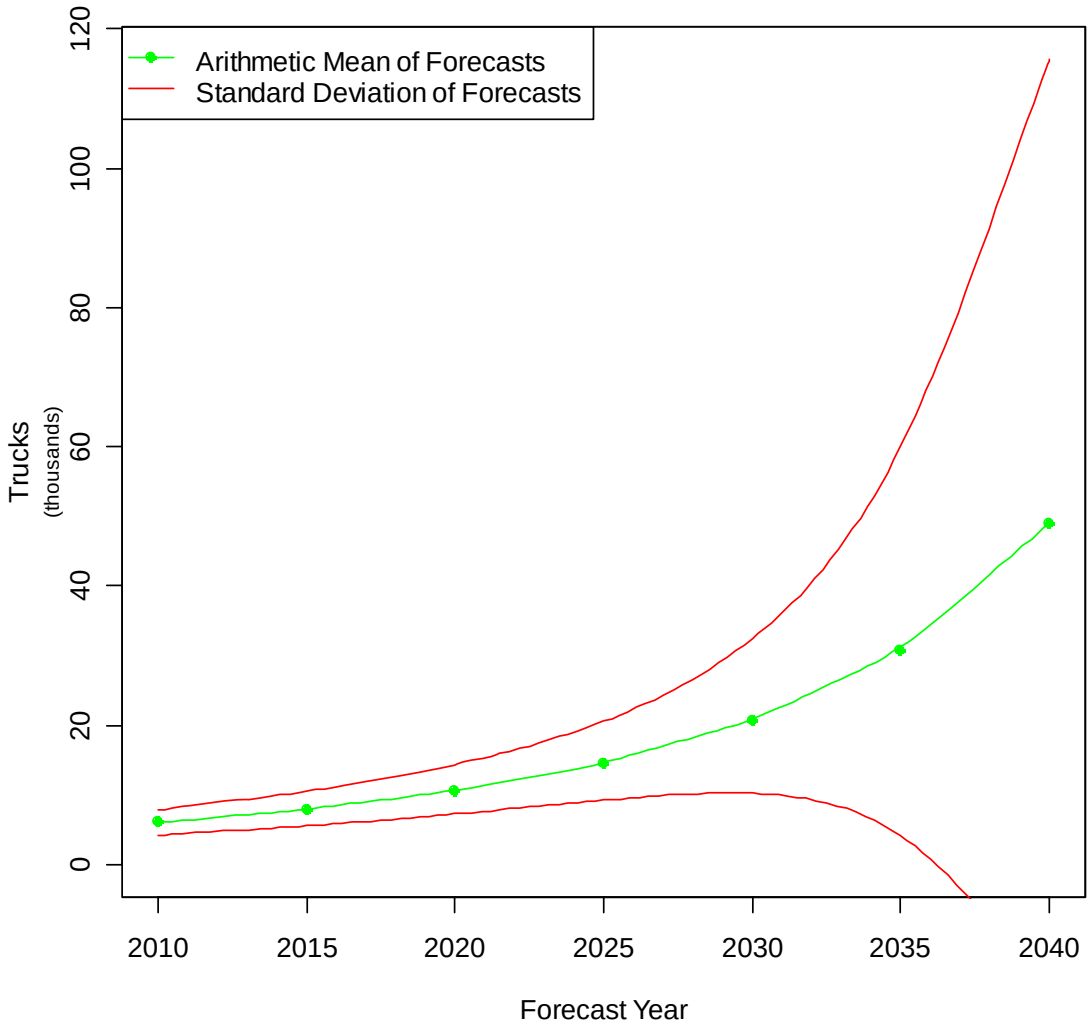


I-80 Corridor QRF Model Truck Forecast

Segment Number: 21
From: IR80E; Between the Orchard interchange 'Exit 38' & the Painted Rock interchange 'Exit 40'
To: IR80E; 1 mi W of the W Wadsworth interchange 'Exit 43'

Model Forecast

Forecast Year	Arithmetic Mean	Lower 95% Confidence Interval	Upper 95% Confidence Interval	Standard Deviation
2010	6,038	6,032	6,044	1,818
2015	7,921	7,913	7,929	2,424
2020	10,599	10,588	10,610	3,405
2025	14,540	14,524	14,558	5,246
2030	20,633	20,603	20,663	9,629
2035	30,714	30,642	30,786	22,759
2040	48,962	48,751	49,173	66,693

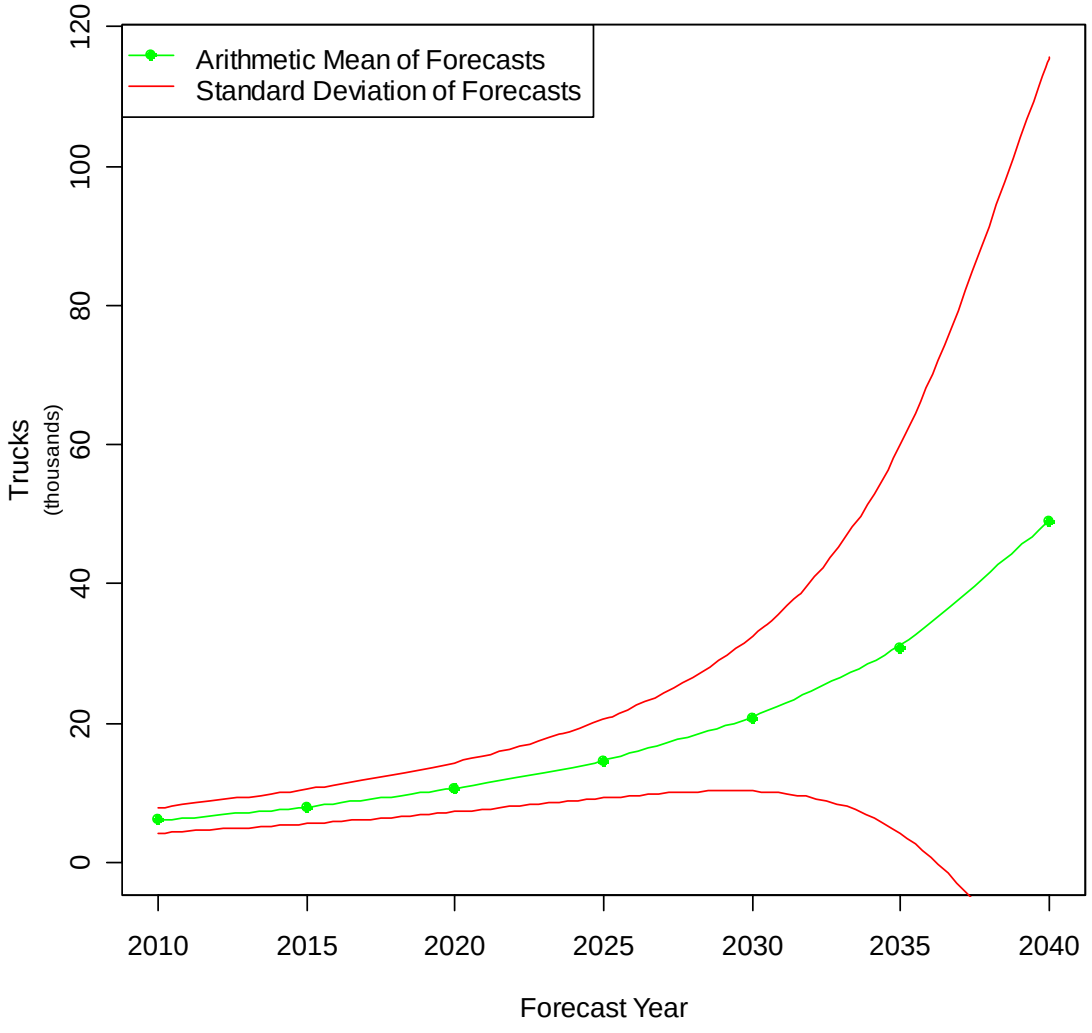


I-80 Corridor QRF Model Truck Forecast

Segment Number: 22
From: IR80E; 1 mi W of the W Wadsworth interchange 'Exit 43'
To: IR80E; E of the W Wadsworth interchange 'Exit 43' .9 mi E of exit 43

Model Forecast

Forecast Year	Arithmetic Mean	Lower 95% Confidence Interval	Upper 95% Confidence Interval	Standard Deviation
2010	6,038	6,032	6,044	1,818
2015	7,921	7,913	7,929	2,424
2020	10,599	10,588	10,610	3,405
2025	14,540	14,524	14,558	5,246
2030	20,633	20,603	20,663	9,629
2035	30,714	30,642	30,786	22,759
2040	48,962	48,751	49,173	66,693

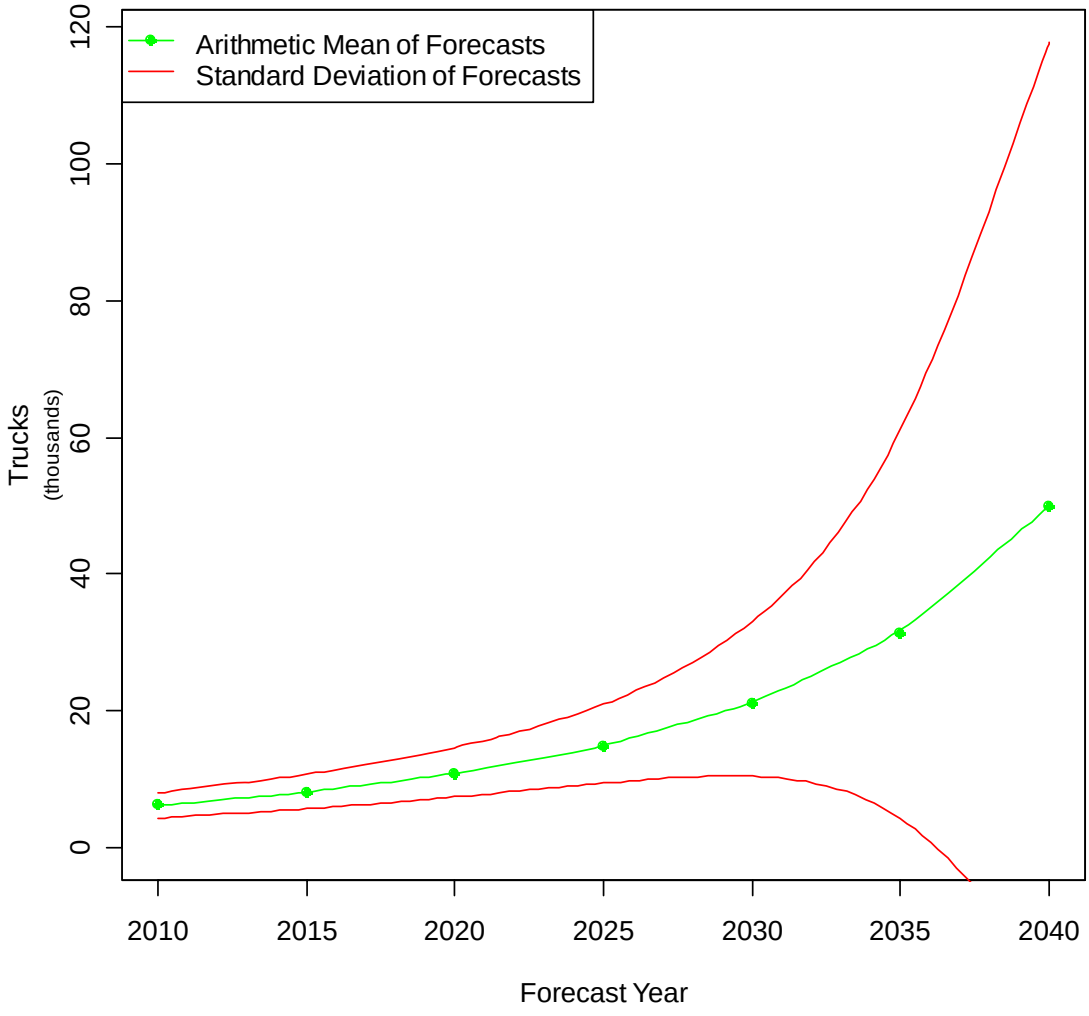


I-80 Corridor QRF Model Truck Forecast

Segment Number: 23
From: IR80E; E of the W Wadsworth interchange 'Exit 43'
To: .9 mi E of exit 43

Model Forecast

Forecast Year	Arithmetic Mean	Lower 95% Confidence Interval	Upper 95% Confidence Interval	Standard Deviation
2010	6,152	6,146	6,158	1,852
2015	8,070	8,062	8,078	2,469
2020	10,798	10,787	10,809	3,469
2025	14,814	14,797	14,831	5,344
2030	21,021	20,990	21,052	9,810
2035	31,291	31,218	31,364	23,187
2040	49,882	49,667	50,097	67,947



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