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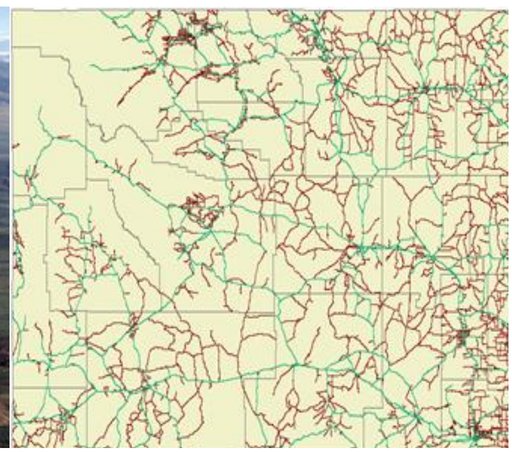

WYOMING LOW-VOLUME ROADS TRAFFIC VOLUME ESTIMATION

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FORWARD

The purpose of this study is to develop low-cost and effective traffic volume prediction models for rural low-volume roads in Wyoming. The models were developed to support a wide variety of design, planning, and management functions on both state and county road networks.

A literature review of existing methods of traffic volume estimation in other states was carried out. Two main methods were identified - regression models and travel demand models. This study developed the two model types for Wyoming and recommended the best model for implementation. Regression modeling utilized two techniques to develop two models, a linear regression model and a logistic regression model. Each of the regression models was developed using data from 13 randomly selected counties in Wyoming and nine counties were used to validate the models. The linear regression model had an R^2 of 64 percent and was validated as a good predictor of traffic volumes across Wyoming. The logistic regression model was also validated and shown to have a prediction accuracy ranging from 78 to 89 percent. The travel demand model was developed using standard trip rates in the NCHRP Report 365 and implemented for four south eastern counties in Wyoming. The model was then validated by comparing 100 actual traffic volumes in the four counties to those generated by the model. The validation indicated %RMSE and R^2values of 50.4 percent and 74 percent respectively. The report concludes by recommending the travel demand model for implementation due to its higher accuracy.

State departments of transportation (DOTs), local transportation administrators along with other stakeholders concerned with transportation planning are among the audiences interested in this report.

The study was submitted and accepted for presentation at the Transportation Research Board 94th Annual Meeting.

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16. Abstract:

Low-volume roads are excluded from regular traffic counts except on a need to know basis. But needs for traffic volume data on low-volume roads in road infrastructure management, safety, and air quality analysis have necessitated regular traffic volume estimates. This study developed traffic volume estimation models for low-volume roads in Wyoming. A review of existing estimation models was carried out. Two main model types were identified - regression models and Travel Demand Models (TDMs). The study developed the two model types and recommended the best model for implementation. Two regression models were developed, a linear and a logistic regression model. Each of the regression models was developed using data from 13 randomly selected counties and nine counties were used in model validation. The linear regression model had an R^2 of 64 percent and was verified to be a good predictor of traffic volumes across Wyoming. The logistic regression model validation indicated a prediction accuracy ranging from 78 to 89 percent. The TDM was developed using standard factors and trip rates in the NCHRP Report 365. The TDM was implemented for four south eastern counties in Wyoming. The model was then validated and calibrated by comparing actual traffic volumes to those generated by the model. The calibrated model had a Percentage Root Mean Square Error and an R^2 values of 50 and 74 percent respectively. The report compared the three models with respect to cost-effectiveness, ease of use, and accuracy and recommended the TDM for implementation. The regression models were recommended for applications requiring quick traffic volume estimations and for which lower levels of accuracy are acceptable.

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Metric Conversion Table

SI* (MODERN METRIC) CONVERSION FACTORS

Symbol	When You Know	Multiply By	To Find	Symbol
		LENGTH		
in	inches	25.4	millimeters	mm
ft	feet	0.305	meters	m
yd	yards	0.914	meters	m
mi	miles	1.61	kilometers	km
		AREA		
in^2	square inches	645.2	square millimeters	mm^2
ft^2	square feet	0.093	square meters	m^2
yd^2	square yard	0.836	square meters	m^2
ac	acres	0.405	hectares	ha
mi^2	square miles	2.59	square kilometers	km^2
		VOLUME		
fl oz	fluid ounces	29.57	milliliters	mL
gal	gallons	3.785	liters	L
ft^3	cubic feet	0.028	cubic meters	m^3
yd^3	cubic yards	0.765	cubic meters	m^3
	NOTE: volumes greater than 1000 L shall be shown in m^3			
		MASS		
oz	ounces	28.35	grams	g
lb	pounds	0.454	kilograms	kg
T	short tons (2000 lb)	0.907	megagrams (or "metric ton")	Mg (or "t")
		TEMPERATURE (exact degrees)		
°F	Fahrenheit	5 (F-32)/9 or (F-32)/1.8	Celsius	°C
		ILLUMINATION		
fc	foot-candles	10.76	lux	lx
fl	foot-Lamberts	3.426	candela/m^2	cd/m^2
		FORCE and PRESSURE or STRESS		
lbf	poundforce	4.45	newtons	N
lbf/in^2	poundforce per square inch	6.89	kilopascals	kPa

Symbol	When You Know	Multiply By	To Find	Symbol
		LENGTH		
mm	millimeters	0.039	inches	in
m	meters	3.28	feet	ft
m	meters	1.09	yards	yd
km	kilometers	0.621	miles	mi
		AREA		
mm^2	square millimeters	0.0016	square inches	in^2
m^2	square meters	10.764	square feet	ft^2
m^2	square meters	1.195	square yards	yd^2
ha	hectares	2.47	acres	ac
km^2	square kilometers	0.386	square miles	mi^2
		VOLUME		
mL	milliliters	0.034	fluid ounces	fl oz
L	liters	0.264	gallons	gal
m^3	cubic meters	35.314	cubic feet	ft^3
m^3	cubic meters	1.307	cubic yards	yd^3
		MASS		
g	grams	0.035	ounces	oz
kg	kilograms	2.202	pounds	lb
Mg (or "t")	megagrams (or "metric ton")	1.103	short tons (2000 lb)	T
		TEMPERATURE (exact degrees)		
°C	Celsius	1.8C+32	Fahrenheit	°F
		ILLUMINATION		
lx	lux	0.0929	foot-candles	fc
cd/m^2	candela/m^2	0.2919	foot-Lamberts	fl
		FORCE and PRESSURE or STRESS		
N	newtons	0.225	poundforce	lbf
kPa	kilopascals	0.145	poundforce per square inch	lbf/in^2

*SI is the symbol for the International System of Units. Appropriate rounding should be made to comply with Section 4 of ASTM E380.

(Revised March 2003)

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EXECUTIVE SUMMARY

Local roads comprise almost 70 percent of the total mileage of roads in the United States. Historically, low-volume local roads are excluded from regular traffic counts except on a need to know basis. However, the needs for traffic volume data on these low-volume roads in exercises such as road infrastructure management, safety, and air quality analysis have created the necessity for regular and accurate traffic volume estimates.

The literature indicates that numerous studies have been undertaken on local roads to develop models for estimating traffic volumes. These studies mainly utilized regression methods and/or travel demand modeling methods. The models were mostly developed for high population areas or for roads that have higher traffic volumes compared to those in rural Wyoming. This report describes methodologies utilized in developing a travel demand model and two regression models for low-volume roads in the State of Wyoming.

The regression models were a linear regression model and a logistic regression model. They were developed with traffic volume, demographic and socioeconomic data from 13 randomly selected counties across Wyoming. Data from nine more counties were used to validate the model for consistency and accuracy in estimations.

The linear regression model was developed to estimate the Average Daily Traffic (ADT) of a roadway using pavement type (categorized into paved or unpaved), whether the road had direct access to a highway, population in the census block group where the road count is desired, and land use (categorized into pastureland, cropland, industrial land, and subdivisions). The R^2 value of the model was 64 percent and the model validation showed the model predictions to correlate well with the actual traffic volumes. Pearson's product moment correlation coefficient (Pearson's r) was determined to be 0.69 for the modeling dataset and 0.61 for the validation dataset.

The logistic regression model consists five equations that utilize land use, pavement type, total household, employment, employment density, per cap income density, house density, and population density to predict the odds of a road's traffic volume falling within five traffic volume thresholds. The odds of belonging to each of the five thresholds is determined by the five equations and a final equation is used to convert the odds into probabilities. Validation of this model indicated the prediction accuracies ranged from 78 to 89 percent.

The travel demand model was developed using standard trip rates from NCHRP Report 365. The model was implemented for four south eastern counties in Wyoming and then validated by comparing 100 actual traffic volumes in the four counties to those generated by the model. The validation indicated acceptable Percentage Root Mean Square Error (%RMSE) and R^2 values of 50 and 74 percent respectively.

The report compared the three models with respect to ease of use, cost-effectiveness, and prediction accuracy to make recommendations for implementation. The report recommended the travel demand model for implementation due to the higher level of accuracy associated with its predictions. The regression models were recommended for applications requiring quick traffic volume estimations and for which lower levels of accuracy are acceptable.

The report recommends a second phase to expand the travel demand model for the remaining 19 counties. The second phase will develop a recommendation for delineating transportation analysis zones for low population rural areas. Transportation analysis zones and network data files will be built and used to implement the model for each county. The model will then be verified and calibrated for implementation by the Wyoming Department of Transportation (WYDOT) and other agencies.

CHAPTER 1. INTRODUCTION

Background

Historically, transportation planning has been led by Metropolitan Planning Organizations (MPOs). Much of this effort has been directed towards reducing traffic congestion and providing adequate capacity. More recently, there have been increased emphasis on estimating traffic on low-volume roads driven at least in part by safety and air quality concerns.

In addition to the two motivating factors necessitating low-volume road traffic estimation, it has been widely recognized that traffic fatality rates on rural roads are higher than on other roads. With better estimates of traffic on low-volume county and secondary state roads, better targeted and more effective safety improvement efforts can be made. In broader terms, better estimates of traffic volumes on low-volume roads will allow for more effective planning and more efficient operations.

Better traffic models on lower volume roads will allow more information to be obtained while using less resources. The models would allow for more cost effective management of both county and secondary state roads. Traffic originating on county roads usually end up on state highways. The ability to apply comprehensive traffic models to the state's lower volume roads will provide a better understanding of traffic on our state's low-volume rural roads, thereby allowing for more effective planning. More effective planning will lead to a safer and more efficient statewide transportation network.

Recent advances in Geographic Information System (GIS) software's analytical capabilities allow for more sophisticated analyses of transportation networks and the traffic they carry. Techniques that even a decade ago would not have been seriously considered may now be possible. Improved analytical capabilities may allow for more information to be extracted from the same data collection efforts. Additionally, with more sophisticated analytical methods, traffic counting and other data collections efforts can be focused more efficiently.

Some Departments of Transportation (DOTs) in the U.S. (Florida, Indiana, North Carolina, Montana, South Dakota, Virginia, Texas, and Tennessee) have developed models for estimating road traffic volumes in quick, easy and cost effective manners. The common models that have been developed include (1) regression models, (2) models that use known traffic volume data to estimate volumes using Geographic Information System (GIS) spatial interpolation tools, and (3) travel demand models (See references (1), (2), (3), (4), (5), (6), (7), (8), (9), (10), and (11).) Most of these models were however developed for high volume roads and/or urban locations and may not be suitable for implementation in rural low volume road networks without some calibration.

The Wyoming Technological Transfer Center (WYT^2/LTAP) received funding from Wyoming Department of Transportation (WYDOT) to develop and implement methodologies for developing traffic volume estimation models for low-volume roads in the State of Wyoming. The research process involved collecting traffic count data to develop, validate and calibrate the models where necessary.

Problem Description

Traffic volume data are essential in many transportation and decision making models. They are used to estimate Vehicle Miles Traveled (VMT) for crash rate and environmental impact analyses. Estimated traffic volumes are used in the evaluation of infrastructure management needs such as determining roadway geometry, and road construction and maintenance scheduling. [(6)]

The traditional method of determining traffic volume involves carrying out a two or three day traffic count on a road, and then dividing the traffic count by the period (in days) over which the count was taken to obtain an Average Daily Traffic (ADT). The ADT is then factored up to a yearly average traffic volume estimate based on year to year trends, sampling season and day of week factors developed from permanent automatic traffic recorder (ATR) stations. [(12)] The resulting value, after applying the factors, is the Annual Average Daily Traffic (AADT).

The high expense and time consuming nature of traffic counting exercises limit the state and local governments' ability to collect ADTs for low-volume roads. [(13)] Thus regular traffic counts are carried out for highways and expressways at the expense of local roads due to the relative importance of high-volume roadways. Secondly, interstates, freeways, expressways, and arterial roads comprise approximately 31 percent of total road mileage in United States whereas the remaining 69 percent (2,795,813 miles) are local roads. [(14)] The high mileage of local roads compared to those of highways, freeways and arterials makes it impractical to carry out extensive traffic counts on a significant proportion of the local roads.

Typically, traffic volume estimates are made for local road sections without traffic counts by comparing the road section to other similar road sections that have traffic count data. Traffic volume estimations for local roads in Wyoming are done following this practice today. The comparison of one road to another can be inaccurate and difficult to perform. Some roads can be similar in classification and road construction, such as road width and surface type. However, there are other differences in roadways that need to be considered. Land use of the surrounding area can influence the traffic volumes on the road and is often overlooked in the comparison of road sections. Other demographic factors such as surrounding population and the income of the area are also not typically considered in the comparison of road sections. Without all of the influences on the road, traffic counts are not accurate or reliable.

The crude method of estimating traffic volumes on low-volume roads, described above, is unreliable for making decisions in managing road networks. The State of Wyoming is facing influx of energy industry development in the State. The oil and gas industry has increased in recent years and a plan is needed to handle the increase in traffic on the local low-volume roadways. The road network needs to be considered as a whole to address issues related to the increase in traffic due to the energy industry. The road network needs to accommodate the higher traffic and a transportation management plan has to be developed to upgrade and maintain the roads that need them. To create the future plan for the State, counts need to be conducted on all the local low volume roads. However, as previously discussed, it is not practical and cost effective to do these traffic counts manually.

The goal of this study is to develop inexpensive but effective models for estimating traffic volumes on low-volume rural roads in Wyoming. Wyoming Department of Transportation has funded this study to develop traffic volume prediction models for Wyoming low-volume roads. The estimated ADT data from the developed models could be used for design, planning, and management functions on both state and county road networks.

Regression and travel demand models were developed for estimating the traffic volumes. The regression models were created first as a quick way to get ADT estimations for the local roadways. The regression models were meant to help in identifying areas that have higher traffic that will require some mitigation in the transportation system. The model will also allow for areas with high oil and gas traffic impacts to be identified quickly.

The travel demand models use travel behavior parameters, demographic and network data to estimate the trip productions and attractions for a traffic analysis zone and distributes the trips using the gravity model. The gravity model considers the productions and attractions generated in the zones and the cost of travel between them to connect trip origins to destinations. Other considerations used in travel demand modeling are time-of-day and vehicle occupancy factors. The consideration of additional factors beyond those considered by the regression models enable a more reliable prediction of traffic impacts. The regression and travel demand models will enable a more accurate and reliable way of estimating traffic volumes for future planning.

Project Objectives

The overarching objective of this project is to develop a cost-effective and easy to use traffic estimation model for low-volume roads in Wyoming. This involved reviewing existing studies to determine an appropriate methodology for developing the models, identifying data sources for model development and developing and implementing a data sampling plan. Beyond the model development, the models were validated by comparing actual traffic volumes to those predicted by the models. Finally, recommendations were made for model implementation that enable easy and effective utilization of the project outcome.

By accomplishing these goals, more efficient means of estimating low-volume road traffic will be developed to support design, planning, and management functions on both state and county road networks. Using the models will make better traffic volume estimates possible with readily available data, thereby lowering costs and improving the quality of traffic information. By taking advantage of better software and better models, more and higher quality information may be provided, leading to improvements in safety and other planning efforts.

Report Organization

This report describes and discusses the activities and results of this study. It consists of seven chapters. A literature review of previous studies relevant to this study is presented in Chapter 2. Chapter 3 lays out the methodology implemented to develop the two models. Chapter 4 is a discussion of the data collected and their descriptive analysis. Chapter 5 discusses the development of the regression models and their validation. Chapter 6 discusses the development of the travel demand model and its validation. Finally, Chapter 7 compares the model types developed, discusses the findings of the study and makes recommendations for their implementation.

CHAPTER 2. LITERATURE REVIEW

Traffic Volume Estimation

Accurate traffic volume counts are essential to multiple transportation analysis processes. Some of these analyses include, but are not limited to, development and maintenance of roadway programs, pavement design, economic evaluations for safety projects, the calculation of Vehicle Miles Travelled (VMT), and the computation of level of service on a roadway or intersection. (7) For the State of Wyoming, traffic volume estimates from various road sections are important for fulfilling the Highway Performance Management System (HPMS) requirements. These requirements state that each state provides summarized traffic volume data for their rural, minor collector, and local road networks to the Federal Highway Authority (FHWA). (12) The traffic volume estimates are also used in pavement management and maintenance scheduling.

According to "Wisconsin's Approach to Variation in Traffic Data", Annual Average Daily Traffic (AADT) is the most widely used traffic data statistic. (15) The AADT allows for analysis to be conducted on roadways of different types. Customarily, transportation agencies only conduct traffic counts on high volume roadways but there is the need for AADT data for low volume roads as well. However, local roads make up 67 percent of all road types making it impractical to implement the traditional AADT estimation methods used for high volume roads. (16)

The Traffic Monitoring Guide outlines how to carry out a continuous count program and a short term count program to determine AADTs. (12) In the continuous count program, traffic volume measures are carried out using permanent count stations throughout the year. The continuous count programs enable determination of Annual Average Daily Traffic (AADT) using temporal variations in traffic volumes such as time-of-day, day-of-week and other seasonal patterns on the roadway. The short term count program is used to estimate traffic counts (AADT) on roads where the continuous count program has not been carried out. It involves collecting traffic counts on the road sections for a short period of time ranging from one to seven days. The short term traffic counts taken over the short period of time are then converted into AADT based on the continuous count program's seasonal factors associated with the road's functional classification. The procedure for applying the seasonal factors is summarized by Ming Zhong et al. as follows: (17)

- Collect permanent or automatic traffic recorder data based on the road functional classes (Expressway, Arterial, and Collector).
- Calculate the monthly and day-of-week factors (seasonal factors) for each functional class using data from the permanent count stations. For instance, a day of week factor is calculated by dividing a three year average traffic for each day by the average daily traffic averaged over three years.
- The functional class of the road segment on which short-term traffic counts are carried out are determined and the corresponding seasonal factors for that functional class are assigned.
- The annual average traffic volume (AADT) for the road is then estimated by applying the expansion factors to the average daily traffic count obtained from the short term traffic count.

This is the procedure widely used in the estimation of traffic data in all states including Wyoming. However, Ming Zhong et al. points out that roads belonging to the same functional class may not necessarily have similar traffic patterns and so the method may produce large estimation errors. In most cases, low-volume local roads do not have permanent traffic counts or a good enough coverage of permanent count stations to develop accurate seasonal factors. (16) The absence or inadequate coverage of permanent counts result in the application of seasonal factors from higher functional classes within the locality of the road. This tends to introduce even higher errors in AADT estimations. For this reason, the study reported here considered average daily traffic data computed from short term traffic counts without applying seasonal factors.

Short term traffic counts on low-volume roads are typically carried out for a period of 48 hours to determine the Average Daily Traffic (ADT). In a research to develop regression models for estimating traffic volumes in Indiana, Mohamad also suggested that daily adjustment factors are not applicable to local roads because traffic volumes do not vary by much daily or weekly on such roads. (3) This assumption holds valid for this study as well. Thus the models were developed to predict Average Daily Traffic (ADT) that could be converted into AADT by applying appropriate monthly adjustment factors where seasonal factors are available for the low-volume roads.

Traffic Volume data collection

Accuracy in traffic data collection is very important. Long range traffic plans are created based on the collection of traffic data for the current and projected traffic volumes across the state and in smaller entities. (18) Having inaccurate traffic data is one of the causes of wasteful spending on the transportation network. Inaccurate traffic volumes counts will also produce inaccuracies in future calculations of vehicle miles traveled and congestion. This study requires accurate counts to ensure the development of accurate prediction models.

The following is a list of the most commonly used traffic counters according to McGowen: (18)

- Pneumatic road tubes.
- Passive infrared devices.
- Active infrared devices.
- Passive magnetic devices.
- Radar.
- Ultrasonic devices.
- Passive acoustic devices.
- Video image processing systems.

The pneumatic tubes are the most commonly used traffic volume counters with 49 states utilizing them for traffic counts and 20 states using them for speed counts. (18) Pneumatic tubes are rubber tubes positioned across the traffic lanes in a specific configuration. The configuration of the tubes depend on the type of counter being used for the test. For example, in this study, the Diamond Apollo counter was utilized. This counter required that the tubes are spaced four feet apart. Nails or road adhesive tape were used to secure the tubes to the road surface. When a pair of wheels (an axel) drives over the tubes, air is pressed into the counter that activates the recording of a vehicle. When two tubes are used simultaneously, speed data is also collected. The tubes can also count the number of axels on a vehicle to determine if it is a truck or passenger vehicle.

One of the advantages to the use of pneumatic tubes is the ease of installation. The sensors are also low cost and can be maintained easily. [19] Pneumatic tubes have only a four percent chance of error, making them one of the more accurate and trustworthy counting devices. The disadvantages to the tubes are that they are sensitive to temperature, since they are constructed from rubber. The tubes also wear out over time. They also tend to break especially on unpaved roadways. Tube counters are also above ground, making them susceptible to vandalism.

Traffic prediction models

Most of the literature available on traffic volume estimation are concentrated on urban roads, highways and freeways or expressways. Some studies have been carried out on estimating AADT on local roads but most of these studies are county or state based and so are not transferable to other states without requiring some calibration. Another issue is that the data set used to develop the models include local roads with high traffic volumes (AADT > 400). The models developed in those studies are therefore not transferrable to states such as Wyoming which have very low traffic (AADT<200) on most of the local roads. Two types of traffic volume estimation models were prevalent in the literature – regression models and travel demand models.

Regression Models

This section explores previous studies relevant to the development of traffic prediction models for low-volume roads using regression methods.

Indiana 1998

Mohamad et al. developed a traffic prediction model for county roads in Indiana. [3] Counts were taken from 40 out of 92 counties with three to four 48-hour traffic counts taken in each county. The counts were then converted to AADT using seasonal adjustment factors. The initial quantitative predictors considered were county population (CPOP), county households (CHH), county vehicle registration (CVR), county employment (CEMP), county per capita income (CPCI), county state highway mileage (CSHM), arterial mileage (ART), and collector mileage (COLL). For qualitative predictors, type of location – urban or rural (LOCALE), presence of interstate highways (INT), and accessibility (ACCESS) were considered.

An initial regression fit was carried out with all the predictor variables. Thereafter, a check for multi-collinearity using the variance inflation factor (VIF) found seven of the eleven predictors to be more closely related to other predictors. Since multi-collinearity increases the instability of coefficient estimates, the multi-collinearity problem was remedied by expressing the model in terms of centered independent variables. In addition to the multi-collinearity problem, error variance was also found to be non-constant and so a log-transformation was applied to the response variable to stabilize the error variance.

Three subset selection methods were used to select promising predictors. Each of the three subset selection methods chose location type (X1), easy access to highway (X2), county population (X4), and total arterial mileage of a county (X10) as predictors. A reduced model with only the four significant predictors yielded a model with an R^2 value of 0.77 at a 95 percent confidence interval. The model is indicated as follows:

$$Log_{10}(AADT) = 4.82 + 0.82X1 + 0.84X2 + 0.24X4 - 0.46Log_{10}(X10)$$

Figure 1: Equation. Indiana Traffic Volume Estimation Model

Validation of the model was carried out using data from eight randomly selected counties that were not used in developing the model. The mean squared prediction error (MSPR) was calculated from logarithmic transformations of both the observed and predicted AADT resulting in a MSPR of 0.051 and was compared to a MSE of 0.1606 obtained from the model building dataset to conclude that the model was adequate for predicting traffic volumes.

Florida 1999

Xia et al. developed a model for predicting traffic volumes for non-state urban roads in Broward County, Florida. [9] Twelve initial variables were investigated using data from 450 count stations. The ADT dataset was split into two groups with 90 percent (representing 399 count stations) used for model development, and the remaining 10 percent (44 count stations) used for model validation.

The initial predictor variables used in the study were number of lanes on the roadway (L); area type (AREA) categorized into rural = 1, central business district = 2, fringe area = 2, residential area = 3, outlying business district (OBD) = 4; functional classification (FCLASS1) categorized into state minor arterial = 2, county minor arterial = 2, county collector = 1, city collector = 1, and local and unclassified = 0; population within a certain distance of a count station (POP); dwelling units (DUS); automobile ownership within a certain distance of a count station(AUTO); industrial employment (INDEMP); commercial employment (COMMEMP); service employment (SEREMP); total employment (TOTALEMP); school enrollment (SCHOOL); hotel occupancy(HTL); accessibility to state roads (ACCESS1), and accessibility to non-state roads (ACCESS2). GIS tools were used in obtaining the values for socio-economic and accessibility data. A buffer of 0.25 mi from the subject road was used to determine the values for the socio-economic factors. A buffer of 1.0 mi from the count station was used to determine the presence or absence of a state road access.

The regression analysis was carried out using a method similar to that of Mohamad et al (1998). A multiple linear regression using all 12 independent variables yielded a model with an R square value of 0.6061 but large variance inflation factors (VIF) for POP, AUTO, SEREMP, COMMEMP, and INDEMP indicated substantial correlation among these variables. Additional procedures were needed to build an appropriate model that did not include highly correlated variables. The procedures selected for building the model were the R^2 selection, CP statistic, and the forward selection methods. The results from all three procedures indicated that the best predictors for ADT were accessibility to county roads (ACCESS2), number of lanes (L), functional classification (FCLASS1), area type (AREA1), automobile (AUTO), and service employment (SEREMP). The final model is presented in Figure 2.

$$ADT = -10759 + 4737.44L + 5071.13FCLASS1 + 1274.17AREA1 + 0.15AUTO - 816.21ACCESS2 - 0.15SEREMP$$

Figure 2: Equation. Final ADT Estimation Model by Xia et al (1999)

The model's predictive ability was tested in a model validation process that involved comparing the estimated ADT to observed ADT.

The distribution of errors also indicated that 50 percent of the test points had errors smaller than 20 percent, whereas 85 percent of the test points had errors smaller than 40 percent. The authors found the accuracy of the model to be inadequate and recommended further research to improve on the model.

Florida 2001

A second study in Broward County, Florida, used 898 data points that comprised data from principal arterials, minor arterials, collectors, and local roads. [(10)] The initial independent variables were number of lanes (LANES); land use type (AREA) coded as 5.17 for central business district (CBD), 3.16 for CBD fringe, 3.24 for residential, 5.63 for outlying business districts, 1.65 for rural areas, and 1.0 for undefined areas; road functional classes (FCLASS) where 3.4 represented urban principal arterial, 2.2 represented urban minor arterial, 1.0 represented urban collectors, and 0.6 represented unclassified roads. The numeric values assigned to the nominal predictors represented average AADT values in each land use or functional class group.

Socio-economic independent variables were employment, population, and dwelling units in a corridor near a group of count stations. The three socio-economic variables were found to be highly correlated. The employment indicator contributed most to the explanation of variations in AADT. This led to the inclusion of only BUFFEMP (employment indicator) in the final model. Accessibility variables that were considered include minimum distance to expressway measured in miles; minimum travel time in minutes from a count station to an expressway; number of expressway access points within a four-mile radius from a count station; and direct access (DIRECTAC) with binary values of 1 for direct connection to an expressway and 0 when there was no connection to an expressway. DIRECTAC was selected for the final model because it had the most significant correlation with AADT.

Zhao et al. introduced new variables that would model the influence of regional economic activities on the traffic of a road. The variables were network distances to the regional mean centers of employment (DECNTR), and regional mean centers of population (DPCNTR). Other accessibility measurements included regional accessibility to population centers (RPAccessk), regional accessibility to employment centers (REAccessk), regional accessibility to employment and population (RPEAccessk). These variables are defined by the equations in figures 3, 4, and 5.

$$RPAccess_k = \sum_{i=1}^{N_p} P_i e^{-0.0954 t_{ki}}$$

Figure 3: Equation. Measure of Regional Accessibility to Population Centers

$$REAccess_k = \sum_{j=1}^{N_E} E_j e^{-0.0954 t_{kj}}$$

Figure 4: Equation. Measure of Regional Accessibility to Employment Centers

$$RPEAccess_k = \left[\sum_{j=1}^{N_E} E_j e^{-0.0954 t_{kj}}\right]\left[\sum_{i=1}^{N_p} P_i e^{-0.0954 t_{ki}}\right]$$

Figure 5: Equation. Regional Accessibility to Employment and Population Centers

Where

k *is the count station,*
Pi is the population at the ith population center,
Ej is the employment at the jth employment center,
tki and tkj are the network travel times to the ith population and the jth employment centers respectively, and
NP and NE are the numbers of population and employment centers respectively.

Four models were developed with functional classification, number of lanes, direct access to a highway or expressway, employment, population, and distances to population centers, and employment centers as the predictors. The four models developed are presented in figures 6, 7, 8, and 9 and the adjusted R square values for the models ranged from 0.6589 to 0.8168.

$$AADT = -9.520386 + 8.480001FCLASS + 3.428939LANE + 0.596752REACCESS + 2.991573DIRECTAC + 0.069086BUFFEMP$$

Figure 6: Equation. Model 1 Developed by the Zhao et al. Study

$$AADT = -6.15742 + 6.55471LANE + 0.61433REACCESS + 7.88344DIRECTAC - 0.34494DISTPOPMCNTR$$

Figure 7: Equation. Model 2 Developed by the Zhao et al. Study

$$AADT = -4.66034 + 4.95341LANE + 0.51119REACCESS + 4.52713DIRECTAC - 0.10689DPOPCNTR + 0.00112POPBUFF$$

Figure 8: Equation. Model 3 Developed by the Zhao et al. Study

$$AADT = -4.26565 + 4.86271LANE + 0.47286REACCESS + 4.34780DIRECTAC - 0.10197DPOPCNTR + 0.00104POPBUFF + 0.00022820EMPBUFF$$

Figure 9: Equation. Model 4 Developed by the Zhao et al. Study

Each of the models were inspected and it was indicated that the FCLASS variable in Model one had a partial R square value of 0.7103. The partial R square value for LANE was 0.0836 and the remaining variables (REACCESS, DIRECTAC, and BUFFEMP) all had partial R square values that were less than 0.02. This model (Model 1) had the highest R square value but there were concerns that the FCLASS (functional class) variable that contributed most to estimating the traffic volumes was itself attributed to a road based mostly on the road's traffic volume. Thus the strong correlation between the model predictions and actual AADT were attributed to the Functional Class of the road and the model fails to capture underlying causes of varying traffic volumes. Other criteria used in determining a road's functional class such as anticipated future land developments or linkage of significant facilities may create weak correlations for some roads.

Models 2 excluded functional class as a potential predictor in an attempt at identifying the underlying causes of traffic volume variations but this model yielded the lowest R square of 0.66. Models 3 and 4 did not directly use functional classification but used land use variables that are based on functional class of roads and both had an R square of 0.76. The level of accuracy obtained in the models were deemed inadequate for engineering design but were considered appropriate for tasks that do not require high levels of accuracy. An example of tasks for which the models developed could be used was in estimating system-wide vehicle miles traveled.

Florida 2008

The third Florida study was a graduate thesis that developed a model for assigning AADT volumes on all roads in Florida. (5) Initial predictors considered in the study were roadway and socioeconomic characteristics. The socioeconomic characteristics were population, total mileage of highways in the county, vehicle registration, personal income, retail sales, population within incorporated areas, and labor force. The roadway characteristics were type of median (whether divided or undivided), number of lanes on both sides, location (whether located in urban or rural location), and accessibility to freeways.

A total of 26,721 traffic counts were used in the model development. Stepwise regression methods were used to develop six traffic volume prediction models from 21 initial independent variables. Each of the six models was developed for a particular road type in a specific type of locality. The locality and the associated adjusted R square of the model developed are presented in Table 1.

Table 1: Model Types Developed and their Adjusted R Squares

Model Type	**Adjusted R^2**
Large Metropolitan Area, State/County Highway Model	0.186
Large Metropolitan Area, Local Street Model	0.242
Small-Medium Urban Area, State/County Highway Model	0.259
Small-Medium Urban Area, Local Street Model	0.166
Rural Area, State/County Highway Model	0.378
Rural Area, Local Street Model	0.418

The models developed reported adjusted R squared values ranging from 0.166 to 0.418 with models for rural areas yielding better prediction models compared to the models for large metropolitan areas. Generally, models for local streets were also better than models for state/county highway models.

The developed models were validated using 1,149 traffic counts from three counties. The validation was carried out by comparing actual traffic volumes to estimated traffic volumes using the Mean Absolute Percentage Error (MAPE) measure. The model validation indicated that the state/county highway model for rural areas had the lowest (best) MAPE value of 31.99 percent. The highest (worst) MAPE value of 159.49 percent was recorded for the local street model for large metropolitan areas. A major concern for this study was inadequate traffic counts for local roads requiring the researcher to assign traffic volumes on nearby roads to those roads without traffic counts.

Ohio 2012

In a 2012 report by the Ohio Department of Transportation, an analysis was carried out to determine a method for predicting counts on local roads for safety analysis. Factors that were analyzed included employment, population, and road characteristics. (4) The employment factors were initially categorized into retail, service, education, health, and recreational, but a correlation and regression analysis indicated that there was no difference between the categories, and correlations to count levels were not made any better in using one category versus another.

Buffer zones of 30.48 meters (100 feet) and 0.8 kilometers (0.5 miles) were created for population and employment densities respectively. A correlation analysis indicated that population was correlated with traffic counts but employment was not a good indicator of traffic count because most employment captured in the local road buffer were actually on major streets that the local roads were intersecting.

For the road characteristics, the data collected and analyzed were functional class (urban versus rural, and subdivision), road widths, and road surface types. Road surface was classified into paved, intermediate and unpaved with correlation analysis showing higher counts on paved roads followed by the intermediate, and the unpaved roads in order of decreasing counts. However, the intermediate and unpaved roads had similar counts. Lane widths also had a positive correlation with traffic count. Correlation analysis of road types indicated that municipal roads recorded higher counts followed by subdivisions and then rural roads.

Some regression analysis was performed using the important variables but the best model developed could only explain about 16 percent of the variability. In their recommendations, a suggestion was made for future research to randomly sample the counts to support unbiased estimation of the count volumes.

Spatial Interpolation Methods

Another method that has been used in traffic volume predictions is the spatial interpolation techniques. For instance, Wang and Kockelman carried out a study in which a Kriging-based method was developed for forecasting future AADT values at locations where no traffic detectors were present. [8] The Kriging method relies on the theory that unobserved factors (such as AADT) are autocorrelated over space, and the level of autocorrelation decline with distance. This method was implemented with the help of GIS tools and traffic volume data collected over a period of seven years. Selby and Kockelman also carried out another study that compared traffic estimates using the Kriging methods to make traffic volume estimations using non-spatial regression methods. [6] The results indicated that the spatial interpolation methods have improved accuracy when compared to the regression. However, the limitation of the model was that traffic volume estimates tended to be less accurate when no earlier counts existed at the road of interest or nearby. Since low-volume roads typically have fewer traffic counts on them, this technique would be inappropriate for estimating traffic.

Travel Demand Models

According to the NCHRP Report 365 "Travel Estimation Techniques for Urban Planning", travel demand modeling is roughly 55 years old. [20] Since its inception during area wide transportation studies in Chicago and Detroit, this modeling technique has undergone various transformations. The earlier models were developed to "provide an objective tool for evaluating major infrastructure investments and preparing long range, regional transportation plans". These were undertaken using the federal mainframe software. However, current advances in computing technology has created a significant revolution that has enabled smaller urban areas to develop their own models.

Unlike the older federal models that were run every few years to update regional transportation plans, current models are used daily for purposes that include the following:

- Project-level studies that utilize hourly traffic data in geometric design.
- Subarea traffic circulation studies that require peak hour turning movements.
- Analysis to determine the feasibility of transportation investment strategies.
- Evaluation of land use patterns and their impact on transportation systems.
- Regional and localized air quality analysis.
- Analysis and evaluation of travel demand and congestion management systems.
- Analysis of road pricing options such as toll roads, high occupancy toll lanes, cordon pricing and congestion pricing that varies by time of day.

There are currently two main techniques for travel demand modeling. The techniques include the Four-Step modeling process and the Tour- and Activity- based modeling process. For the purpose of estimating traffic volumes for low volume roads, the four-step modeling technique is the most appropriate technique due to its simplicity and ability to produce accurate results. Thus the remainder of the literature review explores existing studies that developed travel demand models using the four-step modeling process.

The four-step travel demand model can only simulate two-way trips during modeling. The trips begin at the origin to the destination and back to the origin with no stop in between. This is however, not representative of all trips made in reality. Despite this limitation, the four-step modeling process is still accepted and used by most Metropolitan Planning Organizations (MPOs) due to the fairly satisfactory results produced by this model type. [20]

Factors considered in the four-step travel demand forecasting technique included time of day analysis, peak-period spreading, automobile occupancy rates, and feedback mechanisms for congested speeds and land use changes. [21] As the name suggests, the four-step travel demand model typically consists of four step. The steps are:

1. Trip Generation: This step estimates the productions and attractions for each trip purpose. The purposes are generally of three types – Home-Based Work (HBW), Home-Based Other (HBO), and Non-Home Based (NHB) purposes. These three main trip purposes can be further broken down into other categories such as Home Based Shop, and Home Based Recreational. The trip generation process uses trip rate data derived from travel

surveys, and land use data such as population, households, housing units, and employment to compute trip productions and attractions for each Transportation Analysis Zone (TAZ) in the study area.
2. Trip Distribution: In this step of the four-step modeling process, trip productions and attractions developed in the trip generation step are paired. The gravity model or a variation of the gravity model is generally applied in pairing the productions and attractions. The gravity method distributes the productions and attractions based on the attraction between zones (magnitude of production/attraction trips in each zone) and the cost of traversing the distance between the zones (impedance).
3. Mode Choice: This step is most critical for urban models that have alternative modes of travel such as transit buses and transit trains. The main goal of this step is to convert productions-attraction round trips into origins and destinations by the various modes available. This step incorporates vehicle occupancy, and time of day factors into the model.
4. Trip Assignment: This final step of the four step modeling process involves assigning the vehicle trips developed in the mode choice step to the road network. Several methods have been developed for assigning trips. The most common and widely accepted method is the user equilibrium method. The user equilibrium method operates by assigning trips to other reasonable routes when the shortest route experiences congestion delays ensuring all routes used have equal travel times.

The processes described in the four step process requires input data such as the network attributes and land use attributes data. However, data that represents the travel behavior in the study area is also required at each step to ensure accurate estimates. The travel behavior parameters include trip rate tables, vehicle occupancy factors, and time of day factors.

Unfortunately, few areas have locally generated travel behavior data and so publications such as the ITE's Trip Generation, NCHRP Report 365, and NCHRP Report 716 are used for areas lacking predetermined local parameters. This study uses these published parameters to estimate traffic volumes in Wyoming. The estimates were then validated and calibrated using actual traffic counts. Past models that were developed for estimating traffic volumes are discussed in the rest of this section of the report.

Oregon Study (2000)

This study was carried out by the Oregon Department of Transportation (ODOT) to determine travel behavior characteristics in areas falling outside the jurisdiction of metropolitan planning organizations (MPOs). [22] The study involved surveying 3200 households to obtain information relating to their travel behavior over a two-day period. Household characteristics were found to have significant impact on home-based work and home-based school trips made every day. For other trips such as home-based shopping, recreation, and non-home-based non-work trips, a recommendation was made for future studies to explain the differences in number of trips among households.

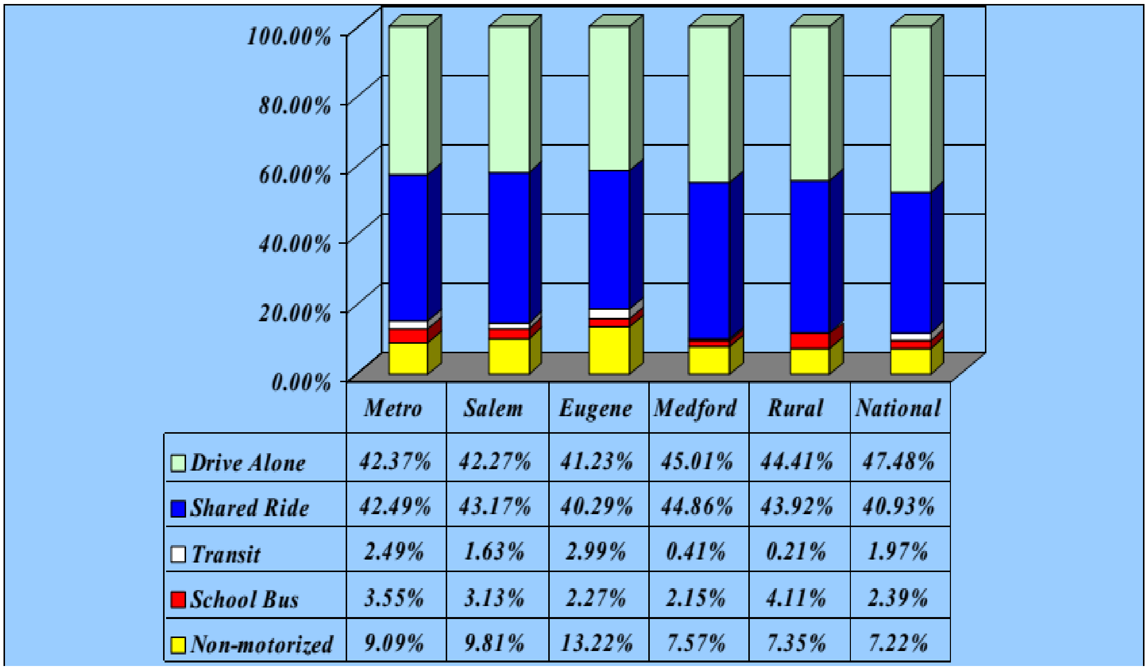
Trips generated per day for the average rural household was found to range from 7.2 to 8.8 depending on the county surveyed. The breakdown indicated an average trip rate per household of 1.5 home-based work trips, 0.4 non-home-based work related trips, 0.8 home-based school trips, 3.5 home-based non-work trips, and 1.5 non-home-based other trips per day. Travel times averaged 16.52 minutes for all trip types. For home based work trips, an average trip time of 17.21 minutes was determined whereas 15.14 minutes for non-home-based work-related trips, 10.16 minutes for home-based school trips, and 18.39 minutes for home-based non-work trips were recorded.

Finally the travel behavior trends for the Oregon rural area were compared to both Oregon's MPO areas and the nation. The comparison determined households in the Oregon rural areas had trip rates that were identical to the national trip rates for different trip purposes. Table 2 shows the comparison of the Non-MPO trip rates by purpose to the national trip rates.

Table 2: Comparison of National Trip Rates to Oregon's Non-MPO Trip Rates

	Non-MPO	Metro	M-WVCOG	LCOG	RVCOG	National
All Trips	7.79	9.18	8.78	9.07	8.38	7.58
Home-Based Work	1.50	1.63	1.58	1.60	1.61	1.23
Home-Based School	0.81	0.65	1.04	1.04	0.89	0.45
Home-Based University	0.05	0.20	0.10	0.19	0.05	0.09
Home-Based Shop	0.83	1.06	1.19	1.11	1.19	0.89
Home-Based Recreation	1.10	1.15	1.38	1.36	1.23	0.91
Home-Based Other	1.51	1.95	1.48	1.48	1.35	1.50
Non-Home Based Work	0.44	0.94	0.64	0.76	0.62	0.96
Non-Home-Based Other	1.54	1.61	1.37	1.54	1.44	1.56

The comparison of observed mode choice by the Rural (non-MPO) areas to the national mode choice indicated some differences. Passenger vehicle use was higher and transit trips were lower than the national average mode choice as shown in Figure 10.



	Metro	Salem	Eugene	Medford	Rural	National
Drive Alone	42.37%	42.27%	41.23%	45.01%	44.41%	47.48%
Shared Ride	42.49%	43.17%	40.29%	44.86%	43.92%	40.93%
Transit	2.49%	1.63%	2.99%	0.41%	0.21%	1.97%
School Bus	3.55%	3.13%	2.27%	2.15%	4.11%	2.39%
Non-motorized	9.09%	9.81%	13.22%	7.57%	7.35%	7.22%

Figure 10: Observed Mode Choice Comparison for All Trip Purposes

The comparison of the average number of persons occupying a vehicle by trip purpose for Oregon's rural areas compared to the national averages is shown in Figure 11. The comparison indicates similar rural and national occupancy rates for the non-home based trips (NHBW and the NHBO), slightly higher national occupancy rates for HBSch, HBUniv, HBShop, and HBRec, and lower national occupancy rates for HBW and HBO trip purposes.

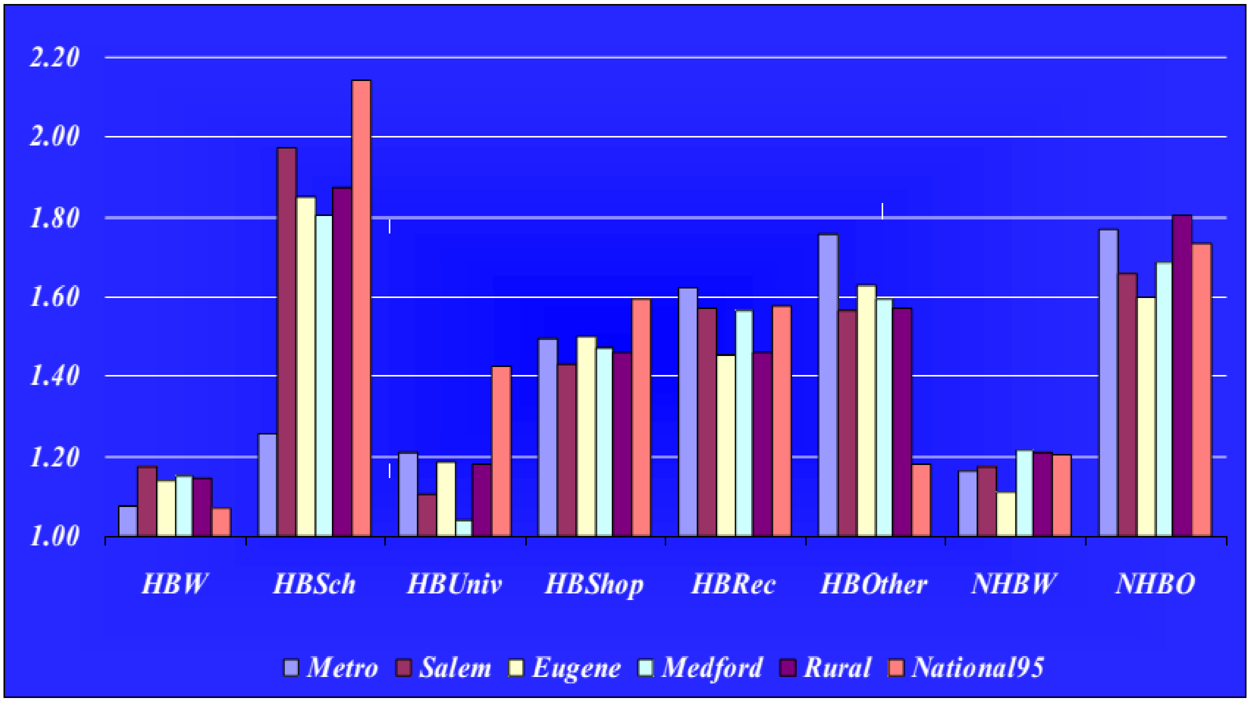


Figure 11: Vehicle Occupancy by Trip Purpose Comparison

A time of day comparison of the survey results from rural Oregon and the national average indicated similar distributions with a slight difference in distribution for the morning commute (the national time of day distribution showed morning commutes to peak 1 hour earlier than the rural distribution). Figure 12 shows the time of day distribution comparisons for the MPOs in Oregon, the rural areas, and the national publication.

The Oregon travel behavior study is important to this research because its comparison of the travel demand modeling parameters of rural areas to those of the national publications provided a basis for using the nationally published parameters for developing the model for rural Wyoming. The basis was that, except for mode choice, the travel behavior parameters in the ITE Trip Generation report are only slightly different for rural locations and so can be safely implemented in rural settings to obtain good estimates of traffic volumes. Calibrations can be implemented after comparing the estimated volumes to the actual volumes to account for the slight differences between the average rural and national travel behavior trends.

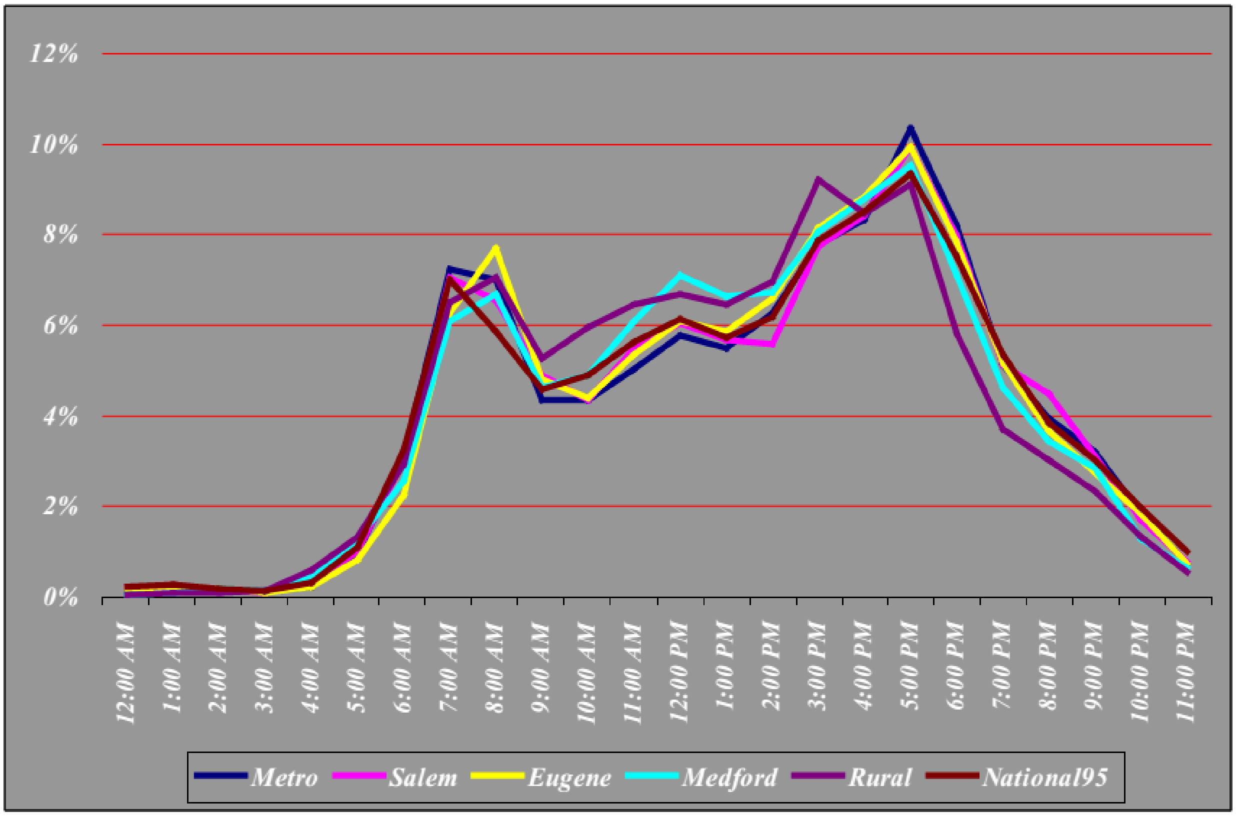


Figure 12: Time of Day Trip Distribution

New Brunswick, Canada 2009

Zhong and Hanson carried out a study that implemented a travel demand model for two regions in the Province of New Brunswick, Canada. [11] The aim of the project was to estimate traffic volumes for county roads in rural areas. Their methodology involved using Geographic Information System (GIS) census data and the ITE Quick Response Method (QRM). The QRM process used a cross-classification trip rate table with travel behavior parameters from the NCHRP Report 187. This cross-classification table contained trip rates by the trip purposes – Home-Bases Work (HBW), Home-Based Other (HBO), and Non-Home Based (NHB) trips. Input data required in the trip production model of the QRM method were household and income data whereas the trip attraction model required household, retail and non-retail employment in the transportation analysis zone. Trip distribution was carried out using the gravity model, and the trip assignment used a method known as the “STOCH” method. This method assigned trips to the shortest paths and assigned a small fraction of trips to other “reasonable” routes.

The QRM travel demand model was developed using TRANSCAD’s built-in four-step model but modified to exclude the mode choice step. The input data sources were a GIS shapefiles for the road network and the traffic analysis zones (made up of the smallest census units from the 2000 census).

The study enabled traffic estimation for 250 km (155 miles) of road that previously did not have any traffic count data. A comparison of the estimated data for the roads was carried out with available traffic counts. The comparison for ten arterial roads indicated an error of 9 percent for one of the arterial roads but exceeding 10 percent for the remaining nine roads. A regression analysis indicated a strong linear relationship between the estimated and observed values with an R^2 of 98 percent. For collector roads, the percentage errors were higher with an average error of 44 percent and a 90th percentile error of 104 percent. The local roads had the worst predictions with an average error of 174 percent and an R^2 of 54.14 percent. Further verification also indicated significant overestimation in most cases with errors ranging from 7 to 700 percent. The high overestimations was attributed to the fact that traffic was not widely assigned to the road network resulting in only 65 percent of the roads receiving traffic. Thus the fraction of roads that received all the traffic had the tendency to have higher traffic volume estimations.

The trip assignment step was modified to assign trips to roads based on stochastic methods instead of the earlier all or nothing approach based on shortest distance. This reduced the average error by 14 percent with an R^2 of 69.65 percent. The Sum of Squared Error (SSE) for the estimated traffic volumes was also improved by 97 percent from 25,424,339 to 861,461. A calibration process used regression methods to develop a model for recasting the forecasts from the travel demand models to obtain more reasonable results. The calibrated estimates resulted in an average error of 36 percent.

Montana 2012

In his master's thesis, Berger developed a travel demand model for Gallatin County in Montana to estimate total daily vehicle miles traveled. [(2)] The primary aim of the project was to evaluate the impact of changing urban forms on future traffic forecasts and so the model developed (base model) was modified to account for changes in urban form. The trip rate equations (Trip generation step of model) for the base model were developed using parameter estimates from ITE Trip Generation publication and the NCHRP Report 365. The trip distribution step used the gravity model and friction factors from NCHRP Report 365 to distribute person trips. The mode choice step focused on only personal vehicle travel and utilized the vehicle occupancy rates recommended in NCHRP 365. In the final step of trip assignment, the all or nothing traffic assignment was initially used to assign trips to the shortest trip route based on free flow speeds. The results from the all or nothing traffic assignment method was found to be inaccurate and so an alternative method known as the user equilibrium method was implemented to give more accurate estimates.

The developed model was validated by calculating the Percentage Root Mean Square Error (%RMSE) in ADT estimations. A %RMSE value greater than 50 percent was considered high and so the model was recommended for calibration to reduce the %RMSE to a value less than 50 percent. The calculated %RMSE was determined to be 111.3 percent and this was calibrated by applying a ratio of total estimated ADT to actual ADT to each of the trip rate equations. The calibration reduced the %RMSE from 111.3 to 49.0 percent.

Oklahoma, 2012

Alliance Transportation Group, Inc. developed a travel demand model for the Association of Oklahoma Central Governments. [1] The model was a four-step travel demand model that was implemented using Citilab's Cube software platform. The primary components of the model were:

- Trip Generation that included a special generator as well as modeling for external-internal and external-external trips.
- Trip Distribution.
- Mode Choice.
- Traffic and Transit Assignments.
- Time-of-Day Analysis.
- A feedback loop from Traffic Assignment back to Trip Generation.

The extent of the study area for the model is shown in Figure 13. It encompassed the entire Oklahoma and Cleveland counties as well as portions of Logan, Canadian, Grady, and McClain counties. The model development began with a redevelopment of transportation analysis zones (TAZ). The newly delineated TAZ were the basic geographic unit for aggregating demographic and socioeconomic data used in trip generation. Highway network layers with information on traffic signals and transit system routes were collected from the Association of Central Oklahoma Governments (ACOG) for the model development.

Regional household travel surveys and an on-board transit survey were carried out to provide primary data used in the model development. The data obtained from the surveys included:

- Diurnal distribution for time-of-day stratification.
- Trip purposes.
- Trip production and attraction rates.
- District to district trip ends for transit trips.
- Trip length frequency distribution curves by trip purpose.
- Socioeconomic market stratification (including auto ownership and income.
- Mode choice sensitivities.
- Travel speeds and volume delay function parameters.
- Bus travel speeds (from GPS units used by survey staff).

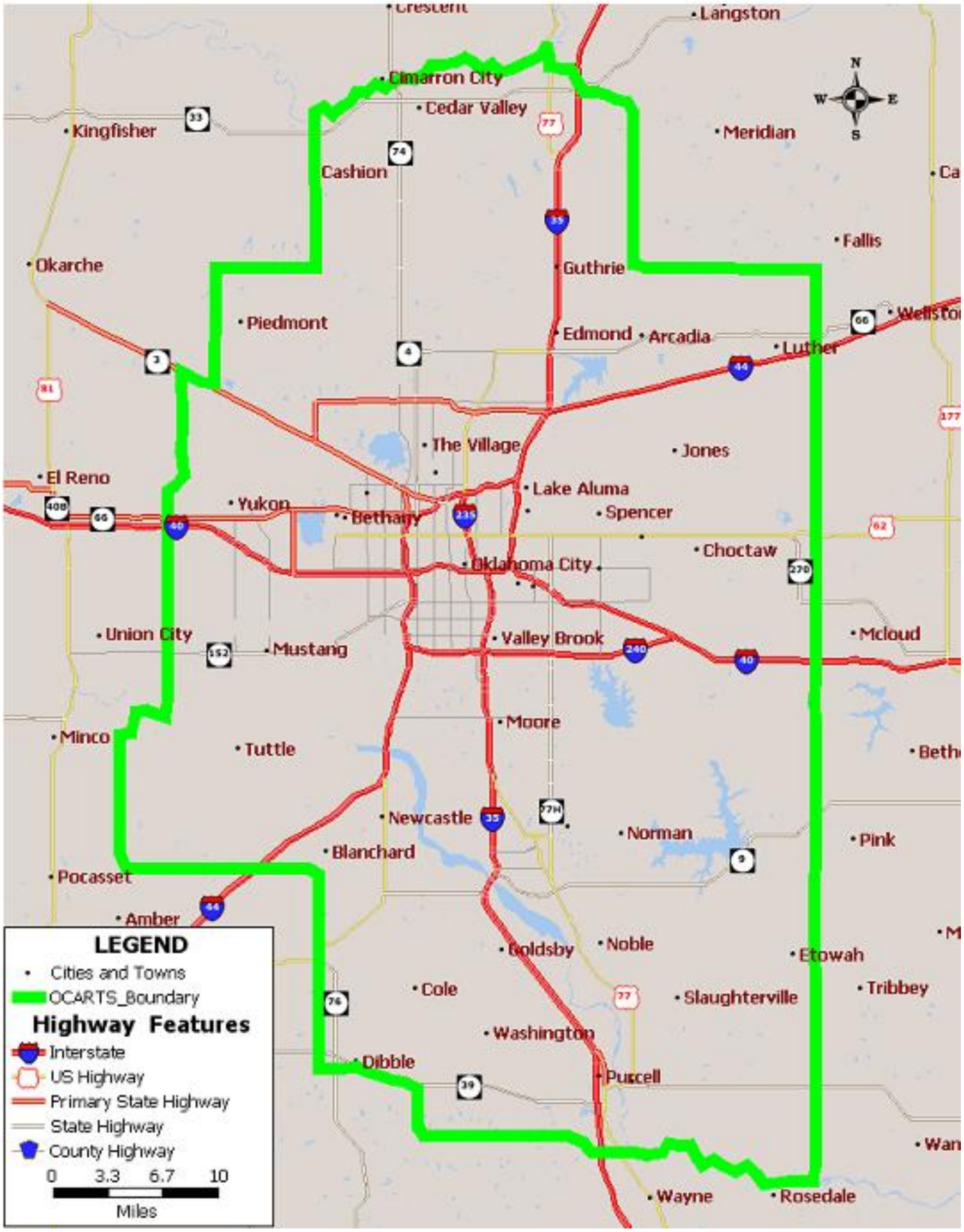


Figure 13: OCARTS Model Study Area

The Oklahoma City Area Regional Transportation Study (OCARTS) model was built based on the results of the surveys. The trip generation model design began with a definition of the trip purposes into seven types based on the results of the survey. Statistical analysis of the survey data enabled selection of trip production cross-classification variables and estimation of trip production rates by purpose for each cross-classification. Trip attraction regression equations were developed from the survey for each trip purpose and finally, external internal trips to be used in the model development were also estimated from the survey data.

In developing the production models, household surveys were used to determine an overall average person trip per household of 8.79. Table 3 presents the estimated percentage household trip rates for each trip purpose.

Table 3: Household Trip Rates by Trip Purpose

Purpose	Percent of Trip
HBW	13.8%
HBSCH	16.7%
HBU	1.1%
HBO	38.6%
NHB	29.7%

Trip production rates were determined for household size, income, and employment classifications to compute trip productions for each zone. For trip attraction rates, a regression model was developed based on geocoded information on non-home trip ends available from the household survey. The attractions for each purpose were then tabulated by TAZ and regressed against district employment totals at the zip code level and total households.

The trip distribution model involved developing highway paths/skims and transit paths/skims. The highway or transit skim is a process that determines the generalized costs or impedances (travel time, distance, costs) for each origin-destination zone-pair. The skims were built for each mode and indicated travel time, number of transfers, and transit fare costs for each origin-destination zonal pair. The traditional gravity model distributed trips according to characteristics of land use and the transportation system in the area. The gravity model is based on the theory that trips between two zones are a function of trips originating in one zone and the relative attractiveness of the other zone compared to the remaining zones. The mode choice component of the model assigned trips to the various modes of travel in the study. In the OCARTS travel demand model, a nested logit structure was chosen with nests that aggregated modes by type as opposed to modeling a long list of individual modes.

After assigning trips to the different modes, a time of day model was developed to stratify trips by time period, mode, and purpose using diurnal factors obtained from the household travel and onboard transit surveys. The resulting output were hourly vehicle trips between zones.

The final component of the model, the highway assignment step, involved assigning auto trips and commercial vehicle trips simultaneously for each time period. The accumulation of the assignments in each time periods results in a 24-hour volume estimate. The equilibrium assignment method was chosen for the highway assignments. This assignment method used cost functions such as the vehicle delay function to assign trips.

After the model had been developed, it was validated to show that the model process and assumptions were reasonable. Two methods were used for the model validation, the percent of count and the Percentage Root Mean Squared Error (%RMSE). The percent of count was used to determine the overall difference between modeled and count volumes. The %RMSE measures the difference between the modeled and counted traffic volumes on a link by link basis. This gave a good idea of the closeness between model and count volumes. The percent of counts given by modeled volume over count volume for the OCARTS study were determined for the four road classes and compared to standard values from the literature. Table 4 presents the comparison of the model to the standard values from the literature.

Table 4: Volume to Count by Functional Class [1]

Functional Class	Volume-over-Count modeled	Volume-over-Count Standard
Interstate & Freeway	+2.6%	+/- 7%
Principal Arterial	+4.0%	+/- 10%
Minor Arterial	-1.3%	+/- 15%
Collector	+8.0%	+/- 25%
Overall	+1.9%	+/- 5%

Florida 2013

Wang et al. undertook a study to estimate AADTs for local roads in Broward County, Florida, using the travel demand method. [7] The four step travel demand model used parcels as transportation analysis zones, and trip generation and distribution was at the parcel level. The mode choice step utilized in traditional travel demand modeling was ignored in this model because the authors assumed transit trips and trips by other modes apart from private passenger vehicles are insignificant on local road networks. The trip rates generated by each parcel from the Department of Revenue (DOR) was determined using ITS trip generation report. Trip distribution was carried out using the gravity model and the trips were distributed between parcels. Trip assignments utilized the all or nothing approach because congestion seldom happens on local roads. The route selection was based on the free flow travel time to the nearby major roads. The AADT values were then estimated as the sum of trips in both directions of a roadway.

The model was evaluated by comparing the estimated AADT values to actual count data. The mean absolute percentage error (MAPE) was used to quantify the estimation errors. The MAPE values from a previous regression model for predicting traffic in Broward County was compared to that of the developed travel demand model. For the regression model, an MAPE value of 211 percent was obtained for all predictions whereas the MAPE for the travel demand model was 52 percent.

Chapter Summary

This chapter provided a review of previous studies carried out to estimate traffic volumes. Two main model types were determined to be used for local rural roads, the regression model and the travel demand model. A third model that used geospatial interpolation method was also found in the literature but this method required existing traffic counts for a road class to enable accurate estimations. However, low volume roads do not usually have enough road count data to enable implementation of this method.

The literature revealed that numerous states have developed one or both types of models for estimating traffic volumes. A statewide study in Indiana developed a regression model for county roads that was validated to have an R^2 value of 77 percent. In Florida State, three studies were found to have been carried out to develop regression models for estimating traffic volumes for roads of various classes. The first Florida study was in 1999 and resulted in a model with an R^2 value of 60.6 percent. The subsequent study was in 2001 and developed four models with the best model having an R^2 value of 81.7 percent. The third regression model was developed as a thesis research and it resulted in six models for six combinations of area type and road class. The resulting R^2 values for the models ranged from 16.6 to 41.8 percent. A regression model was developed in a white paper by Ohio DOT for predicting traffic volumes on local roads. The model developed had an R square value of 16 percent and the study recommended that future studies be conducted by selecting roads in a random manner to remove any bias.

For travel demand modeling, the literature indicated several studies that had been carried out for developing such models. A study in Oregon was reviewed that carried out a travel behavior survey and compared the results of the study in rural locations to published national standards. The study indicated nearly similar results between the rural travel behaviors and the national standards with the exception of the mode choice component of the model. For rural locations, transit mode usage was found to be very low compared to the national mode choice data.

Studies using the travel demand modeling have yielded some improvement in estimation accuracy with higher accuracies in high volume roads compared to low volume local roads. The traditional four step travel demand modeling method was modified for rural low volume roads by omitting the mode choice step. This was done to account for the lack of significant transit and other modes of travel on rural local roads where the main means of transport is by personal vehicles. A study was also carried out in Canada that attempted to estimate traffic volumes for county roads in rural New Brunswick using the four-step travel demand method. The model was developed with parameter estimates from the ITE trip generation report and then the results were compared for the various road classes. The study found that the predictions were better for high volume roads such as highways compared to low-volume roads. Another travel demand modeling study was carried out in Montana that also used published national parameters from the ITE trip generation report. This study estimated traffic volumes for some roads in Gallatin

County, Montana. The model was calibrated to reduce the errors associated with traffic volume estimates. The model was validated using Percentage Root Mean Square Error (%RMSE) formula. A %RMSE value of 49 percent was obtained for the traffic volume estimates. Finally, a model developed for some Metropolitan Planning Organizations in Oklahoma was reviewed. This model development process included carrying out travel and transit surveys to determine appropriate parameters to use in the implementation of the four-step model. Unlike the other local and rural studies in the literature, this study carried out the full four-step model without a modification of the mode choice component. The results of the model validation indicated a percentage volume over counts ranging from 1.3 to 8.0 percent compared to the standard range of 5 to 25 percent for the various road classes.

Based on this literature review exercise, a decision was made for this study to develop both types of traffic volume estimation models – a regression model and a travel demand model – for the State of Wyoming. Developing both models will enable their comparison and the selection of a best model to implement in the State of Wyoming.

CHAPTER 3. PROJECT METHODOLOGY

The main research objective is to develop traffic volume estimation models for the State of Wyoming. Two main model types were identified in the literature. The first model type is a regression model that uses local demographics, land use, and roadway characteristics to estimate traffic volumes. The second model type is a travel demand model that uses trip generation, trip distribution, and assignment models to estimate traffic volumes. In this section, the strategy used to develop each of the two model types are discussed.

Methodology for Regression Modeling

The study began with an identification of data sources needed to develop the model. Traffic count data on sampled roads across Wyoming were determined as essential for the development of a regression model. Existing traffic count data collected in a previous study by LTAP in 2012 were added to this study's database. This data was from a study of the impact of the energy industry on roads in four south east Wyoming counties – Laramie, Converse, Goshen, and Platte counties. Additional data were collected in the four counties as well as the 19 remaining counties in Wyoming. In Sublette County, traffic count data that were previously collected by the district were obtained for the study. However, the data for Sublette County were found to be unusable because the precise locations of the count stations were not provided.

The process for collecting the additional traffic count data involved partitioning each county into zones to ensure adequate spatial coverage of the entire state's local road network. Additionally, the zones were created to ensure all the identified factors such as predominant land use, and road surface type in each county were covered. The zones also helped by preventing sampling in zones where roads had already been sampled in the previous study.

Pneumatic tube traffic count devices were installed on designated roads for three days to collect the count data on the selected roads. The specific process and number of counts can be found in the data collection section of this report. Once the count data were collected, the data were summarized and some analyses of the data were carried out to achieve a perspective of the data composition. The analyses included summations of the factors previously considered in the creation of the zones. After the analysis of the original collected data counts, gaps in the data were identified and additional counts were conducted. The traffic count data collected were used as the response variable in the regression model development. The counts were collected in the summers from 2012 to 2014 on 476 roads in 22 out of the 23 counties in Wyoming. Sublette County was not included in the data counts because some local road count data were obtained from the district.

Some factors were identified as possible predictors for determining the traffic volumes of roads. These factors included: population, number of households, employment, housing units, income, highway access, and pavement type. A linear regression model was developed using data from 13 randomly selected counties to estimate traffic volumes. Nine of the remaining counties were then used to validate the prediction ability of the model developed. The linear regression model development processes and the methodology used to create the model are all outlined in Figure 14.

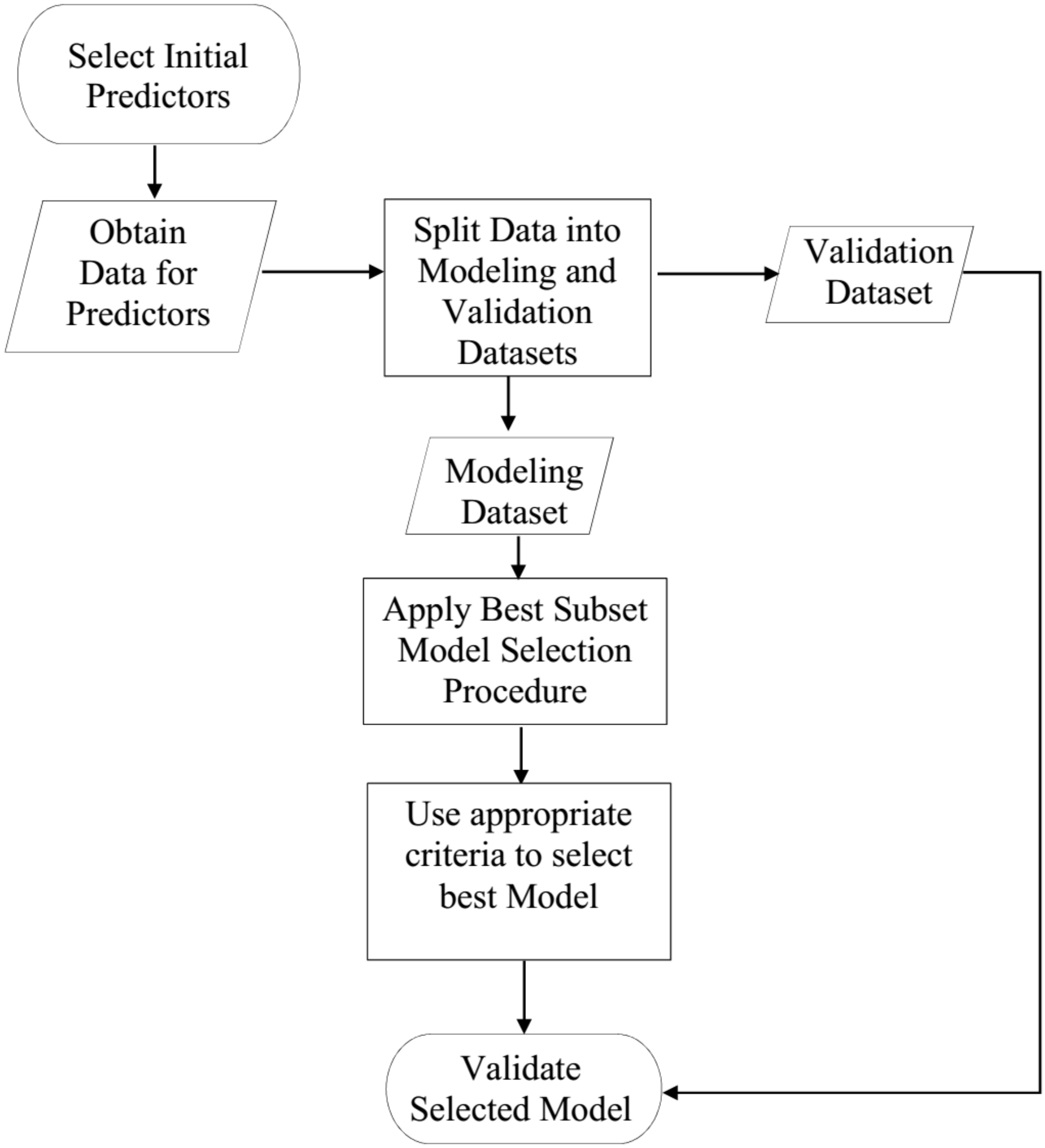


Figure 14: Methodology for Developing the Linear Regression Model

During the model development a best subset selection method was utilized. Checks for multiple linear regression assumptions were carried out to ensure that none of the assumptions of linear regression modeling were violated. The assumptions checked which were checked included:

- Linearity and additivity of the relationship between dependent and independent variables. This assumption required that there must be a symmetrical distribution of points around a diagonal line in a plot between observed versus predicted values or a distribution of points around a horizontal line in a plot of residuals versus predicted values. A problem of nonlinearity or non-additivity result in systematic errors whenever making unusually large or small predictions. A recommended solution to this problem is to consider applying a nonlinear transformation to the dependent and/or independent variables.

- Statistical independence of errors assumed there were no serial correlations in errors. This assumption is most applicable to time series regression models and the presence of independence of errors indicates that the model could be improved. In non-time-series models, violations of this assumption results in errors that always have the same sign under particular conditions. For instance, a prediction model that violates this assumption systematically under-predicts or over-predicts when the independent variables have a particular configuration. This assumption can be checked using the Durbin-Watson statistic in the case of time-series regression models. For non-time-series regression models, the assumption can be checked by examining plots of the residual versus independent variables. If the residuals are randomly and symmetrically distributed around zero under all conditions then the assumption is not violated, otherwise the assumption is violated. Such a violation in non-time series models can be fixed by omitted variables or a correction of the first assumption (linearity assumption).
- Homoscedasticity or constancy of variance of errors ensures stable standard deviation of the prediction errors. Violations of this assumption results in unrealistic confidence intervals and also gives too much weight to a small subset of the data when estimating coefficients. The assumption can be checked by examining a plot of residuals versus predicted values. Plots with residuals that grow larger with predicted values indicate a violation of the assumption. These violations can be fixed by applying a log transformation to stabilize the variance but the problem is often fixed when there are problems of non-linearity that are fixed using logarithmic transformations.
- Normality of error distribution violations result in problems for determining model coefficients that are not significantly different from zero and in determining confidence intervals for forecasts. However, the normal distribution assumption can be ignored if the main goal is to estimate the coefficients and generate predictions in such a way as to minimize mean squared error (as is the case for this study).

After the model was developed, the results were then validated to determine the accuracy and consistency of the model's predictions.

An alternative regression model was developed using logistic regression methods. This model was developed to predict traffic volume ranges within which a road's traffic volume is likely to fall. The decision to include a logistic model was to enable identification of roads with similar traffic impacts for some transportation planning purposes such as maintenance scheduling. For instance, all roads with an ADT less than 50 may be considered to have similar traffic volumes and given similar intervals in maintenance scheduling whereas roads with ADTs above 50 may be scheduled for more frequent repairs. Prediction accuracy using a logistic model was also expected to improve for ranges of data values compared to linear regression models that estimate discrete traffic volume values. The logistic model development was carried out following the methodology shown in Figure 15.

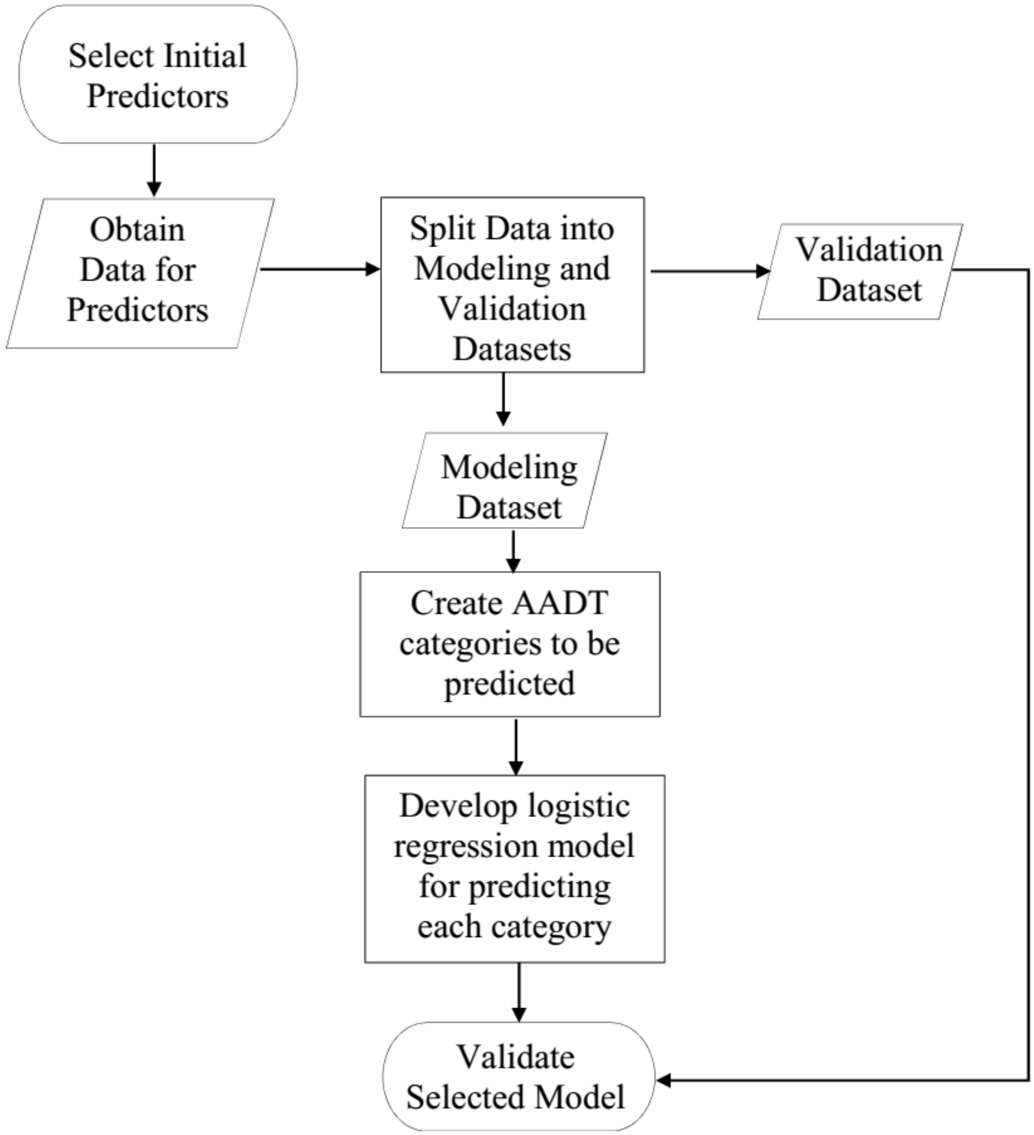


Figure 15: Methodology for Developing the Logistic Regression Model

Once each model was developed, it was verified using data from the 9 counties which were not included in the model development. Additional analysis was also carried out by comparing the results of the validation to results from previous studies in other states.

Methodology for Travel Demand Modeling

In developing the travel demand model, the four-step travel demand modeling procedure was followed. This procedure is the traditional method of travel demand forecasting and includes four steps. The steps are trip generation, trip distribution, mode choice, and traffic assignment. The methodology used in developing the model is illustrated in Figure 16.

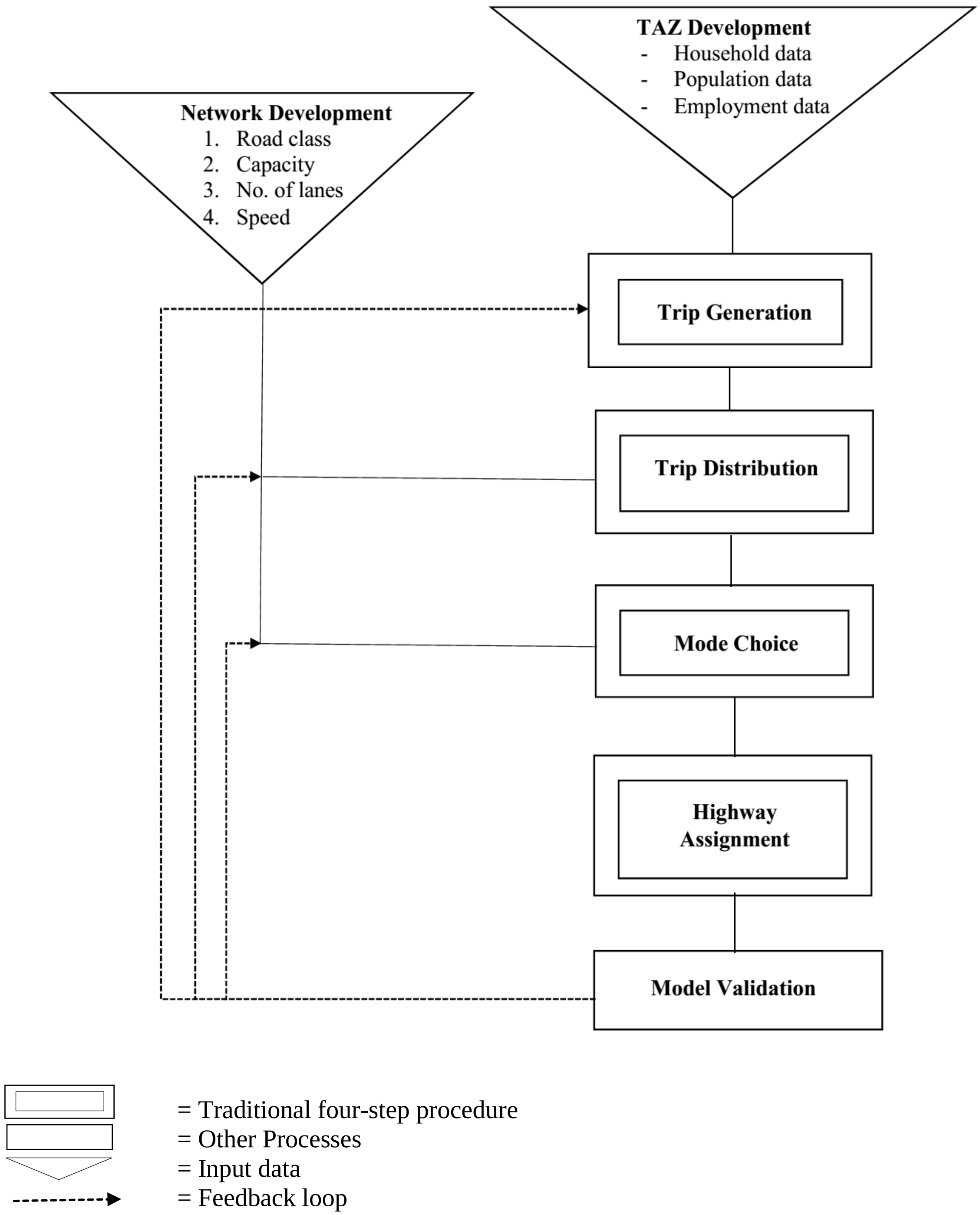


Figure 16: Travel Demand Modeling Process

The model development began with the process of collecting data and preparing input files for the model. Two datasets were developed as input files. These were a traffic analysis zone database and a road network database. Developing the zones involved aggregating some census blocks to form each zone while ensuring that each zone has a population of at least one person with some trip generation occurring in every zone. Demographic data (from U.S. Census website) such as housing units, population and employment which are used for estimating trip generation for each TAZ were collected and aggregated for each zone. The network database comprised a shapefile with link attributes such as road class, speed, number of lanes and capacity. The link attributes are important in the trip distribution and assignment steps of the four-step model.

The two datasets (zonal and network datasets) served as inputs in the four-steps. In the first step (trip generation step), trip productions and trip attractions are computed for each zone using the zonal data. The second step applies a gravitational model to distribute trips between zones. The trip distribution is carried out using the trip productions and attractions of the zones. The mode choice step follows the trip distribution step and it basically converts the trips generated between pairs of zone into vehicle trips using auto-occupancy factors. The final step, the highway assignment involved the allocation of vehicle trips among possible routes between pairs of zones.

After the four-step process, an output is generated that shows all the links in the study area and their associated estimated traffic volumes. The estimated traffic volumes for a sample of 100 roads were then compared to their actual counts. This is the validation process and the results of the validation were in the form of a Percentage Root Mean Squared Error (%RMSE) or R square values and these were compared to standard values from the literature. Based on the results of the validation, an appropriate model calibration method(s) is/are applied to the model to improve on the estimation accuracy of the model. These calibrations take the form of adjustment of trip generation rates, the friction factors in the trip distribution model, and the auto-occupancy factors.

The overall travel demand modeling procedure is described in NCHRP reports 365 and 716. The main difference in the modeling process used in this research was the modification of the mode choice step. The mode choice step was modified so that only one transportation mode (private passenger cars) was considered. This was due to the absence of alternative transportation modes in the rural study area.

Chapter Summary

In this chapter, methodologies used in the study for developing the two model types were presented. For the regression model, procedures for developing a linear regression model and a logistic regression model were presented. The methodology began with identifying and collecting required data for model development, followed by an application of a best selection linear regression technique to select the best predictors for the model. In the case of the logistic model, a full logistic regression model was run with all the predictors and assessed to remove insignificant predictors. However, variables that were significant predictors were retained in the final model.

For the travel demand model, the modeling methodology began with the creation of transportation analysis zones and road network and their associated datasets. The traditional four step modeling process was then followed to estimate traffic volumes for links in the road network. Finally, each of the models developed was validated to assess their prediction accuracies. A calibration process was then carried out to improve the model.

CHAPTER 4. DATA COLLECTION

Traffic Volume Distribution over Study Area

Data from 22 counties in Wyoming were used in this study. As mentioned in Chapter three, 13 counties were randomly selected for the regression model development and nine counties were used for model validation. The counties used for model development were Campbell, Carbon, Converse, Goshen, Hot Springs, Johnson, Laramie, Natrona, Park, Platte, Sheridan, Sweetwater, and Teton. For the model validation, Albany, Big Horn, Crook, Fremont, Lincoln, Niobrara, Uinta, Washakie, and Weston were used. The locations of the counties used in the model development and validation are presented in Figure 17.

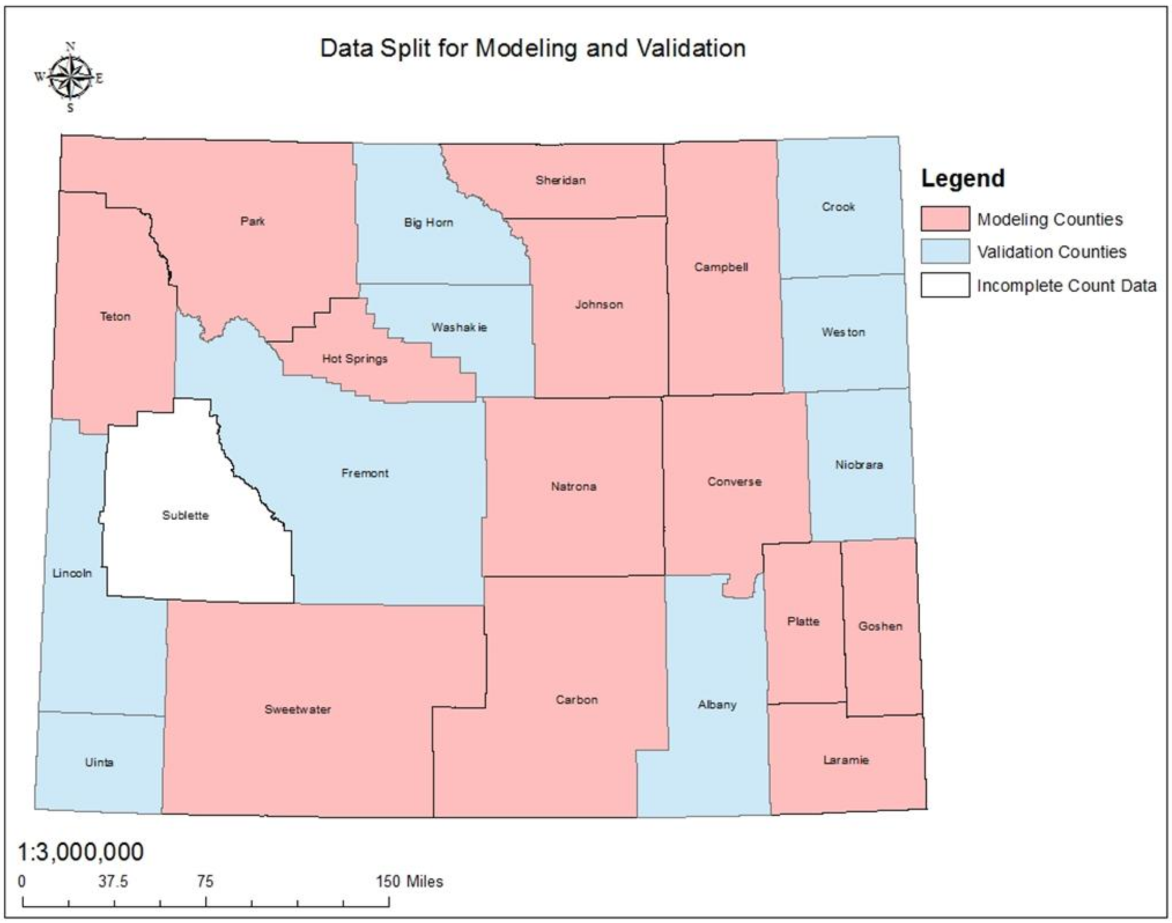


Figure 17: Counties Used in Model Development and Model Validation

Unlike the other counties where traffic counts were carried out in this study, data for Sublette County were collected from the district engineer. The data included ADTs and the name of the associated road segments but the mile post or location where the counts were collected was absent in the data. However, the location of the count was important for determining the demographic data to associate with the count for roads that traversed multiple census blocks. The data from Sublette County was therefore not used in the study.

Some traffic count data obtained from Laramie, Converse, Goshen, and Platte counties were from a previous study investigating the impact of the energy industry on roads [(23)]. Due to the nature of that previous study, the data set was not representative of all road types of interest in this study, and so additional data were collected from other roads in the four counties. The strategy for collecting additional data involved breaking down the four counties into zones based on dominant land use characteristics. Gap areas where samples had not been taken were identified and additional traffic counts taken from roads in those zones. The zones used in the road selection and a description of their locations are presented in Table 5.

Table 6 shows the number of counts collected in the previous oil and gas study, the number of additional counts collected for the current study, and the total number of counts for that county.

Table 7 presents the number of traffic counts taken in each county. The locations of the count stations across the State of Wyoming is presented in Appendix 1. As stated previously, traffic count data from Sublette County was provided by the Sublette County district engineer but those counts were excluded from the validation because there was no information on the exact location of count stations on the road segments. These count locations were necessary to determine some of the demographic data necessary for estimating traffic volumes.

In addition to the traffic volume data, the counters recorded information about speed, number of axles and types of vehicles counted. This information was essential in determining the characteristics of the traffic that plied the road, whether the traffic was industrial or freight in nature or whether the traffic was purely residential with smaller passenger vehicles.

Table 5: Description of zones created.

County	Zone	Description
Laramie	A	West of Cheyenne, largely residential areas off Happy Jack and Horse Creek
	B	East of I 25 and North of US 85
	C	North of Pine Bluffs and adjacent to Nebraska
	D	East of I 25, South of I 80, and closer to Colorado than I 80
	E	West of I 25 and North of Horse Creek
	F	Southeast of the portion of US 85 neither close to Cheyenne nor close to Goshen County, and not close to I 80
	G	Between Zones F & C
	H	East of Cheyenne and close to I 80
	J	West of Pine Bluffs and close to I 80
Converse	A	Just North of I 25 and West of Highway 59
	B	Just North of I 25 and East of Highway 59
	C	Just South of I 25
Platte	A	Between Highway 34 and Bluff View Road / Sybille Creek Road and East Fairview Road
	B	North of Highway 34 and West of I 25
	C	South of Highway 34 and Highway 314
	D	East of I 25 and Between Highway 314 and Highway 26
	E	East of I 25 and North of Highway 26
Goshen	A	North of Highway 26 and West of Highway 85
	B	North of Highway 26 and East of Highway 85
	C	South of Highway 26 and East of Highway 92
	D	Between Highway 26 and Highway 154 and West of Highway 85
	E	South of Highway 154 and West of Highway 85

Table 6: Number of traffic counts in the four counties.

County	Oil Study Counts	Current Study Counts	Total Counts
Laramie	53	33	86
Converse	20	18	38
Goshen	33	37	70
Platte	22	31	53
		Total	247

Table 7: Traffic counts in all counties in Wyoming

Counties	Frequency	Percent
Albany	13	2.7
Big Horn	13	2.7
Campbell	14	2.9
Carbon	12	2.5
Converse	38	8.0
Crook	13	2.7
Fremont	10	2.1
Goshen	70	14.7
Hot Springs	12	2.5
Johnson	16	3.4
Laramie	86	18.1
Lincoln	12	2.5
Natrona	17	3.6
Niobrara	9	1.9
Park	17	3.6
Platte	53	11.1
Sheridan	17	3.6
Sweetwater	12	2.5
Teton	8	1.7
Uinta	13	2.7
Washakie	11	2.3
Weston	10	2.1
Total	476	100.0

Data for Regression Model Development

Predictor Variables

The independent variables were used to predict ADT for a particular road section. The initial identified predictors were: land use, road surface, population, number of households, highway access, per cap income, and housing units. The next sections describe each predictor and the expected trend for the predictor based on findings from the literature review and some logical observations.

Land Use

The prominent land use adjacent to selected roads is helpful in identifying the trip generators on that road segment and was expected to explain traffic volumes on the road. Field assessments were undertaken to categorize the land use into the initial categories in Table 8. Additionally, aerial photographs were used to determine the land use of certain locations. The aerial photographs were mostly used only in the determination of land use for the previous project dataset. These aerial photographs were then cross checked with the information gathered from recent traffic counts.

Table 8: Land Use Descriptions

Land Use		Description
AC	Agricultural cropland	Fields plowed and often irrigated with various crops
AP	Agricultural pasture	Some hay meadows, but mostly pasture
AC/AP	Agricultural cropland/pasture	A pretty even distribution of plowed/ irrigated fields and pasture; E.g. pasture on one side of the road while crop fields are on the other
F	Forest	Wooded areas; Classified as national forest land
R	Recreational	Used for recreational purposes
I	Industrial/Commercial	Commercial operations more extensive than just cattle or sheep stockyards; Oil rigging; Power plant; Mining plants
AP/I	Agricultural pasture/Industry	A mix of pasture and oil rigging/power plants
S	Subdivision	Residential land use; Fairly dense population of houses

The distribution of land use for the selected roads showed most roads to be located in agricultural pastureland, followed by agricultural cropland and then land use types with an even mixture of pastureland and cropland.

Apart from AC and AP land uses, it was observed that the number of roads in each of the remaining categories were inadequate for performing inferential analysis. So land use mixes such as AP/I, AC/I and F/I were combined as industrial (I) land use. AP/AC lands were categorized as either AP or AC depending on the dominant type in the land use mix. Land uses AC/S and AP/S were also re-categorized and added to S (subdivisions) land use. The remaining land uses - AP/R, AP/S, and F - were combined and re-categorized as Other-land use. Finally, the mean ADT from AP was not significantly different from roads with Other-land use and so Other-land use was combined with the AP land use for the model development. The final categories of land use were therefore AC, AP, S, and I.

Dummy variables were created for the land use variable. Subdivision land use (S) was taken as the reference category, and indicator variables (composed of 0 and 1 values) were formed for the remaining three categories. Figure 18 shows the four land use categories' composition in the traffic count data and Figure 19 shows the mean ADT for each land use category.

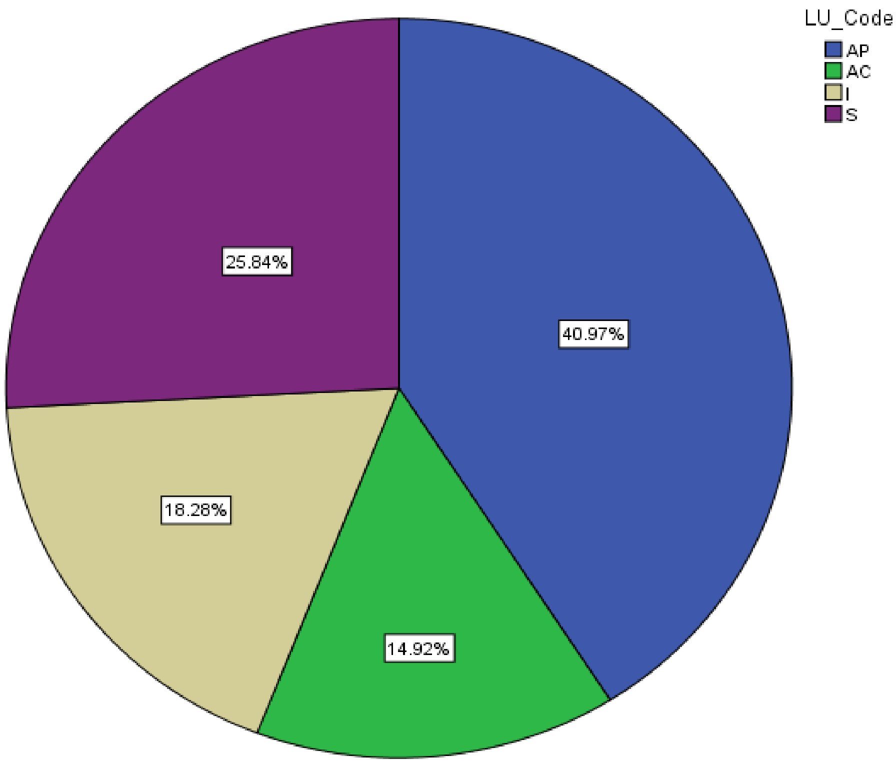


Figure 18: Proportion Distribution of Final Land Use Types

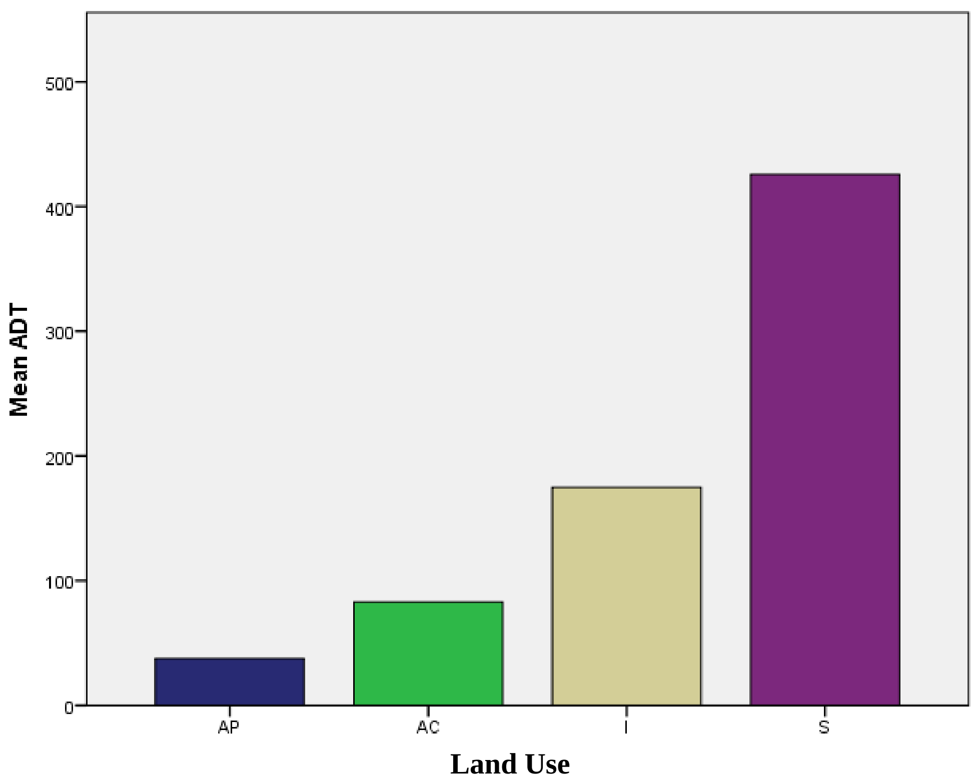


Figure 19: Mean ADT for the Four Main Land Use Categories

Road Surface

Road surface was categorized into unpaved and paved road surfaces. Sixty two percent (62.2 percent) of the roads were unpaved and thirty eight percent (37.8 percent) were paved. Due to the fact that paved roads are more comfortable and safer to drive on, they were expected to attract relatively more traffic compared to unpaved roads. The paved roads are also built to connect important facilities that are usually major traffic generators. Thus the expected trend for road surface types was that paved roads would reflect higher traffic volumes compared to unpaved roads. This trend is shown in Figure 20 for the dataset.

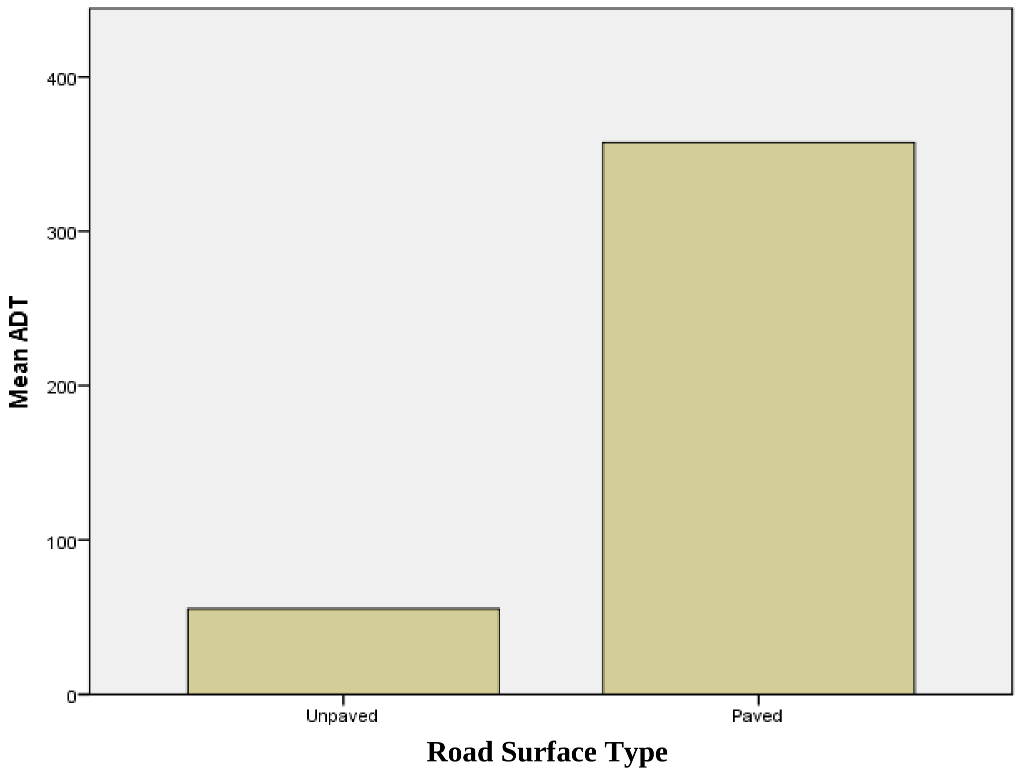


Figure 20: Comparing ADT for Paved and Unpaved Roads

Population

A review of previous studies to predict traffic volumes indicated that population of residents in the vicinity of the road had an impact on the road traffic volumes. The trend relating traffic volumes to population was expected to be positive with higher values resulting in higher traffic volumes in rural locations. In urban locations, ride-sharing, transit services and higher auto occupancy rates result in a trend where increased population do not necessarily reflect in higher ADTs. Figure 21 shows a scatterplot of traffic volume against Population for the data collected. It is seen that there is no clear relationship that shows increasing or decreasing traffic volumes with increasing population.

The scattered nature of the plot in Figure 21 was explained by the fact that the census blocks around the road were not equally sized and so high populations associated with an adjacent road may be covering a large area that encompass other roads. For this reason, population density was computed and considered as a variable in the model development process.

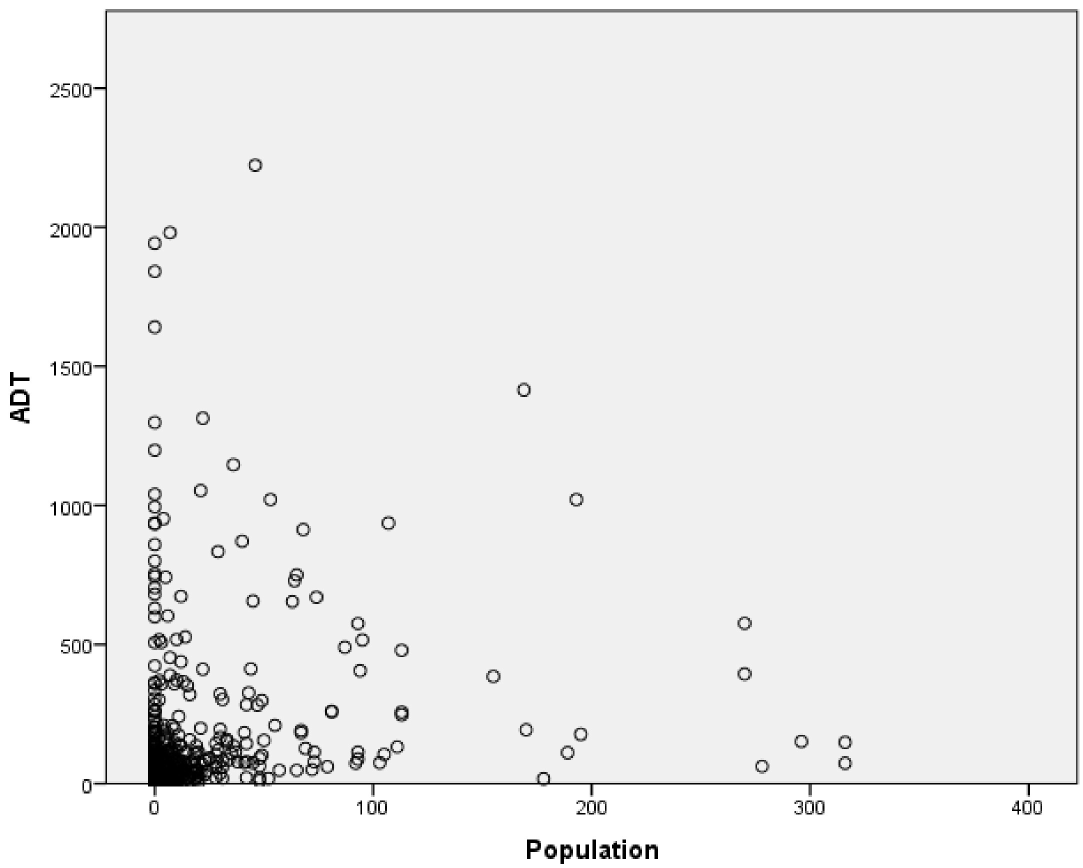


Figure 21: Plot of Census Block Population versus Traffic Volume

Population data obtained from the census.gov website were aggregated at census block and census block group levels. The census block is the smallest geographic area for which the U.S. Census collects and tabulates decennial data. The census block groups are the next level above census blocks in geographic hierarchy. Figure 22 compares the census blocks in Converse County to the census block groups for the same county.

Both levels of aggregation were considered for the regression model development. Population data at the census block level ranged from 0 to 316 but for the census block group, population ranged from 622 to 4,342. Population at the block group level were divided by 1000 to obtain values in the thousandth. The population density variables were also at two levels, one of them was for densities computed with census block data and the other was computed from census block group data.

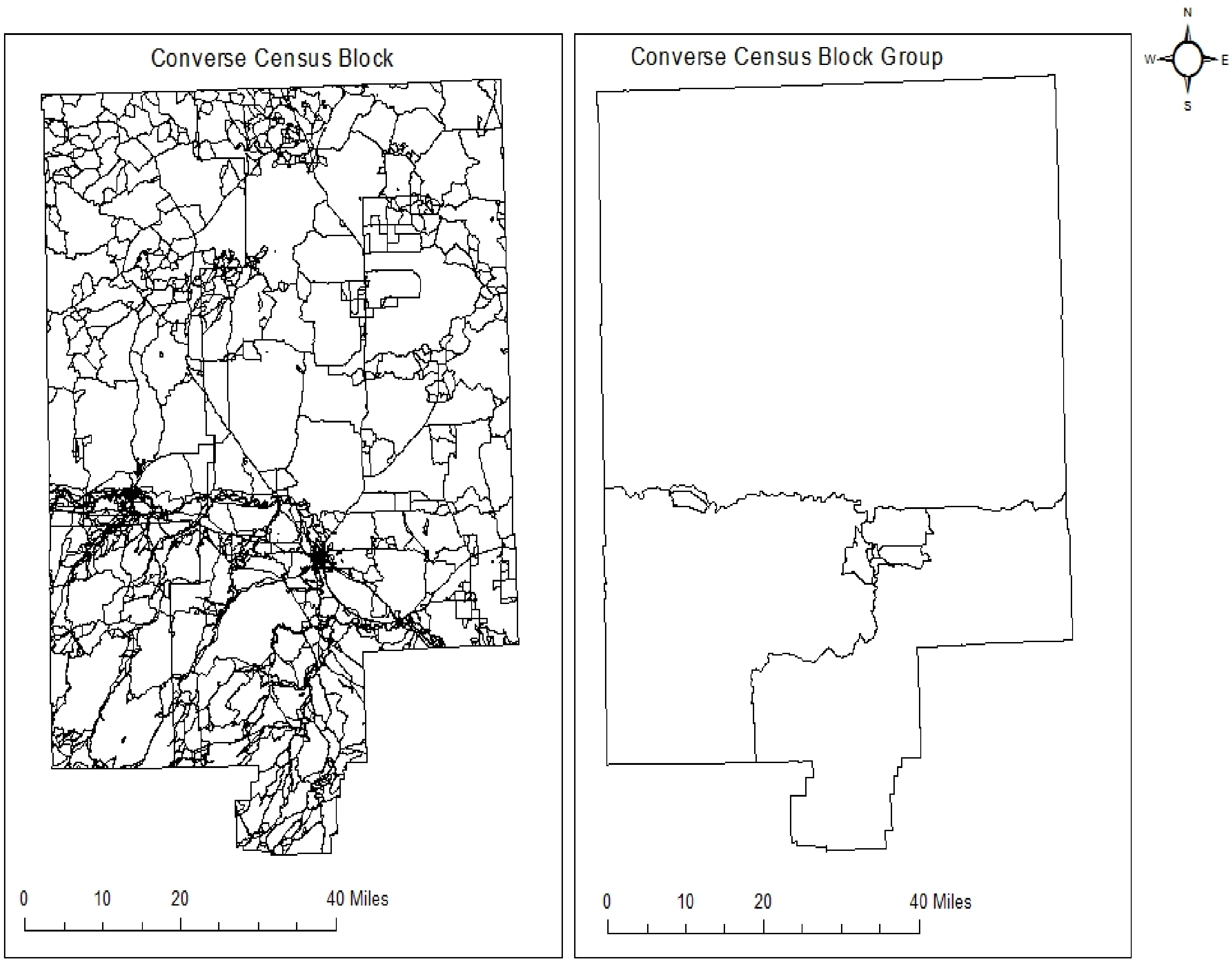


Figure 22: Comparing census blocks to census block groups in Converse County

Households and Dwelling Units

Based on the literature review, the number of households and dwelling/housing units were included as initial predictors. Higher number of households and dwelling units were expected to translate into predictions of higher traffic volumes on nearby roads. Data for households were at the block level and ranged from 0 to 129. Dwelling units were aggregated at the block group level and ranged from 243 to 1,786. Household density and dwelling unit density were also included as initial predictors in the regression analysis since plots in Figure 23 and Figure 24 did not show a clear trend in the relationship between traffic volume and the two variables.

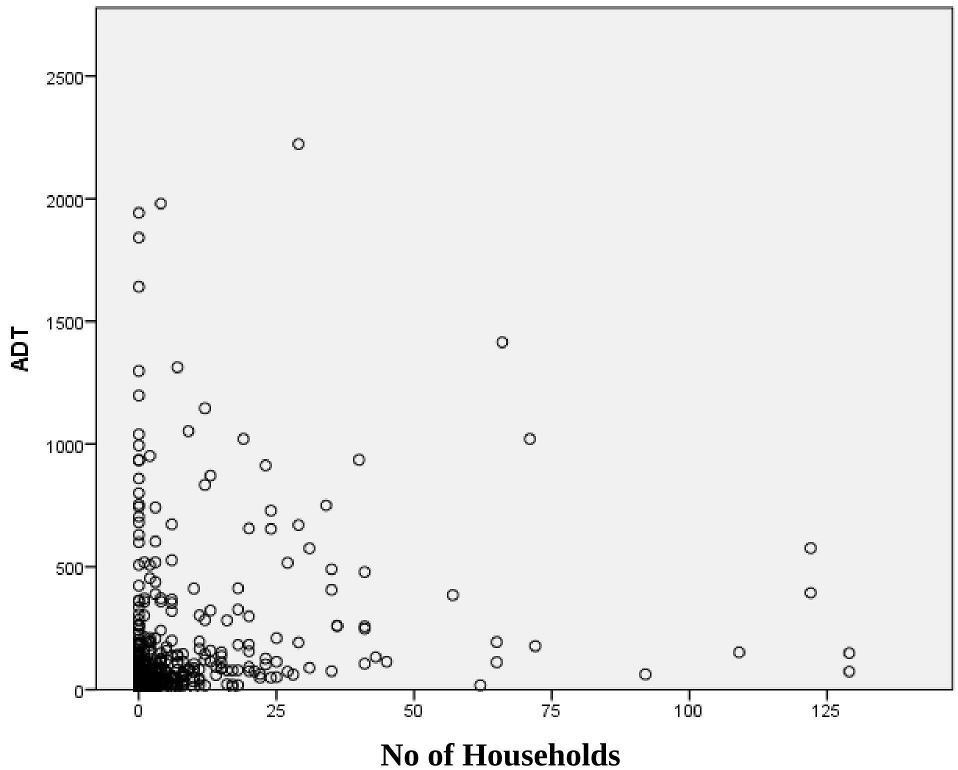


Figure 23: Plot of Households versus Traffic Volume

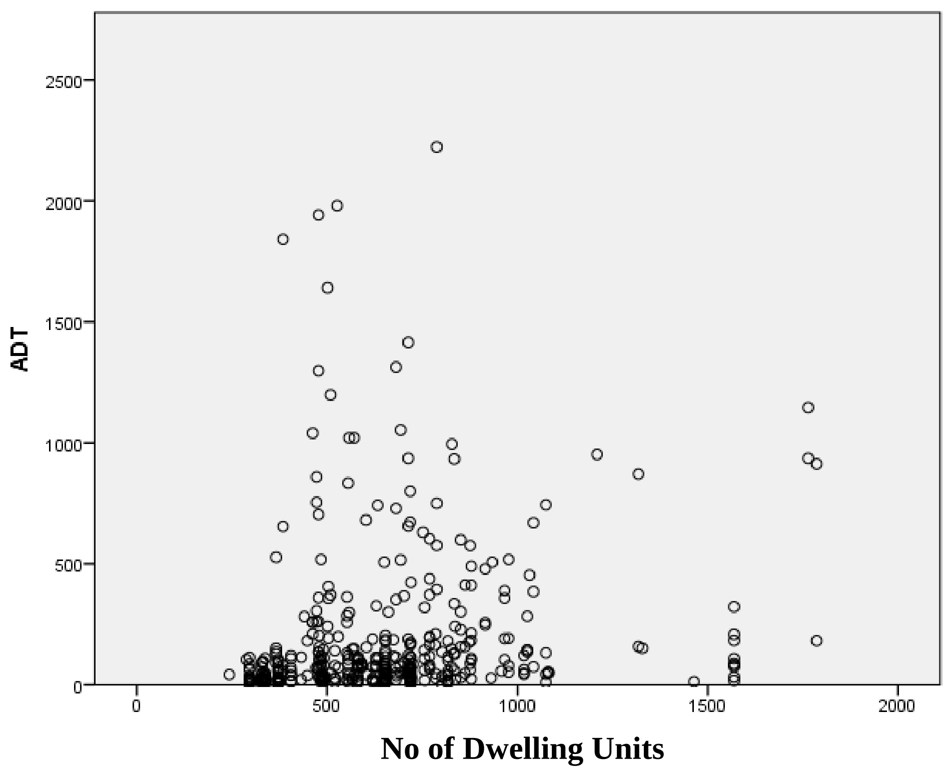


Figure 24: Plot of Dwelling Units versus Traffic Volume

Employment and Per Capita Income

This data was available at the census block group level. Employment numbers and income information provides an indication of the level of economic activities generated within a census block group. Higher employment and income values were expected to translate into higher traffic volumes. Per capita income values were divided by 10,000 to obtain values in the ten-thousandth for the regression analysis. Employment numbers ranged from 236 to 2173 and income ranged from 17,126 to 57,313.

Figure 25 and Figure 26 show random plots for employment versus traffic volume and income versus traffic volume respectively. Therefore, employment density and income density were also included for analysis as initial predictors.

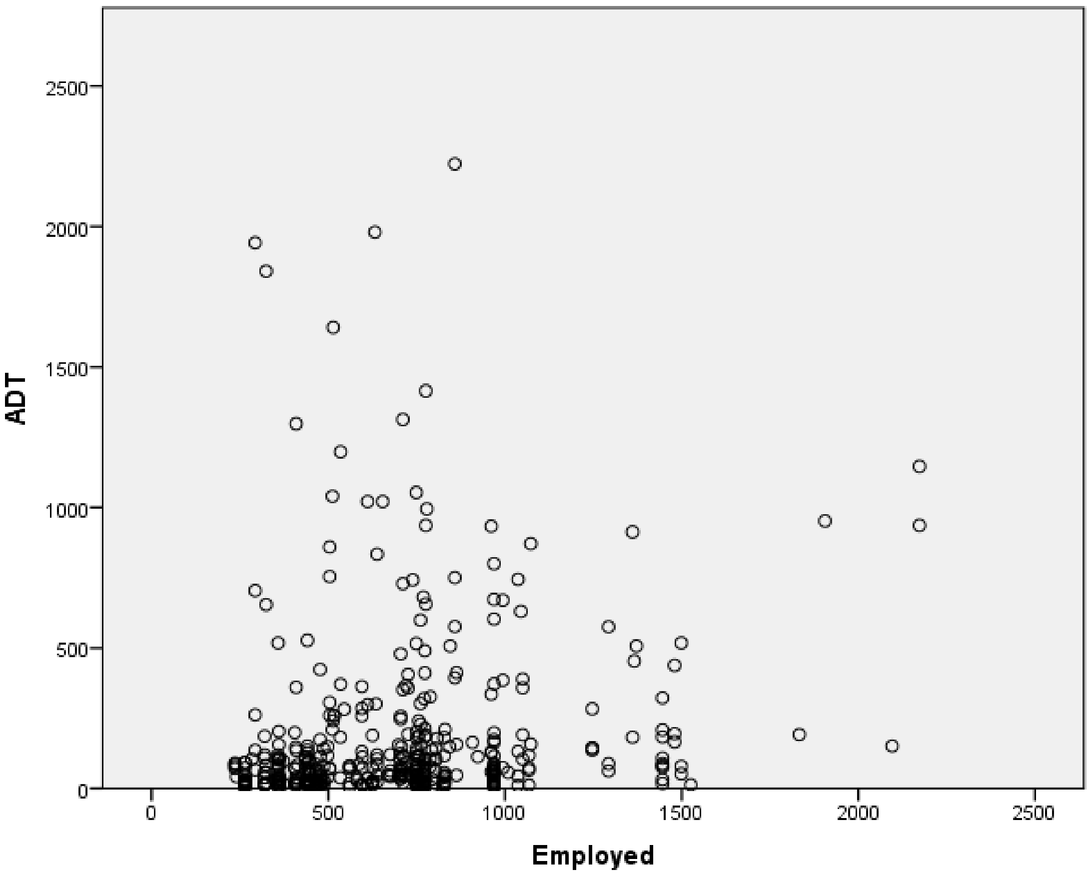


Figure 25: Plot of Employment versus Traffic Volume

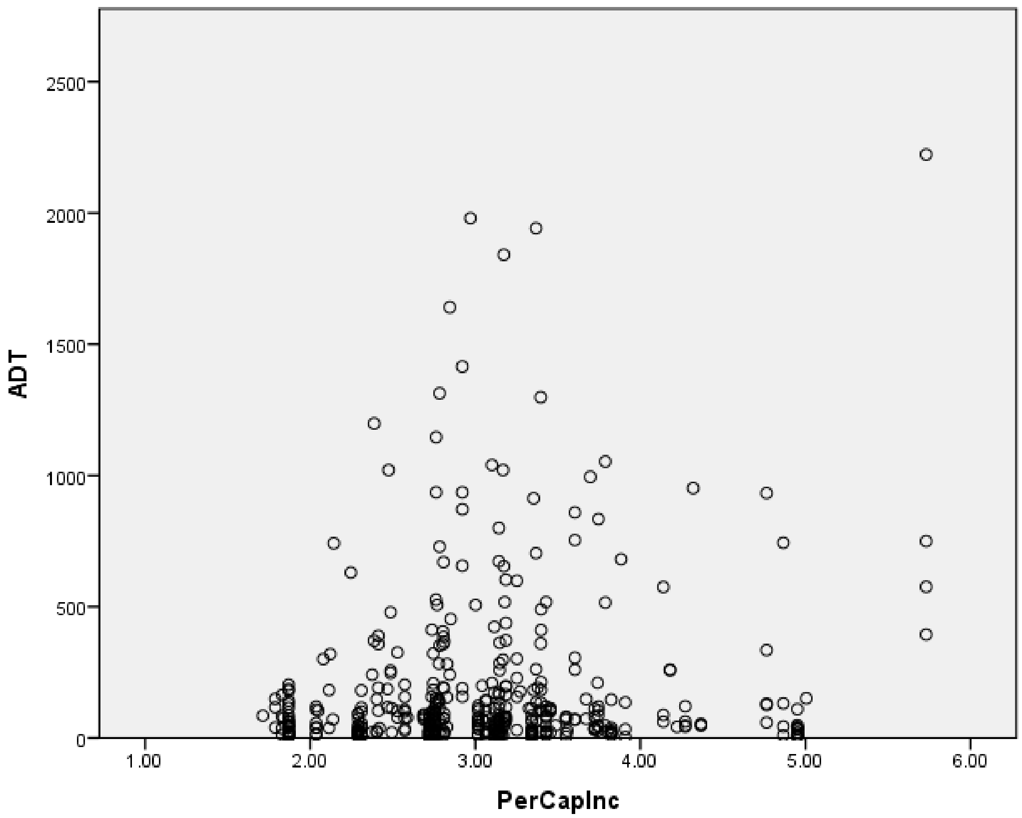


Figure 26: Plot of Per Cap Income versus Traffic Volume

Access to Highway

Access to highway refers to whether a local road had direct access to primary or secondary roads or not. Traffic count locations that were less than two miles from a highway were also considered as having direct access to highways. Roads with direct access to highways were expected to have higher traffic volumes because they are likely to be used by a proportion of the traffic on the highway to access outlying areas. Figure 27 shows the mean traffic volumes for roads categorized as having direct "access" and roads categorized as having "no access".

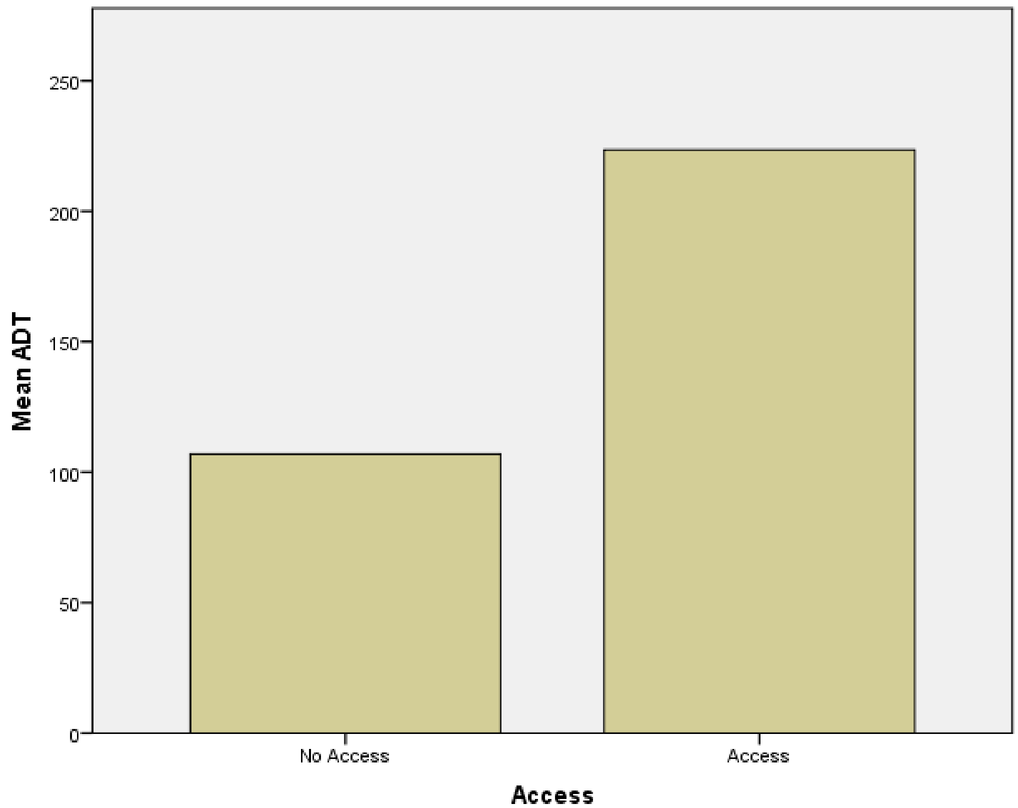


Figure 27: Average Traffic Volume by Access

Database Preparation

All the data for the potential predictors were collected and entered into the Minitab software database for carrying out the analysis to develop the model. This involved encoding the categorical variable as dummy variables and recording the values for qualitative variables for the analysis. Appendix 2 and Appendix 3 present the respective modeling and validation database created for the study. The 13 potential predictors were encoded as:

- Pavement type (PvtType): paved roads were classified as 1 and unpaved roads 0.
- Access (Access): roads with direct access to primary or secondary roads were classified as 1, whereas roads without direct access were classified as 0.
- Land Use: the land use categories were classified as agricultural cropland (LU_AC), industrial areas (LU_I), subdivisions (LU_S), and agricultural pastureland (LU_AP). Subdivision (LU_S) was taken as a reference category, and indicator variables (composed of 0 and 1 values) were formed for the other three.
- Population in the census block where ADT counts were taken (Population).
- Population in the census block group (Population1) where the traffic count was taken. The raw population values were divided by 1000 to obtain population in the thousandth.
- Number of households (Total_HH) in the census block group where ADT counts were taken.

- Number of employed civilians in the census block group (Employed) where the road is located.
- Number of housing units in the block group (Housing1) where ADT counts were taken.
- Per cap income of the block group (Income_1) in ten-thousands, where ADT counts were taken.
- Employment density (Emp_Dense1) at the road location using the employment number and area (in sq. miles) of the block group
- Housing unit density (Hse_Dense1) obtained from total housing units in a census block group divided by the area (in square miles) of the block group.
- Income density (Inc_Dense1) obtained from dividing the per capita income of a block group by the area of the census block group.
- Population density (Pop_Dense1) obtained from dividing the census block group population by the area of the census block group.

According to the Guideline for Geometric Design of Very Low-Volume Local Roads, a road is classified as a low volume road when the ADT on the road is less than 400. (24) An examination of the data collected on rural local roads in Wyoming as shown in Figure 28 indicated that some of the "low volume roads" had ADT greater than 400. These higher volume roads were few and was not unexpected for the sample.

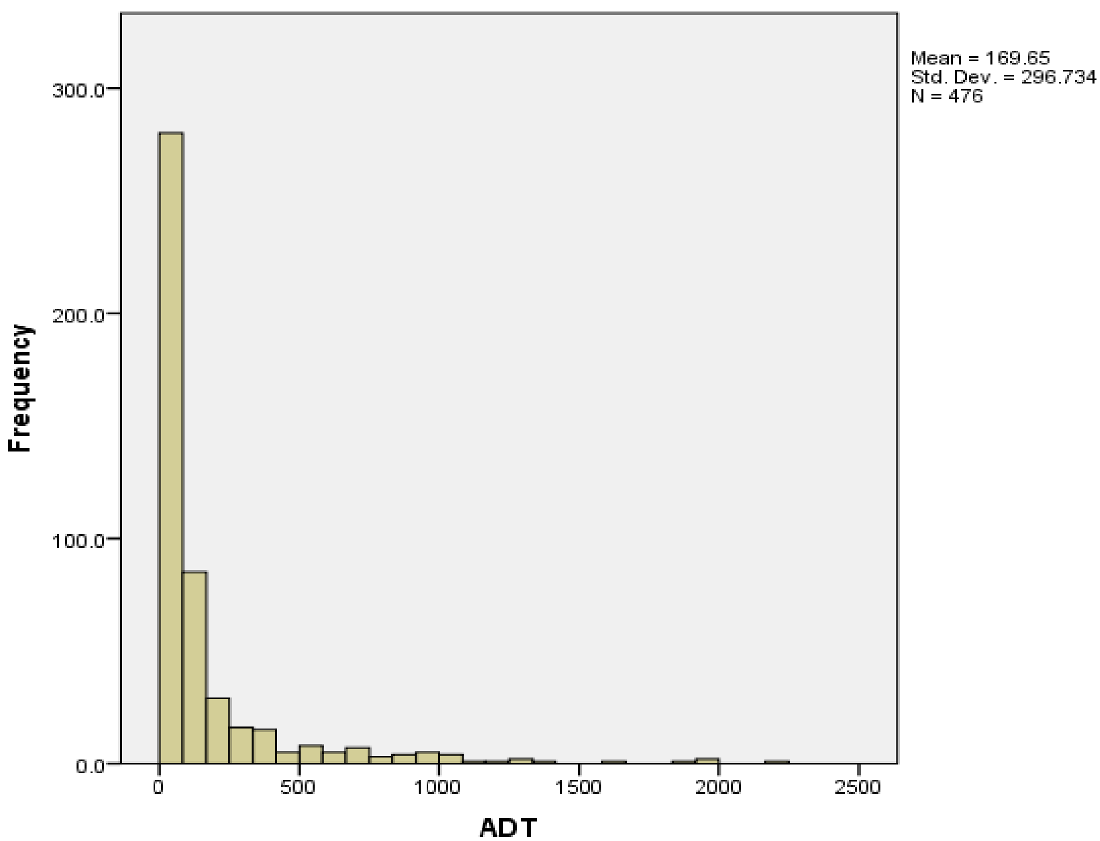


Figure 28: Histogram of all road locations collected

Data Collection for Travel Demand Modeling

Two types of data sources are required in travel demand modeling. These are the network data and socioeconomic data. Socioeconomic data are aggregated in transportation analysis zones (TAZs) and they are mainly used in computing trip generation in the first step. TAZs are geographic areas that divide the study area into relatively similar areas. They serve as the basic units of land use and land activity. Network data provide an accurate representation of the transportation system serving the study area. The network data enable determination of travel times for the trip distribution and highway assignment steps. This section discusses the process of building the socioeconomic and network data used in developing the model.

Socioeconomic Data and Transportation Analysis Zones

Transportation analysis zones do not only serve as basic units for storing socioeconomic data but their centroids serve as the origin and destinations in travel demand models. The type of transportation analysis usually determines the level of detail required in TAZ development. In urban studies where greater detailed analysis are required, a large number of zones are developed that cover small land areas and it is not uncommon to use land parcels for the zones. However, in rural areas where population is sparsely distributed, the zones are developed to be less detailed. In this study, the TAZs are typically aggregations of U.S. Census geographic blocks that enable easy utilization of census products in the model development.

Some MPOs and DOTs have setup procedures for delineating TAZs to suit the type of studies that are carried out by the agency. For instance, Florida DOT has a document that gives a clear guide for delineating TAZs. Such a document ensures consistency in model developments and improves model accuracy.

The document was a whitepaper prepared by Cambridge Systems, Inc. and AECOM Consult for Florida DOT detailing a recommended approach to delineating TAZs in Florida. [(25)] The guidelines covered zone sizing, quantity and boundary compatibility. The following are the recommendations made for the base and future year in transportation demand forecasting:

1. The population in each TAZ must not exceed 3,000 but must be greater than 1200.
2. The person trips in each TAZ must not exceed 15,000 in the base and future years.
3. Sizing of each TAZ must be greater than 0.25 square miles but less than one square mile.
4. The study area must be large enough for over 90 percent of the trips to begin and end within the study area.
5. The TAZ structure must be such that they are compatible with highway and transit networks within the study area.
6. Centroid connectors in a TAZ must represent realistic access points to highway and transit networks.
7. TAZ structure is compatible with census, physical, and political boundaries.
8. TAZs are based on homogenous land uses, when feasible.
9. Special generators and freight generators must be isolated in their own TAZ.

The study area considered in this research is mostly rural with far lower population sizes than in Florida and so some of the recommendations made in the Florida document are not implementable. For instance, it is impossible to delineate a TAZ in rural areas of Wyoming with an area of one square mile and a population greater than 1,200 (satisfy both recommendations 1 and 2). For this reason, only recommendations 4 to 9 were adopted in developing TAZs for this study. TAZs were developed by combining census blocks to form new zones that aggregate data from their constituent census blocks.

The objective of aggregating the census blocks was to ensure that each TAZ had a population of at least one. These zones were created for six south eastern counties (Laramie, Albany, Converse, Niobrara, Platte, and Goshen counties). Figure 29 provides a map showing the TAZs that were delineated from the census blocks for the study area.

The socioeconomic data needed for developing the travel demand model included population, household, housing unit, and employment data. Previous studies reviewed in the literature utilized trip rates for oil wells in estimating ADT. However, this research uses trip rates associated with households and employment with the reason that employment level in TAZs are likely to be correlated to oil and gas activities in the zone.

Population, Employment, Housing Units and Households Data

According to NCHRP Report 716, the decennial U.S. Census is the best source for basic population, housing units and household data. [26] The data are available in tables that can be joined to GIS shape-files of the census blocks and aggregated to the transportation analysis zones. Since the last decennial U.S. census survey was undertaken in 2010 (five years) ago, the 2010 data were used in developing the model. Population and household data were available at the census block level but the employment and housing unit data were available at the census block group level of aggregation.

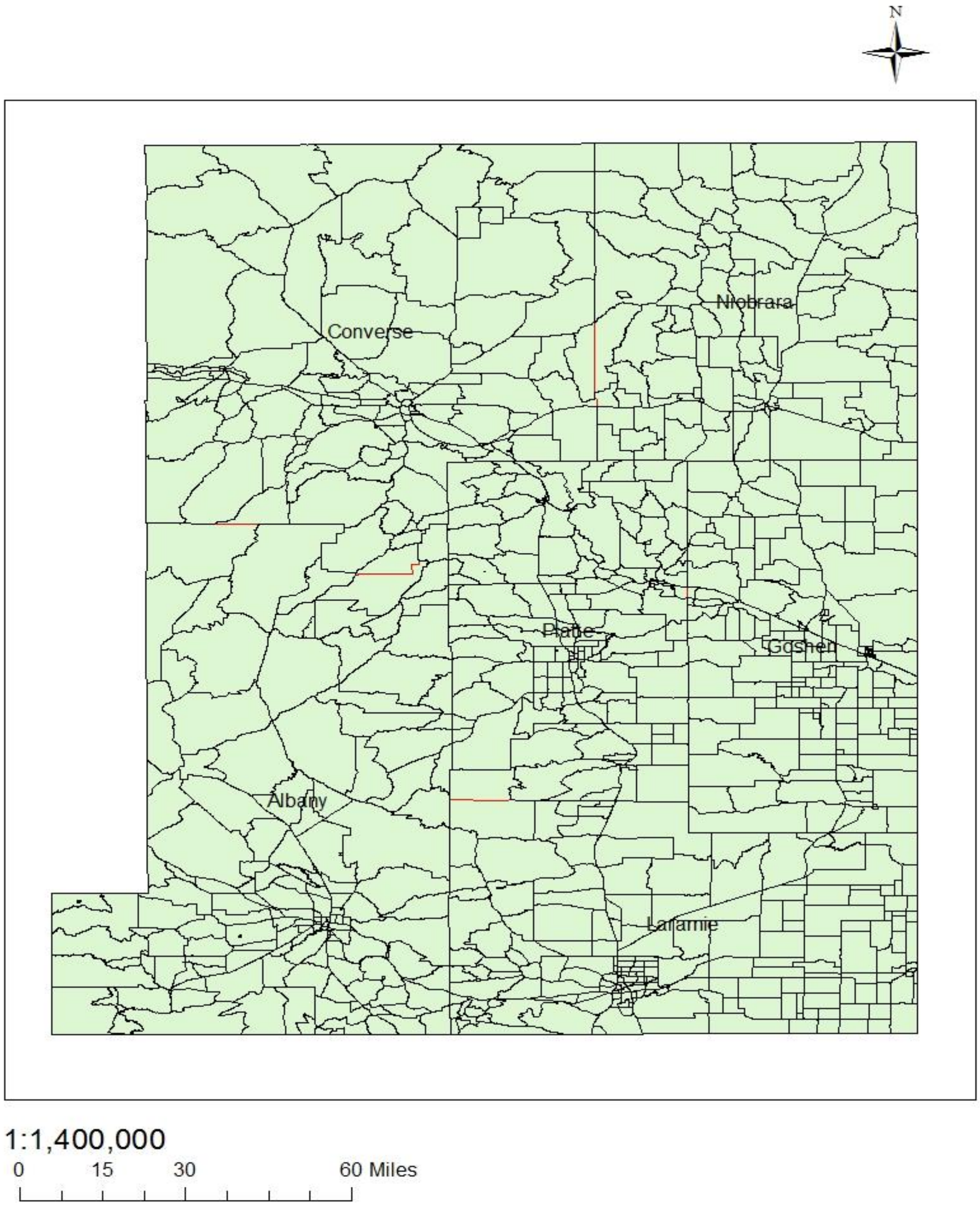


Figure 29: TAZ Delineation for the Study Area

Census block data for housing units and employment were determined for each block by computing the fraction of the block group's population in that block. The fraction was then multiplied by the block group's data to obtain an estimate of employment and housing units in the census block (Figures 30 and 31).

$$Employment_{Blocki} = \frac{Population_{Blocki}}{Population_{Blockgroupi}} \times Employment_{Blockgroupi}$$

Figure 30: Equation. Estimating Block Employment

$$Housing\ Unit_{Blocki} = \frac{Population_{Blocki}}{Population_{Blockgroupi}} \times Housing\ Unit_{Blockgroupi}$$

Figure 31: Equation. Estimating Block Housing Units

Where

$Housing\ Unit_{Blockgroupi}$ *is the number of housing units in a census block group i*
$Housing\ Unit_{Blocki}$ *is the number of housing units in a census block i*
$Population_{Blockgroupi}$ *is the population in census block group i*
$Population_{Blocki}$ *is the population in census block i*

The employment data were categorized into service, retail, and other employment. The classifications were based on the following Standard Industrial Classification codes:

- Retail: Major Groups 52 through 59 (5200 – 5999).
- Service: Major Groups 60 through 90 (6000 – 9000).
- Other: Major Groups 1 through 51 and 91 through 99 (100 - 5100 and 9100 – 9999).

Network Data

The network database was developed such that all the attributes of the road system could be read, stored, and manipulated by the travel demand forecasting software. Citilabs Cube software was used for the travel demand modeling. This software package can import ArcGIS shape-files and their attributes into the Cube environment for modeling. Thus the network data was developed using ArcGIS. The network developed covered a large rural area with the network composed of county roads, primary and secondary roads but excluded private roads and trails.

The network data for WYDOT highways and county roads were obtained from the WyGISC Geospatial Hub (www.uwyo.edu/wygisc/). The two shapefiles were merged to obtain a single shape-file for all roads in Wyoming. Additional data for each link such as posted speeds, number of lanes and link capacity were entered manually into the network attribute file. Direction of travel for each link was also encoded in the links with "2" for bi-directional travel, and "1" for one-directional travel.

Chapter Summary

This chapter discusses the data collection exercises carried out for the regression and travel demand modeling. Traffic counting exercises were carried out in 22 counties in Wyoming. The ADT data were used as response variables in the regression model development. The data were split into a modeling dataset for developing the model, and a validation dataset for validating the model developed, and for validation in the travel demand modeling. All the ADT data were collected in the summers from 2012 to 2014.

Data for potential predictor variables such as income, population, number of households, and housing units, identified in the literature, were collected from the U.S. census website and aggregated at the census block and block group level. Other variables such as road surface type, access and land use were collected during site visits and from aerial photographs. These data were coded into SPSS statistical software for the development of the regression models.

The data needs for developing the travel demand model required the delineation of transportation analysis zones from census blocks. These transportation analysis zones are the basic units of aggregation for socioeconomic data used in the trip generation model. The socioeconomic data were obtained from the US census website and included housing units, population, employment by type (service, retail, and other) and household data. Network data were also developed for the travel demand model. The network shape-files were obtained from the WyGISC website and attribute data such as speed, link capacity and direction of travel were input manually.

CHAPTER 5. REGRESSION MODEL DEVELOPMENT

In developing the regression models for predicting traffic volumes, two regression model development techniques were implemented. These were the linear regression and logistic regression modeling methods. Socio-economic, land use and road geometric data served as the predictor variables, and traffic volume data served as the response variable in both methods used.

Thirteen predictors were initially selected for developing the model. The predictors were:

- Pavement type (PvtType): paved roads were classified as 1 and unpaved roads 0.
- Access (Access): roads with direct access to primary or secondary roads were classified as 1, whereas roads without direct access were classified as 0.
- Land Use: the study employed four land use categories - agricultural cropland (LU_AC), industrial areas (LU_I), subdivisions (LU_S), and agricultural pastureland (LU_AP). This last includes "other" since their mean AADT values were not significantly different. LU_S was taken as a reference category, and indicator variables (composed of 0 and 1 values) were formed for the other three.
- Population in the census block where ADT counts were taken (Population).
- Population in the census block group (Population1) where the traffic count was taken. The raw population values were divided by 1000 to obtain population in the thousandth.
- Number of households (Total_HH) in the census block group where ADT counts were taken.
- Number of employed civilians in the census block group (Employed) where the road is located.
- Number of housing units in the block group (Housing1) where ADT counts were taken.
- Per cap income of the block group (Income_1) in ten-thousands, where ADT counts were taken.
- Employment density (Emp_Dense1) at the road location using the employment number and area (in sq. miles) of the block group.
- Housing unit density (Hse_Dense1) obtained from total housing units in a census block group divided by the area (in square miles) of the block group.
- Income density (Inc_Dense1) obtained from dividing the per capita income of a block group by the area of the census block group.
- Population density (Pop_Dense1) obtained from dividing the census block group population by the area of the census block group.

GIS tools were used to process demographic data collected from the U.S. Census website. Shapefiles for blocks and block groups were downloaded from census.gov at no cost. Each block or block group had a geographic identity code (GEOID) that was used to link them to Census Bureau's American Factfinder website demographic data.

Pavement type, access to highways and land use types were determined from satellite images such as google maps and a 2014 world satellite image file downloaded from the ESRI website (http://www.esri.com). The information obtained from the image files were further confirmed by onsite observations during the traffic count exercise.

Linear Regression Model

In building the linear regression model, a best subsets model selection procedure was used to identify the most important predictors. The process involved first generating a list of all possible models from the 13 predictors. The next step involved using a criterion such as the adjusted R^2 value to examine each of the regression models for a given number of predictors to determine the best model subset. In this study, the model with the best R^2 that also had all of its predictors contributing significantly to the model was selected as the best model.

Best Model Selection

The best subset selection method involved examining all possible subset regressions for a best model. The Minitab software was used in this model development. It had a feature that enabled easy computation and examination of the best models for each subset size.

To estimate ADT, the best subset had five predictors and an adjusted R^2 of 44 percent. Checks for violations of linear regression assumptions indicated unequal scatter in the residual plot (Figure 32) and some curvature in the error variance. This violation was fixed by applying a logarithmic transformation of the response variable (ADT) to ensure a constant error variance and a linear scatter in the residual plot.

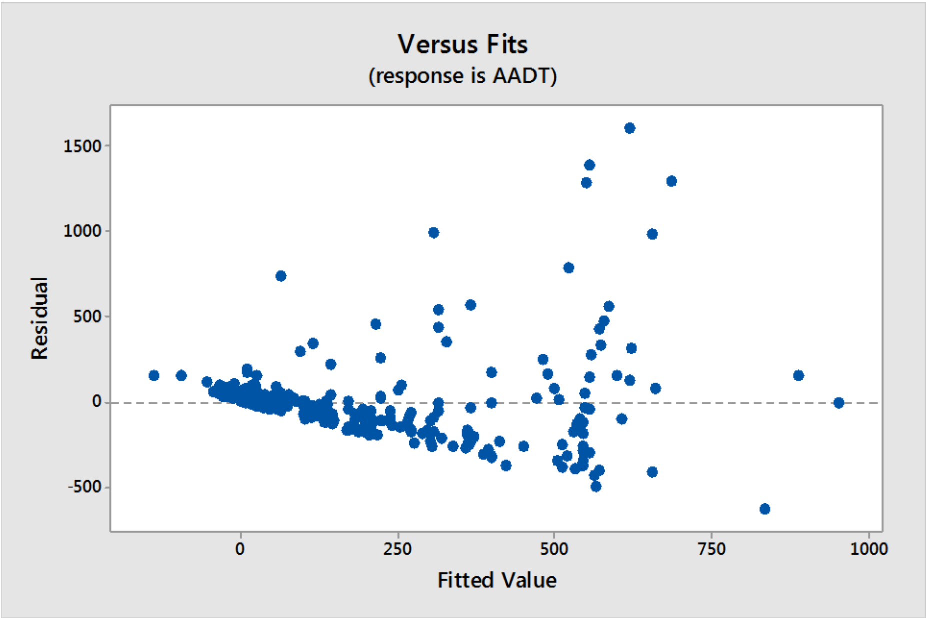


Figure 32: Residual Plot for Initial ADT Prediction Model

The model selection process was rerun using the logarithmic transformation of ADT (log10 (ADT)) as the response variable. Table 9 shows the results of the process and indicates that the transformation led to an improved adjusted R^2 from approximately 44 to 64 percent. Table 9 was further examined to determine the predictors that contributed most in estimating Log10 (ADT).

Land use (represented by the three indicator variables) contributed significantly to explaining the variation in log10 (ADT) and so was included in all the subset models. From Table 9, a regression of pavement type and land use type resulted in an adjusted R^2 of 62.1 percent. The R^2 value increased significantly as subset size increased until the subset size reached four. Beyond a subset size of four, there was no useful increase in adjusted R^2 values.

Table 9: Best subset regression for estimating log (ADT)

Total var	R-Sq	R-Sq (adj)	Pavement Type	Population	Households	Employed	Access	Housing	Income	Population1	EmpDense	HHDense	IncomeDense	PopDense
2	62.6	62.1	X											
2	56.1	55.6					X							
3	63.5	63.0	X				X							
3	63.2	62.7	X							X				
4	64.3	63.7	X				X			X				
4	64.0	63.5	X			X	X							
5	64.6	63.9	X				X			X				X
5	64.6	63.9	X				X			X		X		
6	64.7	63.9	X				X			X	X			X
6	64.6	63.8	X				X		X	X				X
7	64.8	63.9	X				X		X	X	X			X
7	64.7	63.8	X				X			X	X		X	X
8	64.8	63.8	X				X		X	X	X		X	X
8	64.8	63.8	X			X	X		X	X	X			X
9	64.8	63.7	X	X	X		X		X	X	X			X
9	64.8	63.7	X			X	X		X	X	X		X	X
10	64.8	63.6	X	X	X		X		X	X	X		X	X
10	64.8	63.6	X	X	X	X	X		X	X	X			X
11	64.8	63.6	X	X	X	X	X		X	X	X		X	X
11	64.8	63.5	X	X	X		X		X	X	X	X	X	X
12	64.8	63.5	X	X	X	X	X		X	X	X	X	X	X
12	64.8	63.5	X	X	X	X	X	X	X	X	X		X	X
13	64.8	63.4	X	X	X	X	X	X	X	X	X	X	X	X

The four selected predictors were pavement type, land use, access, and population at the block group level.

Model Diagnostics

A regression fit using all four significant predictors resulted in a model with an adjusted R^2 of 64 percent. In checking for the assumptions of regression modeling, an examination of the residual plots, as shown in Figure 33, indicated constant error variance and normality of error distribution. Thus the regression modeling assumptions were seen to have been adequately met.

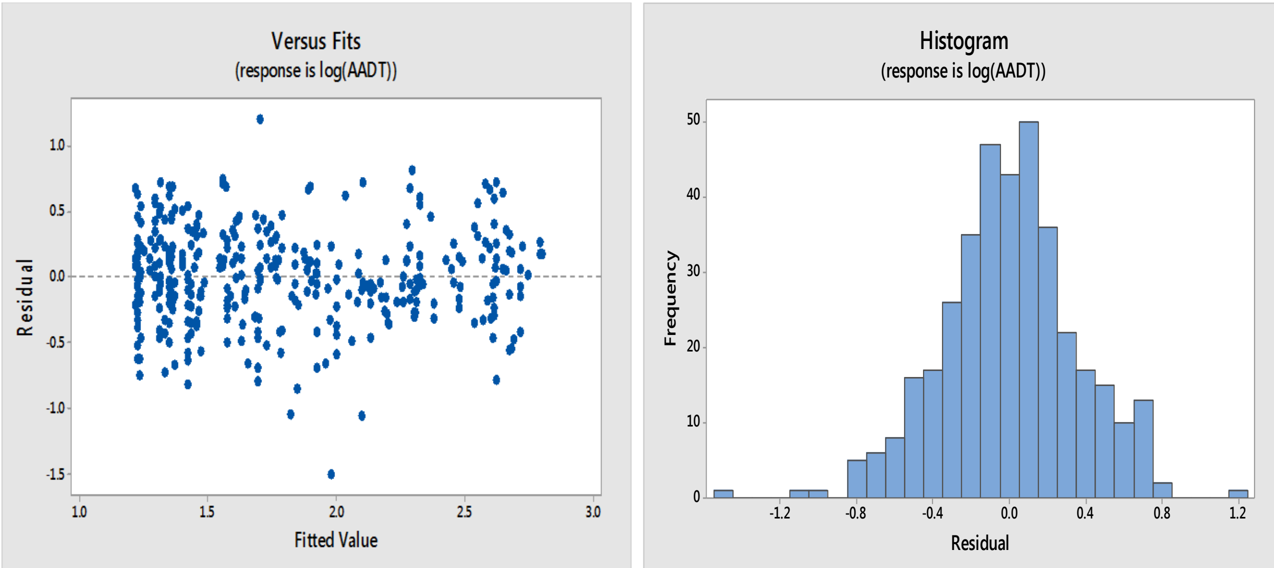


Figure 33: Check for constancy of error variance and normality of error distribution

Model Description

Table 10 presents the model coefficients from the best subset selection technique. All coefficient signs in the table were as expected. For example, the positive sign for pavement type indicated that paved roads had more traffic than unpaved roads. Similarly, the positive sign for access implied roads with direct access to highways carried more traffic than roads without direct access to highways. The negative signs for land uses indicated lower traffic on pasture lands, crop lands, and industrial land uses when compared to subdivisions. Population at the block group level also had a positive sign indicating increasing traffic volumes with increasing population.

Table 10: Model coefficients for best subset model

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
	B	Std. Error	Beta			Lower Bound	Upper Bound
(Constant)	1.993	.080		24.823	.000	1.835	2.151
PvtType	.404	.045	.323	8.906	.000	.315	.493
Access	.124	.038	.104	3.259	.001	.049	.199
LU_AC	-.587	.066	-.380	-8.911	.000	-.717	-.458
LU_AP	-.834	.060	-.696	-13.817	.000	-.952	-.715
LU_I	-.299	.065	-.184	-4.584	.000	-.427	-.170
Population1	.091	.034	.091	2.716	.007	.025	.158

The final model is presented in equation form as:

$$\log_{10}(ADT) = 1.993 + 0.404PvtType + 0.124Access - 0.587LU_{AC} - 0.834LU_{AP} - 0.299LU_I + 0.091\ Population1$$

Figure 34: Equation. Linear Model for Estimating ADT

Model Validation

Two methods were used to validate the model. First, a plot of predicted log10 (ADT) against observed log10 (ADT) for the modeling dataset was compared to a plot of predicted log10 (ADT) against log10 (ADT) for the validation datasets. A comparison of the two scatterplots would also serve as a test of the robustness of the model. In order to validate the model, both plots were expected to display similar trends and level of accuracy.

The second validation method involved determining the Pearson product moment correlation coefficient (Pearson's r) between predicted ADT and actual ADT. Pearson's r was determined for both datasets (modeling dataset versus validation dataset) and compared to confirm the linearity of relationship between the actual and predicted ADT values.

The Percentage Root Mean Square Error (%RMSE) that measures the errors of the predictions was determined. This was computed for the low volume roads (ADT<400) to be 73.4 percent.

Validation Method 1: Plots of Predicted vs Actual AADT

Figure 35 shows the plots of the predicted log10 (ADT) versus actual log10 (ADT) for the modeling and validation datasets.

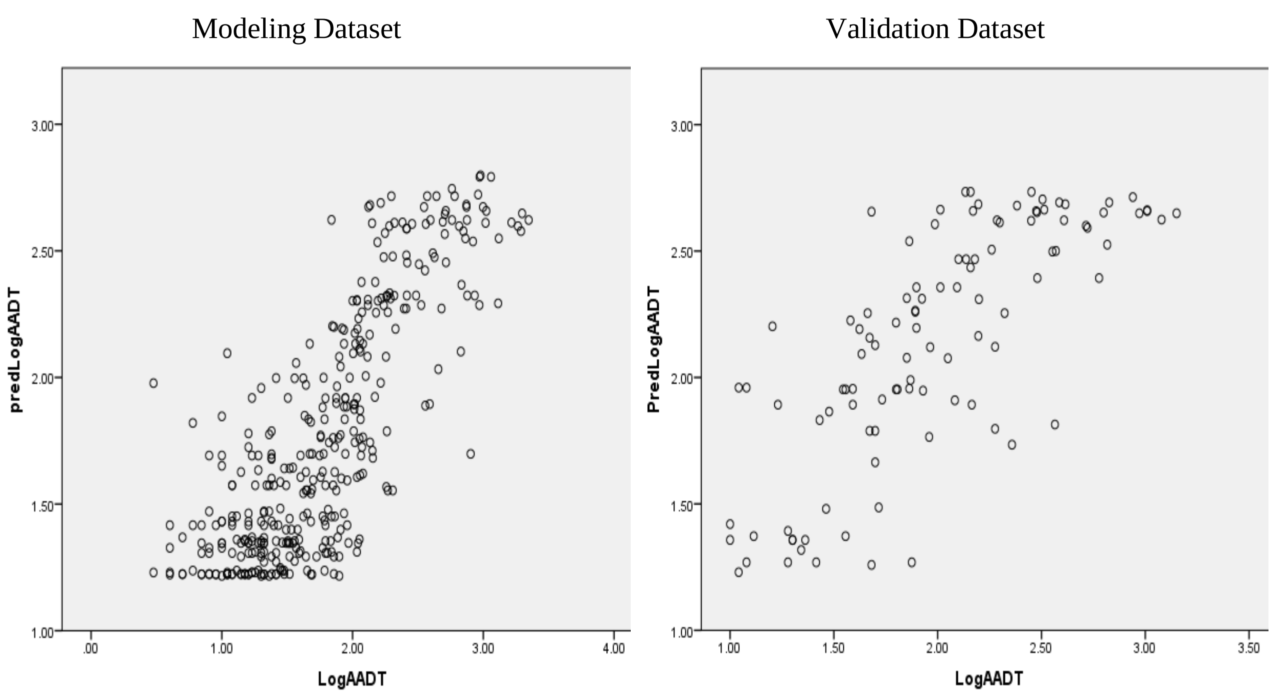


Figure 35: Comparing prediction trends for modeling and validation datasets

Both plots had linear relationships between actual log10 (ADT) and predicted log10 (ADT) and thus showed the model to be effective for estimating traffic volumes for low volume roads in Wyoming.

Validation Method 2: Correlation between Predicted AADT and Actual AADT

Pearson product moment correlation coefficient was used to confirm the linear association between predicted Log10 (ADT) and actual log10 (ADT). For the modeling dataset, the Pearson's correlation value was 0.687 compared to 0.61 for the validation dataset. The high correlation for both datasets indicated less variation around the line of best fit and shows the model to be valid for predicting traffic volumes across Wyoming.

LOGISTIC REGRESSION MODEL DEVELOPMENT

The logistic regression model was developed in this section for predicting the ADT thresholds within which a road's ADT is likely to fall. As stated previously in Chapter 3, the logistic regression model was deemed necessary because roads having traffic volumes within certain range experience similar traffic impacts. Predictions using the logistic regression model will enable differentiation of low volume roads from relatively higher volume roads. For instance, all roads with ADT less than 100 may be considered to have similar traffic volumes and given similar intervals in maintenance scheduling whereas roads with ADTs above 100 may be scheduled for more frequent repairs. The ADT thresholds used to develop the models were selected by considering the impacts experienced by roads from ranges of traffic volumes. The thresholds are as follows:

- Threshold 1: Roads with ADT less than 50.
- Threshold 2: Roads with ADT less than 100.
- Threshold 3: Roads with ADT less than 150.
- Threshold 4: Roads with ADT less than 175.
- Threshold 5: Roads with ADT less than 200.

Five equations were developed for determining the odds (OddsTi) of a road falling within each threshold.

Threshold 1: ADT < 50

A full binomial logistic regression model was run with all the 13 predictors. Nine of the predictors were found to be insignificant using alpha = 0.05 and so were removed from the model. The final logistic regression analysis output for Threshold 1 is presented in Table 11. The model equation developed for Threshold 1 is also presented in Figure 36. The model had an R^2 of 58.1 percent.

Table 11: Logistic Regression Output for Threshold 1

		B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I.for EXP(B)	
								Lower	Upper
Step 1[a]	PvtType(1)	-1.691	.335	25.523	1	.000	.184	.096	.355
	Access(1)	-.807	.293	7.583	1	.006	.446	.251	.793
	LU_AC(1)	2.163	.453	22.787	1	.000	8.696	3.578	21.135
	LU_AP(1)	3.245	.416	60.804	1	.000	25.671	11.355	58.039
	Total_HH	-.051	.022	5.384	1	.020	.950	.910	.992
	Constant	-1.076	.406	7.038	1	.008	.341		

$$Odds_{T1} = EXP(2.163 * LU\_AC - 1.691 * PvtType - 0.807 * Access + 3.245 * LU\_AP - 0.051 * Total\_HH - 1.076)$$

Where

$Odds_{Ti}$ is the calculated odds for threshold i,
LU_AC is an indicator variable for cropland land use,
LU_AP is an indicator variable for pastureland land use,
PvtType is an indicator variable for paved roads,
Access is an indicator variable for direct connection of road to highway,
Total_HH refers to the number of households in the census block where ADT is desired.

Figure 36: Equation. Odds of Road Belonging to Threshold 1

Model Interpretation for Threshold 1

The model can be interpreted by using the Exp(B) column of Table 11. Assuming all other predictors in the model were held constant, the odds of being in the threshold for each predictor is determined by calculating the Exponential of the coefficient values. Thus the odds of a paved road falling within the threshold drops by 82 percent compared to the odds of an unpaved road. The odds of a road connected to a highway falling in this threshold drops by 55 percent compared to a road with no access to a highway.

For a land use indicator, subdivisions are the reference baseline. So a cropland has an increased odds of 8.696 times compared to subdivisions, whereas for pasturelands, the odds is 25.671 times higher than subdivisions. Finally, a unit increase in households results in a drop in odds by 5 percent.

Threshold 2: ADT < 100

In the analysis for Threshold 2, 11 of the predictors were found to be insignificant using alpha = 0.05 and were removed from the model. The final logistic regression analysis output for Threshold 2 is presented in Table 12.

Table 12: Logistic Regression Output for Threshold 2

		B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I.for EXP(B)	
								Lower	Upper
Step 1[a]	PvtType(1)	-2.681	.369	52.686	1	.000	.068	.033	.141
	LU_AC(1)	2.701	.549	24.198	1	.000	14.887	5.076	43.662
	LU_AP(1)	4.523	.571	62.837	1	.000	92.140	30.112	281.944
	LU_I(1)	1.190	.544	4.779	1	.029	3.286	1.131	9.546
	Constant	-.710	.454	2.446	1	.118	.492		

The model's R^2 was 70.2 percent and the equation is presented in Figure 37.

$$Odds_{T2} = EXP(2.701 * LU\_AC - 2.681 * PvtType + 4.523 * LU\_AP + 1.190 * LU\_I - 0.710)$$

Where

$Odds_{Ti}$ is the calculated odds for threshold I,
LU_AC is an indicator variable for cropland land use,
LU_AP is an indicator variable for pastureland land use,
LU_I is an indicator variable for industrial land use,
PvtType is an indicator variable for paved roads.

Figure 37: Equation. Odds of Road Belonging to Threshold 2

Model Interpretation for Threshold 2

The model can be interpreted by using the Exp(B) column of Table 12. Assuming all other predictors in the model were held constant, the odds of a paved road falling within the threshold drops by 93 percent compared to the odds of an unpaved road. For a land use indicator, subdivisions are the reference baseline. So a cropland has an increased odds ratio of 14.887 compared to subdivisions, for pasturelands the odds is 92.140 times higher than subdivisions, and for industrial land uses, the odds is 3.286 times higher than subdivisions.

Threshold 3: AADT < 150

Eight of the predictors were found to be insignificant using alpha = 0.05 and so were removed from the model. The final logistic regression analysis output for Threshold 3 is presented in Table 13.

Table 13: Logistic Regression Output for Threshold 3

		B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I.for EXP(B)	
								Lower	Upper
Step 1	PvtType(1)	-3.267	.418	61.198	1	.000	.038	.017	.086
	Employed	-.003	.001	22.932	1	.000	.997	.996	.998
	Emp_Dense1	.094	.046	4.157	1	.041	1.099	1.004	1.203
	Hse_Dense1	-.147	.071	4.322	1	.038	.863	.751	.992
	Inc1d	-.530	.230	5.315	1	.021	.589	.375	.924
	Constant	7.021	.980	51.297	1	.000	1119.594		

The R square for the model is 59.2 percent and the model equation is shown in Figure 38.

$$Odds_{T3} = EXP(7.021 - 3.267 * PvtType - 0.003 * Employed + 0.094 * Emp\_Dense1 - 0.147 * Hse\_Dense1 - 0.530 * Inc1d)$$

Where

$Odds_{Ti}$ is the calculated odds for threshold I,
PvtType is an indicator variable for paved roads,
Employed refers to the number of employed in the census block,
Emp_Dense1 refers to the employment density of the census block group,
Hse_Dense1 refers to the housing unit density of the census block group,
Inc1d refers to per capita income density of the census block group.

Figure 38: Equation. Odds of Road Belonging to Threshold 3

Model Interpretation for Threshold 3

The model can be interpreted by using the Exp(B) column of Table 13. Assuming all other predictors in the model are held constant, the odds of a paved road falling within the threshold drops by 96 percent compared to the odds of an unpaved road. Unit increases in employment, housing unit density, and income resulted in drops in odds by 0.3 percent, 13.7 percent, and 46.5 percent respectively. A unit increase in employment density results in an odds increment by 10 percent.

Threshold 4: AADT < 175

Eight of the predictor variables were found to be insignificant predictors using alpha = 0.05 and were removed from the model. The final logistic regression analysis output for Threshold 4 is presented in Table 14.

Table 14: Logistic Regression Output for Threshold 4

		B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I.for EXP(B)	
								Lower	Upper
Step 1[a]	PvtType(1)	-3.391	.430	62.067	1	.000	.034	.014	.078
	Employed	-.003	.001	25.290	1	.000	.997	.996	.998
	Emp_Dense1	.088	.029	9.445	1	.002	1.092	1.032	1.155
	Pop_Dense1	-.027	.012	5.437	1	.020	.973	.951	.996
	Inc_dense1	-.002	.001	9.767	1	.002	.998	.997	.999
	Constant	5.685	.659	74.519	1	.000	294.446		

The R^2 for the model is 53.5 percent and the model is shown in Figure 39.

$$Odds_{T4} = EXP(5.685 - 3.391 * PvtType - 0.003 * Employed + 0.088 * Emp\_Dense1 - 0.027 * Pop\_Dense1 - 0.002 * Inc\_dense1)$$

Where

$Odds_{Ti}$ is the calculated odds for threshold I,
PvtType is an indicator variable for paved roads,
Employed refers to the number of employed in the census block,
Emp_Dense1 refers to the employment density of the census block group,
Pop_Dense1 refers to the population density of the census block group,
Inc_dense1 refers to per capita income density of the census block group.

Figure 39: Equation. Odds of Road Belonging to Threshold 4

Model Interpretation for Threshold 4

The model can be interpreted by using the Exp(B) column of Table 14. Assuming all other predictors in the model were held constant, the odds of a paved road falling within the threshold drops by 97 percent compared to the odds of an unpaved road. Unit increases in employment, population density, and income density resulted in drops in odds by 0.3 percent, 2.7 percent, and 0.2 percent. A unit increase in employment density results in an odds increase by 9 percent.

Threshold 5: AADT < 200

Eight of the predictors were found to be insignificant using alpha = 0.05 and so were removed from the model. The logistic regression analysis output for Threshold 5 is presented in Table 15. The R^2 for the model is 56.3 percent and the model is shown in Figure 40.

Model Interpretation for Threshold 5

The model can be interpreted by using the Exp(B) column of Table 15. Assuming all other predictors in the model were held constant, the odds of a paved road falling within the threshold drops by 97 percent compared to the odds of an unpaved road. Unit increases in employment, housing density, and income density resulted in reductions in odds of 0.3 percent, 3.8 percent, and 0.2 percent respectively. A unit increase in employment density resulted in an odds increment by 6.4 percent.

Table 15: Logistic Regression Output for Threshold 5

		B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I.for EXP(B)	
								Lower	Upper
Step 1[a]	PvtType(1)	-3.421	.435	61.955	1	.000	.033	.014	.077
	Employed	-.003	.001	24.153	1	.000	.997	.996	.998
	Emp_Dense1	.062	.018	11.429	1	.001	1.064	1.027	1.103
	Hse_Dense1	-.038	.016	5.504	1	.019	.962	.932	.994
	Inc_dense1	-.002	.001	8.089	1	.004	.998	.997	1.000
	Constant	5.592	.643	75.701	1	.000	268.276		

$$Odds_{T5} = EXP(5.592 - 3.421 * PvtType - 0.003 * Employed + 0.062 * Emp\_Dense1 - 0.038 * Hse\_Dense1 - 0.002 * Inc\_dense1)$$

Where

$Odds_{Ti}$ is the calculated odds for threshold I,
PvtType is an indicator variable for paved roads,
Employed refers to the number of employed in the census block,
Emp_Dense1 refers to the employment density of the census block group,
Hse_Dense1 refers to the housing unit density of the census block group,
Inc_dense1 refers to per capita income density of the census block group.

Figure 40: Equation. Odds of Road Belonging to Threshold 5

Model Predictions

The output (OddsTi) from each of the five equations (figures 36 to 40) was then used in Figure 41 to determine the probability or chance of the road's ADT falling within the threshold of interest.

$$Probability(AADT < Thresholdi) = \frac{Odds_{Ti}}{1+Odds_{Ti}}$$

Where

$Odds_{Ti}$ is the calculated odds for threshold i

Figure 41: Equation. Probability of Road Belonging to a Threshold

Calculated probabilities from Figure 41 range from 0 to 1. Roads with calculated probabilities of 50 percent or more are predicted to have ADTs less than the threshold. Thus for a road with probability calculated to be less than 50 percent for Threshold 5, the road is predicted to have an ADT of more than 200. However, a road is predicted to have an ADT less than 200 when the calculated probability is equal to or greater than 50 percent. The next section validates the five models in determining the odds of belonging to each threshold.

Model Validation

Validations for the logistic models were carried out by comparing the threshold predictions to observed ADTs in the modeling and validation datasets. The threshold predictions were determined by using the results from figures 36, 37, 38, 39, and 40 as inputs in the equation in Figure 41 to calculate the probability of a road falling in a given threshold. Roads with calculated probabilities of 50 percent or greater were regarded as falling within the threshold of interest and those roads with lower probabilities were regarded as falling outside the threshold.

Table 16 shows the performance of the five models in predicting roads falling in each threshold. For instance the model for Threshold 1 correctly predicted the ADT threshold for 303 roads in the modeling dataset. This represented 81 percent of the 372 roads used in developing the model. The model accurately predicted the threshold for 81 percent (84 out of 104) of the roads in the validation dataset as well. The similarity in percentage accuracy for the two datasets exhibits consistency in predictions across various counties in Wyoming. The models for thresholds 2, 3, 4, and 5 had percentage accuracies ranging from 78 percent to 89 percent for both datasets.

Table 16: Prediction performance of the five logistic models

	Threshold 1		Threshold 2		Threshold 3		Threshold 4		Threshold 5	
	Model Dataset	Validation Dataset	Model Dataset	Validation Dataset	Model Dataset	Validation Dataset	Model Dataset	Validation Dataset	Model Dataset	Validation Dataset
Predictions (1)	203	18	254	40	312	73	309	77	296	76
Actual (1)	180	32	243	55	288	67	296	71	308	76
Error (1)	46	3	17	4	32	12	16	11	23	6
Predictions (0)	169	86	118	64	60	31	63	27	76	28
Actual (0)	192	72	129	49	84	37	76	33	64	28
Error (0)	23	17	28	19	8	6	29	5	35	6
Overall Misclassified	69	20	45	23	40	18	45	16	58	12
% Overall Misclassified	19%	19%	12%	22%	11%	17%	12%	15%	16%	12%

Chapter Summary

This chapter developed two efficient, cost effective and easy to use models for predicting traffic volumes on low volume roads in Wyoming. The first model is a linear regression model and the second model is a logistic regression model. During the model development process, the response variable was log transformed to overcome issues of non-constancy of error variance. The model utilizes pavement type, access to highway or expressway, predominant land use type, and population at the census block group as inputs to predict the Log10 (ADT) of a roadway. Validation of the model was carried out by predicting traffic volumes (ADT) for roads that were not included in the model development. The prediction accuracy for the validation dataset was found to be comparable to the prediction accuracy of the data used in developing the model. The logistic regression model was used in predicting the probability of a road belonging to one of five ADT thresholds. These five thresholds were ADTs less than 50, 100, 150, 175, and 200 respectively. The model comprised six equations for determining the probability of a road belonging to each threshold. A validation of the logistic model was carried out with data that was not used in building the model. The percentage accuracies in predicting the AADT thresholds were found to range from 78 percent to 89 percent.

CHAPTER 6. TRAVEL DEMAND MODEL DEVELOPMENT

The travel demand model was developed with ArcGIS 10.2.2 from Esri and Cube 6 from Citilabs. ArcGIS was used in compiling the various data and Cube in the implementation of the model. The model development in Cube involved creating scripts that call on in-built libraries of programs within Cube to execute the various steps of the model. A detailed description of the preprocessing of data and the travel demand model development processes are presented in this chapter.

Data Preprocessing

The travel demand model was developed for four counties in south east Wyoming. The location of these counties are shown in Appendix 4. Two main data types are used in travel demand modeling. These are the network data and the socio-economic or land use data. These two data types were preprocessed using ArcGIS. The preprocessing involved gathering all road network and census block data into two geodatabases. Attributes such as posted speed limits, number of lanes, functional class, and whether the road section was a one-way or two-way were assigned to each road segment in the road network database. For the socio-economic data, transportation analysis zones (TAZs) were delineated from census block shapefiles. Data from census blocks making up each TAZ were aggregated to the TAZ level. The steps followed in developing the two datasets are presented in Figure 42 and the resulting TAZ and network data are presented in Appendix 5, and Appendix 6 respectively.

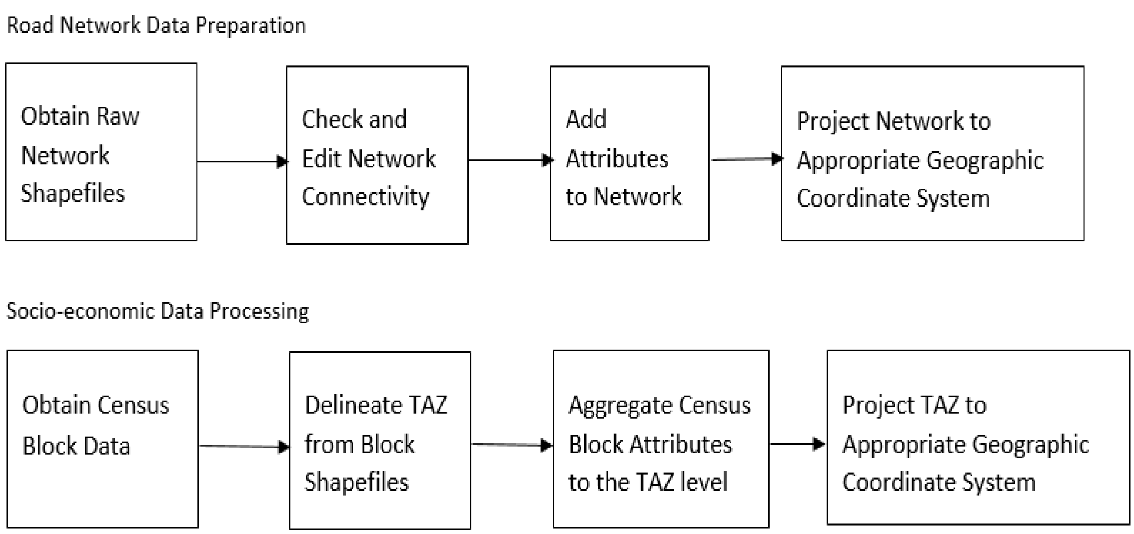


Figure 42: Data Preprocessing

Upon completion of the data preprocessing, the two datasets were then imported into the Cube software environment for the model development. Figure 43 shows the model application developed in the Cube software environment. The application took the inputs from the preprocessing through the four travel demand steps to produce a network file with estimated traffic volumes.

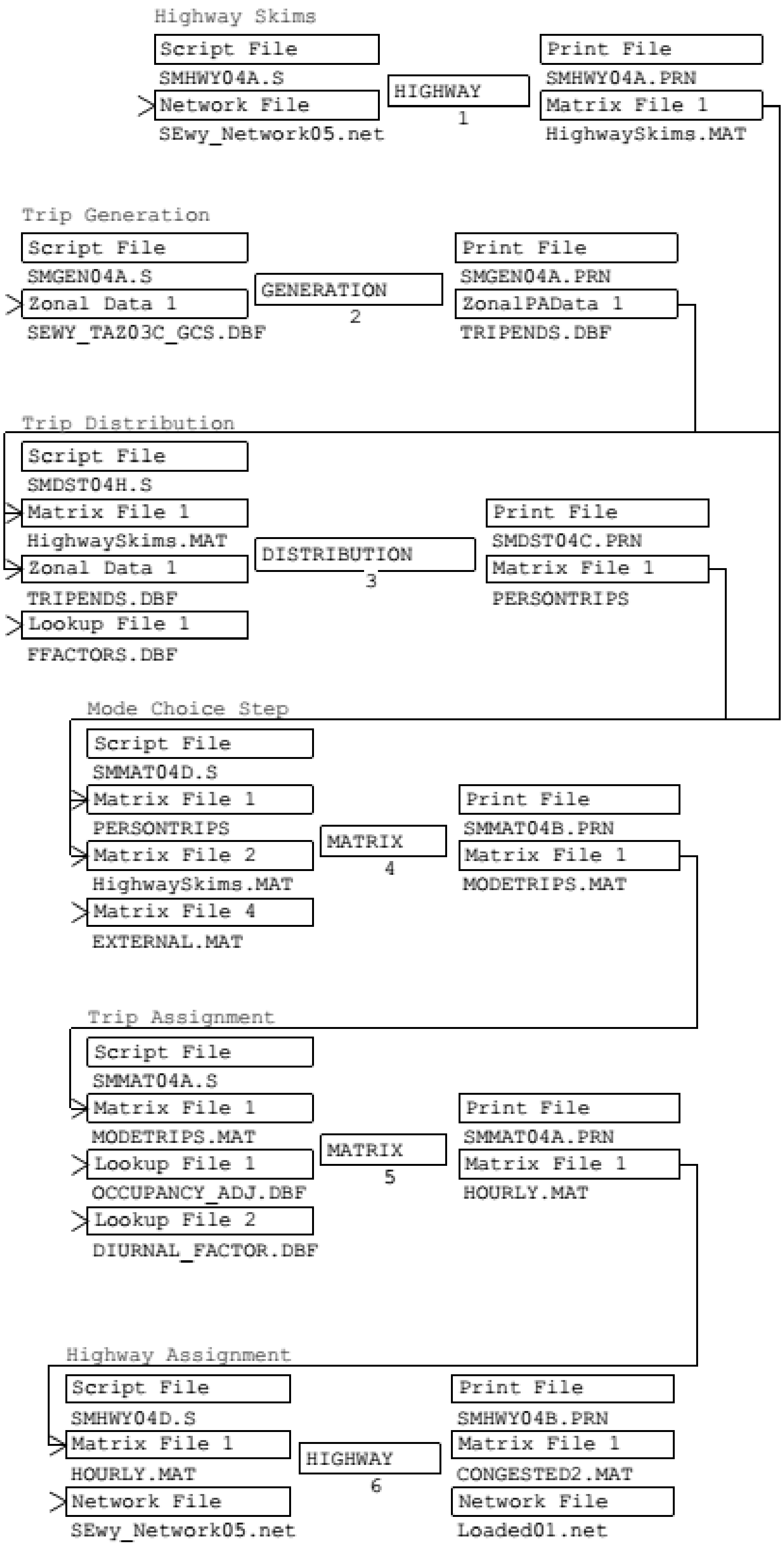


Figure 43: Cube Model for Low Volume Roads in Wyoming

The Modeling Process

The travel demand model development used a modified four-step travel demand modeling process. The modification involved excluding all other travel modes with the exception of private passenger cars in the mode choice step whereas the other steps remained unchanged. For the purpose of this research all socio-economic and network data were from the year 2013. The traffic volume outputs of the model were validated against available ADT data collected in the study location from 2012 to 2014.

Figure 43 shown previously is the application model that was developed and executed in the Cube software environment to estimate traffic volumes in Wyoming. Each of the black boxes represent an executable process in the model, whereas the blue and green boxes represent inputs and outputs of each process. The components of the model application that was developed are explained together with the travel behavior parameters implemented for the model in the following sections.

Highway Skim

This is the first component of the model and it produces a matrix that shows the costs associated with traveling from one zone to another. The costs are presented in terms of travel distance in miles and the associated travel time. The costs are calculated using link distances and the associated link speed. The link distance and speed information are obtained from the network file that serves as an input in the "highway skim" program.

Trip Generation

In the first step of the four-step modeling process, trips generated (attraction and production trips) were computed for each of the analysis zones. The TAZ database contained attribute data on population, employment by type, households, and housing units. A total of 832 zones were created for the study area. The network was connected to the TAZ in the Cube environment using two tools, namely the "Automatic Add Centroid" and the "Automatic Add Centroid Connectors".

The "Automatic Add Centroid" feature automatically generates centroids at the center of each zone, and the "Automatic Add Centroid Connectors" creates links from the nearest network segments to the centroid of the zone. The centroid connectors are imaginary access roads that connect traffic generated in a zone to the network. In this model, centroids were allowed to connect to all road types except interstates. This is because interstates are not typically connected to driveways (centroid connectors). All the centroid connectors were assigned the program's default travel time of 0.5 minutes which represents an approximate time it would take for a car to traverse a driveway and leave a block. Figure 44 shows part of the study area with TAZ demarcations, road network, and centroid connectors.

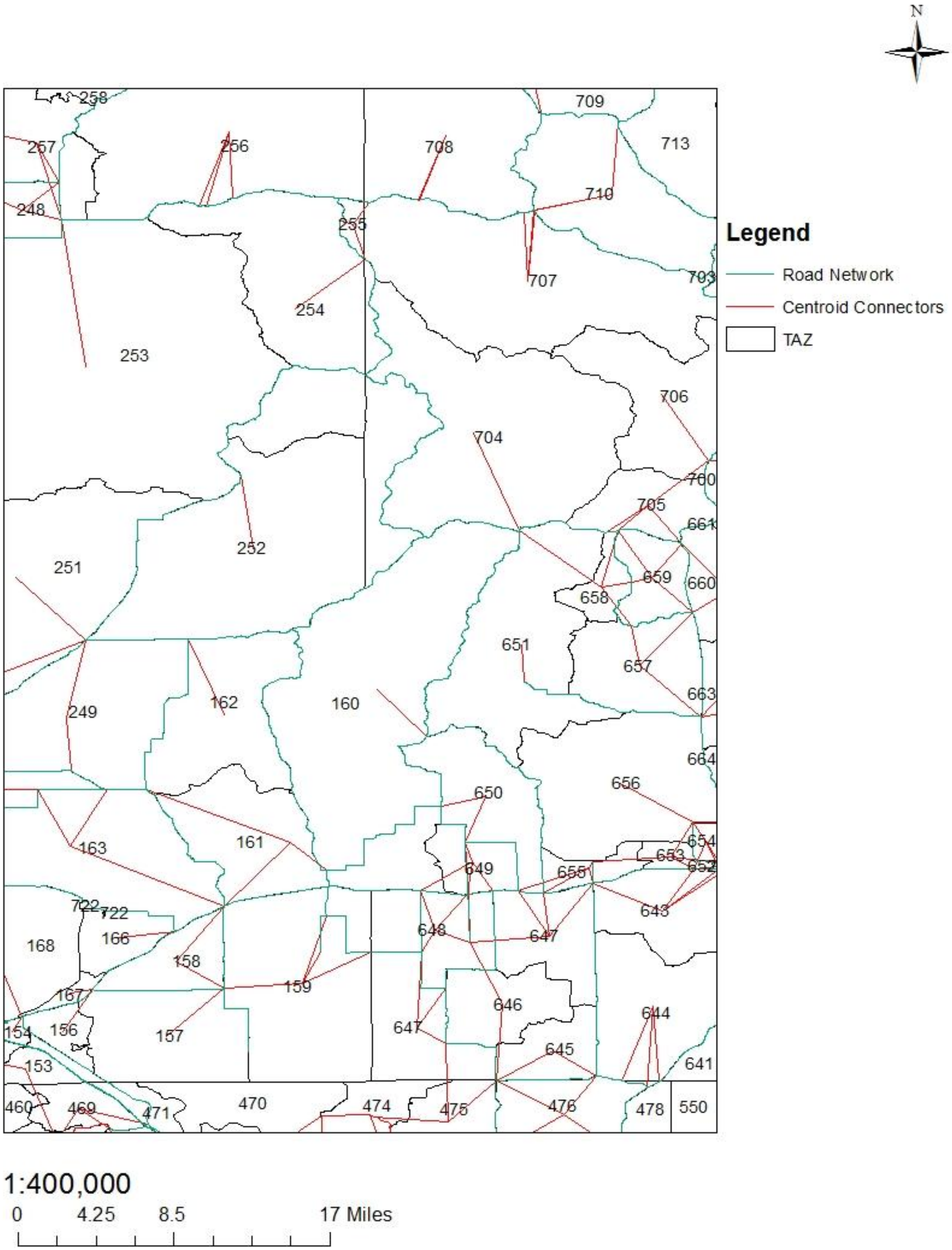


Figure 44: Road Network, Centroid Connectors and TAZs

Trip Rates

Using the TAZ attribute data and trip rates obtained from the NCHRP Report 365, trip production and attraction rates, and trip purpose percentages for each analysis zone were calculated for three trip purposes – Home-Base Work (HBW), Home-Base Other (HBO), and Non-Home Base (NHB) trips. Home-Based Work trips are trips that have one end at home and the other at work, Home-Based Other trips are all trips with one end at home and the other end at any other place other than work, and Non-Home Based trips are those trips that start and end away from home. The trip generation equations derived for the model are presented in Table 17. A weighted average trip production per household (across all income levels) of 9.2 was selected from the household trip production rates shown in Appendix 7. From Appendix 8, the proportion of average daily person trips by purpose (HBW, HBO, and NHB) of 16 percent, 60 percent and 24 percent were selected for the three respective purposes. The equations for trip productions were also taken from the NCHRP 365 report and are presented in Appendix 9.

Table 17: Trip Rate Equations

Trip Type		**Equation**
Production	Home Based Work	9.2*0.16*Households
	Home Based Other	9.2*0.6*Households
	Non-Home Based Other	9.2*0.24*Households
Attraction	Home Based Work	1.45*Employment
	Home Based Other	9.0*Retail+1.7*Service+0.5*Other+0.9*Households
	Non-Home Based Other	4.1*Retail+1.2*Service+0.5*Other+0.5*Households

External Trips

External trips are trips with one or both ends outside the study area. These trips are determined for most models to enable balancing the production and attraction trips for the trip assignment step as well as accounting for trip that leave the study area from within a production zone or those that end up in an attraction zone from outside the study area.

The NCHRP Report provides an extensive description of how to identify external zones and calculate external trips; however, the procedure is applicable to only smaller sized urban areas. In large rural study areas, majority of the trips take place completely within the study area and most external trips are external-external through trips that have little impact on the model. Thus external travel was deemed to have no significant impact on the local roadways and were not considered in developing the model.

Balancing Productions and Attractions

The production and attraction trips calculated in the trip generation step for a study area are not usually equal. But the four-step process considers trips as two-ways with every trip production having an attraction, the trip production and attraction totals for a study area must therefore be balanced for each trip purpose.

The trip productions and attractions were balanced by making the productions constant and scaling the attractions to equal the productions total for each trip purpose. Trip productions are often used as the basis for balancing because the household data used in calculating productions are usually more accurate than the employment data used for calculating trip attractions. The balancing process is built into the Cube software program and so the productions and attractions were automatically balanced out during the trip generation step.

Trip Distribution

During this step, the productions and attractions estimated from the trip generation stage were paired based on the relative attractiveness of traveling between two zones compared to others. This attractiveness of travel between zones is determined by the impedance to travel (from the highway skim process described earlier) and is typically represented by travel time or distance between the zones. This method of pairing productions and attractions is called the gravity model and is derived from Newton's law of gravity. The gravity model estimates that the relative number of trips made between two TAZs are directly proportional to the number of productions and attractions in each TAZ and inversely proportional to a function of the spatial separation or travel time between the two zones. This model is defined by the equation in Figure 45.

$$T_{ij} = P_i \left[\frac{A_j F_{ij} K_{ij}}{\sum_{k=1}^{zones} A_k F_{ik} K_{ik}} \right]$$

Where

$T_{ij} = number\ of\ trips\ from\ zone\ i\ to\ zone\ j,$

$P_i = number\ of\ trip\ productions\ in\ zone\ i,$

$A_j = number\ of\ trips\ attractions\ in\ zone\ j,$

$F_{ij} = friction\ factor\ relating\ the\ spatial\ separation\ between\ zone\ i\ and\ zone\ j, and$

$K_{ij} = optional\ trip\ distribution\ adjustment\ factor\ for\ interchanges\ between\ zones\ i\ and\ j.$

Figure 45. Equation. Gravity Model

The K factor in the trip distribution model is used to modify the results of the gravity model to closely match travel characteristics in the study area such as the barrier effects of movements between zones separated by rivers. The friction factor in Figure 45 is computed by using the gamma function presented in Figure 46. The friction factor depends on the travel time between the two zones and three constants presented in Table 18. In this study, a modification was required to account for the barrier introduced by zones connected by unpaved roads. This was done by applying an artificial speed to unpaved roads that was 10 mph lower than posted speed of similar road classes that were paved.

$$F_{ij} = a \times t_{ij}^{b} \times e^{c \times t_{ij}}$$

Where:

$f_{ij} = friction\ factors\ representing\ the\ cost\ of\ travel$
$t_{ij} = Travel\ time\ between\ zones\ i\ and\ j$
$a, b, c = Constants\ determined\ by\ the\ trip\ type\ (Table\ 18)$

Figure 46. Equation. Using Gamma Function to Calculate Friction Factors

Table 18: NCHRP Gamma Function Coefficients used in Figure 46

Trip Purpose	a	b	c
HBW	28,507	0.02	0.123
HBO	139,173	1.285	0.094
NHB	219,113	1.332	0.100

The Highway Skims program analyzes the network and determines the shortest travel time between every possible origin-destination (O-D) pair using a gamma function. The posted speed limit and the length of the links in the network (attributes in the network file) were utilized in determining travel times between zones. Intra-zonal trips occurred within the zone and were assigned a travel time of 0 (zero) minutes to allow some of the attractions and productions within the zone to be met internally. This was necessary because most of the zones were the size of several census blocks and there was the likelihood of vehicular trips within a zone.

Table 19 presents the computed friction functions that served as the trip length distribution table for the trip distribution step. The Cube software used the table as a lookup file to determine the associated impedance to travel between pairs of zones. Intermediate values not recorded in Table 19 were interpolated to obtain the required friction values. With an estimate of the impedance between zones and the attractions and the productions within each zone, trips were distributed from all zones to other zones.

The output from the Trip Distribution step is a matrix table with assigned production and attraction trips between all pairs of zones in the study area. The next step in the four step process (mode choice step) converts the production-attraction output of the trip distribution step to an origin-destination format.

Table 19: Average National Travel Time Distribution (NCHRP 365)

HR	HBW ADJ	HBO ADJ	NHB ADJ
5	0.00	0.00	0.00
6	0.08	0.09	-0.24
7	0.03	0.11	-0.13
8	0.06	0.27	0.19
9	0.03	0.21	-0.02
10	-0.07	-0.30	-0.24
11	-0.04	-0.09	-0.06
12	-0.11	-0.15	-0.07
13	-0.07	-0.16	-0.12
14	0.04	-0.10	-0.18
15	0.09	0.22	0.03
16	0.07	0.22	0.06
17	0.02	0.06	-0.05
18	-0.04	-0.05	-0.08
19	-0.01	0.14	0.37
20	-0.01	0.06	0.41
21	0.07	0.17	0.31
22	-0.07	-0.20	0.17
23	-0.10	-0.16	0.01
24	-0.03	-0.22	0.08

Mode Choice

Personal vehicle travel is the only mode of travel considered in this study since other travel alternatives such as transit were not significantly represented in the study area. The mode choice step was modified to serve as a step where occupancy and time of day factors were applied to the model. This resulted in the conversion of predicted person trips (production-attraction trips) by category between zones into vehicle trips (origin-destination trips).

Trips by purpose and vehicle occupancy rates typically vary throughout the day. For instance a larger portion of trips in the morning and evenings are HBW and these morning trips have the lowest occupancy rates. During off-peak hours, most trips have relatively higher occupancy and are usually shopping and social trips. National average auto-occupancy rates and auto-occupancy adjustment factors by time of day are presented in Table 20 and Table 21 respectively.

Tables 20 and 21 are applied to the person trips output from the trip distribution step to obtain estimates of total daily travel in hourly origin-destination format. This is done by dividing total person trips by auto occupancy rates (Table 20) to obtain vehicle trips for each trip purpose type. Diurnal factors (Table 21) enabled the total vehicle trips to be spread over a 24 hour time period. Time of day (diurnal) factoring enabled the estimation of trip tables that indicate peak and off-peak period activities. Each home-based trip purpose is split into trips from productions to attractions and from attractions to productions. Productions indicate the location of the home end of the trip and attractions indicate the work, school, or shop end of the trip. In order to account for the split of each trip into two, a final conversion to origin-destination format was carried out using the equation in Figure 47. The next step in the modeling process was the assignment of the trips between the zones.

$$Daily\,Vehicle\,Trips(O-D) = 0.5 \times (HBW_{PA} + HBW_{AP} + HBO_{PA} + HBO_{AP}) +$$

Where

HBW_{AP} *and* HBO_{AP} *are the transpose of* HBW_{PA} *and* HBO_{PA}*, respectively.*

The NHB trips are not factored because they are already balanced in the origin − destination format

Figure 47: Equation. Converting Production-Attraction Trips to Origin-Destination Trips

Table 20: NCHRP 365 Auto-Occupancy Rates

Trip Type	Auto-Occupancy Rates (Persons/Vehicles)
Home-Based Work	1.11
Home-Based Other	1.59
Non-Home Based	1.43

Table 21: NCHRP 365 Diurnal factors by purpose and direction

HR	HBW_P2A	HBW_A2P	HBO_A2P	HBO_P2A	NHB	TOTAL
1	0.000	0.004	0.000	0.002	0.003	0.003
2	0.000	0.002	0.000	0.001	0.002	0.002
3	0.000	0.003	0.000	0.002	0.002	0.003
4	0.002	0.002	0.000	0.001	0.001	0.002
5	0.009	0.001	0.001	0.000	0.001	0.003
6	0.032	0.001	0.002	0.000	0.001	0.008
7	0.093	0.002	0.010	0.001	0.004	0.026
8	0.138	0.006	0.050	0.004	0.015	0.062
9	0.076	0.004	0.048	0.008	0.026	0.054
10	0.030	0.003	0.038	0.011	0.035	0.043
11	0.014	0.004	0.039	0.017	0.053	0.047
12	0.010	0.006	0.029	0.024	0.078	0.052
13	0.011	0.013	0.029	0.032	0.110	0.066
14	0.011	0.011	0.029	0.027	0.087	0.057
15	0.014	0.021	0.026	0.045	0.087	0.069
16	0.012	0.062	0.028	0.060	0.100	0.089
17	0.011	0.092	0.029	0.040	0.093	0.082
18	0.009	0.114	0.035	0.039	0.091	0.088
19	0.008	0.057	0.042	0.032	0.065	0.071
20	0.006	0.026	0.036	0.033	0.053	0.058
21	0.004	0.017	0.016	0.036	0.037	0.043
22	0.003	0.018	0.009	0.031	0.029	0.034
23	0.005	0.015	0.004	0.018	0.015	0.021
24	0.003	0.015	0.002	0.013	0.012	0.015

Traffic Assignment

The origin-destination trips for all pairs of zones, developed in the modified mode choice step, are distributed in this final step among the network links connecting the zones. The traffic assignment step in this study utilized the User Equilibrium method in assigning traffic to the network. The user equilibrium method of network assignment is based on the principle that as congestion delay arises, road users seek alternative routes until all vehicles traveling between two zones are using the shortest routes available. This method increases the travel time on a link when traffic volumes approach or exceed the link capacity and diverts traffic to other routes. The travel time associated with a highway is determined by applying the Bureau of Public Road (BPR) volume-day relationship equation in Figure 48 to the trip tables produced from the mode choice step. Application of time-of-day factors to the vehicle trips converts the daily trip tables to peak period, peak direction tables that enables determination of assigned link traffic volumes.

$$T_c = T_f \times \left(1 + \alpha \times \left[\frac{v}{c}\right]^{\beta}\right)$$

Where

$T_c = congested\ link\ travel\ time,$
$T_f = link\ free - flow\ travel\ time,$
$v = assigned\ link\ traffic\ vlume\ (vehicles),$
$c = link\ capacity, and$
$\alpha, \beta = volume - delay\ coefficients\ (\alpha = 0.15\ and\ \beta = 4.0)$

Figure 48: Equation. BPR formula for volume-delay relationships

The output from the traffic assignment step includes a shapefile of the road network with the assigned ADT for each link. These estimated ADT values could then be compared to observed ADT values in validating the model.

Model Validation and Calibration

In validating the model, traffic volume data generated by the model for some selected links were compiled and compared to actual traffic volumes. One method of validating a model is by determining the percentage root mean square error using the equation in Figure 49.

$$\%RMSE = 100 \times \left[\frac{\sqrt{\frac{\sum_{i=1}^{n}\left(ADT_{m,i} - ADT_{a,i}\right)^2}{n}}}{\frac{\sum_{i}^{n} ADT_{a,i}}{n}}\right]$$

Where

$ADT_{m,i}$ = The modeled average daily traffic on link i
$ADT_{a,i}$ = The actual average daily traffic on link i
$n = the\ number\ of\ links\ with\ measured\ actual\ average\ daily\ traffic$

Figure 49: Equation. Percentage Root Mean Square Error (%RMSE)

According to Berger, most state departments of transportation recommend a maximum Percentage Root Mean Squared Error (%RMSE) value of 30 percent. (2) However, research by Zhong et al. indicated that low-volume roads by their nature are susceptible to higher percentage errors in prediction compared to higher road classes. (11) Zhong et al. compared the predictions from their model for low volume roads to those for roads of higher classes. The comparison indicated that their predictions for high volume roads such as arterials resulted in low average percentage error of 9 percent with a corresponding R^2 value of 98.07 percent whereas that for low volume collectors was 44 percent. For the lowest class of roads (local numbered roads), the average error was higher at 174 percent with an R^2 value of 54.14 percent.

In another study by Wang et al., a travel demand model was developed to predict ADT for local volume roads with ADTs ranging from about 2,000 to 25,000. [(7)] The authors used the mean absolute percentage error (MAPE). The results from the MAPE calculations for 78 roads indicated a MAPE of 52 percent.

For this research, the %RMSE method of model validation were carried out for 100 selected roads in the study area. A %RMSE value of 54.95 percent was obtained for the model validation and a regression analysis resulted in an R^2 value of 68.5 percent. This indicated a strong linear relationship between the estimated and observed values. The average percentage error in prediction was 57.3 percent with a 90^{th} percentile error of 94 percent.

The NCHRP report recommends model calibrations that modifies each of the steps in the model. However, the specific calibrations are subject to the engineering judgment of the modeler. The calibration method implemented in this model involved adjusting the trip rates to increase or decrease total trips. Modification of the trip generation rates was attempted by applying a factor derived from the average ratio of actual ADT to estimated ADT. The average ratio obtained was 1.3 and this was applied to each of the trip generation equations to obtain the modified equations in Table 22.

Table 22: Calibrated Trip Rate Equations

Trip Type		**Equation**
Production	Home Based Work	1.3*9.2*0.16*Households
	Home Based Other	1.3*9.2*0.6*Households
	Non-Home Based Other	1.3*9.2*0.24*Households
Attraction	Home Based Work	1.3*1.45*Employment
	Home Based Other	1.3*9.0*Retail+1.7*Service+0.5*Other+0.9*Households
	Non-Home Based Other	1.3*4.1*Retail+1.2*Service+0.5*Other+0.5*Households

The model was rerun after applying the modification factor to the trip rate equations and the resulting estimated ADTs had a %RMSE of 50.33 percent and an R^2 value of 74 percent. Appendix 10 presents the 100 roads that were selected in the study area and used in the model validation. The improvement in prediction accuracy for the model after the model calibration was satisfactory. Additional calibrations such as modification of the travel time distribution factors (friction factors), vehicle occupancy and time of day distribution factors can be carried out to improve the model further. These calibrations will however, require travel behavior surveys but that is beyond the scope of this study.

The %RMSE validation check showed the prediction errors were similar to those of low volume roads cited in the literature. The higher percentage errors in ADT for low volume roads compared to high volume roads (in the literature) are explained by the fact that the high percentage errors translate into small ADT counts that are negligible in their impact on transportation systems. Table 23 illustrates the significance in percentage errors for higher volume roads compared to low volume roads.

Table 23: Comparing Percentage Errors for Low versus High Volume Roads

Road Type	Actual ADT	Predicted ADT	Percentage Error	ADT Estimation Error
High Volume Roads	5,000	3,500	30%	1,500
High Volume Roads	5,000	8,000	60%	3,000
Low Volume Roads	60	42	30%	18
Low Volume Roads	60	96	60%	36

Table 22 shows two examples of predictions for a high volume road and a low volume road. It is seen that higher percentage errors in ADT predictions for low volume roads result in errors in ADTs that are small (60 percent translates to an error of 36 vehicles on a road with ADT of 60). However, small percentage errors in ADT for high volume roads result in high ADT differences that can have quite significant impacts on the transportation system (30 percent translates to an error of 1,500 vehicles on a road with ADT of 5,000). Thus, even though the %RMSE values of high volume roads are recommended to be 30 percent, reasonably higher %RMSE values on low-volume roads are acceptable. Therefore, a %RMSE of 50.33 percent for roads with ADT less than 200 is considered as an adequate validation of the model's accuracy.

Limitations of the Travel Demand Modeling

One limitation identified during the travel demand model development was that the level of detailing of the transportation analysis zones took away the ability to estimate traffic volumes for certain roads. The TAZ delineation required combining census blocks to create them but some short roads segments were found to lie wholly within a zone. Such roads were not included in the trip distribution process because they did not provide a link between two zones necessary for the trips from one zone to be distributed to the other. The problem was prevalent in low population areas that had a grid network of roads. This impacted the traffic volume predictions since some low volume segments were located wholly within a zone and so were not assigned any traffic. This problem also affected the estimation accuracy of the model since trips generated in a zone were assigned to fewer links than what is actually the case in reality. There is therefore the need to develop a TAZs delineation methodology that ensured finer aggregation of zones at areas with a grid road network.

Chapter Summary

This chapter outlines the development process for a travel demand model. The model was developed using national travel behavior parameters from the NCHRP 365 report and the ITE Trip Generation report. This was done because previous studies on low class roads used them to develop their models and had shown these parameters to be adequate for developing travel demand models for rural areas. Transportation analysis zones (TAZs) were developed by aggregating census block data to ensure that each zone had a population of at least one. A network database was also built with attributes of posted speed limits, number of lanes, and direction of travel.

The four-step modeling process was carried out using Citilabs Cube Software that has inbuilt programing modules for each of the four steps. The modules were edited to suit the southeast Wyoming study area and to modify the mode choice step. The mode choice component of the model was modified to account for the use of only passenger vehicles in rural Wyoming as the main mode of transportation. Traffic volume estimates from the model were validated by comparing them to actual ADTs using %RMSE and MAPE methods. The results indicated the prediction errors were adequate for low volume roads. An attempt in calibrating the trip generation rates resulted in improved prediction accuracies. The %RMSE and R square value of the model before calibration was 54.95 percent and 68.5 percent respectively but these were improve to a %RMSE of 50.33 percent and an R square value of 74.0 percent after the model was calibrated.

CHAPTER 7. CONCLUSIONS AND RECOMMENDATIONS

This report developed three cost-effective models for estimating traffic volumes on low volume roads in Wyoming. The models were 1) a linear regression model, 2) a logistic regression model, and 3) a travel demand model. This chapter summarizes the three models and makes a recommendation for implementation based on analysis and comparison of the three models.

Conclusions

Linear Regression Model

The linear regression model was developed to predict the log10 (ADT) values using socioeconomic and roadway characteristics from 13 randomly selected counties in Wyoming. The logarithmic transformation was necessary to ensure a constant error variance and a linear scatter in the residual plots. The final model predictors were; land use (categorized into cropland, pastureland, industrial and subdivision), pavement type (categorized into pave and unpaved), access to highway, and population. The model analysis indicated an R square value of 0.64 for the final model and application of the model in estimating traffic volumes in other counties that were not included in the model development indicated the model to be consistent in the accuracy of its predictions for those counties as well. Pearson's correlation was used to confirm the linear association between predicted Log10 (ADT) and actual Log10 (ADT). The Pearson's correlation value for the counties used in developing the model was 0.687 and that for the counties that were not used in developing the model was 0.61. A Percentage Root Mean Square Error (%RMSE) value of 73.4 percent was obtained for the model.

Logistic Regression Model

A second regression model was also developed for estimating traffic volumes. This model utilized the logistic regression modeling method. The data from the 13 randomly selected counties that were used in the linear regression model were also used in developing the logistic model, and data from the nine counties were also used for the model validation. The final model consisted of five equations for determining the odds of a road's ADT falling below five thresholds. The thresholds are not mutually exclusive and are as follows:

- Threshold 1: ADT of 50 or less.
- Threshold 2: ADT of 100 or less.
- Threshold 3: ADT of 150 or less.
- Threshold 4: ADT of 175 or less.
- Threshold 5: ADT of 200 or less.

A sixth equation converted the odds (obtained from one of the five equations) into a probability of the road's ADT falling below the five thresholds. A calculated probability of 0.5 or more meant a road's ADT is within the threshold of interest, whereas roads with probabilities less than 0.5 have ADTs greater than the threshold. The model was also validated and found to have an acceptable prediction accuracy ranging from 78 to 89 percent.

Travel Demand Model

The travel demand model was developed for four counties in Southeast Wyoming using the four-step process. The steps were trip generation, trip distribution, mode choice, and highway assignment. Parameters and procedures from the NCHRP Report 365 and the ITE Trip Generation report were used in the model development. Transportation analysis zones were created by aggregating census blocks to ensure that none of the zones had a population of zero. Estimates from the travel demand model were calibrated and validated by comparing estimated traffic volumes to actual traffic volumes on 100 roads in the study area. A %RMSE of 50.33 percent and an R^2 value of 74 percent were obtained from the data validation. These results were found to be consistent with traffic volume estimations for low-volume roads in other studies and was considered as acceptable. The presence of special generators (oil and gas, mines, and plants) and the methodology used in delineating transportation analysis zone low population rural areas were pointed out as issues that could be addressed to improve the model's estimation accuracy in future studies.

The validation of the three models showed the three models to perform adequately in estimating traffic volumes for low-volume roads in Wyoming. The next section discusses the strengths and weaknesses of the models to make a recommendation for their implementation.

Model Comparisons

The attributes of each of the three models are discussed based on:

1. The model inputs necessary to estimate traffic volume for a roadway.
2. The technical knowledge and skills required to implement the model.
3. The costs associated with model implementation.
4. Ease of implementation of the model.
5. Traffic volume estimation accuracy of the model.
6. Limitations of the model.

The Linear Regression Model

The input requirements of this model are pavement type of the roadway (paved = 1, unpaved = 0); access to highway (access = 1, no access = 0); presence or absence of cropland, pastureland, and industrial land use in the vicinity of the roadway; and population at the census block group level. The land use type, access to highway, and pavement type variables can be determined from aerial photographs or from site visits whereas the population variable can be obtained from the U.S. Census factfinder website. The population data from the census data are excel files in Comma Separated Values (CSV) format with a "GeoID" field that can be used to link the population data to census block group shapefiles downloaded from the census website. The population data for the census block group within which the road is located can then be extracted and used in the model equation to estimate traffic volumes. Thus some GIS knowledge is required in collecting the population data needed to implement the model.

The costs associated with this model are minimal. The information that serve as inputs for the model are freely available to download from the U.S. Census. Once the needed information has been gathered, the model can be easily implemented by computing the Log10 (ADT) and then converting the logarithmic values to real numbers. Traffic volume estimations were fairly accurate with the predictors explaining 64 percent of the variations in ADT.

The main limitation of this model is that the pavement type variable itself depended on the traffic volume on the roadway and so it contributed most in explaining the traffic volumes. Due to this reason, traffic volume variations on some roads that could be attributed to other variables would not be predicted accurately.

Logistic Regression Model

The logistic model consists of six equations. Five of the equations use pavement type, land use, access, household number, income, number of housing units, population and employment to estimate the odds of belonging to five thresholds. The demographic and socio-economic variables can be obtained from the U.S. Census website in CSV formats that can be joined to GIS shapefiles to enable the extraction of the required information whereas land use information can be collected from aerial photographs or site visits. Some knowledge of GIS is therefore needed to gather some of the data necessary for implementing the model. The cost of implementing the logistic regression model is also minimal and its implementation is easy since it simply involves computing the odds of a road belonging to a threshold using one of the five equations and then converting the odds into a probability. This model makes an estimate that provides information about the range of ADTs within which a road falls and its validation showed the prediction accuracies to range from 78 to 89 percent.

Pavement type serves as an important predictor in this model but the pavement type of a roadway depends on the traffic volumes expected on the roadway. This situation makes it difficult to predict accurately for roads which are influenced by variables other than pavement type.

Another limitation of the logistic regression model is that it is unable to provide discrete ADT estimates for roads. It is therefore not useful for applications where discrete traffic volume is desired. An example of one such application is when ADT data is needed to compute vehicle miles traveled to check for compliance with air quality standards.

Travel Demand Model

The travel demand model application developed in this study can be applied to other parts of Wyoming. However, its implementation in any new location will require delineation of transportation analysis zones and network shapefiles to serve as the inputs for the model. Studies that developed methodologies for delineating TAZs for urban or high population locations could be found in the literature but no such study was available for low population rural environments. It is recommended that such a plan is developed for Wyoming to enable consistent development of TAZs suitable for the rural low volume roads. The TAZ database include socio-economic and demographic data collected from the U.S. Census website. The network shapefile can be obtained from the Wyoming Geographic Information Science Center (WYGISC) and additional data such as posted speed limits, direction of travel, and number of lanes added as attributes to the shapefile. The creation of these two databases will require some knowledge of GIS to enable the implementation of the model. Additionally, the model application can only be run with Citilabs Cube software package and this software package can be expensive to procure for a local county.

When compared to the regression models, the travel demand model implementation is more difficult to implement. This is because creating the TAZ to encompass a large rural study area can be time consuming and the model implementation will require some knowledge of travel demand modeling to enable model calibrations.

The estimates from the travel demand model were found to be more accurate. The estimated and actual ADT values of 100 roads were fitted to determine the R square value for the model. The results indicated an R^2 value of 74.0 percent and a %RMSE of 50.3 percent whereas the R^2 and the %RMSE for the linear regression model were found to be 64.0 and 73.4 percent respectively.

The main limitation of the travel demand model was its inability to estimate for roads that did not traverse at least two zones. An additional limitation is the requirement for travel behavior surveys in the study area to enable friction factor, time of day, and vehicle occupancy calibrations. Such surveys are resource intensive and so the model calibration was limited to only the trip rate generation step in this study.

The regression models are limited for ADT estimations of only low volume roads but the travel demand model can estimate for all roads within the study area. Therefore, agencies such as WYDOT, who may be interested in traffic flows on higher classes of roads, can also use the travel demand model's estimates on higher road classes.

Table 24 summarizes the attributes of the three models with regards to meeting the objectives of estimating traffic volumes for low volume roads in an easy and cost-effective manner.

Table 24: Model Comparisons

Factors	TDM	Linear Regression	Logistic Regression
Required inputs	Transportation Analysis Zones (TAZ) with employment, household and housing unit attributes and network shapefiles containing link speed, direction of travel and number of lanes attributes	Pavement type, Access, land use, population in the census block group	Pavement type, access, land use, households, employment, and per cap income
Required skills/knowledge	Geographic information system (GIS)	Geographic information system (GIS)	Geographic information system (GIS)
Cost of implementation	Travel demand modeling software cost	None	None
Ease of implementation	Developing TAZ and network data is time intensive, require some knowledge of travel demand modeling	Easy to implement	Easy to implement
Accuracy of estimates	Discrete ADT estimates with an R^2 of 0.74	Discrete ADT estimates with an R^2 of 0.64	ADT is predicted as probability of belonging to a range of values with percentage accuracy ranging from 78% to 89%
Limitations	Inability to estimate traffic volumes for roads lying entirely within a zone Comprehensive model calibration is resource intensive	Pavement type variable is dependent on traffic volume. Limited to estimating traffic on low volume roads only.	Pavement type variable is dependent on traffic volume, ADT predictions are for range of values and so the model cannot be used for some applications. Limited to estimating traffic on low volume roads only.

Recommendations for Implementation

Based on the previous discussions of the merits, demerits, and limitations of each model, the following recommendations were made for implementation by WYDOT and local governments:

1. The travel demand model is the most desirable model recommended for implementation due to its high prediction accuracy and its ability to explain changes in traffic volumes using purely independent variables. The regression models relied heavily on pavement

type to predict traffic volumes but the decision to pave a road is inherently based on the level of traffic volume the roadway is exposed to. Thus the regression models will fail to predict accurately for unpaved roads with high traffic volumes.

2. The relatively high cost of implementing the travel demand model due to software costs can be mitigated by using a single software to implement the model for the various counties across the state.
3. A methodology must be developed for delineating traffic analysis zones for low population rural areas. This will ensure that local roads that do not extend over long distances traverse between at least two zones to ensure their inclusion in the trip distribution step and thereby enabling traffic volume estimation for those roads,
4. Trip rate equations must be developed for oil and gas wells, mines and plants as special generators in areas where they are located. This is because these land uses are prevalent in Wyoming and their inclusion in the travel demand models will account for trips generated by these land uses and improve the accuracy of the model.
5. The regression models are simpler models that are inexpensive and easy to implement. They are recommended for applications where quick estimates of traffic volumes are required that do not need high levels of prediction accuracy. An example of one such application is when there is the need to identify roads impacted by industrial activities for road maintenance scheduling.

Recommendations for Phase Two

The first phase of the project developed two model types, regression and travel demand forecasting models, for estimating traffic volumes in Wyoming. Using linear regression and logistic regression methods, two regression models were developed using data from 13 counties. Data from nine other counties were used to validate the models to confirm their implementation across the State of Wyoming.

The second model, the travel demand model, was developed for four southeastern counties in Wyoming (Converse, Goshen, Laramie, and Platte counties). Estimates from the model were verified for the four counties and calibrated to improve on the prediction accuracy of the model. A comparison of the models recommended the travel demand model for implementation by WYDOT. This was due to the higher accuracy of travel demand model predictions as well as the ability to predict for higher road classes such as arterials and highways. The regression models were recommended for applications requiring quick estimates and where relatively lower prediction accuracies are acceptable.

A second phase is recommended for expanding the travel demand model to the rest of Wyoming by undertaking the following tasks:

1. Developing a recommendation for delineating Transportation Analysis Zones (TAZs) in Wyoming for improved traffic volume estimations. This will ensure a consistent methodology for TAZ delineation across counties.
2. Creating TAZ and network data for the remaining counties.
3. Implementing the four-step travel demand model to generate traffic volume estimates for the remaining counties.
4. Verifying the traffic volume estimates for the remaining counties.
5. Calibrating the models to improve their predictions.

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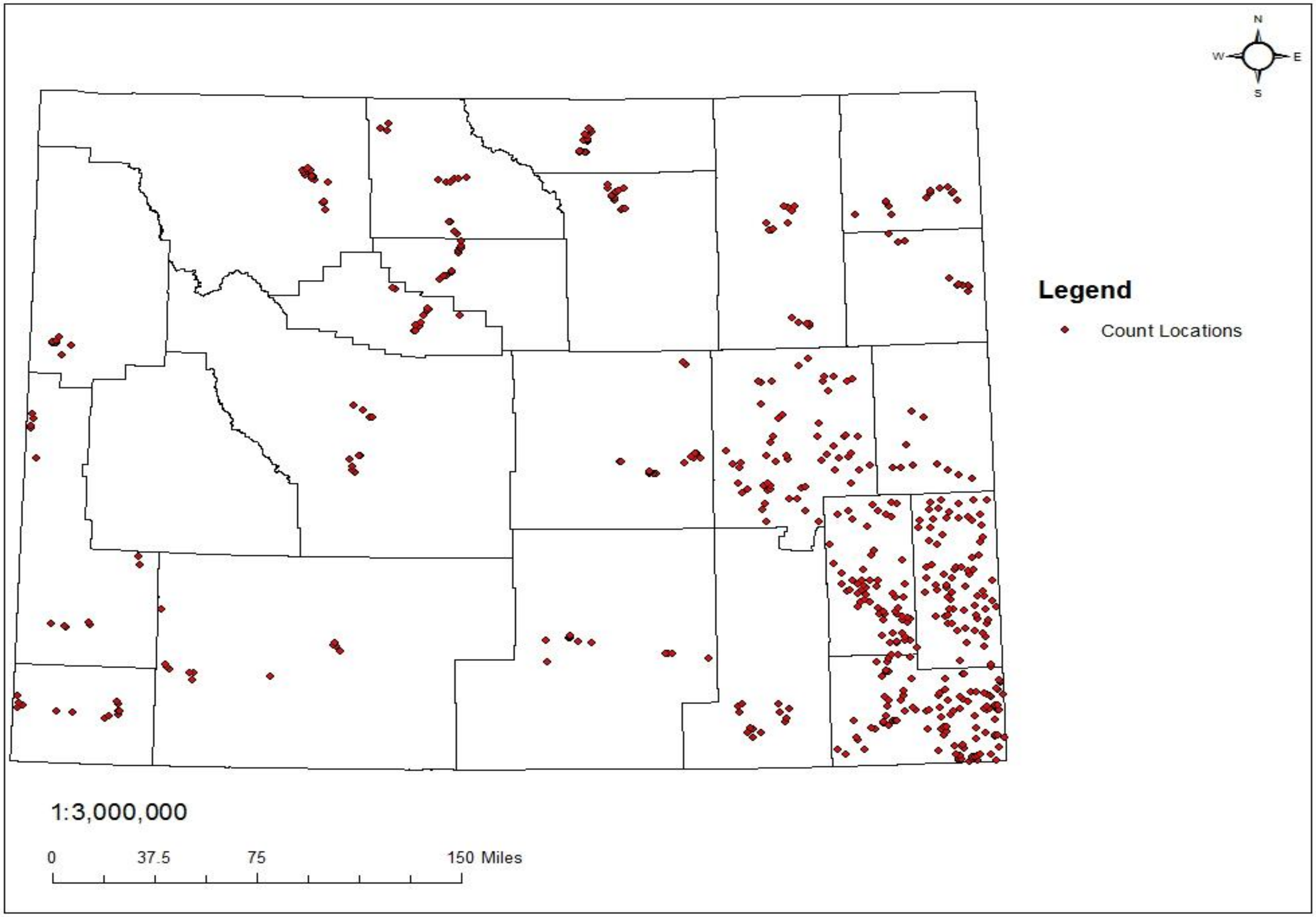
APPENDIX 1: MAP OF WYOMING WITH TRAFFIC COUNT LOCATIONS



APPENDIX 2: REGRESSION MODELING DATASET

RoadID	ADT	PvtType	Pop	HseHold	Emp	Access	Housing	Income	Pop1	EmpDense	HHDense	IncDense	PopDense	LU_AC	LU_AP	LU_I	LU_S
ML8208B	47	0	0	0	638	0	555	3.75	1.54	20.67943	17.98916	1214.12	49.88344	0	0	0	1
ML8400B	69	1	0	0	504	1	472	3.6	1.12	0.49168	0.46047	35.16	1.08873	0	0	0	1
RIN 710	70	0	0	0	560	1	580	3.55	0.94	3.13674	2.15558	131.93	3.49724	0	0	0	1
ML6249B	79	0	42	18	487	0	520	3.07	0.97	0.34105	0.36416	21.48	0.02941	0	0	0	1
ML7881B	83	0	0	0	324	1	384	3.17	0.84	5.77822	6.84827	566.00	15	0	0	0	1
RIN 6015	86	0	34	15	465	1	296	3.34	0.78	1.17739	0.60822	68.67	1.60273	0	0	0	1
ML8187B	86	0	25	10	638	0	555	3.75	1.54	20.67943	17.98916	1214.12	49.88344	0	0	0	1
ML9396B	105	0	105	41	638	0	555	3.75	1.54	20.67943	17.98916	1214.12	49.88344	0	0	0	1
RIN 120	111	0	189	65	756	1	491	3.72	1.28	1.84343	0.92549	70.18	2.40325	0	0	0	1
ML6711B	113	0	93	45	923	0	634	3.33	1.32	144.4601	99.22826	5204.63	206.9082	0	0	0	1
ML7792B	114	0	20	8	711	0	681	2.78	1.67	20.81597	19.93766	815.00	49	0	0	0	1
ML8276B	120	0	29	12	638	0	555	3.75	1.54	20.67943	17.98916	1214.12	49.88344	0	0	0	1
ML7655B	132	1	111	43	1037	1	1075	4.87	1.68	1.34931	1.39875	63.32	2.18075	0	0	0	1
RIN 920	136	1	19	7	793	1	802	3.91	1.75	7.30098	4.08325	199.03	8.92512	0	0	0	1
ML6246B	141	1	11	7	487	1	520	3.07	0.97	0.34105	0.36416	21.48	0.0077	0	0	0	1
ML8668B	151	0	296	109	2096	0	1328	5	2.89	83.92863	53.17616	2004.04	115.6421	0	0	0	1
RIN 2101	155	1	50	20	699	0	603	2.83	1.51	45.86377	26.49028	1242.76	66.20374	0	0	0	1
RIN 54	164	1	5	2	969	1	718	3.14	1.85	2.529	1.30917	57.31	3.37139	0	0	0	1
RIN 63	166	0	30	11	1480	1	769	3.19	2.14	13.32408	6.6062	273.62	18.41833	0	0	0	1
RIN 992	173	0	11	5	969	1	718	3.14	1.85	2.529	1.30917	57.31	3.37139	0	0	0	1
RIN 2088	173	1	0	0	477	0	720	3.12	0.86	0.97166	0.94668	40.96	1.12813	0	0	0	1
ML9614B	177	1	195	72	808	0	873	3.27	1.9	0.64835	0.70051	26.25	1.5278	0	0	0	1
ML8670B	182	0	67	18	1361	1	1786	3.35	2.21	173.6042	227.8157	4277.48	282.0272	0	0	0	1
ML7699B	191	1	67	29	1050	0	966	2.41	2.21	1.65988	1.52709	38.14	3.48891	0	0	0	1
RIN 130	195	0	30	11	1480	1	769	3.19	2.14	13.32408	6.6062	273.62	18.41833	0	0	0	1
RIN 26	198	1	9	2	969	1	769	3.19	2.14	13.32408	6.6062	273.62	18.41833	0	0	0	1
ML6223B	203	1	0	0	360	0	479	2.57	0.89	0.62692	0.83415	44.80	0	0	0	0	1

RoadID	ADT	PvtType	Pop	HseHold	Emp	Access	Housing	Income	Pop1	EmpDense	HHDense	IncDense	PopDense	LU_AC	LU_AP	LU_I	LU_S
ML8170B	209	1	55	25	512	1	462	3.1	0.99	584.12614	527.0826	35379.56	1123.7583	0	0	0	1
ML6254B	241	1	0	0	514	1	501	2.85	1	205.2363	200.0455	11362.67	398.4939	0	0	0	1
ML7811B	258	1	0	0	595	0	552	3.15	0.94	0.42465	0.39396	22.00	1	0	0	0	1
ML9395B	258	1	81	36	516	1	462	4.18	0.74	3.65363	3.27127	295.97	5.2043	0	0	0	1
ML8202B	260	1	81	36	516	1	462	4.18	0.74	3.65363	3.27127	295.97	5.2043	0	0	0	1
ML5465B	262	1	0	0	293	0	477	3.37	0.62	0.20989	0.34169	24.13	0.44556	0	0	0	1
ML7811B	285	1	0	0	595	1	552	3.15	0.94	0.42465	0.39396	22.00	1	0	0	0	1
ML7791B	352	1	15	6	711	1	681	2.78	1.67	20.81597	19.93766	815.00	49	0	0	0	1
ML1136B	363	1	0	0	595	1	552	3.15	0.94	0.42465	0.39396	22.00	1	0	0	0	1
RIN 24	372	1	10	4	969	1	769	3.19	2.14	13.32408	6.6062	273.62	18.41833	0	0	0	1
ML8653B	394	1	270	122	858	1	788	5.73	1.11	17.04715	15.65635	1138.72	21.97453	0	0	0	1
ML7653B	411	1	22	10	773	0	879	3.4	1.03	0.23372	0.26577	10.27	0.31143	0	0	0	1
RIN 2082	423	1	0	0	477	0	720	3.12	0.86	0.97166	0.94668	40.96	1.12813	0	0	0	1
RIN 22	438	1	12	3	1480	1	769	3.19	2.14	13.32408	6.6062	273.62	18.41833	0	0	0	1
ML7653B	490	1	87	35	773	1	879	3.4	1.03	0.23372	0.26577	10.27	0.31143	0	0	0	1
ML6704B	507	1	0	0	845	0	934	2.77	1.86	116.4468	128.7116	3814.91	256.3208	0	0	0	1
ML8679B	507	1	3	2	1372	1	650	3	1.36	59.13538	28.01603	1293.65	58.70436	0	0	0	1
ML8202B	516	1	95	27	749	1	693	3.79	1.5	42.21041	39.05449	2134.58	84.64623	0	0	0	1
RIN 2058	518	1	10	3	358	0	484	3.43	0.63	1.5208	1.34319	95.15	1.74559	0	0	0	1
ML5380B	575	1	93	31	1293	1	876	4.14	2.46	3.72599	2.52434	119.28	7.09177	0	0	0	1
ML8654B	576	1	270	122	858	1	788	5.73	1.11	17.04715	15.65635	1138.72	21.97453	0	0	0	1
RIN 27	603	1	6	3	969	1	769	3.19	2.14	13.32408	6.6062	273.62	18.41833	0	0	0	1
ML7807B	654	1	63	24	324	1	384	3.17	0.84	5.77822	6.84827	566.00	15	0	0	0	1
ML20264B	704	1	0	0	293	1	477	3.37	0.62	0.20989	0.34169	24.13	0.44556	0	0	0	1
ML7796B	729	1	64	24	711	0	681	2.78	1.67	20.81597	19.93766	815.00	49	0	0	0	1
ML8177B	742	1	5	3	739	1	633	2.14	1.77	221.52876	189.7533	6423.73	530.58985	0	0	0	1
ML7692B	744	1	0	0	1037	1	1075	4.87	1.68	1.34931	1.39875	63.32	2.18075	0	0	0	1
ML8656B	750	1	65	34	858	1	788	5.73	1.11	17.04715	15.65635	1138.72	21.97453	0	0	0	1
ML8183B	834	1	29	12	638	0	555	3.75	1.54	20.67943	17.98916	1214.12	49.88344	0	0	0	1

RoadID	ADT	PvtType	Pop	HseHold	Emp	Access	Housing	Income	Pop1	EmpDense	HHDense	IncDense	PopDense	LU_AC	LU_AP	LU_I	LU_S
ML8652B	913	1	68	23	1361	1	1786	3.35	2.21	173.6042	227.8157	4277.48	282.0272	0	0	0	1
ML5377B	936	1	0	0	2173	0	1764	2.76	4.34	150.5155	122.1857	1913.62	300.754	0	0	0	1
ML7688B	952	1	4	2	1906	1	1209	4.32	3.04	736.64768	467.265	16695.54	1175.699	0	0	0	1
ML8241B	995	1	0	0	779	1	828	3.7	1.67	0.60065	0.63843	28.51	1.28689	0	0	0	1
ML9397B	1040	1	0	0	512	1	462	3.1	0.99	584.12614	527.0826	35379.56	1123.7583	0	0	0	1
ML8160B	1053	1	21	9	749	1	693	3.79	1.5	42.21041	39.05449	2134.58	84.64623	0	0	0	1
ML5382B	1146	1	36	12	2173	0	1764	2.76	4.34	150.5155	122.1857	1913.62	300.754	0	0	0	1
ML7790B	1313	1	22	7	711	0	681	2.78	1.67	20.81597	19.93766	815.00	49	0	0	0	1
ML6702B	1641	1	0	0	514	1	501	2.85	1	205.2363	200.0455	11362.67	398.4939	0	0	0	1
ML78705B	1841	1	0	0	324	1	384	3.17	0.84	5.77822	6.84827	566.00	15	0	0	0	1
ML20264B	1942	1	0	0	293	1	477	3.37	0.62	0.20989	0.34169	24.13	0.44556	0	0	0	1
ML5406B	1980	1	7	4	632	1	526	2.97	1.39	230.5018	191.8417	10832.49	508.4169	0	0	0	1
ML8647B	2223	1	46	29	858	1	788	5.73	1.11	17.04715	15.65635	1138.72	21.97453	0	0	0	1
RIN 3076	9	0	2	1	771	1	650	2.72	1.47	0.42786	0.24163	10.11	0.5457	0	1	0	0
ML6227B	10	1	0	0	487	0	520	3.07	0.97	0.34105	0.36416	21.48	0	0	1	0	0
ML7794B	13	0	1	1	1526	1	1464	3.16	1.86	0.394	0.37799	8.00	0	0	1	0	0
RIN 3087	14	0	0	0	771	0	650	2.72	1.47	0.42786	0.24163	10.11	0.5457	0	1	0	0
ML6217B	23	1	8	4	487	1	520	3.07	0.97	0.34105	0.36416	21.48	0.0056	0	1	0	0
RIN 219	25	0	0	0	771	1	650	2.72	1.47	0.42786	0.24163	10.11	0.5457	0	1	0	0
ML6238B	28	0	7	3	360	0	479	2.57	0.89	0.62692	0.83415	44.80	0.01219	0	1	0	0
ML6227B	28	0	0	0	487	0	520	3.07	0.97	0.34105	0.36416	21.48	0	0	1	0	0
ML6235B	35	1	18	8	360	0	479	2.57	0.89	0.62692	0.83415	44.80	0.03135	0	1	0	0
ML5503B	40	0	0	0	498	0	571	1.79	1.7	0.25266	0.2897	9.07	0.86454	0	1	0	0
ML5469B	66	1	0	0	293	1	477	3.37	0.62	0.20989	0.34169	24.13	0.44556	0	1	0	0
RIN 713	3	0	0	0	793	1	802	3.91	1.75	7.30098	4.08325	199.03	8.92512	0	0	1	0
ML7694B	10	0	4	3	1037	0	1075	4.87	1.68	1.34931	1.39875	63.32	2.18075	0	0	1	0
ML7811B	16	0	0	0	595	0	552	3.15	0.94	0.42465	0.39396	22.00	1	0	0	1	0
ML6262B	17	0	4	1	1446	0	1569	2.74	2.48	0.3488	0.37847	6.62	0.59701	0	0	1	0
ML7645B	24	0	0	0	773	0	879	3.4	1.03	0.23372	0.26577	10.27	0.31143	0	0	1	0

RoadID	ADT	PvtType	Pop	HseHold	Emp	Access	Housing	Income	Pop1	EmpDense	HHDense	IncDense	PopDense	LU_AC	LU_AP	LU_I	LU_S
ML6283B	32	0	0	0	1446	0	1569	2.74	2.48	0.3488	0.37847	6.62	0.59701	0	0	1	0
ML7693B	44	0	0	0	1037	1	1075	4.87	1.68	1.34931	1.39875	63.32	2.18075	0	0	1	0
ML7653B	48	0	5	1	669	0	510	3.49	1.43	5.88086	4.48317	306.41	12.57046	0	0	1	0
ML7801B	57	0	2	1	324	0	384	3.17	0.84	5.77822	6.84827	566.00	15	0	0	1	0
ML5384B	59	0	0	0	961	0	834	4.76	2.06	0.79976	0.69407	39.65	1.71686	0	0	1	0
ML5421B	62	0	278	92	1293	0	876	4.14	2.46	3.72599	2.52434	119.28	7.09177	0	0	1	0
ML5436B	71	0	14	5	236	0	590	2.69	0.74	0.1885	0.47125	21.47	0.58866	0	0	1	0
ML8401B	72	1	14	5	504	0	472	3.6	1.12	0.49168	0.46047	35.16	1.08873	0	0	1	0
ML6219B	75	0	4	1	360	1	479	2.57	0.89	0.62692	0.83415	44.80	0.00697	0	0	1	0
ML6256B	75	0	41	20	1446	0	1569	2.74	2.48	0.3488	0.37847	6.62	0.59701	0	0	1	0
ML5425B	78	0	12	4	236	0	590	2.69	0.74	0.1885	0.47125	21.47	0.58866	0	0	1	0
ML6261B	81	0	13	7	1446	1	1569	2.74	2.48	0.3488	0.37847	6.62	0.59701	0	0	1	0
ML5428B	86	0	3	2	236	1	590	2.69	0.74	0.1885	0.47125	21.47	0.58866	0	0	1	0
ML5328B	88	0	93	31	1293	0	876	4.14	2.46	3.72599	2.52434	119.28	7.09177	0	0	1	0
ML6272B	88	0	0	0	1446	0	1569	2.74	2.48	0.3488	0.37847	6.62	0.59701	0	0	1	0
ML5478B	90	0	0	0	236	1	590	2.69	0.74	0.1885	0.47125	21.47	0.58866	0	0	1	0
ML6236B	100	1	0	0	360	1	479	2.57	0.89	0.62692	0.83415	44.80	0	0	0	1	0
ML7654B	102	0	49	23	773	0	879	3.4	1.03	0.23372	0.26577	10.27	0.31143	0	0	1	0
ML7621B	104	0	0	0	1050	0	966	2.41	2.21	1.65988	1.52709	38.14	3.48891	0	0	1	0
ML8441B	104	1	0	0	284	0	288	2.05	0.84	5.91399	5.99729	426.43	17.55456	0	0	1	0
RIN 159	108	1	8	3	435	1	582	3.46	0.92	0.95105	0.82985	49.27	1.31321	0	0	1	0
ML6221B	108	1	0	0	360	1	479	2.57	0.89	0.62692	0.83415	44.80	0	0	0	1	0
ML6273B	108	0	35	15	1446	0	1569	2.74	2.48	0.3488	0.37847	6.62	0.59701	0	0	1	0
ML7656B	109	1	18	7	773	0	879	3.4	1.03	0.23372	0.26577	10.27	0.31143	0	0	1	0
ML5480B	117	1	1	1	498	1	571	1.79	1.7	0.25266	0.2897	9.07	0.86454	0	0	1	0
ML8196B	118	1	0	0	756	0	674	2.47	1.75	3.89749	3.47475	127.24	9.04259	0	0	1	0
ML5318B	126	0	69	23	961	1	834	4.76	2.06	0.79976	0.69407	39.65	1.71686	0	0	1	0
ML5365B	131	1	0	0	961	0	834	4.76	2.06	0.79976	0.69407	39.65	1.71686	0	0	1	0
ML7811B	131	1	0	0	595	1	552	3.15	0.94	0.42465	0.39396	22.00	1	0	0	1	0

RoadID	ADT	PvtType	Pop	HseHold	Emp	Access	Housing	Income	Pop1	EmpDense	HHDense	IncDense	PopDense	LU_AC	LU_AP	LU_I	LU_S
ML8399B	135	1	0	0	409	0	477	3.4	0.78	0.06744	0.07866	5.60	0.12829	0	0	1	0
ML5476B	149	1	0	0	498	1	571	1.79	1.7	0.25266	0.2897	9.07	0.86454	0	0	1	0
ML6239B	156	1	5	2	360	1	479	2.57	0.89	0.62692	0.83415	44.80	0.00871	0	0	1	0
ML8231B	164	0	2	1	908	1	784	1.83	1.77	829.70566	716.3978	16727.52	1616.464	0	0	1	0
ML6251B	183	1	41	20	1446	0	1569	2.74	2.48	0.3488	0.37847	6.62	0.59701	0	0	1	0
ML7635B	183	0	0	0	773	0	879	3.4	1.03	0.23372	0.26577	10.27	0.31143	0	0	1	0
ML8233B	186	1	0	0	756	0	674	2.47	1.75	3.89749	3.47475	127.24	9.04259	0	0	1	0
ML5349B	192	1	4	2	1833	0	977	3.38	2.58	1.84933	0.98571	34.09	2.60501	0	0	1	0
ML6272B	208	1	8	3	1446	0	1569	2.74	2.48	0.3488	0.37847	6.62	0.59701	0	0	1	0
ML7635B	213	1	1	1	773	0	879	3.4	1.03	0.23372	0.26577	10.27	0.31143	0	0	1	0
ML6255B	247	1	113	41	705	0	915	2.49	1.91	76.76048	99.6253	2707.30	208.3965	0	0	1	0
ML6251B	257	1	113	41	705	0	915	2.49	1.91	76.76048	99.6253	2707.30	208.3965	0	0	1	0
ML8386B	260	1	0	0	504	1	472	3.6	1.12	0.49168	0.46047	35.16	1.08873	0	0	1	0
ML8476B	306	1	0	0	504	1	472	3.6	1.12	0.49168	0.46047	35.16	1.08873	0	0	1	0
ML6297B	322	1	30	13	1446	1	1569	2.74	2.48	0.3488	0.37847	6.62	0.59701	0	0	1	0
ML5396B	335	1	0	0	961	0	834	4.76	2.06	0.79976	0.69407	39.65	1.71686	0	0	1	0
ML7623B	358	1	9	4	1050	1	966	2.41	2.21	1.65988	1.52709	38.14	3.48891	0	0	1	0
ML8399B	360	0	0	0	409	1	477	3.4	0.78	0.06744	0.07866	5.60	0.12829	0	0	1	0
ML7700B	389	0	7	3	1050	0	966	2.41	2.21	1.65988	1.52709	38.14	3.48891	0	0	1	0
ML5335B	453	0	7	2	1366	1	1032	2.85	2.36	1.51331	1.14329	31.59	2.6134	0	0	1	0
ML6275B	479	1	113	41	705	0	915	2.49	1.91	76.76048	99.6253	2707.30	208.3965	0	0	1	0
ML8475B	681	1	0	0	769	1	602	3.88	1.58	0.74328	0.58187	37.54	1.53006	0	0	1	0
ML8387B	754	1	0	0	504	1	472	3.6	1.12	0.49168	0.46047	35.16	1.08873	0	0	1	0
ML8431B	859	1	0	0	504	1	472	3.6	1.12	0.49168	0.46047	35.16	1.08873	0	0	1	0
Ml5314B	933	1	0	0	961	0	834	4.76	2.06	0.79976	0.69407	39.65	1.71686	0	0	1	0
ML8399B	1298	1	0	0	409	1	477	3.4	0.78	0.06744	0.07866	5.60	0.12829	0	0	1	0
RIN 127	3	0	0	0	465	0	296	3.34	0.78	1.17739	0.60822	68.67	1.60273	0	1	0	0
RIN 3022	4	0	0	0	360	0	337	4.95	0.69	0.75061	0.423	62.14	0.86609	0	1	0	0
RIN 210	4	0	0	0	771	1	650	2.72	1.47	0.42786	0.24163	10.11	0.5457	0	1	0	0

RoadID	ADT	PvtType	Pop	HseHold	Emp	Access	Housing	Income	Pop1	EmpDense	HHDense	IncDense	PopDense	LU_AC	LU_AP	LU_I	LU_S
RIN 966	4	0	0	0	969	0	718	3.14	1.85	2.529	1.30917	57.31	3.37139	0	1	0	0
RIN 31	4	0	8	2	465	0	296	3.34	0.78	1.17739	0.60822	68.67	1.60273	0	1	0	0
RIN 1101	5	0	3	3	264	0	329	2.29	0.7	0.51256	0.34067	23.71	0.7238	0	1	0	0
RIN 889	5	0	20	5	560	1	580	3.55	0.94	3.13674	2.15558	131.93	3.49724	0	1	0	0
RIN 46	5	0	10	6	446	0	372	2.76	0.71	0.85894	0.4692	34.75	0.8993	0	1	0	0
RIN 3090	6	0	4	1	771	1	650	2.72	1.47	0.42786	0.24163	10.11	0.5457	0	1	0	0
RIN 3070	6	1	0	0	771	1	650	2.72	1.47	0.42786	0.24163	10.11	0.5457	0	1	0	0
RIN 2091	6	0	7	3	477	0	720	3.12	0.86	0.97166	0.94668	40.96	1.12813	0	1	0	0
RIN 3029	7	0	2	1	360	1	337	4.95	0.69	0.75061	0.423	62.14	0.86609	0	1	0	0
RIN 3063	7	0	0	0	771	1	650	2.72	1.47	0.42786	0.24163	10.11	0.5457	0	1	0	0
RIN 203	7	0	0	0	750	0	653	1.87	1.63	1.32825	0.67028	19.19	1.67109	0	1	0	0
RIN 1117	7	0	0	0	264	0	329	2.29	0.7	0.51256	0.34067	23.71	0.7238	0	1	0	0
RIN 1124	7	0	10	3	264	0	329	2.29	0.7	0.51256	0.34067	23.71	0.7238	0	1	0	0
RIN 1135	8	0	0	0	264	0	329	2.29	0.7	0.51256	0.34067	23.71	0.7238	0	1	0	0
RIN 1266	8	0	1	1	750	0	653	1.87	1.63	1.32825	0.67028	19.19	1.67109	0	1	0	0
RIN 145	8	0	9	3	969	0	718	3.14	1.85	2.529	1.30917	57.31	3.37139	0	1	0	0
RIN 2125	8	0	2	1	446	0	372	2.76	0.71	0.85894	0.4692	34.75	0.8993	0	1	0	0
RIN 1152	9	0	16	10	264	0	329	2.29	0.7	0.51256	0.34067	23.71	0.7238	0	1	0	0
RIN 1136	9	0	0	0	264	0	329	2.29	0.7	0.51256	0.34067	23.71	0.7238	0	1	0	0
RIN 3025	10	0	0	0	360	1	337	4.95	0.69	0.75061	0.423	62.14	0.86609	0	1	0	0
RIN 164	10	0	0	0	360	1	337	4.95	0.69	0.75061	0.423	62.14	0.86609	0	1	0	0
RIN 1057	10	0	0	0	750	1	653	1.87	1.63	1.32825	0.67028	19.19	1.67109	0	1	0	0
RIN 1062	10	0	2	1	320	1	653	1.87	1.63	1.32825	0.67028	19.19	1.67109	0	1	0	0
RIN 783	10	0	2	2	969	0	718	3.14	1.85	2.529	1.30917	57.31	3.37139	0	1	0	0
RIN 2038	10	0	0	0	358	0	484	3.43	0.63	1.5208	1.34319	95.15	1.74559	0	1	0	0
RIN 1113	11	0	0	0	264	0	329	2.29	0.7	0.51256	0.34067	23.71	0.7238	0	1	0	0
RIN 1133	11	0	0	0	264	0	329	2.29	0.7	0.51256	0.34067	23.71	0.7238	0	1	0	0
RIN 771	11	0	0	0	465	0	296	3.34	0.78	1.17739	0.60822	68.67	1.60273	0	1	0	0
RIN 2127	11	0	3	2	446	0	372	2.76	0.71	0.85894	0.4692	34.75	0.8993	0	1	0	0

RoadID	ADT	PvtType	Pop	HseHold	Emp	Access	Housing	Income	Pop1	EmpDense	HHDense	IncDense	PopDense	LU_AC	LU_AP	LU_I	LU_S
RIN 3113	12	0	0	0	771	1	650	2.72	1.47	0.42786	0.24163	10.11	0.5457	0	1	0	0
RIN 1034	12	0	0	0	750	0	653	1.87	1.63	1.32825	0.67028	19.19	1.67109	0	1	0	0
RIN 1114	12	0	0	0	264	0	329	2.29	0.7	0.51256	0.34067	23.71	0.7238	0	1	0	0
RIN 147	12	0	0	0	750	1	653	1.87	1.63	1.32825	0.67028	19.19	1.67109	0	1	0	0
RIN 143	12	0	4	2	969	1	718	3.14	1.85	2.529	1.30917	57.31	3.37139	0	1	0	0
RIN 2119	12	0	2	1	446	0	372	2.76	0.71	0.85894	0.4692	34.75	0.8993	0	1	0	0
RIN 1071	13	0	0	0	320	1	405	2.04	0.84	3.55269	2.2948	115.37	4.77658	0	1	0	0
RIN 2077	13	0	5	2	477	0	720	3.12	0.86	0.97166	0.94668	40.96	1.12813	0	1	0	0
RIN 223	14	0	0	0	264	0	329	2.29	0.7	0.51256	0.34067	23.71	0.7238	0	1	0	0
RIN 1139	14	1	8	3	264	0	329	2.29	0.7	0.51256	0.34067	23.71	0.7238	0	1	0	0
RIN 1095	14	0	10	3	264	1	329	2.29	0.7	0.51256	0.34067	23.71	0.7238	0	1	0	0
RIN 226	14	0	4	2	446	0	372	2.76	0.71	0.85894	0.4692	34.75	0.8993	0	1	0	0
RIN 1064	15	0	2	1	320	1	405	2.04	0.84	3.55269	2.2948	115.37	4.77658	0	1	0	0
RIN 1099	15	0	0	0	264	0	329	2.29	0.7	0.51256	0.34067	23.71	0.7238	0	1	0	0
RIN 32	15	0	6	3	465	1	296	3.34	0.78	1.17739	0.60822	68.67	1.60273	0	1	0	0
RIN 429	15	0	11	3	446	0	372	2.76	0.71	0.85894	0.4692	34.75	0.8993	0	1	0	0
RIN 2116	15	0	0	0	446	0	372	2.76	0.71	0.85894	0.4692	34.75	0.8993	0	1	0	0
RIN 172	16	0	7	3	771	1	650	2.72	1.47	0.42786	0.24163	10.11	0.5457	0	1	0	0
RIN 1250	16	0	0	0	750	1	653	1.87	1.63	1.32825	0.67028	19.19	1.67109	0	1	0	0
RIN 1100	16	0	3	3	264	0	329	2.29	0.7	0.51256	0.34067	23.71	0.7238	0	1	0	0
RIN 1126	16	0	0	0	264	0	329	2.29	0.7	0.51256	0.34067	23.71	0.7238	0	1	0	0
RIN 227	16	0	8	3	750	0	653	1.87	1.63	1.32825	0.67028	19.19	1.67109	0	1	0	0
RIN 18	16	1	20	12	828	0	817	2.31	1.78	8.64894	4.87659	137.89	10.60674	0	1	0	0
RIN 158	16	0	4	2	446	1	372	2.76	0.71	0.85894	0.4692	34.75	0.8993	0	1	0	0
RIN 43	16	0	0	0	446	1	372	2.76	0.71	0.85894	0.4692	34.75	0.8993	0	1	0	0
RIN 1043	17	0	15	5	320	0	653	1.87	1.63	1.32825	0.67028	19.19	1.67109	0	1	0	0
RIN 888	17	0	0	0	560	1	580	3.55	0.94	3.13674	2.15558	131.93	3.49724	0	1	0	0
RIN 28	17	0	8	2	465	0	296	3.34	0.78	1.17739	0.60822	68.67	1.60273	0	1	0	0
RIN 728	17	0	4	2	465	1	296	3.34	0.78	1.17739	0.60822	68.67	1.60273	0	1	0	0

RoadID	ADT	PvtType	Pop	HseHold	Emp	Access	Housing	Income	Pop1	EmpDense	HHDense	IncDense	PopDense	LU_AC	LU_AP	LU_I	LU_S
RIN 123	17	0	178	62	465	0	296	3.34	0.78	1.17739	0.60822	68.67	1.60273	0	1	0	0
RIN 10	18	0	52	18	804	0	756	3.06	1.67	6.02826	3.4112	138.14	7.54434	0	1	0	0
RIN 66	18	0	18	6	465	0	296	3.34	0.78	1.17739	0.60822	68.67	1.60273	0	1	0	0
RIN 33	19	1	0	0	465	0	296	3.34	0.78	1.17739	0.60822	68.67	1.60273	0	1	0	0
RIN 47	19	0	6	3	446	1	372	2.76	0.71	0.85894	0.4692	34.75	0.8993	0	1	0	0
RIN 2083	19	0	5	3	477	0	720	3.12	0.86	0.97166	0.94668	40.96	1.12813	0	1	0	0
RIN 3020	20	0	0	0	435	1	337	4.95	0.69	0.75061	0.423	62.14	0.86609	0	1	0	0
RIN 3074	20	0	18	6	771	0	650	2.72	1.47	0.42786	0.24163	10.11	0.5457	0	1	0	0
RIN 1029	20	0	12	5	750	0	653	1.87	1.63	1.32825	0.67028	19.19	1.67109	0	1	0	0
RIN 1257	20	0	2	1	750	1	653	1.87	1.63	1.32825	0.67028	19.19	1.67109	0	1	0	0
RIN 126	20	0	0	0	756	1	296	3.34	0.78	1.17739	0.60822	68.67	1.60273	0	1	0	0
RIN 2043	20	0	0	0	358	0	484	3.43	0.63	1.5208	1.34319	95.15	1.74559	0	1	0	0
RIN 2118	20	0	0	0	446	0	372	2.76	0.71	0.85894	0.4692	34.75	0.8993	0	1	0	0
RIN 160	21	0	6	3	435	1	582	3.46	0.92	0.95105	0.82985	49.27	1.31321	0	1	0	0
RIN 177	21	0	0	0	771	1	650	2.72	1.47	0.42786	0.24163	10.11	0.5457	0	1	0	0
RIN 3005	21	0	42	16	360	1	337	4.95	0.69	0.75061	0.423	62.14	0.86609	0	1	0	0
RIN 207	21	0	0	0	264	1	329	2.29	0.7	0.51256	0.34067	23.71	0.7238	0	1	0	0
RIN 1107	21	0	2	1	264	0	329	2.29	0.7	0.51256	0.34067	23.71	0.7238	0	1	0	0
RIN 1137	21	0	2	1	264	0	329	2.29	0.7	0.51256	0.34067	23.71	0.7238	0	1	0	0
RIN 1150	21	0	4	1	626	0	566	2.4	1.24	20.51831	11.49838	488.19	25.27206	0	1	0	0
ML7791B	21	0	15	6	711	0	681	2.78	1.67	20.81597	19.93766	815.00	49	0	1	0	0
RIN 2036	23	0	6	4	358	0	484	3.43	0.63	1.5208	1.34319	95.15	1.74559	0	1	0	0
RIN 215	24	0	4	3	771	0	650	2.72	1.47	0.42786	0.24163	10.11	0.5457	0	1	0	0
RIN 3066	24	1	0	0	771	0	650	2.72	1.47	0.42786	0.24163	10.11	0.5457	0	1	0	0
RIN 146	24	0	0	0	750	1	653	1.87	1.63	1.32825	0.67028	19.19	1.67109	0	1	0	0
RIN 45	24	0	2	2	446	0	372	2.76	0.71	0.85894	0.4692	34.75	0.8993	0	1	0	0
ML8399B	24	1	0	0	638	0	552	3.8	1.31	0.29833	0.25811	17.76	0.61442	0	1	0	0
RIN 224	26	0	3	2	750	0	653	1.87	1.63	1.32825	0.67028	19.19	1.67109	0	1	0	0
RIN 261	26	0	10	5	626	0	566	2.4	1.24	20.51831	11.49838	488.19	25.27206	0	1	0	0

RoadID	ADT	PvtType	Pop	HseHold	Emp	Access	Housing	Income	Pop1	EmpDense	HHDense	IncDense	PopDense	LU_AC	LU_AP	LU_I	LU_S
RIN 1122	26	0	7	4	264	0	329	2.29	0.7	0.51256	0.34067	23.71	0.7238	0	1	0	0
RIN 1132	26	0	0	0	264	0	329	2.29	0.7	0.51256	0.34067	23.71	0.7238	0	1	0	0
RIN 30	26	0	2	1	465	1	296	3.34	0.78	1.17739	0.60822	68.67	1.60273	0	1	0	0
RIN 166	27	0	7	3	771	1	650	2.72	1.47	0.42786	0.24163	10.11	0.5457	0	1	0	0
RIN 161	28	0	0	0	435	1	931	3.56	2.19	149.4353	78.73472	3008.33	185.3775	0	1	0	0
RIN 48	29	0	4	2	446	1	372	2.76	0.71	0.85894	0.4692	34.75	0.8993	0	1	0	0
RIN 2090	29	0	2	1	581	0	720	3.12	0.86	0.97166	0.94668	40.96	1.12813	0	1	0	0
RIN 2033	30	0	2	1	477	0	720	3.12	0.86	0.97166	0.94668	40.96	1.12813	0	1	0	0
RIN 2133	30	0	0	0	446	0	372	2.76	0.71	0.85894	0.4692	34.75	0.8993	0	1	0	0
RIN 2086	30	1	3	2	477	0	720	3.12	0.86	0.97166	0.94668	40.96	1.12813	0	1	0	0
RIN 1193	31	0	0	0	264	1	329	2.29	0.7	0.51256	0.34067	23.71	0.7238	0	1	0	0
RIN 37	31	0	0	0	756	1	491	3.72	1.28	1.84343	0.92549	70.18	2.40325	0	1	0	0
RIN 1198	32	0	10	3	264	1	329	2.29	0.7	0.51256	0.34067	23.71	0.7238	0	1	0	0
RIN 6014	32	0	23	10	465	1	296	3.34	0.78	1.17739	0.60822	68.67	1.60273	0	1	0	0
RIN 3030	33	0	0	0	360	1	337	4.95	0.69	0.75061	0.423	62.14	0.86609	0	1	0	0
RIN 176	33	0	0	0	771	0	650	2.72	1.47	0.42786	0.24163	10.11	0.5457	0	1	0	0
RIN 707	33	0	0	0	793	1	802	3.91	1.75	7.30098	4.08325	199.03	8.92512	0	1	0	0
RIN 2115	33	0	0	0	446	0	372	2.76	0.71	0.85894	0.4692	34.75	0.8993	0	1	0	0
RIN 2029	33	1	10	3	477	0	720	3.12	0.86	0.97166	0.94668	40.96	1.12813	0	1	0	0
RIN 35	34	0	0	0	756	1	491	3.72	1.28	1.84343	0.92549	70.18	2.40325	0	1	0	0
RIN 3045	35	0	0	0	360	1	337	4.95	0.69	0.75061	0.423	62.14	0.86609	0	1	0	0
RIN 71	36	0	0	0	465	1	296	3.34	0.78	1.17739	0.60822	68.67	1.60273	0	1	0	0
RIN 924	36	0	0	0	756	0	491	3.72	1.28	1.84343	0.92549	70.18	2.40325	0	1	0	0
RIN 980	37	0	5	1	969	0	718	3.14	1.85	2.529	1.30917	57.31	3.37139	0	1	0	0
RIN 70	38	0	4	1	756	1	491	3.72	1.28	1.84343	0.92549	70.18	2.40325	0	1	0	0
RIN 1074	39	0	10	3	320	1	405	2.04	0.84	3.55269	2.2948	115.37	4.77658	0	1	0	0
RIN 1125	39	0	0	0	750	0	653	1.87	1.63	1.32825	0.67028	19.19	1.67109	0	1	0	0
RIN 991	42	0	0	0	969	1	718	3.14	1.85	2.529	1.30917	57.31	3.37139	0	1	0	0
RIN 104	43	1	7	2	828	1	817	2.31	1.78	8.64894	4.87659	137.89	10.60674	0	1	0	0

RoadID	ADT	PvtType	Pop	HseHold	Emp	Access	Housing	Income	Pop1	EmpDense	HHDense	IncDense	PopDense	LU_AC	LU_AP	LU_I	LU_S
RIN 213	44	0	24	11	771	0	650	2.72	1.47	0.42786	0.24163	10.11	0.5457	0	1	0	0
RIN 1046	44	1	13	3	264	0	329	2.29	0.7	0.51256	0.34067	23.71	0.7238	0	1	0	0
RIN 2028	45	0	0	0	477	0	720	3.12	0.86	0.97166	0.94668	40.96	1.12813	0	1	0	0
RIN 253	46	1	11	6	750	1	653	1.87	1.63	1.32825	0.67028	19.19	1.67109	0	1	0	0
RIN 225	48	0	20	10	264	0	329	2.29	0.7	0.51256	0.34067	23.71	0.7238	0	1	0	0
RIN 1249	48	0	0	0	750	1	653	1.87	1.63	1.32825	0.67028	19.19	1.67109	0	1	0	0
RIN 3031	49	0	0	0	360	0	337	4.95	0.69	0.75061	0.423	62.14	0.86609	0	1	0	0
RIN 218	53	0	4	3	771	0	650	2.72	1.47	0.42786	0.24163	10.11	0.5457	0	1	0	0
RIN 148	57	1	0	0	1009	0	958	2.73	2.21	99.43161	52.05218	1481.48	120.0243	0	1	0	0
RIN 845	59	0	28	8	969	1	718	3.14	1.85	2.529	1.30917	57.31	3.37139	0	1	0	0
RIN 52	59	0	10	5	969	0	718	3.14	1.85	2.529	1.30917	57.31	3.37139	0	1	0	0
RIN 41	59	1	31	14	446	0	372	2.76	0.71	0.85894	0.4692	34.75	0.8993	0	1	0	0
RIN 128	61	1	0	0	750	1	653	1.87	1.63	1.32825	0.67028	19.19	1.67109	0	1	0	0
RIN 7	61	0	79	28	804	1	756	3.06	1.67	6.02826	3.4112	138.14	7.54434	0	1	0	0
RIN 2079	61	0	0	0	477	0	720	3.12	0.86	0.97166	0.94668	40.96	1.12813	0	1	0	0
RIN 173	62	0	4	1	771	1	650	2.72	1.47	0.42786	0.24163	10.11	0.5457	0	1	0	0
RIN 256	62	0	0	0	750	0	653	1.87	1.63	1.32825	0.67028	19.19	1.67109	0	1	0	0
RIN 124	62	0	4	2	465	1	296	3.34	0.78	1.17739	0.60822	68.67	1.60273	0	1	0	0
RIN 152	64	0	4	2	750	0	653	1.87	1.63	1.32825	0.67028	19.19	1.67109	0	1	0	0
RIN 131	65	0	12	4	1068	1	769	3.19	2.14	13.32408	6.6062	273.62	18.41833	0	1	0	0
RIN 170	68	0	22	8	465	1	296	3.34	0.78	1.17739	0.60822	68.67	1.60273	0	1	0	0
RIN 138	69	0	0	0	969	1	718	3.14	1.85	2.529	1.30917	57.31	3.37139	0	1	0	0
ML7797B	69	0	0	0	711	0	681	2.78	1.67	20.81597	19.93766	815.00	49	0	1	0	0
RIN 211	72	0	5	3	435	0	650	2.72	1.47	0.42786	0.24163	10.11	0.5457	0	1	0	0
RIN 40	72	0	4	2	446	0	372	2.76	0.71	0.85894	0.4692	34.75	0.8993	0	1	0	0
RIN 151	73	1	8	3	264	0	329	2.29	0.7	0.51256	0.34067	23.71	0.7238	0	1	0	0
RIN 136	73	0	10	5	969	1	718	3.14	1.85	2.529	1.30917	57.31	3.37139	0	1	0	0
RIN 6012	77	0	17	9	560	1	580	3.55	0.94	3.13674	2.15558	131.93	3.49724	0	1	0	0
RIN 209	79	0	1	1	771	0	650	2.72	1.47	0.42786	0.24163	10.11	0.5457	0	1	0	0

RoadID	ADT	PvtType	Pop	HseHold	Emp	Access	Housing	Income	Pop1	EmpDense	HHDense	IncDense	PopDense	LU_AC	LU_AP	LU_I	LU_S
RIN 2097	79	0	1	1	358	0	484	3.43	0.63	1.5208	1.34319	95.15	1.74559	0	1	0	0
RIN 121	81	0	2	1	756	1	491	3.72	1.28	1.84343	0.92549	70.18	2.40325	0	1	0	0
RIN 702	81	1	0	0	560	1	580	3.55	0.94	3.13674	2.15558	131.93	3.49724	0	1	0	0
RIN 202	87	1	5	2	750	1	653	1.87	1.63	1.32825	0.67028	19.19	1.67109	0	1	0	0
RIN 208	91	0	0	0	771	1	650	2.72	1.47	0.42786	0.24163	10.11	0.5457	0	1	0	0
RIN 1146	93	0	0	0	264	1	329	2.29	0.7	0.51256	0.34067	23.71	0.7238	0	1	0	0
RIN 156	104	1	4	2	358	1	484	3.43	0.63	1.5208	1.34319	95.15	1.74559	0	1	0	0
RIN 870	108	0	2	1	804	0	756	3.06	1.67	6.02826	3.4112	138.14	7.54434	0	1	0	0
RIN 212	110	0	19	7	360	1	337	4.95	0.69	0.75061	0.423	62.14	0.86609	0	1	0	0
RIN 122	113	1	73	25	756	1	296	3.34	0.78	1.17739	0.60822	68.67	1.60273	0	1	0	0
RIN 99	113	0	6	4	477	1	720	3.12	0.86	0.97166	0.94668	40.96	1.12813	0	1	0	0
RIN 260	115	1	2	1	750	1	653	1.87	1.63	1.32825	0.67028	19.19	1.67109	0	1	0	0
RIN 1085	120	1	6	4	320	1	405	2.04	0.84	3.55269	2.2948	115.37	4.77658	0	1	0	0
RIN 2039	120	1	0	0	358	0	484	3.43	0.63	1.5208	1.34319	95.15	1.74559	0	1	0	0
ML5471B	136	1	0	0	293	1	477	3.37	0.62	0.20989	0.34169	24.13	0.44556	0	1	0	0
RIN 118	142	1	0	0	750	0	653	1.87	1.63	1.32825	0.67028	19.19	1.67109	0	1	0	0
RIN 178	8	0	4	2	828	1	817	2.31	1.78	8.64894	4.87659	137.89	10.60674	1	0	0	0
RIN 2123	8	0	0	0	446	0	372	2.76	0.71	0.85894	0.4692	34.75	0.8993	1	0	0	0
RIN 179	10	0	5	1	828	1	817	2.31	1.78	8.64894	4.87659	137.89	10.60674	1	0	0	0
RIN 16	11	1	8	3	828	1	817	2.31	1.78	8.64894	4.87659	137.89	10.60674	1	0	0	0
RIN 20	12	0	0	0	969	0	718	3.14	1.85	2.529	1.30917	57.31	3.37139	1	0	0	0
RIN 65	12	0	5	2	1068	0	718	3.14	1.85	2.529	1.30917	57.31	3.37139	1	0	0	0
RIN 2045	16	0	18	8	358	0	484	3.43	0.63	1.5208	1.34319	95.15	1.74559	1	0	0	0
RIN 19	17	0	3	1	828	1	817	2.31	1.78	8.64894	4.87659	137.89	10.60674	1	0	0	0
RIN 132	18	0	3	1	969	0	718	3.14	1.85	2.529	1.30917	57.31	3.37139	1	0	0	0
RIN 113	19	0	6	2	828	1	817	2.31	1.78	8.64894	4.87659	137.89	10.60674	1	0	0	0
RIN 229	20	1	0	0	750	0	653	1.87	1.63	1.32825	0.67028	19.19	1.67109	1	0	0	0
RIN 2049	21	0	28	7	358	0	372	2.76	0.71	0.85894	0.4692	34.75	0.8993	1	0	0	0
RIN 2056	21	0	19	8	325	0	432	2.49	0.67	51.00385	40.0612	2312.70	62.03923	1	0	0	0

RoadID	ADT	PvtType	Pop	HseHold	Emp	Access	Housing	Income	Pop1	EmpDense	HHDense	IncDense	PopDense	LU_AC	LU_AP	LU_I	LU_S
RIN 964	22	0	3	1	969	0	718	3.14	1.85	2.529	1.30917	57.31	3.37139	1	0	0	0
RIN 139	23	0	2	1	969	0	718	3.14	1.85	2.529	1.30917	57.31	3.37139	1	0	0	0
RIN 2105	23	0	16	5	446	0	372	2.76	0.71	0.85894	0.4692	34.75	0.8993	1	0	0	0
RIN 252	24	0	0	0	750	1	653	1.87	1.63	1.32825	0.67028	19.19	1.67109	1	0	0	0
RIN 67	24	0	9	3	465	1	296	3.34	0.78	1.17739	0.60822	68.67	1.60273	1	0	0	0
RIN 857	25	0	2	2	969	0	718	3.14	1.85	2.529	1.30917	57.31	3.37139	1	0	0	0
RIN 150	26	1	3	1	264	1	329	2.29	0.7	0.51256	0.34067	23.71	0.7238	1	0	0	0
RIN 2053	28	0	20	8	358	1	484	3.43	0.63	1.5208	1.34319	95.15	1.74559	1	0	0	0
RIN 111	31	0	11	5	969	0	718	3.14	1.85	2.529	1.30917	57.31	3.37139	1	0	0	0
RIN 3012	36	1	30	11	360	1	337	4.95	0.69	0.75061	0.423	62.14	0.86609	1	0	0	0
RIN 154	37	1	2	1	581	1	682	2.42	1.35	8.06215	4.6636	165.42	9.24514	1	0	0	0
RIN 1090	40	0	12	4	320	1	405	2.04	0.84	3.55269	2.2948	115.37	4.77658	1	0	0	0
RIN 112	40	0	3	2	828	1	817	2.31	1.78	8.64894	4.87659	137.89	10.60674	1	0	0	0
RIN 165	42	1	0	0	360	1	337	4.95	0.69	0.75061	0.423	62.14	0.86609	1	0	0	0
RIN 2107	42	0	17	6	699	0	603	2.83	1.51	45.86377	26.49028	1242.76	66.20374	1	0	0	0
RIN 205	44	0	0	0	750	0	653	1.87	1.63	1.32825	0.67028	19.19	1.67109	1	0	0	0
RIN 206	45	0	12	4	750	0	653	1.87	1.63	1.32825	0.67028	19.19	1.67109	1	0	0	0
RIN 2102	45	0	3	2	716	0	484	3.43	0.63	1.5208	1.34319	95.15	1.74559	1	0	0	0
RIN 133	47	0	0	0	969	1	718	3.14	1.85	2.529	1.30917	57.31	3.37139	1	0	0	0
ML8219B	48	0	57	22	749	0	693	3.79	1.5	42.21041	39.05449	2134.58	84.64623	1	0	0	0
RIN 140	49	0	4	3	969	1	718	3.14	1.85	2.529	1.30917	57.31	3.37139	1	0	0	0
ML7799B	49	0	14	3	711	0	681	2.78	1.67	20.81597	19.93766	815.00	49	1	0	0	0
RIN 49	50	0	13	6	446	1	372	2.76	0.71	0.85894	0.4692	34.75	0.8993	1	0	0	0
RIN 813	56	0	2	1	828	1	817	2.31	1.78	8.64894	4.87659	137.89	10.60674	1	0	0	0
RIN 1088	57	0	11	6	320	1	405	2.04	0.84	3.55269	2.2948	115.37	4.77658	1	0	0	0
RIN 182	60	0	0	0	969	1	718	3.14	1.85	2.529	1.30917	57.31	3.37139	1	0	0	0
RIN 74	60	1	4	2	446	1	372	2.76	0.71	0.85894	0.4692	34.75	0.8993	1	0	0	0
RIN 144	62	0	6	2	969	0	718	3.14	1.85	2.529	1.30917	57.31	3.37139	1	0	0	0
RIN 180	71	0	11	5	969	0	718	3.14	1.85	2.529	1.30917	57.31	3.37139	1	0	0	0

RoadID	ADT	PvtType	Pop	HseHold	Emp	Access	Housing	Income	Pop1	EmpDense	HHDense	IncDense	PopDense	LU_AC	LU_AP	LU_I	LU_S
RIN 23	73	0	92	27	1068	1	769	3.19	2.14	13.32408	6.6062	273.62	18.41833	1	0	0	0
RIN 257	75	0	0	0	750	0	653	1.87	1.63	1.32825	0.67028	19.19	1.67109	1	0	0	0
RIN 2066	76	1	28	10	716	0	627	1.84	1.7	77.22442	44.66763	1308.75	121.10841	1	0	0	0
RIN 62	82	0	23	11	969	0	769	3.19	2.14	13.32408	6.6062	273.62	18.41833	1	0	0	0
RIN 2067	86	0	18	9	358	0	484	3.43	0.63	1.5208	1.34319	95.15	1.74559	1	0	0	0
RIN 102	88	0	8	4	969	1	718	3.14	1.85	2.529	1.30917	57.31	3.37139	1	0	0	0
RIN 1128	91	0	9	4	264	1	329	2.29	0.7	0.51256	0.34067	23.71	0.7238	1	0	0	0
RIN 42	95	1	0	0	446	1	372	2.76	0.71	0.85894	0.4692	34.75	0.8993	1	0	0	0
RIN 11	101	1	2	1	804	1	817	2.31	1.78	8.64894	4.87659	137.89	10.60674	1	0	0	0
RIN 3016	102	1	1	1	435	0	582	3.46	0.92	0.95105	0.82985	49.27	1.31321	1	0	0	0
RIN 50	103	1	0	0	446	0	372	2.76	0.71	0.85894	0.4692	34.75	0.8993	1	0	0	0
RIN 259	108	0	0	0	320	1	405	2.04	0.84	3.55269	2.2948	115.37	4.77658	1	0	0	0
RIN 3017	114	0	0	0	435	1	582	3.46	0.92	0.95105	0.82985	49.27	1.31321	1	0	0	0
RIN 2064	114	1	37	13	716	0	432	2.49	0.67	51.00385	40.0612	2312.70	62.03923	1	0	0	0
RIN 55	115	1	2	1	969	1	718	3.14	1.85	2.529	1.30917	57.31	3.37139	1	0	0	0
RIN 15	116	0	8	3	828	1	817	2.31	1.78	8.64894	4.87659	137.89	10.60674	1	0	0	0
RIN 64	118	0	6	1	1068	1	769	3.19	2.14	13.32408	6.6062	273.62	18.41833	1	0	0	0
RIN 204	130	1	0	0	750	1	653	1.87	1.63	1.32825	0.67028	19.19	1.67109	1	0	0	0
RIN 14	143	0	6	1	804	1	756	3.06	1.67	6.02826	3.4112	138.14	7.54434	1	0	0	0
RIN 149	148	1	9	4	843	0	566	2.4	1.24	20.51831	11.49838	488.19	25.27206	1	0	0	0
RIN 250	180	1	0	0	750	1	653	1.87	1.63	1.32825	0.67028	19.19	1.67109	1	0	0	0
RIN 17	181	0	6	2	828	0	817	2.31	1.78	8.64894	4.87659	137.89	10.60674	1	0	0	0
RIN 262	186	0	0	0	320	0	653	1.87	1.63	1.32825	0.67028	19.19	1.67109	1	0	0	0
RIN 251	203	0	0	0	750	0	653	1.87	1.63	1.32825	0.67028	19.19	1.67109	1	0	0	0
RIN 829	673	1	12	6	969	1	718	3.14	1.85	2.529	1.30917	57.31	3.37139	1	0	0	0
RIN 815	800	0	0	0	969	1	718	3.14	1.85	2.529	1.30917	57.31	3.37139	1	0	0	0

APPENDIX 3: REGRESSION VALIDATION DATA

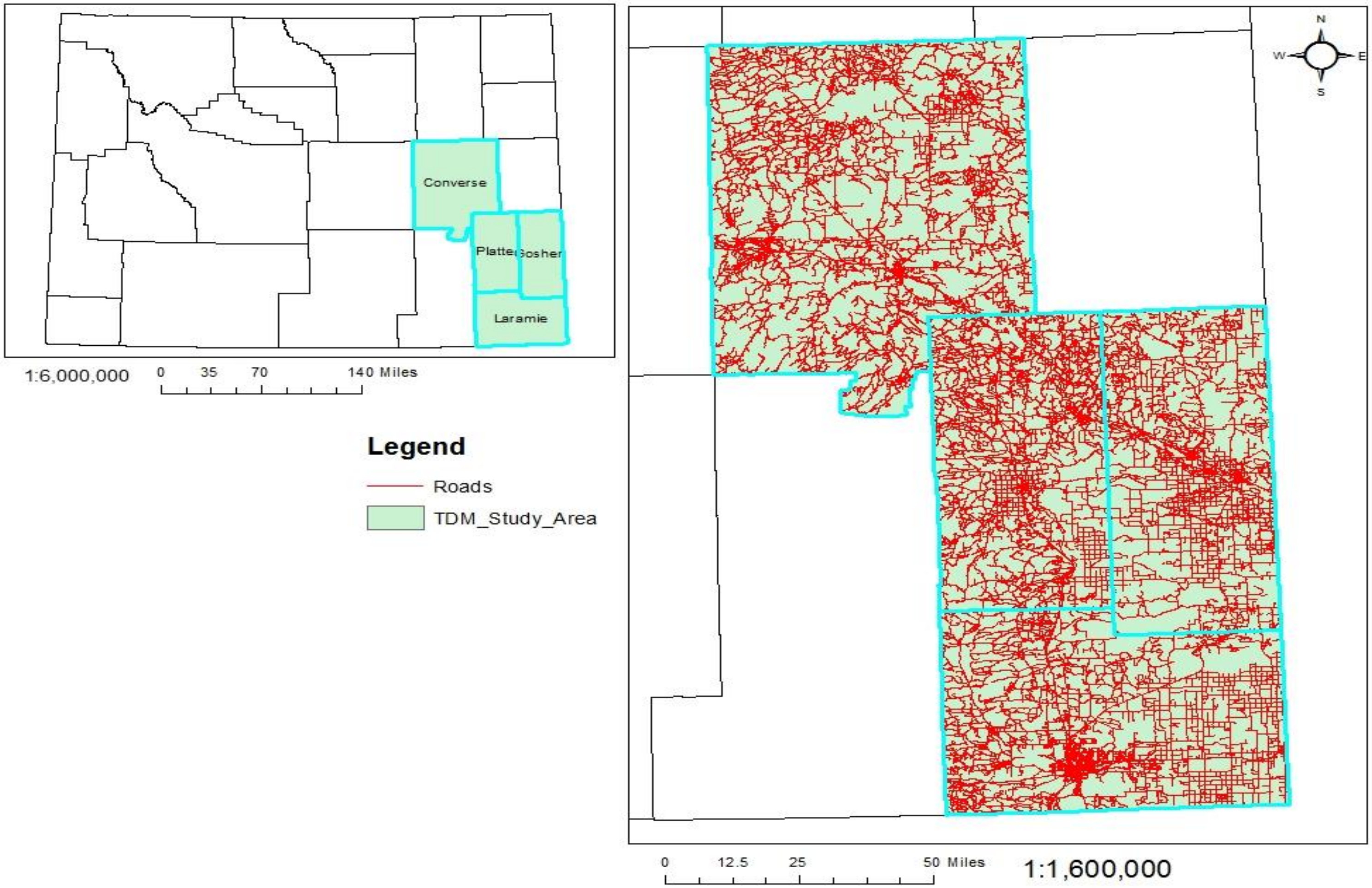
RoadName	County	Pop	Total HH	Employed	Access	Housing1	Income1	Pop1	Emp_Dense1	Hse_Dense1	Inc_Dense1	Pop_Dense1	LandUse	Inc1d	Pvt_Type	Pop1d	ADT	LogADT	PredLgADT
Lezeart Mine/ Leroy Road	Uinta	0	0	611	1	558	31683	1506	0.568187	0.518901	29.46297	1.400474	AP	3.1683	0	1.506	10	1	1.420046
Leimser Road	Niobrara	48	17	408	1	490	38236	818	0.156495	0.187948	14.66605	0.313757	AP	3.8236	0	0.818	10	1	1.357438
Road32	Big Horn	2	1	597	1	627	30164	1559	1.253822	1.316828	63.35058	3.27422	I	3.0164	0	1.559	11	1.0413927	1.959869
Road 31HA	Big Horn	4	1	441	0	366	27617	778	0.610973	0.507066	38.26134	1.077862	O	2.7617	0	0.778	11	1.0413927	1.229798
Lane 50 1/2	Big Horn	7	3	597	1	627	30164	1559	1.253822	1.316828	63.35058	3.27422	I	3.0164	0	1.559	12	1.0791812	1.959869
Williams Road	Crook	14	7	625	0	619	28107	1208	0.768122	0.760748	34.54336	1.484626	AP	2.8107	0	1.208	12	1.0791812	1.268928
Fossil Butte	Lincoln	2	1	413	1	581	18301	982	0.341015	0.479733	15.11118	0.81084	O	1.8301	0	0.982	13	1.1139434	1.372362
Fox Farm	Lincoln	3	1	373	1	331	27378	935	8.575343	7.609756	629.4256	21.49583	S	2.7378	0	0.935	16	1.20412	2.202085
Ridge Road	Niobrara	0	0	408	1	490	38236	818	0.156495	0.187948	14.66605	0.313757	I	3.8236	0	0.818	17	1.2304489	1.892438
Old Sundance Road	Crook	31	11	625	1	619	28107	1208	0.768122	0.760748	34.54336	1.484626	AP	2.8107	0	1.208	19	1.2787536	1.392928
Fuller Road	Crook	15	5	625	0	619	28107	1208	0.768122	0.760748	34.54336	1.484626	AP	2.8107	0	1.208	19	1.2787536	1.268928
Pfister Road	Niobrara	48	17	408	1	490	38236	818	0.156495	0.187948	14.66605	0.313757	AP	3.8236	0	0.818	20	1.30103	1.357438
Divide Road	Niobrara	0	0	408	1	490	38236	818	0.156495	0.187948	14.66605	0.313757	AP	3.8236	0	0.818	20	1.30103	1.357438
Rex Bateman Lane	Lincoln	10	2	756	0	836	23755	1745	24.46	27.04836	768.5812	56.45861	AP	2.3755	0	1.745	22	1.3424227	1.317795
Jireh North Road	Niobrara	0	0	408	1	490	38236	818	0.156495	0.187948	14.66605	0.313757	AP	3.8236	0	0.818	23	1.3617278	1.357438
13A	Crook	0	0	625	0	619	28107	1208	0.768122	0.760748	34.54336	1.484626	AP	2.8107	0	1.208	26	1.4149733	1.268928
Buffalo Creek Road	Weston	0	0	830	0	785	37403	1512	1.078079	1.019629	48.58239	1.963922	I	3.7403	0	1.512	27	1.4313638	1.831592
McMaster Road	Niobrara	1	1	408	0	490	38236	818	0.156495	0.187948	14.66605	0.313757	AC	3.8236	0	0.818	29	1.462398	1.480438
McKean Road	Crook	16	7	761	0	851	32519	1880	0.893899	0.999616	38.19801	2.208317	I	3.2519	0	1.88	30	1.4771213	1.86508
L6	Washakie	13	4	704	1	714	30185	1480	0.409607	0.415425	17.56249	0.861106	I	3.0185	0	1.48	35	1.544068	1.95268
Lane 05	Washakie	18	8	704	1	714	30185	1480	0.409607	0.415425	17.56249	0.861106	I	3.0185	0	1.48	36	1.5563025	1.95268
Clear Creek	Lincoln	0	0	413	1	581	18301	982	0.341015	0.479733	15.11118	0.81084	O	1.8301	0	0.982	36	1.5563025	1.372362
Road 8A	Big Horn	21	4	534	1	448	21144	1193	1.791568	1.503038	70.93803	4.00251	S	2.1144	0	1.193	38	1.5797836	2.225563
Piedmont Road	Uinta	0	0	611	1	558	31683	1506	0.568187	0.518901	29.46297	1.400474	I	3.1683	0	1.506	39	1.5910646	1.955046
North Creek Road	Niobrara	2	1	408	1	490	38236	818	0.156495	0.187948	14.66605	0.313757	I	3.8236	0	0.818	39	1.5910646	1.892438
Lane 16	Washakie	19	7	240	1	243	42214	816	0.472233	0.478136	83.0618	1.605591	S	4.2214	0	0.816	42	1.6232493	2.191256
Meeboer Road	Albany	10	5	675	0	1017	42717	1097	0.727776	1.096516	46.05691	1.182771	S	4.2717	0	1.097	43	1.6334685	2.092827

RoadName	County	Pop	Total HH	Employed	Access	Housing1	Income1	Pop1	Emp_Dense1	Hse_Dense1	Inc_Dense1	Pop_Dense1	LandUse	Inc1d	Pvt_Type	Pop1d	ADT	LogADT	PredLgADT
Thorton	Weston	0	0	830	1	785	37403	1512	1.078079	1.019629	48.58239	1.963922	S	3.7403	0	1.512	46	1.6627578	2.254592
1A	Weston	19	6	863	0	862	27370	1802	0.5445	0.543869	17.26879	1.136952	S	2.737	0	1.802	47	1.6720979	2.156982
McGill Lane	Albany	0	0	448	0	1081	43672	1044	0.144267	0.348109	14.06347	0.336194	I	4.3672	0	1.044	47	1.6720979	1.789004
Road13	Washakie	65	24	704	1	714	30185	1480	0.409607	0.415425	17.56249	0.861106	S	3.0185	1	1.48	48	1.6812412	2.65568
Big Hollow Road	Albany	0	0	675	0	1017	42717	1097	0.727776	1.096516	46.05691	1.182771	AP	4.2717	0	1.097	48	1.6812412	1.258827
Nowater/ Nowood Road	Washakie	6	2	704	0	714	30185	1480	0.409607	0.415425	17.56249	0.861106	S	3.0185	0	1.48	50	1.69897	2.12768
Dalles Lane	Albany	19	8	448	0	1081	43672	1044	0.144267	0.348109	14.06347	0.336194	I	4.3672	0	1.044	50	1.69897	1.789004
Road 15.75;15.5;15.25/ Lane17.25;16.75;16.5	Washakie	72	25	704	1	714	30185	1480	0.409607	0.415425	17.56249	0.861106	AC	3.0185	0	1.48	50	1.69897	1.66468
Brubaker Lane	Albany	0	0	1499	1	977	31784	2231	6.150299	4.008567	130.4077	9.153646	O	3.1784	0	2.231	52	1.7160033	1.486021
Mande Lane	Albany	19	8	448	1	1081	43672	1044	0.144267	0.348109	14.06347	0.336194	I	4.3672	0	1.044	54	1.7323938	1.913004
Mason Lane	Albany	48	22	675	1	1017	42717	1097	0.727776	1.096516	46.05691	1.182771	S	4.2717	0	1.097	63	1.7993405	2.216827
Lane 02	Washakie	6	1	704	1	714	30185	1480	0.409607	0.415425	17.56249	0.861106	I	3.0185	0	1.48	63	1.7993405	1.95268
Lane 04	Washakie	18	8	704	1	714	30185	1480	0.409607	0.415425	17.56249	0.861106	I	3.0185	0	1.48	64	1.80618	1.95268
Bucks Road	Lincoln	11	5	405	1	529	30415	1012	0.334481	0.43689	25.11913	0.83579	I	3.0415	1	1.012	71	1.8512583	2.314092
28 Road	Niobrara	1	1	407	0	404	21376	933	30.5792	30.3538	1606.047	70.09925	S	2.1376	0	0.933	71	1.8512583	2.077903
Road 30	Big Horn	0	0	597	0	627	30164	1559	1.253822	1.316828	63.35058	3.27422	S	3.0164	1	1.559	73	1.8633229	2.538869
Carpenter Road	Fremont	316	129	707	1	827	36716	1514	0.330701	0.386832	17.17402	0.708178	I	3.6716	0	1.514	73	1.8633229	1.955774
Country Garden Road	Fremont	45	21	994	1	1042	28076	1885	0.379171	0.397481	10.70986	0.719051	I	2.8076	0	1.885	74	1.8692317	1.989535
Miller Creek Road 94A	Crook	103	35	625	0	619	28107	1208	0.768122	0.760748	34.54336	1.484626	AP	2.8107	0	1.208	75	1.8750613	1.268928
Angler Road	Fremont	38	16	789	1	629	25283	1569	7.944475	6.333428	254.5756	15.79833	S	2.5283	0	1.569	78	1.8920946	2.259779
Grover Narrows	Lincoln	73	17	767	1	691	25892	1617	13.17012	11.86513	444.5902	27.76542	S	2.5892	0	1.617	78	1.8920946	2.264147
Road 17.5/Tie Down Road	Washakie	10	4	704	1	714	30185	1480	0.409607	0.415425	17.56249	0.861106	I	3.0185	1	1.48	79	1.8976271	2.35668
Welsh Lane	Albany	0	0	1499	0	977	31784	2231	6.150299	4.008567	130.4077	9.153646	S	3.1784	0	2.231	79	1.8976271	2.196021
Twin Creek-South Fork	Lincoln	31	15	413	1	581	18301	982	0.341015	0.479733	15.11118	0.81084	I	1.8301	1	0.982	84	1.9242793	2.311362
Red Willow Road	Uinta	11	3	586	1	726	17126	1428	0.859848	1.065272	25.12927	2.095329	I	1.7126	0	1.428	85	1.9294189	1.947948
Road 29A	Big Horn	48	20	441	0	366	27617	778	0.610973	0.507066	38.26134	1.077862	I	2.7617	0	0.778	91	1.9590414	1.764798
Government Valley	Crook	25	14	720	0	702	28122	1394	22.85649	22.28508	892.7364	44.2527	S	2.8122	0	1.394	92	1.9637878	2.119854

RoadName	County	Pop	Total HH	Employed	Access	Housing1	Income1	Pop1	Emp_Dense1	Hse_Dense1	Inc_Dense1	Pop_Dense1	LandUse	Inc1d	Pvt_Type	Pop1d	ADT	LogADT	PredLgADT
Road																			
Aspen Springs	Lincoln	8	2	373	1	331	27378	935	8.575343	7.609756	629.4256	21.49583	S	2.7378	1	0.935	97	1.9867717	2.606085
Ocean Lake Road	Fremont	6	2	789	1	629	25283	1569	7.944475	6.333428	254.5756	15.79833	S	2.5283	1	1.569	103	2.0128372	2.663779
Lane 07	Washakie	28	10	704	1	714	30185	1480	0.409607	0.415425	17.56249	0.861106	I	3.0185	1	1.48	103	2.0128372	2.35668
Lane 55	Big Horn	14	4	597	1	627	30164	1559	1.253822	1.316828	63.35058	3.27422	AC	3.0164	1	1.559	112	2.049218	2.075869
Harmony Lane	Albany	10	5	675	0	1017	42717	1097	0.727776	1.096516	46.05691	1.182771	AP	4.2717	1	1.097	121	2.0827854	1.909827
Road 10/ Washakie 10	Washakie	0	0	704	1	714	30185	1480	0.409607	0.415425	17.56249	0.861106	I	3.0185	1	1.48	124	2.0934217	2.35668
Davis Road	Big Horn	8	4	441	0	366	27617	778	0.610973	0.507066	38.26134	1.077862	S	2.7617	1	0.778	126	2.1003705	2.467798
Davidson/Fsckrell Road	Uinta	36	15	1247	1	1026	27797	2341	24.97977	20.55272	556.8265	46.89466	S	2.7797	1	2.341	136	2.1335389	2.734031
Road 30 1/2	Big Horn	12	6	441	0	366	27617	778	0.610973	0.507066	38.26134	1.077862	S	2.7617	1	0.778	137	2.1367206	2.467798
Taylor Lane	Uinta	42	12	1247	1	1026	27797	2341	24.97977	20.55272	556.8265	46.89466	S	2.7797	1	2.341	144	2.1583625	2.734031
Taylor Lane	Uinta	28	8	1247	1	1026	27797	2341	24.97977	20.55272	556.8265	46.89466	I	2.7797	1	2.341	144	2.1583625	2.435031
Coffey Road	Niobrara	0	0	408	1	490	38236	818	0.156495	0.187948	14.66605	0.313757	I	3.8236	0	0.818	146	2.1643529	1.892438
Deadman Gulch Road	Fremont	316	129	707	1	827	36716	1514	0.330701	0.386832	17.17402	0.708178	S	3.6716	1	1.514	148	2.1702617	2.658774
Road 36	Big Horn	33	15	441	0	366	27617	778	0.610973	0.507066	38.26134	1.077862	S	2.7617	1	0.778	151	2.1789769	2.467798
Oil Creek Road	Weston	0	0	863	1	862	27370	1802	0.5445	0.543869	17.26879	1.136952	S	2.737	1	1.802	157	2.1958997	2.684982
Old Sundance Road	Crook	16	5	761	0	851	32519	1880	0.893899	0.999616	38.19801	2.208317	S	3.2519	0	1.88	157	2.1958997	2.16408
Prater Canyon	Lincoln	33	13	1073	1	1318	29219	2115	49.36238	60.63338	1344.193	97.29864	S	2.9219	0	2.115	158	2.1986571	2.309465
Road 5B	Big Horn	0	0	534	0	448	21144	1193	1.791568	1.503038	70.93803	4.00251	S	2.1144	1	1.193	182	2.2600714	2.505563
Morrissey Road	Weston	0	0	776	0	713	29214	1410	33.61708	30.88786	1265.579	61.08259	S	2.9214	0	1.41	189	2.2764618	2.12131
Moskee Road	Crook	0	0	625	1	619	28107	1208	0.768122	0.760748	34.54336	1.484626	O	2.8107	1	1.208	189	2.2764618	1.796928
Almy Road	Uinta	170	65	726	1	503	28038	1109	16.06721	11.13196	620.5129	24.54343	S	2.8038	1	1.109	193	2.2855573	2.621919
LaBarge Creek	Lincoln	21	6	405	1	529	30415	1012	0.334481	0.43689	25.11913	0.83579	S	3.0415	1	1.012	199	2.2988531	2.613092
Barton Road	Weston	4	2	830	1	785	37403	1512	1.078079	1.019629	48.58239	1.963922	S	3.7403	0	1.512	210	2.3222193	2.254592
McKeen Road	Crook	0	0	761	0	851	32519	1880	0.893899	0.999616	38.19801	2.208317	O	3.2519	1	1.88	228	2.3579348	1.73408
Sanderson	Lincoln	11	4	756	1	836	23755	1745	24.46	27.04836	768.5812	56.45861	S	2.3755	1	1.745	241	2.382017	2.679795
Riverview Cutoff	Fremont	47	16	545	1	440	28291	1088	5.296404	4.275996	274.9368	10.57337	S	2.8291	1	1.088	282	2.4502491	2.620008
Cottonwood Bench Road	Uinta	42	12	1247	1	1026	27797	2341	24.97977	20.55272	556.8265	46.89466	S	2.7797	1	2.341	283	2.4517864	2.734031

RoadName	County	Pop	Total HH	Employed	Access	Housing1	Income1	Pop1	Emp_Dense1	Hse_Dense1	Inc_Dense1	Pop_Dense1	LandUse	Inc1d	Pvt_Type	Pop1d	ADT	LogADT	PredLgADT
Bridger South Road	Uinta	49	20	611	1	558	31683	1506	0.568187	0.518901	29.46297	1.400474	S	3.1683	1	1.506	298	2.4742163	2.658046
Road 7A	Big Horn	2	1	635	1	661	20794	1458	1.508568	1.570336	49.40026	3.463767	S	2.0794	1	1.458	301	2.4785665	2.653678
D-Road	Crook	31	11	761	1	851	32519	1880	0.893899	0.999616	38.19801	2.208317	I	3.2519	1	1.88	302	2.4800069	2.39308
Chittim Road	Fremont	16	6	771	1	756	21218	2013	181.8958	178.357	5005.792	474.9109	S	2.1218	1	2.013	320	2.50515	2.704183
Buckhorn Flats Road	Fremont	43	18	789	1	629	25283	1569	7.944475	6.333428	254.5756	15.79833	S	2.5283	1	1.569	326	2.5132176	2.663779
Almy West Road	Uinta	3	1	726	0	503	28038	1109	16.06721	11.13196	620.5129	24.54343	S	2.8038	1	1.109	357	2.5526682	2.497919
Warren Peak Road	Crook	13	6	720	1	702	28122	1394	22.85649	22.28508	892.7364	44.2527	O	2.8122	1	1.394	367	2.5646661	1.813854
Ft. Sanders Road	Albany	2	1	535	0	509	23872	1137	100.9049	96.00114	4502.435	214.4466	S	2.3872	1	1.137	371	2.5693739	2.500467
Lyons Valley Road	Fremont	155	57	994	1	1042	28076	1885	0.379171	0.397481	10.70986	0.719051	S	2.8076	1	1.885	385	2.5854607	2.692535
Christensen Road 103	Uinta	94	35	726	1	503	28038	1109	16.06721	11.13196	620.5129	24.54343	S	2.8038	1	1.109	406	2.608526	2.621919
Greenhouse Road	Weston	44	18	863	1	862	27370	1802	0.5445	0.543869	17.26879	1.136952	S	2.737	1	1.802	412	2.6148972	2.684982
Roger Canyon Road	Albany	2	1	1499	0	977	31784	2231	6.150299	4.008567	130.4077	9.153646	S	3.1784	1	2.231	518	2.7143298	2.600021
Road 26	Big Horn	14	6	441	1	366	27617	778	0.610973	0.507066	38.26134	1.077862	S	2.7617	1	0.778	527	2.7218106	2.591798
Pine Ridge Road	Crook	0	0	761	1	851	32519	1880	0.893899	0.999616	38.19801	2.208317	I	3.2519	1	1.88	599	2.7774268	2.39308
Curtis Street West	Albany	0	0	1045	1	752	22458	1441	480.9108	346.0717	10335.21	663.1507	S	2.2458	1	1.441	630	2.7993405	2.652131
Painted Hills Road	Weston	45	20	776	0	713	29214	1410	33.61708	30.88786	1265.579	61.08259	S	2.9214	1	1.41	656	2.8169038	2.52531
Lyons Valley Road	Fremont	74	29	994	1	1042	28076	1885	0.379171	0.397481	10.70986	0.719051	S	2.8076	1	1.885	670	2.8260748	2.692535
Clark Lane	Lincoln	40	13	1073	1	1318	29219	2115	49.36238	60.63338	1344.193	97.29864	S	2.9219	1	2.115	871	2.9400182	2.713465
1A	Weston	107	40	776	1	713	29214	1410	33.61708	30.88786	1265.579	61.08259	S	2.9214	1	1.41	936	2.9712758	2.64931
Redmon Road	Uinta	193	71	654	1	571	24745	1543	99.89186	87.21445	3779.548	235.6776	S	2.4745	1	1.543	1021	3.0090257	2.661413
Lyman/Carter Road	Uinta	53	19	611	1	558	31683	1506	0.568187	0.518901	29.46297	1.400474	S	3.1683	1	1.506	1021	3.0090257	2.658046
Soldier Springs Road	Albany	0	0	535	1	509	23872	1137	100.9049	96.00114	4502.435	214.4466	S	2.3872	1	1.137	1198	3.0784568	2.624467
Morrissey road	Weston	169	66	776	1	713	29214	1410	33.61708	30.88786	1265.579	61.08259	S	2.9214	1	1.41	1415	3.1507564	2.64931

APPENDIX 4: MAP OF TRAVEL DEMAND MODEL STUDY AREA



APPENDIX 5: TRANSPORTATION ANALYSIS ZONE DATASET

FID	TAZ	HH	HU	POPULATION	TOTAL_EMP	SERVICE	RETAIL	OTHER
0	1	9	183	15	9	5	4	0
1	2	6	53	13	8	5	2	1
2	3	14	59	24	14	9	4	1
3	4	1	11	1	1	0	1	0
4	5	26	69	48	29	17	7	5
5	6	11	21	22	14	8	4	2
6	7	14	19	34	20	11	6	3
7	8	6	8	9	5	4	0	1
8	9	47	56	112	67	40	18	9
9	10	1	1	1	1	0	1	0
10	11	1	3	1	1	0	1	0
11	12	1	41	2	1	1	0	0
12	13	2	15	4	2	2	0	0
13	14	2	6	4	2	2	0	0
14	15	2	4	4	3	1	2	0
15	16	2	7	3	2	1	1	0
16	17	2	3	5	3	2	0	1
17	18	1	1	2	1	1	0	0
18	19	8	13	17	10	6	2	2
19	20	3	4	6	3	2	1	0
20	21	3	3	6	3	2	1	0
21	22	4	4	7	4	2	2	0
22	23	31	117	62	38	23	8	7
23	24	11	14	30	14	8	3	3
24	25	3	11	5	3	2	1	0
25	26	20	22	45	28	16	7	5
26	27	24	26	71	43	23	13	7
27	28	13	14	27	16	10	3	3
28	29	10	12	18	11	6	3	2
29	30	6	6	13	8	5	2	1
30	31	1	1	4	2	1	1	0
31	32	142	384	272	122	74	17	31
32	33	3	8	7	3	2	1	0
33	34	2	7	4	2	1	1	0
34	35	19	49	50	32	17	10	5
35	36	4	10	6	3	2	1	0
36	37	15	24	30	14	9	2	3
37	38	18	23	41	19	11	4	4
38	39	4	4	6	3	2	1	0

FID	TAZ	HH	HU	POPULATION	TOTAL_EMP	SERVICE	RETAIL	OTHER
39	40	3	5	8	3	2	0	1
40	41	7	13	18	9	6	1	2
41	42	2	3	3	1	1	0	0
42	43	2	3	5	3	2	1	0
43	44	9	13	21	14	8	4	2
44	45	1	1	2	1	1	0	0
45	46	6	9	9	4	2	1	1
46	47	1	2	2	1	1	0	0
47	48	2	2	5	2	2	0	0
48	49	3	3	7	3	2	0	1
49	50	1	6	4	2	1	1	0
50	51	1	10	2	1	1	0	0
51	52	3	25	6	3	2	0	1
52	53	1	2	1	0	0	0	0
53	54	2	3	5	2	1	0	1
54	55	2	3	9	4	2	1	1
55	56	2	7	3	1	1	0	0
56	57	6	7	14	6	3	2	1
57	58	98	131	256	116	71	16	29
58	59	3	4	9	4	2	1	1
59	60	44	50	121	75	41	20	14
60	61	9	10	15	9	5	2	2
61	62	24	26	69	43	25	10	8
62	63	2	2	3	1	1	0	0
63	64	10	13	17	7	5	1	1
64	65	6	7	13	9	5	2	2
65	66	4	5	8	5	3	1	1
66	67	1	1	2	1	1	0	0
67	68	21	23	56	39	21	9	9
68	69	19	20	52	36	20	8	8
69	70	5	7	13	8	5	2	1
70	71	3	4	5	2	2	0	0
71	72	87	100	249	138	49	61	28
72	73	1	1	1	1	0	1	0
73	74	244	263	580	431	251	76	104
74	75	511	539	1169	716	405	151	160
75	76	877	961	1929	988	485	237	266
76	77	1	2	2	1	0	1	0
77	78	16	16	35	23	15	6	2
78	79	46	55	103	71	39	16	16

FID	TAZ	HH	HU	POPULATION	TOTAL_EMP	SERVICE	RETAIL	OTHER
79	80	17	18	36	22	11	7	4
80	81	17	18	38	25	13	7	5
81	82	88	110	171	88	35	20	33
82	83	29	36	77	39	17	7	15
83	84	2	2	5	3	1	2	0
84	85	2	4	5	3	1	2	0
85	86	5	7	14	9	4	4	1
86	87	91	105	201	138	76	31	31
87	88	1	2	1	1	0	1	0
88	89	3	4	11	8	4	2	2
89	90	14	15	26	17	10	4	3
90	91	148	149	367	274	160	46	68
91	92	18	19	43	29	16	6	7
92	93	350	402	799	451	168	184	99
93	94	252	276	483	354	176	111	67
94	95	181	200	354	254	129	77	48
95	96	180	199	329	220	143	60	17
96	97	1	7	3	1	1	0	0
97	98	2	5	4	2	1	1	0
98	99	1	1	3	1	1	0	0
99	100	1	8	3	1	1	0	0
100	101	7	30	12	5	3	1	1
101	102	4	33	8	4	3	0	1
102	103	1	24	2	1	1	0	0
103	104	2	22	5	2	2	0	0
104	105	1	13	2	1	1	0	0
105	106	13	23	31	15	8	3	4
106	107	3	5	4	1	1	0	0
107	108	2	4	6	3	2	0	1
108	109	1	2	4	2	1	1	0
109	110	5	7	9	4	3	0	1
110	111	7	8	12	5	3	1	1
111	112	4	9	6	2	2	0	0
112	113	7	68	10	5	3	2	0
113	114	2	14	6	3	2	1	0
114	115	6	7	9	4	2	1	1
115	116	3	8	5	2	1	0	1
116	117	1	1	3	1	1	0	0
117	118	2	4	5	2	1	1	0
118	119	8	13	20	9	6	2	1

FID	TAZ	HH	HU	POPULATION	TOTAL_EMP	SERVICE	RETAIL	OTHER
119	120	9	10	17	8	6	1	1
120	121	9	11	23	10	6	2	2
121	122	1	1	1	0	0	0	0
122	123	69	74	191	133	74	30	29
123	124	54	56	158	105	58	25	22
124	125	256	259	670	411	281	100	30
125	126	9	9	100	69	38	16	15
126	127	7	7	13	7	5	1	1
127	128	2136	2296	6161	3115	1863	960	292
128	129	3485	3696	7432	4411	2476	1168	767
129	130	4054	4312	8780	5304	3709	980	615
130	131	63	66	143	88	60	22	6
131	132	7	7	17	8	5	1	2
132	133	7	8	14	6	4	1	1
133	134	135	136	408	275	165	64	46
134	135	245	257	597	413	225	95	93
135	136	42	44	104	53	21	13	19
136	137	115	125	305	211	115	49	47
137	138	34	44	78	50	27	12	11
138	139	6	7	19	12	7	4	1
139	140	32	46	83	51	29	15	7
140	141	5	5	11	7	4	2	1
141	142	25	47	50	32	17	11	4
142	143	3	4	6	2	1	0	1
143	144	1	1	1	0	0	0	0
144	145	3	3	8	3	2	0	1
145	146	819	857	1915	936	769	147	20
146	147	19	101	35	16	5	6	5
147	148	11	28	19	9	3	2	4
148	149	4	6	10	5	2	1	2
149	150	3	7	4	1	1	0	1
150	151	14	19	28	13	5	3	5
151	152	16	17	34	15	6	4	6
152	153	1	1	2	1	0	1	0
153	154	20	26	47	23	8	6	9
154	155	2	3	3	1	0	1	0
155	156	5	7	14	7	3	1	3
156	157	3	4	8	4	2	0	2
157	158	4	4	13	6	2	1	3
158	159	8	10	24	11	4	3	4

FID	TAZ	HH	HU	POPULATION	TOTAL_EMP	SERVICE	RETAIL	OTHER
159	160	5	9	7	4	2	0	2
160	161	10	14	14	5	2	1	2
161	162	11	12	24	13	6	2	5
162	163	70	73	166	80	33	10	37
163	164	1	2	2	1	1	0	0
164	165	17	24	44	14	4	2	8
165	166	8	8	22	11	4	2	5
166	167	1	2	5	2	1	0	1
167	168	6	7	15	7	3	2	3
168	169	73	88	164	81	32	12	38
169	170	237	247	579	388	154	68	167
170	171	4	4	6	4	2	1	1
171	172	345	370	858	583	249	111	223
172	173	960	1075	2259	1327	477	212	639
173	174	592	654	1408	676	201	132	343
174	175	708	756	1755	1142	507	301	334
175	176	10	11	16	7	3	3	3
176	177	32	32	89	42	19	5	18
177	178	52	55	153	92	44	17	31
178	179	101	110	265	151	42	39	70
179	180	188	196	514	297	82	78	137
180	181	27	28	70	30	19	2	9
181	182	30	33	80	13	8	1	4
182	183	7	7	13	6	4	0	2
183	184	4	6	7	3	2	0	1
184	185	19	20	51	24	9	4	11
185	186	3	33	7	3	1	1	1
186	187	1	3	2	1	0	1	0
187	188	15	16	38	17	10	2	5
188	189	9	9	18	7	4	1	2
189	190	9	11	21	9	5	1	3
190	191	1	1	2	1	1	0	0
191	192	9	12	16	7	4	0	3
192	193	7	13	20	9	6	1	2
193	194	2	27	5	2	2	0	0
194	195	3	11	10	4	3	0	1
195	196	6	11	9	4	3	0	1
196	197	2	5	5	2	2	0	0
197	198	3	4	10	4	3	0	1
198	199	13	16	42	18	12	0	6

FID	TAZ	HH	HU	POPULATION	TOTAL_EMP	SERVICE	RETAIL	OTHER
199	200	2	2	6	3	2	0	1
200	201	2	6	7	3	2	0	1
201	202	2	2	5	2	1	0	1
202	203	14	16	38	17	11	0	6
203	204	8	10	21	8	5	0	3
204	205	3	8	6	3	0	3	0
205	206	21	23	48	27	9	6	12
206	207	25	25	66	29	17	4	8
207	208	13	15	41	16	11	0	5
208	209	9	10	22	8	6	0	2
209	210	20	20	54	23	14	2	7
210	211	17	24	36	11	8	1	2
211	212	8	9	18	8	5	1	2
212	213	4	5	9	5	2	1	2
213	214	8	10	19	10	6	1	3
214	215	6	6	10	7	3	3	1
215	216	94	100	222	116	61	18	37
216	217	293	314	708	407	135	133	139
217	218	52	60	98	57	20	16	21
218	219	230	257	508	290	100	89	101
219	220	282	309	666	350	138	84	128
220	221	148	158	350	183	73	43	67
221	222	206	220	520	272	107	64	101
222	223	2	2	7	3	2	0	1
223	224	10	11	25	11	7	1	3
224	225	7	7	15	6	4	0	2
225	226	17	19	45	20	13	2	5
226	227	3	3	5	3	1	1	1
227	228	11	12	27	13	6	3	4
228	229	138	140	417	232	110	41	81
229	230	27	28	66	37	18	7	12
230	231	146	154	389	217	102	38	77
231	232	1	3	3	2	1	0	1
232	233	11	11	32	17	8	2	7
233	234	2	3	5	3	1	1	1
234	235	29	30	62	20	6	1	13
235	236	7	7	18	8	5	0	3
236	237	2	2	5	2	1	0	1
237	238	3	4	7	4	2	1	1
238	239	6	6	20	11	5	2	4

FID	TAZ	HH	HU	POPULATION	TOTAL_EMP	SERVICE	RETAIL	OTHER
239	240	2	3	4	2	1	0	1
240	241	4	6	10	5	4	0	1
241	242	2	2	4	2	2	0	0
242	243	5	8	12	7	3	2	2
243	244	3	4	8	4	2	0	2
244	245	8	9	20	11	6	1	4
245	246	6	8	18	10	5	2	3
246	247	5	5	12	6	4	0	2
247	248	4	4	14	8	4	2	2
248	249	5	5	8	4	3	0	1
249	250	2	2	4	2	1	0	1
250	251	7	11	14	8	3	2	3
251	252	1	2	4	2	1	0	1
252	253	32	44	76	44	21	7	16
253	254	2	2	3	2	1	1	0
254	255	2	2	5	3	1	1	1
255	256	1	3	2	1	1	0	0
256	257	1	2	2	1	1	0	0
257	258	4	11	10	5	4	0	1
258	259	1059	1132	2141	0	0	0	0
259	260	95	98	233	0	0	0	0
260	261	651	693	1085	0	0	0	0
261	262	1572	1662	3266	0	0	0	0
262	263	106	118	306	0	0	0	0
263	264	1923	1998	4876	0	0	0	0
264	265	204	206	577	0	0	0	0
265	266	1255	1330	3057	0	0	0	0
266	267	1199	1233	3139	0	0	0	0
267	268	421	434	1036	0	0	0	0
268	269	1035	1063	2641	0	0	0	0
269	270	107	117	294	0	0	0	0
270	271	307	316	789	0	0	0	0
271	272	126	128	316	0	0	0	0
272	273	65	67	180	0	0	0	0
273	274	293	303	763	0	0	0	0
274	275	69	70	153	0	0	0	0
275	276	385	392	1194	24	16	6	2
276	277	12	13	36	0	0	0	0
277	278	71	74	210	0	0	0	0
278	279	35	41	80	0	0	0	0

FID	TAZ	HH	HU	POPULATION	TOTAL_EMP	SERVICE	RETAIL	OTHER
279	280	34	38	87	0	0	0	0
280	281	13	15	45	0	0	0	0
281	282	11	14	26	0	0	0	0
282	283	4	9	10	0	0	0	0
283	284	8	11	19	0	0	0	0
284	285	6	6	22	0	0	0	0
285	286	6	8	14	0	0	0	0
286	287	11	15	26	0	0	0	0
287	288	3	3	4	0	0	0	0
288	289	5	7	12	0	0	0	0
289	290	13	15	28	0	0	0	0
290	291	6	11	16	0	0	0	0
291	292	4	4	7	0	0	0	0
292	293	7	7	16	0	0	0	0
293	294	3	3	9	0	0	0	0
294	295	1	1	5	0	0	0	0
295	296	4	4	10	0	0	0	0
296	297	7	7	16	0	0	0	0
297	298	3	3	7	0	0	0	0
298	299	9	11	16	0	0	0	0
299	300	68	80	203	0	0	0	0
300	301	2	3	4	0	0	0	0
301	302	12	15	34	0	0	0	0
302	303	20	25	49	0	0	0	0
303	304	4	5	10	0	0	0	0
304	305	26	33	75	0	0	0	0
305	306	1	3	2	0	0	0	0
306	307	7	12	16	0	0	0	0
307	308	3	6	11	0	0	0	0
308	309	10	17	23	0	0	0	0
309	310	2	4	4	0	0	0	0
310	311	16	21	37	0	0	0	0
311	312	22	29	64	0	0	0	0
312	313	6	7	9	0	0	0	0
313	314	158	162	447	0	0	0	0
314	315	52	54	149	0	0	0	0
315	316	125	133	330	0	0	0	0
316	317	22	28	57	0	0	0	0
317	318	39	44	102	0	0	0	0
318	319	1	1	2	0	0	0	0

FID	TAZ	HH	HU	POPULATION	TOTAL_EMP	SERVICE	RETAIL	OTHER
319	320	3	4	6	0	0	0	0
320	321	9	10	15	2	1	1	0
321	322	3	9	6	0	0	0	0
322	323	8	15	15	0	0	0	0
323	324	3	4	8	0	0	0	0
324	325	3	4	4	3	1	1	1
325	326	1	1	4	0	0	0	0
326	327	46	48	126	0	0	0	0
327	328	2	4	5	0	0	0	0
328	329	14	16	40	0	0	0	0
329	330	7	7	27	0	0	0	0
330	331	7	8	13	0	0	0	0
331	332	1	1	1	0	0	0	0
332	333	2	2	2	0	0	0	0
333	334	2	4	3	0	0	0	0
334	335	6	10	22	0	0	0	0
335	336	56	62	149	0	0	0	0
336	337	90	94	254	0	0	0	0
337	338	26	26	73	0	0	0	0
338	339	5	5	12	4	2	0	2
339	340	4	6	13	0	0	0	0
340	341	10	15	30	0	0	0	0
341	342	2	2	3	0	0	0	0
342	343	17	22	36	0	0	0	0
343	344	88	92	238	0	0	0	0
344	345	10	13	19	0	0	0	0
345	346	24	30	68	0	0	0	0
346	347	64	69	179	0	0	0	0
347	348	41	49	87	0	0	0	0
348	349	51	52	132	0	0	0	0
349	350	13	15	26	0	0	0	0
350	351	2	2	3	0	0	0	0
351	352	1	1	1	0	0	0	0
352	353	90	103	208	0	0	0	0
353	354	8	8	19	0	0	0	0
354	355	7	9	31	0	0	0	0
355	356	2	3	4	0	0	0	0
356	357	5	5	12	0	0	0	0
357	358	1	1	2	0	0	0	0
358	359	4	5	15	0	0	0	0

FID	TAZ	HH	HU	POPULATION	TOTAL_EMP	SERVICE	RETAIL	OTHER
359	360	2	2	3	0	0	0	0
360	361	3	4	9	0	0	0	0
361	362	3	3	5	0	0	0	0
362	363	5	7	9	0	0	0	0
363	364	2	3	3	0	0	0	0
364	365	10	13	26	0	0	0	0
365	366	20	24	62	0	0	0	0
366	367	10	14	24	0	0	0	0
367	368	1	3	2	0	0	0	0
368	369	15	19	28	0	0	0	0
369	370	5	8	8	0	0	0	0
370	371	3	5	4	0	0	0	0
371	372	2	3	5	0	0	0	0
372	373	20	23	50	0	0	0	0
373	374	11	16	26	0	0	0	0
374	375	25	26	54	0	0	0	0
375	376	4	10	8	0	0	0	0
376	377	4	5	7	0	0	0	0
377	378	6	10	10	0	0	0	0
378	379	1	1	2	0	0	0	0
379	380	11	20	26	0	0	0	0
380	381	4	5	7	0	0	0	0
381	382	5	9	16	0	0	0	0
382	383	47	50	117	0	0	0	0
383	384	481	542	1152	0	0	0	0
384	385	54	59	129	0	0	0	0
385	386	30	33	80	0	0	0	0
386	387	40	46	83	0	0	0	0
387	388	52	56	135	0	0	0	0
388	389	26	31	63	0	0	0	0
389	390	119	133	318	0	0	0	0
390	391	26	30	71	0	0	0	0
391	392	67	73	155	0	0	0	0
392	393	74	90	176	0	0	0	0
393	394	113	136	211	0	0	0	0
394	395	587	664	1192	0	0	0	0
395	396	257	294	532	0	0	0	0
396	397	127	137	271	0	0	0	0
397	398	4	6	7	0	0	0	0
398	399	1	1	2	0	0	0	0

FID	TAZ	HH	HU	POPULATION	TOTAL_EMP	SERVICE	RETAIL	OTHER
399	400	74	83	182	0	0	0	0
400	401	73	77	183	0	0	0	0
401	402	3	3	6	0	0	0	0
402	403	12	13	26	0	0	0	0
403	404	8	8	15	0	0	0	0
404	405	8	8	17	0	0	0	0
405	406	5	5	9	0	0	0	0
406	407	3	5	8	0	0	0	0
407	408	1	2	2	0	0	0	0
408	409	5	5	10	0	0	0	0
409	410	3	3	9	0	0	0	0
410	411	11	16	19	0	0	0	0
411	412	11	15	27	0	0	0	0
412	413	109	127	308	0	0	0	0
413	414	2	2	3	0	0	0	0
414	415	45	49	109	0	0	0	0
415	416	3	5	8	0	0	0	0
416	417	19	22	45	0	0	0	0
417	418	17	17	40	0	0	0	0
418	419	7	7	16	0	0	0	0
419	420	11	13	22	0	0	0	0
420	421	6	6	11	0	0	0	0
421	422	10	11	26	0	0	0	0
422	423	6	7	10	0	0	0	0
423	424	5	5	9	0	0	0	0
424	425	7	9	16	0	0	0	0
425	426	7	10	16	0	0	0	0
426	427	4	4	8	0	0	0	0
427	428	10	10	17	0	0	0	0
428	429	1	1	2	0	0	0	0
429	430	3	3	13	0	0	0	0
430	431	5	7	8	0	0	0	0
431	432	4	5	10	0	0	0	0
432	433	3	3	9	0	0	0	0
433	434	5	9	11	0	0	0	0
434	435	3	3	5	0	0	0	0
435	436	5	5	11	0	0	0	0
436	437	53	58	139	0	0	0	0
437	438	299	349	657	0	0	0	0
438	439	8	8	12	0	0	0	0

FID	TAZ	HH	HU	POPULATION	TOTAL_EMP	SERVICE	RETAIL	OTHER
439	440	4	6	10	0	0	0	0
440	441	1	1	2	0	0	0	0
441	442	152	174	351	0	0	0	0
442	443	20	30	44	0	0	0	0
443	444	11	13	31	0	0	0	0
444	445	5	5	12	0	0	0	0
445	446	2	2	4	0	0	0	0
446	447	36	55	72	0	0	0	0
447	448	8	24	17	0	0	0	0
448	449	3	3	6	0	0	0	0
449	450	2	2	3	0	0	0	0
450	451	2	2	3	0	0	0	0
451	452	1	2	2	0	0	0	0
452	453	1	1	2	0	0	0	0
453	454	3	6	6	0	0	0	0
454	455	28	32	64	0	0	0	0
455	456	7	7	15	0	0	0	0
456	457	10	13	19	0	0	0	0
457	458	9	11	16	0	0	0	0
458	459	3	5	9	0	0	0	0
459	460	1	1	4	0	0	0	0
460	461	3	5	7	0	0	0	0
461	462	3	5	10	0	0	0	0
462	463	9	11	18	0	0	0	0
463	464	18	44	38	0	0	0	0
464	465	8	9	17	0	0	0	0
465	466	1	1	3	0	0	0	0
466	467	4	4	9	0	0	0	0
467	468	3	6	8	0	0	0	0
468	469	2	3	6	0	0	0	0
469	470	10	53	18	0	0	0	0
470	471	39	135	82	0	0	0	0
471	472	99	164	201	0	0	0	0
472	473	1	1	2	0	0	0	0
473	474	3	5	6	0	0	0	0
474	475	1	4	2	0	0	0	0
475	476	4	5	6	0	0	0	0
476	477	4	4	7	0	0	0	0
477	478	4	4	6	0	0	0	0
478	479	3	3	10	0	0	0	0

FID	TAZ	HH	HU	POPULATION	TOTAL_EMP	SERVICE	RETAIL	OTHER
479	480	1	1	2	0	0	0	0
480	481	1	2	2	0	0	0	0
481	482	6	7	10	0	0	0	0
482	483	10	17	22	0	0	0	0
483	484	6	11	16	0	0	0	0
484	485	10	12	19	11	7	2	2
485	486	2	3	4	2	1	0	1
486	487	5	5	16	9	5	2	2
487	488	7	8	17	11	5	4	2
488	489	6	7	15	9	5	3	1
489	490	2	5	3	2	1	1	0
490	491	38	46	109	63	37	10	16
491	492	78	90	342	200	113	41	46
492	493	6	12	22	13	8	3	2
493	494	13	19	43	24	14	3	7
494	495	2	5	3	2	1	1	0
495	496	19	32	38	21	13	1	7
496	497	5	6	14	8	4	2	2
497	498	2	3	4	2	1	0	1
498	499	4	6	10	5	4	0	1
499	500	6	8	11	7	4	2	1
500	501	1	3	1	1	0	1	0
501	502	13	16	34	19	12	3	4
502	503	13	21	24	14	9	3	2
503	504	18	23	40	24	14	6	4
504	505	2	6	3	2	1	1	0
505	506	4	8	13	7	5	1	1
506	507	4	5	9	5	3	0	2
507	508	1	2	1	1	0	1	0
508	509	11	11	28	13	6	3	4
509	510	21	23	52	27	14	7	6
510	511	10	14	21	12	7	2	3
511	512	16	25	34	19	12	3	4
512	513	17	20	35	20	13	2	5
513	514	26	31	70	40	25	6	9
514	515	19	30	44	25	15	4	6
515	516	69	86	153	88	54	15	19
516	517	8	9	24	11	5	3	3
517	518	2	2	4	2	1	0	1
518	519	9	12	21	7	3	2	2

FID	TAZ	HH	HU	POPULATION	TOTAL_EMP	SERVICE	RETAIL	OTHER
519	520	12	14	35	14	6	6	2
520	521	1	1	2	1	0	1	0
521	522	5	5	13	5	2	2	1
522	523	3	3	6	2	1	1	0
523	524	5	5	8	3	1	2	0
524	525	5	5	11	4	1	2	1
525	526	8	8	21	8	2	4	2
526	527	15	16	41	17	8	4	5
527	528	2	3	6	3	2	0	1
528	529	10	14	27	18	8	6	4
529	530	7	7	13	8	4	1	3
530	531	2	3	5	3	2	1	0
531	532	6	6	11	7	3	3	1
532	533	4	4	9	5	2	1	2
533	534	2	3	5	3	2	0	1
534	535	3	6	8	5	3	1	1
535	536	1	1	2	1	1	0	0
536	537	11	15	24	12	7	3	2
537	538	3	5	11	5	3	0	2
538	539	1	1	2	1	1	0	0
539	540	1	1	1	1	0	1	0
540	541	9	16	18	7	1	5	1
541	542	12	14	23	8	3	2	3
542	543	2	3	3	1	0	1	0
543	544	3	4	8	3	1	1	1
544	545	1	1	2	1	0	1	0
545	546	2	2	3	1	0	1	0
546	547	1	1	1	0	0	0	0
547	548	2	4	4	2	0	2	0
548	549	3	7	9	3	1	1	1
549	550	4	7	13	4	2	1	1
550	551	6	8	9	2	1	0	1
551	552	2	4	5	1	1	0	0
552	553	3	3	7	3	1	1	1
553	554	2	2	5	2	0	2	0
554	555	12	18	29	10	5	2	3
555	556	9	17	18	7	2	3	2
556	557	1	3	1	0	0	0	0
557	558	3	7	5	2	0	2	0
558	559	11	16	22	8	3	3	2

FID	TAZ	HH	HU	POPULATION	TOTAL_EMP	SERVICE	RETAIL	OTHER
559	560	7	11	21	8	3	2	3
560	561	1	2	2	1	0	1	0
561	562	22	22	52	24	11	6	7
562	563	2	2	4	3	1	1	1
563	564	17	18	36	22	10	9	3
564	565	128	166	278	91	44	18	29
565	566	9	13	21	7	3	4	0
566	567	7	10	19	13	5	4	4
567	568	28	30	68	42	24	9	9
568	569	16	19	41	27	13	8	6
569	570	6	8	15	9	5	3	1
570	571	125	130	285	184	97	47	40
571	572	85	92	202	129	68	33	28
572	573	20	21	39	23	14	4	5
573	574	8	9	17	7	2	4	1
574	575	1	2	2	1	0	1	0
575	576	28	29	78	31	12	14	5
576	577	7	7	15	6	1	4	1
577	578	5	5	16	8	2	2	4
578	579	32	36	71	29	11	10	8
579	580	16	17	32	12	4	4	4
580	581	11	13	29	13	6	3	4
581	582	8	10	19	11	6	3	2
582	583	5	6	12	7	4	1	2
583	584	13	14	33	15	6	7	2
584	585	5	5	9	4	2	1	1
585	586	1	1	2	1	0	1	0
586	587	1	2	2	1	0	1	0
587	588	17	19	42	16	4	9	3
588	589	8	8	21	9	3	5	1
589	590	13	13	35	13	4	6	3
590	591	10	17	29	13	6	6	1
591	592	2	4	4	2	0	2	0
592	593	11	12	26	12	5	7	0
593	594	21	24	45	17	5	10	2
594	595	29	34	68	27	9	12	6
595	596	29	37	78	29	11	12	6
596	597	27	32	61	23	10	8	5
597	598	17	20	35	13	5	5	3
598	599	17	18	48	18	7	6	5

FID	TAZ	HH	HU	POPULATION	TOTAL_EMP	SERVICE	RETAIL	OTHER
599	600	218	253	595	291	99	59	133
600	601	35	36	79	34	7	13	14
601	602	192	203	458	205	77	49	79
602	603	10	12	28	17	10	4	3
603	604	23	25	64	40	22	10	8
604	605	28	36	75	47	24	14	9
605	606	49	51	125	79	39	22	18
606	607	257	277	599	318	174	60	84
607	608	132	146	295	128	49	30	49
608	609	260	294	647	284	110	69	105
609	610	327	350	999	530	290	97	143
610	611	2031	2169	4495	2378	1263	502	613
611	612	0	0	0	0	0	0	0
612	613	46	49	99	57	32	12	13
613	614	77	88	697	314	156	79	79
614	615	16	16	40	21	13	1	7
615	616	7	8	20	11	6	2	3
616	617	61	64	153	68	35	14	19
617	618	22	26	46	21	11	5	5
618	619	14	16	37	12	4	5	3
619	620	4	4	8	3	1	2	0
620	621	4	4	16	5	2	1	2
621	622	4	6	5	2	0	2	0
622	623	1	6	2	1	0	1	0
623	624	3	3	7	2	1	0	1
624	625	2	2	2	1	0	1	0
625	626	1	3	1	0	0	0	0
626	627	8	10	18	7	2	4	1
627	628	4	4	9	0	0	0	0
628	629	2	3	4	0	0	0	0
629	630	8	13	16	0	0	0	0
630	631	3	4	8	0	0	0	0
631	632	21	28	56	0	0	0	0
632	633	3	4	6	0	0	0	0
633	634	2	3	6	0	0	0	0
634	635	5	8	13	0	0	0	0
635	636	1	1	1	0	0	0	0
636	637	13	14	41	0	0	0	0
637	638	4	5	11	0	0	0	0
638	639	5	10	10	0	0	0	0

FID	TAZ	HH	HU	POPULATION	TOTAL_EMP	SERVICE	RETAIL	OTHER
639	640	9	9	19	0	0	0	0
640	641	2	2	6	0	0	0	0
641	642	3	3	8	0	0	0	0
642	643	3	3	6	0	0	0	0
643	644	5	6	8	0	0	0	0
644	645	2	2	2	0	0	0	0
645	646	1	1	4	0	0	0	0
646	647	10	12	26	0	0	0	0
647	648	9	10	30	0	0	0	0
648	649	3	3	5	0	0	0	0
649	650	4	6	11	0	0	0	0
650	651	1	7	2	0	0	0	0
651	652	49	56	96	0	0	0	0
652	653	5	5	11	0	0	0	0
653	654	1	1	1	0	0	0	0
654	655	3	4	7	0	0	0	0
655	656	6	7	11	0	0	0	0
656	657	6	8	9	0	0	0	0
657	658	4	5	7	0	0	0	0
658	659	9	16	17	0	0	0	0
659	660	3	6	5	0	0	0	0
660	661	1	5	3	0	0	0	0
661	662	3	3	10	0	0	0	0
662	663	1	1	2	0	0	0	0
663	664	3	6	7	0	0	0	0
664	665	2	2	3	0	0	0	0
665	666	1	2	3	0	0	0	0
666	667	1	2	2	0	0	0	0
667	668	3	4	6	0	0	0	0
668	669	5	5	13	0	0	0	0
669	670	2	2	6	0	0	0	0
670	671	352	417	908	0	0	0	0
671	672	2	3	4	0	0	0	0
672	673	58	78	110	0	0	0	0
673	674	259	307	575	0	0	0	0
674	675	3	3	9	0	0	0	0
675	676	13	16	39	0	0	0	0
676	677	3	7	7	0	0	0	0
677	678	7	8	11	0	0	0	0
678	679	5	5	14	0	0	0	0

FID	TAZ	HH	HU	POPULATION	TOTAL_EMP	SERVICE	RETAIL	OTHER
679	680	16	22	34	0	0	0	0
680	681	1	4	4	0	0	0	0
681	682	1	5	2	0	0	0	0
682	683	3	4	6	0	0	0	0
683	684	8	13	15	0	0	0	0
684	685	1	1	2	0	0	0	0
685	686	1	1	2	0	0	0	0
686	687	2	3	4	0	0	0	0
687	688	4	6	6	0	0	0	0
688	689	2	3	4	0	0	0	0
689	690	1	1	2	0	0	0	0
690	691	2	4	3	0	0	0	0
691	692	4	6	6	0	0	0	0
692	693	9	9	19	0	0	0	0
693	694	4	5	15	0	0	0	0
694	695	6	7	11	0	0	0	0
695	696	3	6	6	0	0	0	0
696	697	4	4	7	0	0	0	0
697	698	2	3	2	0	0	0	0
698	699	1	2	3	0	0	0	0
699	700	2	2	4	0	0	0	0
700	701	4	4	11	0	0	0	0
701	702	3	3	6	0	0	0	0
702	703	2	2	4	0	0	0	0
703	704	10	11	21	0	0	0	0
704	705	8	16	11	0	0	0	0
705	706	1	1	2	0	0	0	0
706	707	7	9	11	0	0	0	0
707	708	2	4	2	0	0	0	0
708	709	1	2	2	0	0	0	0
709	710	3	3	12	0	0	0	0
710	711	1	4	4	0	0	0	0
711	712	2	2	5	0	0	0	0
712	713	2	3	6	0	0	0	0
713	714	6	9	14	0	0	0	0
714	715	5	5	9	0	0	0	0
715	716	6	7	14	0	0	0	0
716	717	3	4	6	0	0	0	0
717	718	1	7	5	0	0	0	0
718	719	1	6	2	0	0	0	0

FID	TAZ	HH	HU	POPULATION	TOTAL_EMP	SERVICE	RETAIL	OTHER
719	720	10	23	17	0	0	0	0
720	721	5	8	10	0	0	0	0
721	722	10	12	21	1	0	1	0
722	723	3	3	8	0	0	0	0
723	724	3	3	6	0	0	0	0
724	725	14	17	31	0	0	0	0
725	726	14	14	40	0	0	0	0
726	727	4	6	11	0	0	0	0
727	728	3	3	8	0	0	0	0
728	729	8	11	21	0	0	0	0
729	730	365	382	1007	0	0	0	0
730	731	9	9	18	0	0	0	0
731	732	1	2	3	0	0	0	0
732	733	52	62	124	0	0	0	0
733	734	2	2	3	0	0	0	0
734	735	8	8	75	0	0	0	0
735	736	3	3	4	0	0	0	0
736	737	31	34	102	0	0	0	0
737	738	39	40	90	0	0	0	0
738	739	593	641	1597	0	0	0	0
739	740	2605	2800	6820	0	0	0	0
740	741	293	326	691	0	0	0	0
741	742	685	736	1604	0	0	0	0
742	743	196	205	534	0	0	0	0
743	744	1296	1388	2860	0	0	0	0
744	745	434	471	1225	0	0	0	0
745	746	2067	2225	5006	0	0	0	0
746	747	1	1	1	0	0	0	0
747	748	2665	2773	7004	0	0	0	0
748	749	4	4	8	0	0	0	0
749	750	11	12	28	0	0	0	0
750	751	1	6	1	0	0	0	0
751	752	42	52	97	0	0	0	0
752	753	47	106	93	0	0	0	0
753	754	13	16	41	0	0	0	0
754	755	6	7	12	0	0	0	0
755	756	102	107	230	0	0	0	0
756	757	3	5	5	0	0	0	0
757	758	102	108	280	0	0	0	0
758	759	79	79	241	0	0	0	0

FID	TAZ	HH	HU	POPULATION	TOTAL_EMP	SERVICE	RETAIL	OTHER
759	760	209	217	556	0	0	0	0
760	761	42	47	96	0	0	0	0
761	762	146	160	321	22	13	4	5
762	763	293	309	976	0	0	0	0
763	764	501	627	2096	0	0	0	0
764	765	1226	1300	2677	0	0	0	0
765	766	284	302	725	0	0	0	0
766	767	559	586	1162	0	0	0	0
767	768	1351	1412	3227	0	0	0	0
768	769	166	185	433	0	0	0	0
769	770	961	1000	2678	7	3	2	2
770	771	69	73	153	0	0	0	0
771	772	62	70	179	0	0	0	0
772	773	131	155	337	0	0	0	0
773	774	8	8	16	0	0	0	0
774	775	13	18	31	0	0	0	0
775	776	14	19	37	0	0	0	0
776	777	121	133	346	0	0	0	0
777	778	205	212	593	0	0	0	0
778	779	96	105	256	0	0	0	0
779	780	115	123	370	0	0	0	0
780	781	249	266	647	0	0	0	0
781	782	8	11	24	0	0	0	0
782	783	32	39	94	2	1	0	1
783	784	23	26	63	0	0	0	0
784	785	12	13	26	0	0	0	0
785	786	9	13	21	0	0	0	0
786	787	18	21	31	0	0	0	0
787	788	13	13	25	0	0	0	0
788	789	17	20	47	0	0	0	0
789	790	12	16	37	0	0	0	0
790	791	5	5	7	0	0	0	0
791	792	19	21	40	0	0	0	0
792	793	400	452	942	0	0	0	0
793	794	8	9	19	0	0	0	0
794	795	22	24	48	0	0	0	0
795	796	8	8	18	0	0	0	0
796	797	43	48	98	0	0	0	0
797	798	13	15	42	0	0	0	0
798	799	10	13	21	0	0	0	0

FID	TAZ	HH	HU	POPULATION	TOTAL_EMP	SERVICE	RETAIL	OTHER
799	800	11	13	20	0	0	0	0
800	801	6	7	25	0	0	0	0
801	802	15	17	27	0	0	0	0
802	803	2	2	6	0	0	0	0
803	804	13	18	41	0	0	0	0
804	805	23	24	66	0	0	0	0
805	806	17	18	66	0	0	0	0
806	807	20	25	79	0	0	0	0
807	808	53	56	137	0	0	0	0
808	809	187	277	291	0	0	0	0
809	810	259	272	667	0	0	0	0
810	811	1797	1904	3838	0	0	0	0
811	812	1922	2193	3571	0	0	0	0
812	813	1550	1737	3352	0	0	0	0

APPENDIX 6: ROAD NETWORK DATASET

ID	ROUTE	FROM_MP	TO_MP	Shape_Leng	Road_ID	ROAD_NAME	SPEED	NUM_LANES	FUNC_CLASS	ONEWAY_TWO	A	B
1080	ML6817B	0	4.37	0.06407	CR 155-2	Zimmerman Road	55	1	4	2	2707	2708
1112	ML6817B	0	4.37	0.06407	CR 155-2	Zimmerman Road	55	1	4	2	2708	2713
1128	ML6817B	0	4.37	0.06407	CR 155-2	Zimmerman Road	55	1	4	2	2713	2714
1898	ML8031B	0	2.33	0.031265	CR 49	Y.O. Ranch Road	45	1	4	2	1587	1582
1904	ML8031B	0	2.33	0.031265	CR 49	Y.O. Ranch Road	45	1	4	2	1584	1587
2277	ML6025B	0	2.65	0.045261	CR 31C	WYNCOTE Rd.	45	1	4	2	2471	2438
2278	ML6025B	0	2.65	0.045261	CR 31C	WYNCOTE Rd.	45	1	4	2	2438	2403
2283	ML6025B	0	2.65	0.045261	CR 31C	WYNCOTE Rd.	45	1	4	2	2470	2471
167	ML96B	0	3.11	0.059138	WY 96	WY96E	65	1	3	2	1220	1205
2225	ML96B	0	3.11	0.059138	WY 96	WY96E	65	1	3	2	1205	1203
2226	ML96B	0	3.11	0.059138	WY 96	WY96E	65	1	3	2	1203	1204
174	ML504B	1.68	18.88	0.31478	WY 95	WY95E	65	1	3	2	1059	1067
180	ML504B	1.68	18.88	0.31478	WY 95	WY95E	65	1	3	2	1067	1078
182	ML504B	1.68	18.88	0.31478	WY 95	WY95E	65	1	3	2	1078	1131
1690	ML500B	0	2.13	0.035201	WY 95	WY95E	65	1	3	2	1057	1058
1693	ML500B	0	2.13	0.035201	WY 95	WY95E	65	1	3	2	1058	1063
1695	ML500B	0	2.13	0.035201	WY 95	WY95E	65	1	3	2	1063	1062
2510	ML504B	1.68	18.88	0.31478	WY 95	WY95E	65	1	3	2	1131	1161
2214	ML94B	0	16.61	0.253635	WY 94	WY94E	65	1	3	2	1234	1236
2215	ML94B	0	16.61	0.253635	WY 94	WY94E	65	1	3	2	1243	1242
2216	ML94B	0	16.61	0.253635	WY 94	WY94E	65	1	3	2	1244	1243
2218	ML94B	0	16.61	0.253635	WY 94	WY94E	65	1	3	2	1245	1244
2307	ML94B	0	16.61	0.253635	WY 94	WY94E	65	1	3	2	1242	1248
2308	ML94B	0	16.61	0.253635	WY 94	WY94E	65	1	3	2	1258	1257
2311	ML94B	0	16.61	0.253635	WY 94	WY94E	65	1	3	2	1248	1258
2313	ML94B	0	16.61	0.253635	WY 94	WY94E	65	1	3	2	1256	1234
2316	ML94B	0	16.61	0.253635	WY 94	WY94E	65	1	3	2	1255	1256

ID	ROUTE	FROM_MP	TO_MP	Shape_Leng	Road_ID	ROAD_NAME	SPEED	NUM_LANES	FUNC_CLASS	ONEWAY_TWO	A	B
2317	ML94B	0	16.61	0.253635	WY 94	WY94E	65	1	3	2	1257	1255
2523	ML94B	0	16.61	0.253635	WY 94	WY94E	65	1	3	2	1247	1245
183	ML502B	0.03	26.14	0.418018	WY 93	WY93E	65	1	3	2	1159	1148
2511	ML502B	0.03	26.14	0.418018	WY 93	WY93E	65	1	3	2	1161	1159
2513	ML502B	0.03	26.14	0.418018	WY 93	WY93E	65	1	3	2	1213	1212
2515	ML502B	0.03	26.14	0.418018	WY 93	WY93E	65	1	3	2	1212	1211
2517	ML502B	0.03	26.14	0.418018	WY 93	WY93E	65	1	3	2	1211	1210
2519	ML502B	0.03	26.14	0.418018	WY 93	WY93E	65	1	3	2	1210	1161
2521	ML502B	0.03	26.14	0.418018	WY 93	WY93E	65	1	3	2	1246	1213
723	ML807B	0	14.07	0.237456	WY 92	WY92E	65	1	3	2	2900	2927
727	ML807B	0	14.07	0.237456	WY 92	WY92E	65	1	3	2	2927	2954
728	ML807B	0	14.07	0.237456	WY 92	WY92E	65	1	3	2	2954	2977
735	ML807B	0	14.07	0.237456	WY 92	WY92E	65	1	3	2	2977	3011
739	ML807B	0	14.07	0.237456	WY 92	WY92E	65	1	3	2	2892	2899
779	ML807B	0	14.07	0.237456	WY 92	WY92E	65	1	3	2	2818	2815
787	ML807B	0	14.07	0.237456	WY 92	WY92E	65	1	3	2	2817	2818
789	ML807B	0	14.07	0.237456	WY 92	WY92E	65	1	3	2	2820	2817
800	ML807B	0	14.07	0.237456	WY 92	WY92E	65	1	3	2	2821	2820
804	ML807B	0	14.07	0.237456	WY 92	WY92E	65	1	3	2	2809	2821
808	ML807B	0	14.07	0.237456	WY 92	WY92E	65	1	3	2	2787	2809
157	ML91B	0	23.1	0.400958	WY 91	WY91E	65	1	3	2	1133	1112
158	ML91B	0	23.1	0.400958	WY 91	WY91E	65	1	3	2	1135	1133
2220	ML91B	0	23.1	0.400958	WY 91	WY91E	65	1	3	2	1242	1135
1705	ML507B	0	3	0.05347	WY 90	WY90E	65	1	3	2	1085	1080
187	ML43B	0	170.11	2.645549	WY 59	WY59E	65	1	3	2	1262	1251
188	ML43B	0	170.11	2.645549	WY 59	WY59E	65	1	3	2	1251	1222
260	ML43B	0	170.11	2.645549	WY 59	WY59E	65	1	3	2	1277	1288
268	ML43B	0	170.11	2.645549	WY 59	WY59E	65	1	3	2	1288	1302
273	ML43B	0	170.11	2.645549	WY 59	WY59E	65	1	3	2	1302	1309

ID	ROUTE	FROM_MP	TO_MP	Shape_Leng	Road_ID	ROAD_NAME	SPEED	NUM_LANES	FUNC_CLASS	ONEWAY_TWO	A	B
274	ML43B	0	170.11	2.645549	WY 59	WY59E	65	1	3	2	1309	1299
277	ML43B	0	170.11	2.645549	WY 59	WY59E	65	1	3	2	1299	1313
285	ML43B	0	170.11	2.645549	WY 59	WY59E	65	1	3	2	1313	1320
286	ML43B	0	170.11	2.645549	WY 59	WY59E	65	1	3	2	1320	1319
287	ML43B	0	170.11	2.645549	WY 59	WY59E	65	1	3	2	1319	1317
288	ML43B	0	170.11	2.645549	WY 59	WY59E	65	1	3	2	1317	1294
296	ML43B	0	170.11	2.645549	WY 59	WY59E	65	1	3	2	1294	1262
2364	ML43B	0	170.11	2.645549	WY 59	WY59E	65	1	3	2	1276	1277
2520	ML43B	0	170.11	2.645549	WY 59	WY59E	65	1	3	2	1246	1276
2525	ML43B	0	170.11	2.645549	WY 59	WY59E	65	1	3	2	1247	1246
120	ML109B	0	52.29	0.914197	WY 34	WY34E	65	1	3	2	1197	1218
121	ML109B	0	52.29	0.914197	WY 34	WY34E	65	1	3	2	1218	1264
122	ML109B	0	52.29	0.914197	WY 34	WY34E	65	1	3	2	1264	1293
124	ML109B	0	52.29	0.914197	WY 34	WY34E	65	1	3	2	1293	1331
126	ML109B	0	52.29	0.914197	WY 34	WY34E	65	1	3	2	1331	1335
1808	ML109B	0	52.29	0.914197	WY 34	WY34E	65	1	3	2	1423	1417
1809	ML109B	0	52.29	0.914197	WY 34	WY34E	65	1	3	2	1423	1471
1875	ML109B	0	52.29	0.914197	WY 34	WY34E	65	1	3	2	1510	1522
1876	ML109B	0	52.29	0.914197	WY 34	WY34E	65	1	3	2	1471	1510
1890	ML109B	0	52.29	0.914197	WY 34	WY34E	65	1	3	2	1522	1545
2143	ML109B	0	52.29	0.914197	WY 34	WY34E	65	1	3	2	1545	1564
2145	ML109B	0	52.29	0.914197	WY 34	WY34E	65	1	3	2	1564	1565
2250	ML109B	0	52.29	0.914197	WY 34	WY34E	65	1	3	2	1395	1417
2251	ML109B	0	52.29	0.914197	WY 34	WY34E	65	1	3	2	1335	1377
2254	ML109B	0	52.29	0.914197	WY 34	WY34E	65	1	3	2	1377	1395
2384	ML109B	0	52.29	0.914197	WY 34	WY34E	65	1	3	2	1125	1197
2119	ML321B	54.59	57.93	0.056078	WY 321	WY321E	65	1	3	2	1776	1778
2123	ML321B	54.59	57.93	0.056078	WY 321	WY321E	65	1	3	2	1863	1862
2126	ML321B	54.59	57.93	0.056078	WY 321	WY321E	65	1	3	2	1868	1863

ID	ROUTE	FROM_MP	TO_MP	Shape_Leng	Road_ID	ROAD_NAME	SPEED	NUM_LANES	FUNC_CLASS	ONEWAY_TWO	A	B
2260	ML321B	54.59	57.93	0.056078	WY 321	WY321E	65	1	3	2	1778	1813
2261	ML321B	54.59	57.93	0.056078	WY 321	WY321E	65	1	3	2	1813	1868
1795	ML1610B	0	12.33	0.186609	WY 320	WY320E	65	1	3	2	1533	1530
1796	ML1610B	0	12.33	0.186609	WY 320	WY320E	65	1	3	2	1574	1533
1798	ML1610B	0	12.33	0.186609	WY 320	WY320E	65	1	3	2	1592	1574
1799	ML1610B	0	12.33	0.186609	WY 320	WY320E	65	1	3	2	1569	1592
1932	ML1610B	0	12.33	0.186609	WY 320	WY320E	65	1	3	2	1559	1566
1937	ML1610B	0	12.33	0.186609	WY 320	WY320E	65	1	3	2	1566	1569
372	ML319B	100.13	114.62	0.234578	WY 319	WY319E	65	1	3	2	1448	1455
373	ML319B	211.88	226.13	0.236675	WY 319	WY319E	65	1	3	2	1455	1445
2177	ML319B	100.13	114.62	0.234578	WY 319	WY319E	65	1	3	2	1428	1431
2178	ML319B	100.13	114.62	0.234578	WY 319	WY319E	65	1	3	2	1427	1428
2190	ML319B	211.88	226.13	0.236675	WY 319	WY319E	65	1	3	2	1445	1407
2191	ML319B	211.88	226.13	0.236675	WY 319	WY319E	65	1	3	2	1407	1359
2470	ML319B	100.13	114.62	0.234578	WY 319	WY319E	65	1	3	2	1431	1501
2471	ML319B	100.13	114.62	0.234578	WY 319	WY319E	65	1	3	2	1501	1448
308	ML318B	4.53	5.62	0.019855	WY 318	WY318E	65	1	3	2	2014	2033
1958	ML317B	0	1.65	0.026891	WY 317	WY317E	65	1	3	2	1957	1940
1745	ML1604B	0	11.91	0.227089	WY 316	WY316E	65	1	3	2	1904	1903
1746	ML1604B	0	11.91	0.227089	WY 316	WY316E	65	1	3	2	1904	2005
1901	ML1604B	0	11.91	0.227089	WY 316	WY316E	65	1	3	2	1623	1903
1903	ML1604B	0	11.91	0.227089	WY 316	WY316E	65	1	3	2	1608	1623
1905	ML1604B	0	11.91	0.227089	WY 316	WY316E	65	1	3	2	1584	1608
1906	ML1604B	0	11.91	0.227089	WY 316	WY316E	65	1	3	2	1562	1584
2238	ML1605B	0	3.01	0.043559	WY 315	WY315E	65	1	3	2	1968	1965
2131	ML314B	0	8.57	0.165078	WY 314	WY314E	65	1	3	2	1690	1691
2134	ML314B	0	8.57	0.165078	WY 314	WY314E	65	1	3	2	1691	1710
2232	ML314B	0	8.57	0.165078	WY 314	WY314E	65	1	3	2	1875	1968
2233	ML314B	0	8.57	0.165078	WY 314	WY314E	65	1	3	2	1968	2034

ID	ROUTE	FROM_MP	TO_MP	Shape_Leng	Road_ID	ROAD_NAME	SPEED	NUM_LANES	FUNC_CLASS	ONEWAY_TWO	A	B
2237	ML314B	0	8.57	0.165078	WY 314	WY314E	65	1	3	2	1710	1875
1009	ML1602B	100	130.2	0.574172	WY 313	WY313E	65	1	3	2	2618	2650
1010	ML1602B	100	130.2	0.574172	WY 313	WY313E	65	1	3	2	2558	2618
1011	ML1602B	100	130.2	0.574172	WY 313	WY313E	65	1	3	2	2454	2558
1012	ML1602B	100	130.2	0.574172	WY 313	WY313E	65	1	3	2	2361	2454
1755	ML1602B	100	130.2	0.574172	WY 313	WY313E	65	1	3	2	1881	1882
1756	ML1602B	100	130.2	0.574172	WY 313	WY313E	65	1	3	2	1864	1881
1757	ML1602B	100	130.2	0.574172	WY 313	WY313E	65	1	3	2	2057	2049
1759	ML1602B	100	130.2	0.574172	WY 313	WY313E	65	1	3	2	2057	2091
1760	ML1602B	100	130.2	0.574172	WY 313	WY313E	65	1	3	2	2032	2049
1762	ML1602B	100	130.2	0.574172	WY 313	WY313E	65	1	3	2	2006	2032
1763	ML1602B	100	130.2	0.574172	WY 313	WY313E	65	1	3	2	1967	2006
1764	ML1602B	100	130.2	0.574172	WY 313	WY313E	65	1	3	2	1964	1967
1765	ML1602B	100	130.2	0.574172	WY 313	WY313E	65	1	3	2	1882	1964
2258	ML1602B	100	130.2	0.574172	WY 313	WY313E	65	1	3	2	1820	1864
2259	ML1602B	100	130.2	0.574172	WY 313	WY313E	65	1	3	2	1813	1820
1877	ML312B	0	7.3	0.110773	WY 312	WY312E	65	1	3	2	1522	1520
1879	ML312B	0	7.3	0.110773	WY 312	WY312E	65	1	3	2	1520	1521
1882	ML312B	0	7.3	0.110773	WY 312	WY312E	65	1	3	2	1521	1519
1883	ML312B	0	7.3	0.110773	WY 312	WY312E	65	1	3	2	1519	1518
1886	ML312B	0	7.3	0.110773	WY 312	WY312E	65	1	3	2	1518	1517
1888	ML312B	0	7.3	0.110773	WY 312	WY312E	65	1	3	2	1517	1514
2151	ML312B	0	7.3	0.110773	WY 312	WY312E	65	1	3	2	1538	1541
2153	ML312B	0	7.3	0.110773	WY 312	WY312E	65	1	3	2	1541	1549
2535	ML312B	0	7.3	0.110773	WY 312	WY312E	65	1	3	2	1514	1513
2538	ML312B	0	7.3	0.110773	WY 312	WY312E	65	1	3	2	1513	1538
1857	ML1601B	0	1.99	0.028916	WY 311	WY311E	65	1	3	2	1437	1435
1864	ML1601B	0	1.99	0.028916	WY 311	WY311E	65	1	3	2	1435	1434
1824	ML1600B	0	8.49	0.135419	WY 310	WY310E	65	1	3	2	1438	1439

ID	ROUTE	FROM_MP	TO_MP	Shape_Leng	Road_ID	ROAD_NAME	SPEED	NUM_LANES	FUNC_CLASS	ONEWAY_TWO	A	B
1830	ML1600B	0	8.49	0.135419	WY 310	WY310E	65	1	3	2	1436	1438
1838	ML1600B	0	8.49	0.135419	WY 310	WY310E	65	1	3	2	1433	1436
1843	ML1600B	0	8.49	0.135419	WY 310	WY310E	65	1	3	2	1548	1484
1845	ML1600B	0	8.49	0.135419	WY 310	WY310E	65	1	3	2	1484	1463
1846	ML1600B	0	8.49	0.135419	WY 310	WY310E	65	1	3	2	1437	1433
1847	ML1600B	0	8.49	0.135419	WY 310	WY310E	65	1	3	2	1463	1437
25	ML273B	0	0.33	0.0048	WY 273	WY273E	65	1	3	2	2262	2261
234	ML272B	0	3.32	0.050989	WY 272	WY272E	65	1	3	2	2117	2104
237	ML271B	0	3.19	0.06135	WY 271	WY271E	65	1	3	2	2042	2037
238	ML271B	0	3.19	0.06135	WY 271	WY271E	65	1	3	2	2093	2042
232	ML1401B	99.77	133.34	0.563136	WY 270	WY270E	65	1	3	2	2190	2192
233	ML1401B	99.77	133.34	0.563136	WY 270	WY270E	65	1	3	2	2117	2190
235	ML1401B	99.77	133.34	0.563136	WY 270	WY270E	65	1	3	2	2192	2227
236	ML1401B	99.77	133.34	0.563136	WY 270	WY270E	65	1	3	2	2097	2093
239	ML1401B	99.77	133.34	0.563136	WY 270	WY270E	65	1	3	2	2093	2117
244	ML1401B	99.77	133.34	0.563136	WY 270	WY270E	65	1	3	2	2103	2097
309	ML1400B	495.47	535.87	0.611545	WY 270	WY270E	65	1	3	2	2014	1991
312	ML1400B	495.47	535.87	0.611545	WY 270	WY270E	65	1	3	2	2027	2018
313	ML1400B	495.47	535.87	0.611545	WY 270	WY270E	65	1	3	2	2018	2014
340	ML1400B	495.47	535.87	0.611545	WY 270	WY270E	65	1	3	2	2071	2077
343	ML1400B	495.47	535.87	0.611545	WY 270	WY270E	65	1	3	2	2046	2071
348	ML1400B	495.47	535.87	0.611545	WY 270	WY270E	65	1	3	2	1991	2030
364	ML1400B	495.47	535.87	0.611545	WY 270	WY270E	65	1	3	2	2030	2046
403	ML1400B	495.47	535.87	0.611545	WY 270	WY270E	65	1	3	2	2077	2110
405	ML1400B	495.47	535.87	0.611545	WY 270	WY270E	65	1	3	2	2110	2110
406	ML1401B	99.77	133.34	0.563136	WY 270	WY270E	65	1	3	2	2110	2109
408	ML1401B	99.77	133.34	0.563136	WY 270	WY270E	65	1	3	2	2109	2108
416	ML1401B	99.77	133.34	0.563136	WY 270	WY270E	65	1	3	2	2108	2103
452	ML1401B	99.77	133.34	0.563136	WY 270	WY270E	65	1	3	2	2227	2440

ID	ROUTE	FROM_MP	TO_MP	Shape_Leng	Road_ID	ROAD_NAME	SPEED	NUM_LANES	FUNC_CLASS	ONEWAY_TWO	A	B
1957	ML1400B	495.47	535.87	0.611545	WY 270	WY270E	65	1	3	2	2021	2028
1959	ML1400B	495.47	535.87	0.611545	WY 270	WY270E	65	1	3	2	2028	2027
29	ML26B	0	42.04	0.741163	WY 230	WY230E	65	1	3	2	1024	1026
32	ML26B	0	42.04	0.741163	WY 230	WY230E	65	1	3	2	1079	1072
34	ML26B	0	42.04	0.741163	WY 230	WY230E	65	1	3	2	1082	1079
35	ML26B	0	42.04	0.741163	WY 230	WY230E	65	1	3	2	1097	1082
40	ML26B	0	42.04	0.741163	WY 230	WY230E	65	1	3	2	1106	1097
42	ML26B	0	42.04	0.741163	WY 230	WY230E	65	1	3	2	1108	1106
44	ML26B	0	42.04	0.741163	WY 230	WY230E	65	1	3	2	1119	1108
46	ML26B	0	42.04	0.741163	WY 230	WY230E	65	1	3	2	1136	1119
49	ML26B	0	42.04	0.741163	WY 230	WY230E	65	1	3	2	1143	1136
50	ML26B	0	42.04	0.741163	WY 230	WY230E	65	1	3	2	1143	1143
1635	ML26B	0	42.04	0.741163	WY 230	WY230E	65	1	3	2	1156	1158
1636	ML26B	0	42.04	0.741163	WY 230	WY230E	65	1	3	2	1156	1155
1640	ML26B	0	42.04	0.741163	WY 230	WY230E	65	1	3	2	1155	1151
1642	ML26B	0	42.04	0.741163	WY 230	WY230E	65	1	3	2	1151	1151
1643	ML26B	0	42.04	0.741163	WY 230	WY230E	65	1	3	2	1151	1151
1644	ML26B	0	42.04	0.741163	WY 230	WY230E	65	1	3	2	1150	1151
1646	ML26B	0	42.04	0.741163	WY 230	WY230E	65	1	3	2	1149	1150
1671	ML26B	0	42.04	0.741163	WY 230	WY230E	65	1	3	2	1002	1000
1674	ML26B	0	42.04	0.741163	WY 230	WY230E	65	1	3	2	1046	1024
1675	ML26B	0	42.04	0.741163	WY 230	WY230E	65	1	3	2	1072	1046
1676	ML26B	0	42.04	0.741163	WY 230	WY230E	65	1	3	2	1017	1002
1677	ML26B	0	42.04	0.741163	WY 230	WY230E	65	1	3	2	1026	1017
2291	ML26B	0	42.04	0.741163	WY 230	WY230E	65	1	3	2	1178	1158
1533	ML56B	348.36	359.55	0.214171	WY 225	WY225E	65	1	3	2	1432	1713
1977	ML56B	348.36	359.55	0.214171	WY 225	WY225E	65	1	3	2	1411	1432
1979	ML56B	348.36	359.55	0.214171	WY 225	WY225E	65	1	3	2	1410	1411
1980	ML56B	348.36	359.55	0.214171	WY 225	WY225E	65	1	3	2	1713	1715

ID	ROUTE	FROM_MP	TO_MP	Shape_Leng	Road_ID	ROAD_NAME	SPEED	NUM_LANES	FUNC_CLASS	ONEWAY_TWO	A	B
1982	ML56B	348.36	359.55	0.214171	WY 225	WY225E	65	1	3	2	1715	1717
1985	ML56B	348.36	359.55	0.214171	WY 225	WY225E	65	1	3	2	1715	1715
1989	ML56B	348.36	359.55	0.214171	WY 225	WY225E	65	1	3	2	1713	1715
2075	ML224B	0	0.12	0.00513	WY 224	WY224E	65	1	3	2	1748	1748
2082	ML224B	0	0.12	0.00513	WY 224	WY224E	65	1	3	2	1748	1748
2083	ML224B	0	0.12	0.00513	WY 224	WY224E	65	1	3	2	1748	1745
2084	ML224B	0	0.12	0.00513	WY 224	WY224E	65	1	3	2	1748	1745
2085	ML224B	0	0.12	0.00513	WY 224	WY224E	65	1	3	2	1745	1743
2086	ML224B	0	0.12	0.00513	WY 224	WY224E	65	1	3	2	1743	1741
2087	ML224B	0	0.12	0.00513	WY 224	WY224E	65	1	3	2	1743	1741
1583	ML223B	0	5.69	0.105539	WY 223	WY223E	65	1	3	2	1661	1664
1585	ML223B	0	5.69	0.105539	WY 223	WY223E	65	1	3	2	1829	1851
1587	ML223B	0	5.69	0.105539	WY 223	WY223E	65	1	3	2	1851	1852
1609	ML223B	0	5.69	0.105539	WY 223	WY223E	65	1	3	2	1664	1749
1610	ML223B	0	5.69	0.105539	WY 223	WY223E	65	1	3	2	1749	1829
26	ML222B	0	1.81	0.025692	WY 222	WY222E	65	1	3	2	1681	1682
1606	ML221B	0	1.84	0.035399	WY 221	WY221E	65	1	3	2	1838	1854
1608	ML221B	0	1.84	0.035399	WY 221	WY221E	65	1	3	2	1854	1867
2017	ML221B	0	1.84	0.035399	WY 221	WY221E	65	1	3	2	1867	1926
1539	ML218B	0	1.77	0.028264	WY 218	WY218E	65	1	3	2	1356	1354
1540	ML218B	0	1.77	0.028264	WY 218	WY218E	65	1	3	2	1357	1356
1300	ML217B	0	4.42	0.064342	WY 217	WY217E	65	1	3	2	2199	2197
1322	ML217B	0	4.42	0.064342	WY 217	WY217E	65	1	3	2	2200	2199
1323	ML217B	0	4.42	0.064342	WY 217	WY217E	65	1	3	2	2201	2200
1324	ML217B	0	4.42	0.064342	WY 217	WY217E	65	1	3	2	2202	2201
1325	ML217B	0	4.42	0.064342	WY 217	WY217E	65	1	3	2	2203	2202
1328	ML217B	0	4.42	0.064342	WY 217	WY217E	65	1	3	2	2204	2203
1329	ML217B	0	4.42	0.064342	WY 217	WY217E	65	1	3	2	2205	2204
1332	ML217B	0	4.42	0.064342	WY 217	WY217E	65	1	3	2	2208	2205

ID	ROUTE	FROM_MP	TO_MP	Shape_Leng	Road_ID	ROAD_NAME	SPEED	NUM_LANES	FUNC_CLASS	ONEWAY_TWO	A	B
1336	ML217B	0	4.42	0.064342	WY 217	WY217E	65	1	3	2	2206	2208
2035	ML217B	0	4.42	0.064342	WY 217	WY217E	65	1	3	2	2207	2206
2037	ML217B	0	4.42	0.064342	WY 217	WY217E	65	1	3	2	2209	2207
1121	ML1105B	0	18.54	0.356722	WY 216	WY216E	65	1	3	2	2810	2850
1123	ML1105B	0	18.54	0.356722	WY 216	WY216E	65	1	3	2	2752	2810
1124	ML1105B	0	18.54	0.356722	WY 216	WY216E	65	1	3	2	2850	2885
1126	ML1105B	0	18.54	0.356722	WY 216	WY216E	65	1	3	2	2885	2923
1127	ML1105B	0	18.54	0.356722	WY 216	WY216E	65	1	3	2	2923	2950
1129	ML1105B	0	18.54	0.356722	WY 216	WY216E	65	1	3	2	2714	2752
1132	ML1105B	0	18.54	0.356722	WY 216	WY216E	65	1	3	2	2685	2714
1134	ML1105B	0	18.54	0.356722	WY 216	WY216E	65	1	3	2	2529	2616
1135	ML1105B	0	18.54	0.356722	WY 216	WY216E	65	1	3	2	2616	2685
1137	ML1105B	0	18.54	0.356722	WY 216	WY216E	65	1	3	2	2408	2529
1140	ML1105B	0	18.54	0.356722	WY 216	WY216E	65	1	3	2	2364	2408
1030	ML1104B	0	17.14	0.252859	WY 215	WY215E	65	1	3	2	2963	2965
1033	ML1104B	0	17.14	0.252859	WY 215	WY215E	65	1	3	2	2965	2966
1056	ML1104B	0	17.14	0.252859	WY 215	WY215E	65	1	3	2	2966	2967
1064	ML1104B	0	17.14	0.252859	WY 215	WY215E	65	1	3	2	2967	2968
1092	ML1104B	0	17.14	0.252859	WY 215	WY215E	65	1	3	2	2968	2964
1106	ML1104B	0	17.14	0.252859	WY 215	WY215E	65	1	3	2	2964	2952
1120	ML1104B	0	17.14	0.252859	WY 215	WY215E	65	1	3	2	2952	2950
2055	ML1104B	0	17.14	0.252859	WY 215	WY215E	65	1	3	2	2970	2960
2057	ML1104B	0	17.14	0.252859	WY 215	WY215E	65	1	3	2	2960	2961
2058	ML1104B	0	17.14	0.252859	WY 215	WY215E	65	1	3	2	2961	2962
2060	ML1104B	0	17.14	0.252859	WY 215	WY215E	65	1	3	2	2962	2963
1285	ML1103B	0	8.39	0.125792	WY 214	WY214E	65	1	3	2	2485	2484
1289	ML1103B	0	8.39	0.125792	WY 214	WY214E	65	1	3	2	2486	2485
1294	ML1103B	0	8.39	0.125792	WY 214	WY214E	65	1	3	2	2487	2486
1310	ML1103B	0	8.39	0.125792	WY 214	WY214E	65	1	3	2	2488	2487

ID	ROUTE	FROM_MP	TO_MP	Shape_Leng	Road_ID	ROAD_NAME	SPEED	NUM_LANES	FUNC_CLASS	ONEWAY_TWO	A	B
1771	ML1103B	0	8.39	0.125792	WY 214	WY214E	65	1	3	2	2492	2488
1772	ML1103B	0	8.39	0.125792	WY 214	WY214E	65	1	3	2	2491	2492
1773	ML1102B	0	2.61	0.040655	WY 213	WY213E	65	1	3	2	2491	2493
1774	ML1102B	0	2.61	0.040655	WY 213	WY213E	65	1	3	2	2493	2494
1476	ML211B	0	42.94	0.712363	WY 211	WY211E	65	1	3	2	1789	1779
1478	ML211B	0	42.94	0.712363	WY 211	WY211E	65	1	3	2	1779	1774
1487	ML211B	0	42.94	0.712363	WY 211	WY211E	65	1	3	2	1612	1613
1488	ML211B	0	42.94	0.712363	WY 211	WY211E	65	1	3	2	1705	1694
1489	ML211B	0	42.94	0.712363	WY 211	WY211E	65	1	3	2	1694	1687
1490	ML211B	0	42.94	0.712363	WY 211	WY211E	65	1	3	2	1612	1593
1492	ML211B	0	42.94	0.712363	WY 211	WY211E	65	1	3	2	1593	1543
1494	ML211B	0	42.94	0.712363	WY 211	WY211E	65	1	3	2	1687	1676
1495	ML211B	0	42.94	0.712363	WY 211	WY211E	65	1	3	2	1627	1613
1496	ML211B	0	42.94	0.712363	WY 211	WY211E	65	1	3	2	1676	1662
1498	ML211B	0	42.94	0.712363	WY 211	WY211E	65	1	3	2	1649	1650
1499	ML211B	0	42.94	0.712363	WY 211	WY211E	65	1	3	2	1662	1650
1500	ML211B	0	42.94	0.712363	WY 211	WY211E	65	1	3	2	1649	1627
1503	ML211B	0	42.94	0.712363	WY 211	WY211E	65	1	3	2	1543	1528
1504	ML211B	0	42.94	0.712363	WY 211	WY211E	65	1	3	2	1528	1516
1512	ML211B	0	42.94	0.712363	WY 211	WY211E	65	1	3	2	1516	1479
1520	ML211B	0	42.94	0.712363	WY 211	WY211E	65	1	3	2	1402	1401
1521	ML211B	0	42.94	0.712363	WY 211	WY211E	65	1	3	2	1479	1402
1526	ML211B	0	42.94	0.712363	WY 211	WY211E	65	1	3	2	1401	1392
1530	ML211B	0	42.94	0.712363	WY 211	WY211E	65	1	3	2	1392	1382
1567	ML211B	0	42.94	0.712363	WY 211	WY211E	65	1	3	2	1382	1350
1568	ML211B	0	42.94	0.712363	WY 211	WY211E	65	1	3	2	1350	1351
1571	ML211B	0	42.94	0.712363	WY 211	WY211E	65	1	3	2	1351	1340
1572	ML211B	0	42.94	0.712363	WY 211	WY211E	65	1	3	2	1340	1337
1574	ML211B	0	42.94	0.712363	WY 211	WY211E	65	1	3	2	1337	1369

ID	ROUTE	FROM_MP	TO_MP	Shape_Leng	Road_ID	ROAD_NAME	SPEED	NUM_LANES	FUNC_CLASS	ONEWAY_TWO	A	B
2091	ML211B	0	42.94	0.712363	WY 211	WY211E	65	1	3	2	1774	1762
2093	ML211B	0	42.94	0.712363	WY 211	WY211E	65	1	3	2	1762	1759
2094	ML211B	0	42.94	0.712363	WY 211	WY211E	65	1	3	2	1759	1705
2121	ML211B	63.01	63.95	0.017155	WY 211	WY211E	65	1	3	2	1776	1776
2262	ML211B	63.01	63.95	0.017155	WY 211	WY211E	65	1	3	2	1737	1770
2263	ML211B	63.01	63.95	0.017155	WY 211	WY211E	65	1	3	2	1770	1776
1557	ML107B	0	37.79	0.677784	WY 210	WY210E	65	1	3	2	1698	1403
1558	ML107B	0	37.79	0.677784	WY 210	WY210E	65	1	3	2	1403	1400
1560	ML107B	0	37.79	0.677784	WY 210	WY210E	65	1	3	2	1400	1396
1562	ML107B	0	37.79	0.677784	WY 210	WY210E	65	1	3	2	1396	1358
1563	ML107B	0	37.79	0.677784	WY 210	WY210E	65	1	3	2	1358	1308
1632	ML107B	0	37.79	0.677784	WY 210	WY210E	65	1	3	2	1747	1746
1633	ML107B	0	37.79	0.677784	WY 210	WY210E	65	1	3	2	1746	1698
1967	ML107B	0	37.79	0.677784	WY 210	WY210E	65	1	3	2	1228	1227
1968	ML107B	0	37.79	0.677784	WY 210	WY210E	65	1	3	2	1308	1228
731	ML811B	0	7.03	0.132093	WY 161	WY161E	65	1	3	2	2684	2717
732	ML811B	0	7.03	0.132093	WY 161	WY161E	65	1	3	2	2631	2684
733	ML811B	0	7.03	0.132093	WY 161	WY161E	65	1	3	2	2717	2737
736	ML811B	0	7.03	0.132093	WY 161	WY161E	65	1	3	2	2737	2757
738	ML811B	0	7.03	0.132093	WY 161	WY161E	65	1	3	2	2757	2757
741	ML811B	0	7.03	0.132093	WY 161	WY161E	65	1	3	2	2757	2762
24	ML809B	0	1.08	0.019151	WY 160	WY160E	65	1	3	2	2213	2183
846	ML808B	0	12.78	0.193401	WY 159	WY159E	65	1	3	2	2780	2781
850	ML808B	0	12.78	0.193401	WY 159	WY159E	65	1	3	2	2781	2782
857	ML808B	0	12.78	0.193401	WY 159	WY159E	65	1	3	2	2782	2784
866	ML808B	0	12.78	0.193401	WY 159	WY159E	65	1	3	2	2765	2766
868	ML808B	0	12.78	0.193401	WY 159	WY159E	65	1	3	2	2766	2767
873	ML808B	0	12.78	0.193401	WY 159	WY159E	65	1	3	2	2767	2785
719	ML802B	0	8.02	0.129477	WY 158	WY158E	65	1	3	2	2928	2934

ID	ROUTE	FROM_MP	TO_MP	Shape_Leng	Road_ID	ROAD_NAME	SPEED	NUM_LANES	FUNC_CLASS	ONEWAY_TWO	A	B
721	ML802B	0	8.02	0.129477	WY 158	WY158E	65	1	3	2	2930	2928
724	ML802B	0	8.02	0.129477	WY 158	WY158E	65	1	3	2	2927	2930
2352	ML802B	0	8.02	0.129477	WY 158	WY158E	65	1	3	2	2981	3010
555	ML806B	0	7.99	0.138982	WY 157	WY157E	65	1	3	2	2328	2319
556	ML806B	0	7.99	0.138982	WY 157	WY157E	65	1	3	2	2319	2318
557	ML806B	0	7.99	0.138982	WY 157	WY157E	65	1	3	2	2318	2317
559	ML806B	0	7.99	0.138982	WY 157	WY157E	65	1	3	2	2317	2316
561	ML806B	0	7.99	0.138982	WY 157	WY157E	65	1	3	2	2316	2324
562	ML806B	0	7.99	0.138982	WY 157	WY157E	65	1	3	2	2393	2354
564	ML806B	0	7.99	0.138982	WY 157	WY157E	65	1	3	2	2468	2393
565	ML806B	0	7.99	0.138982	WY 157	WY157E	65	1	3	2	2508	2468
566	ML806B	0	7.99	0.138982	WY 157	WY157E	65	1	3	2	2354	2328
543	ML805B	0	14.28	0.249852	WY 156	WY156E	65	1	3	2	2508	2514
618	ML805B	0	14.28	0.249852	WY 156	WY156E	65	1	3	2	2657	2638
619	ML805B	0	14.28	0.249852	WY 156	WY156E	65	1	3	2	2638	2641
620	ML805B	0	14.28	0.249852	WY 156	WY156E	65	1	3	2	2641	2646
623	ML805B	0	14.28	0.249852	WY 156	WY156E	65	1	3	2	2646	2614
624	ML805B	0	14.28	0.249852	WY 156	WY156E	65	1	3	2	2614	2582
630	ML805B	0	14.28	0.249852	WY 156	WY156E	65	1	3	2	2582	2534
632	ML805B	0	14.28	0.249852	WY 156	WY156E	65	1	3	2	2534	2482
635	ML805B	0	14.28	0.249852	WY 156	WY156E	65	1	3	2	2482	2483
640	ML805B	0	14.28	0.249852	WY 156	WY156E	65	1	3	2	2483	2490
650	ML805B	0	14.28	0.249852	WY 156	WY156E	65	1	3	2	2490	2508
828	ML805B	0	14.28	0.249852	WY 156	WY156E	65	1	3	2	2790	2740
830	ML805B	0	14.28	0.249852	WY 156	WY156E	65	1	3	2	2740	2690
831	ML805B	0	14.28	0.249852	WY 156	WY156E	65	1	3	2	2690	2657
598	ML803B	0	21.11	0.374163	WY 154	WY154E	65	1	3	2	2577	2585
600	ML803B	0	21.11	0.374163	WY 154	WY154E	65	1	3	2	2548	2577
611	ML803B	0	21.11	0.374163	WY 154	WY154E	65	1	3	2	2613	2613

ID	ROUTE	FROM_MP	TO_MP	Shape_Leng	Road_ID	ROAD_NAME	SPEED	NUM_LANES	FUNC_CLASS	ONEWAY_TWO	A	B
613	ML803B	0	21.11	0.374163	WY 154	WY154E	65	1	3	2	2639	2613
802	ML803B	0	21.11	0.374163	WY 154	WY154E	65	1	3	2	2703	2639
803	ML803B	0	21.11	0.374163	WY 154	WY154E	65	1	3	2	2725	2703
805	ML803B	0	21.11	0.374163	WY 154	WY154E	65	1	3	2	2736	2725
809	ML803B	0	21.11	0.374163	WY 154	WY154E	65	1	3	2	2768	2736
813	ML803B	0	21.11	0.374163	WY 154	WY154E	65	1	3	2	2789	2768
921	ML803B	0	21.11	0.374163	WY 154	WY154E	65	1	3	2	2467	2548
924	ML803B	0	21.11	0.374163	WY 154	WY154E	65	1	3	2	2428	2467
927	ML803B	0	21.11	0.374163	WY 154	WY154E	65	1	3	2	2417	2428
934	ML803B	0	21.11	0.374163	WY 154	WY154E	65	1	3	2	2418	2417
937	ML803B	0	21.11	0.374163	WY 154	WY154E	65	1	3	2	2420	2418
949	ML803B	0	21.11	0.374163	WY 154	WY154E	65	1	3	2	2415	2420
964	ML803B	0	21.11	0.374163	WY 154	WY154E	65	1	3	2	2425	2415
965	ML803B	0	21.11	0.374163	WY 154	WY154E	65	1	3	2	2426	2425
967	ML803B	0	21.11	0.374163	WY 154	WY154E	65	1	3	2	2430	2426
972	ML803B	0	21.11	0.374163	WY 154	WY154E	65	1	3	2	2509	2460
974	ML803B	0	21.11	0.374163	WY 154	WY154E	65	1	3	2	2460	2430
594	ML801B	0	9.8	0.138534	WY 152	WY152E	65	1	3	2	2551	2552
597	ML801B	0	9.8	0.138534	WY 152	WY152E	65	1	3	2	2577	2551
904	ML801B	0	9.8	0.138534	WY 152	WY152E	65	1	3	2	2459	2386
655	ML800B	0	9.91	0.189781	WY 151	WY151E	65	1	3	2	2959	2973
656	ML800B	0	9.91	0.189781	WY 151	WY151E	65	1	3	2	2847	2889
657	ML800B	0	9.91	0.189781	WY 151	WY151E	65	1	3	2	2889	2959
658	ML800B	0	9.91	0.189781	WY 151	WY151E	65	1	3	2	2973	3012
659	ML800B	0	9.91	0.189781	WY 151	WY151E	65	1	3	2	2701	2847
1680	ML105B	0	17.33	0.306042	WY 13	WY13E	65	1	3	2	1028	1013
1681	ML105B	0	17.33	0.306042	WY 13	WY13E	65	1	3	2	1034	1028
64	ML103B	0	68.12	1.249634	WY 130	WY130E	65	1	3	2	1023	1004
66	ML103B	0	68.12	1.249634	WY 130	WY130E	65	1	3	2	1004	1001

ID	ROUTE	FROM_MP	TO_MP	Shape_Leng	Road_ID	ROAD_NAME	SPEED	NUM_LANES	FUNC_CLASS	ONEWAY_TWO	A	B
67	ML103B	0	68.12	1.249634	WY 130	WY130E	65	1	3	2	1030	1023
69	ML103B	0	68.12	1.249634	WY 130	WY130E	65	1	3	2	1076	1068
70	ML103B	0	68.12	1.249634	WY 130	WY130E	65	1	3	2	1068	1061
71	ML103B	0	68.12	1.249634	WY 130	WY130E	65	1	3	2	1143	1142
72	ML103B	0	68.12	1.249634	WY 130	WY130E	65	1	3	2	1142	1137
73	ML103B	0	68.12	1.249634	WY 130	WY130E	65	1	3	2	1137	1127
74	ML103B	0	68.12	1.249634	WY 130	WY130E	65	1	3	2	1127	1114
75	ML103B	0	68.12	1.249634	WY 130	WY130E	65	1	3	2	1111	1076
76	ML103B	0	68.12	1.249634	WY 130	WY130E	65	1	3	2	1114	1111
1634	ML26B	0	2.1	0.038911	WY 130	WY130E	65	1	3	2	1158	1156
1637	ML26B	0	2.1	0.038911	WY 130	WY130E	65	1	3	2	1156	1155
1638	ML26B	0	2.1	0.038911	WY 130	WY130E	65	1	3	2	1155	1151
1641	ML26B	0	2.1	0.038911	WY 130	WY130E	65	1	3	2	1151	1151
1645	ML26B	0	2.1	0.038911	WY 130	WY130E	65	1	3	2	1149	1143
1647	ML26B	0	2.1	0.038911	WY 130	WY130E	65	1	3	2	1150	1149
1649	ML26B	0	2.1	0.038911	WY 130	WY130E	65	1	3	2	1151	1150
94	ML104B	0	12.18	0.219216	WY 12	WY12E	65	1	3	2	1111	1093
1662	ML104B	0	12.18	0.219216	WY 12	WY12E	65	1	3	2	1084	1083
1663	ML104B	0	12.18	0.219216	WY 12	WY12E	65	1	3	2	1093	1084
1664	ML104B	0	12.18	0.219216	WY 12	WY12E	65	1	3	2	1083	1054
31	ML102B	0	10.94	0.179755	WY 11	WY11E	65	1	3	2	1005	1003
62	ML102B	0	10.94	0.179755	WY 11	WY11E	65	1	3	2	1023	1007
1678	ML102B	0	10.94	0.179755	WY 11	WY11E	65	1	3	2	1006	1005
1679	ML102B	0	10.94	0.179755	WY 11	WY11E	65	1	3	2	1007	1006
28	ML101B	0	9.12	0.142787	WY 10	WY10E	65	1	3	2	1026	1025
410	ML5567B	0	2	0.035989	CR 35	Wright Road	55	1	4	2	1598	1657
295	ML5573B	0	3.2	0.052148	CR 41	Woody Creek Road	55	1	4	2	1330	1343
2056	ML6896B	0	2.15	0.039932	CR 213-3	Wisroth Road	55	1	4	2	2913	2961
1330	ML7337B	0	0.89	0.01692	CR 778	Winterset Drive	55	1	4	2	2205	2228

ID	ROUTE	FROM_MP	TO_MP	Shape_Leng	Road_ID	ROAD_NAME	SPEED	NUM_LANES	FUNC_CLASS	ONEWAY_TWO	A	B
162	ML5544B	0	9.7	0.177216	CR 14	Windy Ridge Road	55	1	4	2	1135	1124
1714	ML5544B	0	9.7	0.177216	CR 14	Windy Ridge Road	55	1	4	2	1124	1088
303	ML7729B	0	6.33	0.097073	CR 32	Windmill Road	55	1	4	2	1723	1773
396	ML7729B	0	6.33	0.097073	CR 32	Windmill Road	55	1	4	2	1722	1723
1768	ML8096B	0	7.16	0.107234	CR 169	Windmill Road	55	1	4	2	1876	1869
1769	ML8096B	0	7.16	0.107234	CR 169	Windmill Road	55	1	4	2	1870	1876
2256	ML8096B	0	7.16	0.107234	CR 169	Windmill Road	55	1	4	2	1832	1870
421	ML7726B	0	8.26	0.161175	CR 26	Wilson Road	55	1	4	2	2774	2898
422	ML7726B	0	8.26	0.161175	CR 26	Wilson Road	55	1	4	2	2898	2994
21	ML5565B	0	2.15	0.031829	CR 33	Willow Creek Road	65	1	4	2	1148	1162
2028	ML7229B	0	0.4	0.005721	CR 667	Whitney Road	65	1	4	2	2016	2000
2106	ML6940B	0	1.45	0.027717	CR 228-2	Whitaker Road	55	1	4	2	1692	1693
2108	ML6940B	0	1.45	0.027717	CR 228-2	Whitaker Road	55	1	4	2	1693	1697
2416	ML6940B	0	1.45	0.027717	CR 228-2	Whitaker Road	55	1	4	2	1651	1692
314	ML8109B	0	5.5	0.092455	CR 202	Whalen Canyon Road	55	1	4	2	2027	2082
1131	ML6815B	0	1.01	0.014571	CR 154-2	West Romsa Road	55	1	4	2	2687	2685
2160	ML8028B	0	1.34	0.020833	CR 44	West Laramie River Road	55	1	4	2	1500	1473
2162	ML8028B	0	1.34	0.020833	CR 44	West Laramie River Road	55	1	4	2	1502	1500
3	ML8105B	0	4.62	0.077128	CR 193	West Johnson Road 193	55	1	4	2	1472	1409
2167	ML8104B	0	0.96	0.016709	CR 192	West Johnson Road 192	55	1	4	2	1493	1492
2169	ML8104B	0	0.96	0.016709	CR 192	West Johnson Road 192	55	1	4	2	1495	1493
2172	ML8104B	0	0.96	0.016709	CR 192	West Johnson Road 192	55	1	4	2	1492	1472
1861	ML8018B	25.3	26.5	0.023967	CR 6	West Hightower Road	65	1	4	2	1413	1430
1863	ML8018B	25.3	26.5	0.023967	CR 6	West Hightower Road	65	1	4	2	1430	1434
1871	ML8018B	25.3	26.5	0.023967	CR 6	West Hightower Road	65	1	4	2	1408	1413
1801	ML8055B	0	4.66	0.089381	CR 90	West Fairview Road	65	1	4	2	1544	1535
1865	ML8055B	0	4.66	0.089381	CR 90	West Fairview Road	65	1	4	2	1461	1434
1866	ML8055B	0	4.66	0.089381	CR 90	West Fairview Road	65	1	4	2	1478	1461
1868	ML8055B	0	4.66	0.089381	CR 90	West Fairview Road	65	1	4	2	1482	1478

ID	ROUTE	FROM_MP	TO_MP	Shape_Leng	Road_ID	ROAD_NAME	SPEED	NUM_LANES	FUNC_CLASS	ONEWAY_TWO	A	B
1869	ML8055B	0	4.66	0.089381	CR 90	West Fairview Road	65	1	4	2	1508	1482
1870	ML8055B	0	4.66	0.089381	CR 90	West Fairview Road	65	1	4	2	1535	1508
1933	ML8055B	0	4.66	0.089381	CR 90	West Fairview Road	65	1	4	2	1566	1566
1935	ML8055B	0	4.66	0.089381	CR 90	West Fairview Road	65	1	4	2	1566	1544
2466	ML8025B	0	7.91	0.139627	CR 40A	Wendover Road	55	1	4	2	1853	1678
2467	ML8025B	0	7.91	0.139627	CR 40A	Wendover Road	55	1	4	2	1678	1695
93	ML5034B	0	7.62	0.111787	CR 55	Welsh Lane	55	1	4	2	1137	1140
1655	ML5034B	0	7.62	0.111787	CR 55	Welsh Lane	55	1	4	2	1140	1139
1657	ML5034B	0	7.62	0.111787	CR 55	Welsh Lane	55	1	4	2	1139	1138
1659	ML5034B	0	7.62	0.111787	CR 55	Welsh Lane	55	1	4	2	1138	1130
118	ML5002B	0	5.5	0.090594	CR 11	Wayside Road	55	1	4	2	1231	1230
227	ML7715B	0	18.72	0.336036	CR 13	Wasserburger Road	55	1	4	2	2171	2107
433	ML7715B	0	18.72	0.336036	CR 13	Wasserburger Road	55	1	4	2	2540	2171
1829	ML8047B	0	4.9	0.094012	CR 80	Washington Road	55	1	4	2	1485	1465
1831	ML8047B	0	4.9	0.094012	CR 80	Washington Road	55	1	4	2	1436	1436
1832	ML8047B	0	4.9	0.094012	CR 80	Washington Road	55	1	4	2	1465	1436
1834	ML8047B	0	4.9	0.094012	CR 80	Washington Road	55	1	4	2	1436	1414
1889	ML8047B	0	4.9	0.094012	CR 80	Washington Road	55	1	4	2	1514	1485
2539	ML8047B	0	4.9	0.094012	CR 80	Washington Road	55	1	4	2	1540	1514
438	ML7711B	0	3.52	0.05643	CR 8	Walker Road	55	1	4	2	2404	2429
276	ML5575B	0	34	0.585109	CR 43	Walker Creek Road	65	1	4	2	1309	1380
1721	ML5575B	0	34	0.585109	CR 43	Walker Creek Road	65	1	4	2	1380	1497
1722	ML5575B	0	34	0.585109	CR 43	Walker Creek Road	65	1	4	2	1497	1663
2315	ML5533B	0	11.13	0.194283	CR 3	Wagon Hound Road	65	1	4	2	1255	1207
2405	ML5037B	0	1.16	0.015805	CR 58	Vista Drive	65	1	4	2	1192	1194
2407	ML5037B	0	1.16	0.015805	CR 58	Vista Drive	65	1	4	2	1193	1192
2411	ML5037B	0	1.16	0.015805	CR 58	Vista Drive	65	1	4	2	1195	1193
522	ML6116B	0	30.19	0.451915	CR 51F	Van Tassel Rd.	65	1	4	2	2785	2830
523	ML6116B	0	30.19	0.451915	CR 51F	Van Tassel Rd.	65	1	4	2	2834	2833

ID	ROUTE	FROM_MP	TO_MP	Shape_Leng	Road_ID	ROAD_NAME	SPEED	NUM_LANES	FUNC_CLASS	ONEWAY_TWO	A	B
525	ML6116B	0	30.19	0.451915	CR 51F	Van Tassel Rd.	65	1	4	2	2833	2832
529	ML6116B	0	30.19	0.451915	CR 51F	Van Tassel Rd.	65	1	4	2	2832	2836
535	ML6116B	0	30.19	0.451915	CR 51F	Van Tassel Rd.	65	1	4	2	2939	2941
537	ML6116B	0	30.19	0.451915	CR 51F	Van Tassel Rd.	65	1	4	2	2941	2940
1732	ML6116B	0	30.19	0.451915	CR 51F	Van Tassel Rd.	65	1	4	2	2836	2922
1733	ML6116B	0	30.19	0.451915	CR 51F	Van Tassel Rd.	65	1	4	2	2922	2939
1735	ML6116B	0	30.19	0.451915	CR 51F	Van Tassel Rd.	65	1	4	2	2835	2834
2529	ML6116B	0	30.19	0.451915	CR 51F	Van Tassel Rd.	65	1	4	2	2830	2831
2531	ML6116B	0	30.19	0.451915	CR 51F	Van Tassel Rd.	65	1	4	2	2831	2835
147	ML8091B	0	5.98	0.115055	CR 158	Van Ortwick Hill Road	55	1	4	2	1360	1306
1482	ML7295B	0	4.01	0.06958	CR 734	Valley View Drive	55	1	4	2	1376	1371
1483	ML7295B	0	4.01	0.06958	CR 734	Valley View Drive	55	1	4	2	1364	1361
1485	ML7295B	0	4.01	0.06958	CR 734	Valley View Drive	55	1	4	2	1361	1347
240	ML7765B	0	9.19	0.153034	CR 83	V-5 Hilltop	55	1	4	2	2097	2063
241	ML7765B	0	9.19	0.153034	CR 83	V-5 Hilltop	55	1	4	2	2063	2064
242	ML7765B	0	9.19	0.153034	CR 83	V-5 Hilltop	55	1	4	2	2064	2042
173	ML505B	160.87	187.89	0.587657	US 87	US87E	65	2	2	2	1060	1059
175	ML505B	160.87	187.89	0.587657	US 87	US87E	65	2	2	2	1019	1010
176	ML505B	160.87	187.89	0.587657	US 87	US87E	65	2	2	2	1033	1019
177	ML505B	160.87	187.89	0.587657	US 87	US87E	65	2	2	2	1059	1033
1577	ML25B	0	160.87	5.570344	US 87	US87E	65	2	2	2	1654	1675
1578	ML25B	0	160.87	5.570344	US 87	US87E	65	2	2	2	1652	1673
1581	ML25B	0	160.87	5.570344	US 87	US87E	65	2	2	2	1631	1664
1582	ML25B	0	160.87	5.570344	US 87	US87E	65	2	2	2	1630	1661
1694	ML505B	160.87	187.89	0.587657	US 87	US87E	65	2	2	2	1063	1060
1696	ML505B	160.87	187.89	0.587657	US 87	US87E	65	2	2	2	1062	1060
1697	ML505B	160.87	187.89	0.587657	US 87	US87E	65	2	2	2	1065	1063
1698	ML505B	160.87	187.89	0.587657	US 87	US87E	65	2	2	2	1069	1065
1699	ML505B	160.87	187.89	0.587657	US 87	US87E	65	2	2	2	1069	1064

ID	ROUTE	FROM_MP	TO_MP	Shape_Leng	Road_ID	ROAD_NAME	SPEED	NUM_LANES	FUNC_CLASS	ONEWAY_TWO	A	B
1701	ML505B	160.87	187.89	0.587657	US 87	US87E	65	2	2	2	1064	1064
1702	ML505B	160.87	187.89	0.587657	US 87	US87E	65	2	2	2	1064	1062
1704	ML505B	160.87	187.89	0.587657	US 87	US87E	65	2	2	2	1071	1069
1706	ML505B	160.87	187.89	0.587657	US 87	US87E	65	2	2	2	1085	1071
1707	ML505B	160.87	187.89	0.587657	US 87	US87E	65	2	2	2	1089	1085
1708	ML505B	160.87	187.89	0.587657	US 87	US87E	65	2	2	2	1091	1092
1709	ML505B	160.87	187.89	0.587657	US 87	US87E	65	2	2	2	1092	1089
1770	ML25B	0	160.87	5.570344	US 87	US87E	65	2	2	2	1673	1714
1789	ML25B	0	160.87	5.570344	US 87	US87E	65	2	2	2	1457	1440
1792	ML25B	0	160.87	5.570344	US 87	US87E	65	2	2	2	1460	1443
1995	ML25B	0	160.87	5.570344	US 87	US87E	65	2	2	2	1727	1726
1997	ML25B	0	160.87	5.570344	US 87	US87E	65	2	2	2	1730	1729
2000	ML25B	0	160.87	5.570344	US 87	US87E	65	2	2	2	1729	1747
2001	ML25B	0	160.87	5.570344	US 87	US87E	65	2	2	2	1726	1746
2061	ML25B	0	160.87	5.570344	US 87	US87E	65	2	2	2	1664	1733
2063	ML25B	0	160.87	5.570344	US 87	US87E	65	2	2	2	1661	1732
2065	ML25B	0	160.87	5.570344	US 87	US87E	65	2	2	2	1732	1727
2066	ML25B	0	160.87	5.570344	US 87	US87E	65	2	2	2	1733	1730
2067	ML25B	0	160.87	5.570344	US 87	US87E	65	2	2	2	1747	1753
2069	ML25B	0	160.87	5.570344	US 87	US87E	65	2	2	2	1746	1752
2071	ML25B	0	160.87	5.570344	US 87	US87E	65	2	2	2	1753	1748
2074	ML25B	0	160.87	5.570344	US 87	US87E	65	2	2	2	1752	1748
2076	ML25B	0	160.87	5.570344	US 87	US87E	65	2	2	2	1748	1748
2077	ML25B	0	160.87	5.570344	US 87	US87E	65	2	2	2	1748	1748
2078	ML25B	0	160.87	5.570344	US 87	US87E	65	2	2	2	1748	1748
2088	ML25B	0	160.87	5.570344	US 87	US87E	65	2	2	2	1748	1760
2090	ML25B	0	160.87	5.570344	US 87	US87E	65	2	2	2	1760	1762
2095	ML25B	0	160.87	5.570344	US 87	US87E	65	2	2	2	1757	1728
2097	ML25B	0	160.87	5.570344	US 87	US87E	65	2	2	2	1761	1731

ID	ROUTE	FROM_MP	TO_MP	Shape_Leng	Road_ID	ROAD_NAME	SPEED	NUM_LANES	FUNC_CLASS	ONEWAY_TWO	A	B
2100	ML25B	0	160.87	5.570344	US 87	US87E	65	2	2	2	1728	1702
2101	ML25B	0	160.87	5.570344	US 87	US87E	65	2	2	2	1731	1703
2102	ML25B	0	160.87	5.570344	US 87	US87E	65	2	2	2	1703	1701
2103	ML25B	0	160.87	5.570344	US 87	US87E	65	2	2	2	1702	1700
2105	ML25B	0	160.87	5.570344	US 87	US87E	65	2	2	2	1700	1692
2107	ML25B	0	160.87	5.570344	US 87	US87E	65	2	2	2	1701	1693
2109	ML25B	0	160.87	5.570344	US 87	US87E	65	2	2	2	1692	1666
2112	ML25B	0	160.87	5.570344	US 87	US87E	65	2	2	2	1667	1654
2113	ML25B	0	160.87	5.570344	US 87	US87E	65	2	2	2	1666	1652
2114	ML25B	0	160.87	5.570344	US 87	US87E	65	2	2	2	1675	1742
2116	ML25B	0	160.87	5.570344	US 87	US87E	65	2	2	2	1714	1740
2118	ML25B	0	160.87	5.570344	US 87	US87E	65	2	2	2	1742	1778
2120	ML25B	0	160.87	5.570344	US 87	US87E	65	2	2	2	1769	1776
2122	ML25B	0	160.87	5.570344	US 87	US87E	65	2	2	2	1778	1863
2124	ML25B	0	160.87	5.570344	US 87	US87E	65	2	2	2	1776	1861
2129	ML25B	0	160.87	5.570344	US 87	US87E	65	2	2	2	1861	1689
2132	ML25B	0	160.87	5.570344	US 87	US87E	65	2	2	2	1863	1691
2144	ML25B	0	160.87	5.570344	US 87	US87E	65	2	2	2	1588	1564
2146	ML25B	0	160.87	5.570344	US 87	US87E	65	2	2	2	1589	1565
2147	ML25B	0	160.87	5.570344	US 87	US87E	65	2	2	2	1565	1542
2150	ML25B	0	160.87	5.570344	US 87	US87E	65	2	2	2	1539	1538
2152	ML25B	0	160.87	5.570344	US 87	US87E	65	2	2	2	1542	1541
2154	ML25B	0	160.87	5.570344	US 87	US87E	65	2	2	2	1541	1537
2155	ML25B	0	160.87	5.570344	US 87	US87E	65	2	2	2	1538	1536
2158	ML25B	0	160.87	5.570344	US 87	US87E	65	2	2	2	1536	1531
2159	ML25B	0	160.87	5.570344	US 87	US87E	65	2	2	2	1537	1534
2161	ML25B	0	160.87	5.570344	US 87	US87E	65	2	2	2	1531	1500
2164	ML25B	0	160.87	5.570344	US 87	US87E	65	2	2	2	1534	1503
2166	ML25B	0	160.87	5.570344	US 87	US87E	65	2	2	2	1500	1492

ID	ROUTE	FROM_MP	TO_MP	Shape_Leng	Road_ID	ROAD_NAME	SPEED	NUM_LANES	FUNC_CLASS	ONEWAY_TWO	A	B
2168	ML25B	0	160.87	5.570344	US 87	US87E	65	2	2	2	1503	1493
2173	ML25B	0	160.87	5.570344	US 87	US87E	65	2	2	2	1492	1457
2174	ML25B	0	160.87	5.570344	US 87	US87E	65	2	2	2	1493	1460
2175	ML25B	0	160.87	5.570344	US 87	US87E	65	2	2	2	1443	1431
2176	ML25B	0	160.87	5.570344	US 87	US87E	65	2	2	2	1440	1428
2179	ML25B	0	160.87	5.570344	US 87	US87E	65	2	2	2	1431	1452
2180	ML25B	0	160.87	5.570344	US 87	US87E	65	2	2	2	1428	1451
2240	ML25B	0	160.87	5.570344	US 87	US87E	65	2	2	2	1689	1616
2241	ML25B	0	160.87	5.570344	US 87	US87E	65	2	2	2	1691	1617
2242	ML25B	0	160.87	5.570344	US 87	US87E	65	2	2	2	1616	1588
2243	ML25B	0	160.87	5.570344	US 87	US87E	65	2	2	2	1617	1589
2419	ML25B	0	160.87	5.570344	US 87	US87E	65	2	2	2	1762	1765
2422	ML25B	0	160.87	5.570344	US 87	US87E	65	2	2	2	1765	1763
2426	ML25B	0	160.87	5.570344	US 87	US87E	65	2	2	2	1763	1763
2427	ML25B	0	160.87	5.570344	US 87	US87E	65	2	2	2	1763	1761
2434	ML25B	0	160.87	5.570344	US 87	US87E	65	2	2	2	1693	1674
2436	ML25B	0	160.87	5.570344	US 87	US87E	65	2	2	2	1674	1667
2458	ML25B	0	160.87	5.570344	US 87	US87E	65	2	2	2	1740	1781
2459	ML25B	0	160.87	5.570344	US 87	US87E	65	2	2	2	1781	1769
2540	ML25B	0	160.87	5.570344	US 87	US87E	65	2	2	2	1540	1539
2544	ML25B	0	160.87	5.570344	US 87	US87E	65	2	2	2	1564	1551
2545	ML25B	0	160.87	5.570344	US 87	US87E	65	2	2	2	1551	1540
1623	ML180B	8.5	12.61	0.11741	US 87 Bus.	US87B	45	2	2	2	1827	1816
1625	ML180B	8.5	12.61	0.11741	US 87 Bus.	US87B	45	2	2	2	1826	1812
1627	ML180B	8.5	12.61	0.11741	US 87 Bus.	US87B	45	2	2	2	1816	1817
1628	ML180B	8.5	12.61	0.11741	US 87 Bus.	US87B	45	2	2	2	1812	1811
1629	ML180B	8.5	12.61	0.11741	US 87 Bus.	US87B	45	2	2	2	1817	1815

ID	ROUTE	FROM_MP	TO_MP	Shape_Leng	Road_ID	ROAD_NAME	SPEED	NUM_LANES	FUNC_CLASS	ONEWAY_TWO	A	B
1630	ML180B	8.5	12.61	0.11741	US 87 Bus.	US87B	45	2	2	2	1811	1777
1631	ML180B	8.5	12.61	0.11741	US 87 Bus.	US87B	45	2	2	2	1815	1751
1802	ML57B	78.93	81.89	0.048641	US 87 Bus.	US87B	45	2	2	2	1561	1555
1804	ML57B	78.93	81.89	0.048641	US 87 Bus.	US87B	45	2	2	2	1555	1547
2148	ML57B	78.93	81.89	0.048641	US 87 Bus.	US87B	45	2	2	2	1539	1542
2149	ML57B	78.93	81.89	0.048641	US 87 Bus.	US87B	45	2	2	2	1542	1561
2156	ML57B	78.93	81.89	0.048641	US 87 Bus.	US87B	45	2	2	2	1537	1536
2157	ML57B	78.93	81.89	0.048641	US 87 Bus.	US87B	45	2	2	2	1547	1537
419	ML85B	16.94	256.56	3.761785	US 85	US85E	65	2	2	2	2723	2774
424	ML85B	16.94	256.56	3.761785	US 85	US85E	65	2	2	2	2774	2776
425	ML85B	16.94	256.56	3.761785	US 85	US85E	65	2	2	2	2776	2763
429	ML85B	16.94	256.56	3.761785	US 85	US85E	65	2	2	2	2763	2775
503	ML85B	16.94	256.56	3.761785	US 85	US85E	65	2	2	2	2334	2331
505	ML85B	16.94	256.56	3.761785	US 85	US85E	65	2	2	2	2331	2332
506	ML85B	16.94	256.56	3.761785	US 85	US85E	65	2	2	2	2332	2299
507	ML85B	16.94	256.56	3.761785	US 85	US85E	65	2	2	2	2444	2391
509	ML85B	16.94	256.56	3.761785	US 85	US85E	65	2	2	2	2391	2334
511	ML85B	16.94	256.56	3.761785	US 85	US85E	65	2	2	2	2480	2474
513	ML85B	16.94	256.56	3.761785	US 85	US85E	65	2	2	2	2474	2446
514	ML85B	16.94	256.56	3.761785	US 85	US85E	65	2	2	2	2446	2469
515	ML85B	16.94	256.56	3.761785	US 85	US85E	65	2	2	2	2469	2444
517	ML85B	16.94	256.56	3.761785	US 85	US85E	65	2	2	2	2602	2606
519	ML85B	16.94	256.56	3.761785	US 85	US85E	65	2	2	2	2606	2563
520	ML85B	16.94	256.56	3.761785	US 85	US85E	65	2	2	2	2563	2480
545	ML85B	16.94	256.56	3.761785	US 85	US85E	65	2	2	2	2513	2512
547	ML85B	16.94	256.56	3.761785	US 85	US85E	65	2	2	2	2512	2512

ID	ROUTE	FROM_MP	TO_MP	Shape_Leng	Road_ID	ROAD_NAME	SPEED	NUM_LANES	FUNC_CLASS	ONEWAY_TWO	A	B
548	ML85B	16.94	256.56	3.761785	US 85	US85E	65	2	2	2	2512	2512
550	ML85B	16.94	256.56	3.761785	US 85	US85E	65	2	2	2	2512	2515
552	ML85B	16.94	256.56	3.761785	US 85	US85E	65	2	2	2	2575	2602
583	ML85B	16.94	256.56	3.761785	US 85	US85E	65	2	2	2	2640	2645
584	ML85B	16.94	256.56	3.761785	US 85	US85E	65	2	2	2	2645	2649
588	ML85B	16.94	256.56	3.761785	US 85	US85E	65	2	2	2	2649	2644
590	ML85B	16.94	256.56	3.761785	US 85	US85E	65	2	2	2	2644	2636
592	ML85B	16.94	256.56	3.761785	US 85	US85E	65	2	2	2	2636	2635
596	ML85B	16.94	256.56	3.761785	US 85	US85E	65	2	2	2	2635	2631
662	ML85B	16.94	256.56	3.761785	US 85	US85E	65	2	2	2	2701	2702
666	ML85B	16.94	256.56	3.761785	US 85	US85E	65	2	2	2	2702	2683
669	ML85B	16.94	256.56	3.761785	US 85	US85E	65	2	2	2	2683	2655
671	ML85B	16.94	256.56	3.761785	US 85	US85E	65	2	2	2	2655	2651
678	ML85B	16.94	256.56	3.761785	US 85	US85E	65	2	2	2	2651	2647
680	ML85B	16.94	256.56	3.761785	US 85	US85E	65	2	2	2	2647	2637
682	ML85B	16.94	256.56	3.761785	US 85	US85E	65	2	2	2	2637	2640
748	ML85B	16.94	256.56	3.761785	US 85	US85E	65	2	2	2	2631	2663
760	ML85B	16.94	256.56	3.761785	US 85	US85E	65	2	2	2	2663	2679
771	ML85B	16.94	256.56	3.761785	US 85	US85E	65	2	2	2	2679	2698
781	ML85B	16.94	256.56	3.761785	US 85	US85E	65	2	2	2	2698	2706
791	ML85B	16.94	256.56	3.761785	US 85	US85E	65	2	2	2	2706	2735
794	ML85B	16.94	256.56	3.761785	US 85	US85E	65	2	2	2	2735	2739
798	ML85B	16.94	256.56	3.761785	US 85	US85E	65	2	2	2	2739	2739
799	ML85B	16.94	256.56	3.761785	US 85	US85E	65	2	2	2	2739	2754
807	ML85B	16.94	256.56	3.761785	US 85	US85E	65	2	2	2	2754	2787
812	ML85B	16.94	256.56	3.761785	US 85	US85E	65	2	2	2	2787	2789
826	ML85B	16.94	256.56	3.761785	US 85	US85E	65	2	2	2	2789	2790
837	ML85B	16.94	256.56	3.761785	US 85	US85E	65	2	2	2	2790	2788
1055	ML85B	16.94	256.56	3.761785	US 85	US85E	65	2	2	2	2044	2061

ID	ROUTE	FROM_MP	TO_MP	Shape_Leng	Road_ID	ROAD_NAME	SPEED	NUM_LANES	FUNC_CLASS	ONEWAY_TWO	A	B
1066	ML85B	16.94	256.56	3.761785	US 85	US85E	65	2	2	2	2061	2113
1079	ML85B	16.94	256.56	3.761785	US 85	US85E	65	2	2	2	2113	2167
1087	ML85B	16.94	256.56	3.761785	US 85	US85E	65	2	2	2	2167	2179
1088	ML85B	16.94	256.56	3.761785	US 85	US85E	65	2	2	2	2179	2235
1107	ML85B	16.94	256.56	3.761785	US 85	US85E	65	2	2	2	2235	2284
1139	ML85B	16.94	256.56	3.761785	US 85	US85E	65	2	2	2	2284	2364
1145	ML85B	16.94	256.56	3.761785	US 85	US85E	65	2	2	2	2364	2510
1152	ML85B	16.94	256.56	3.761785	US 85	US85E	65	2	2	2	2510	2507
1158	ML85B	16.94	256.56	3.761785	US 85	US85E	65	2	2	2	2507	2535
1161	ML85B	16.94	256.56	3.761785	US 85	US85E	65	2	2	2	2535	2554
1163	ML85B	16.94	256.56	3.761785	US 85	US85E	65	2	2	2	2554	2557
1164	ML85B	16.94	256.56	3.761785	US 85	US85E	65	2	2	2	2557	2561
1167	ML85B	16.94	256.56	3.761785	US 85	US85E	65	2	2	2	2561	2611
1185	ML85B	16.94	256.56	3.761785	US 85	US85E	65	2	2	2	2611	2701
1462	ML85B	16.94	256.56	3.761785	US 85	US85E	65	2	2	2	1771	1804
1464	ML85B	16.94	256.56	3.761785	US 85	US85E	65	2	2	2	1804	1819
1465	ML85B	16.94	256.56	3.761785	US 85	US85E	65	2	2	2	1819	1831
1467	ML85B	16.94	256.56	3.761785	US 85	US85E	65	2	2	2	1831	1871
1470	ML85B	16.94	256.56	3.761785	US 85	US85E	65	2	2	2	1871	1874
1584	ML180B	0	12.61	0.275457	US 85	US85E	65	2	2	2	1894	1860
1586	ML180B	0	12.61	0.275457	US 85	US85E	65	2	2	2	1860	1851
1588	ML180B	0	12.61	0.275457	US 85	US85E	65	2	2	2	1860	1852
1589	ML180B	0	12.61	0.275457	US 85	US85E	65	2	2	2	1811	1777
1590	ML180B	0	12.61	0.275457	US 85	US85E	65	2	2	2	1815	1751
1591	ML180B	0	12.61	0.275457	US 85	US85E	65	2	2	2	1851	1847
1593	ML180B	0	12.61	0.275457	US 85	US85E	65	2	2	2	1852	1849
1594	ML180B	0	12.61	0.275457	US 85	US85E	65	2	2	2	1847	1846
1595	ML180B	0	12.61	0.275457	US 85	US85E	65	2	2	2	1849	1846
1598	ML180B	0	12.61	0.275457	US 85	US85E	65	2	2	2	1846	1842

ID	ROUTE	FROM_MP	TO_MP	Shape_Leng	Road_ID	ROAD_NAME	SPEED	NUM_LANES	FUNC_CLASS	ONEWAY_TWO	A	B
1612	ML85B	16.94	256.56	3.761785	US 85	US85E	65	2	2	2	1874	1901
1613	ML85B	16.94	256.56	3.761785	US 85	US85E	65	2	2	2	1901	1902
1615	ML85B	16.94	256.56	3.761785	US 85	US85E	65	2	2	2	1902	2044
2072	ML180B	0	12.61	0.275457	US 85	US85E	65	2	2	2	1751	1748
2073	ML180B	0	12.61	0.275457	US 85	US85E	65	2	2	2	1748	1748
2079	ML180B	0	12.61	0.275457	US 85	US85E	65	2	2	2	1751	1748
2080	ML180B	0	12.61	0.275457	US 85	US85E	65	2	2	2	1748	1748
2081	ML25B	12.7	17.24	0.135004	US 85	US85E	65	2	2	2	1748	1748
2089	ML25B	12.7	17.24	0.135004	US 85	US85E	65	2	2	2	1748	1758
2092	ML25B	12.7	17.24	0.135004	US 85	US85E	65	2	2	2	1758	1759
2286	ML85B	16.94	256.56	3.761785	US 85	US85E	65	2	2	2	2515	2536
2289	ML85B	16.94	256.56	3.761785	US 85	US85E	65	2	2	2	2536	2575
2420	ML25B	12.7	17.24	0.135004	US 85	US85E	65	2	2	2	1759	1755
2421	ML85B	16.94	256.56	3.761785	US 85	US85E	65	2	2	2	1755	1763
2424	ML25B	12.7	17.24	0.135004	US 85	US85E	65	2	2	2	1755	1756
2428	ML25B	12.7	17.24	0.135004	US 85	US85E	65	2	2	2	1756	1757
2429	ML85B	16.94	256.56	3.761785	US 85	US85E	65	2	2	2	1763	1771
2430	ML85B	16.94	256.56	3.761785	US 85	US85E	65	2	2	2	1765	1771
2032	ML80B	370.39	401.46	1.178238	US 30	US30E	65	2	2	2	2079	2129
2036	ML80B	370.39	401.46	1.178238	US 30	US30E	65	2	2	2	2129	2207
2040	ML80B	370.39	401.46	1.178238	US 30	US30E	65	2	2	2	2242	2492
2042	ML80B	370.39	401.46	1.178238	US 30	US30E	65	2	2	2	2207	2242
2046	ML80B	370.39	401.46	1.178238	US 30	US30E	65	2	2	2	2492	2670
2050	ML1111B	401.46	403.02	0.027932	US 30	US30E	65	2	2	2	2969	2971
2053	ML1111B	401.46	403.02	0.027932	US 30	US30E	65	2	2	2	2971	2970
2054	ML1111B	401.46	403.02	0.027932	US 30	US30E	65	2	2	2	2970	3000
2272	ML80B	370.39	401.46	1.178238	US 30	US30E	65	2	2	2	2670	2843
2275	ML80B	370.39	401.46	1.178238	US 30	US30E	65	2	2	2	2843	2969
2403	ML55B	328.48	332.48	0.076611	US 30	US30E	65	2	2	2	1199	1200

ID	ROUTE	FROM_MP	TO_MP	Shape_Leng	Road_ID	ROAD_NAME	SPEED	NUM_LANES	FUNC_CLASS	ONEWAY_TWO	A	B
2412	ML55B	328.48	332.48	0.076611	US 30	US30E	65	2	2	2	1195	1199
2413	ML55B	328.48	332.48	0.076611	US 30	US30E	65	2	2	2	1177	1195
1682	ML23B	235.23	328.48	1.896386	US 287	US287E	65	2	2	2	1034	1045
1684	ML23B	235.23	328.48	1.896386	US 287	US287E	65	2	2	2	1027	1034
1961	ML23B	400	425.41	0.399379	US 287	US287E	65	2	2	2	1214	1238
1962	ML23B	400	425.41	0.399379	US 287	US287E	65	2	2	2	1172	1173
1963	ML23B	400	425.41	0.399379	US 287	US287E	65	2	2	2	1176	1172
1966	ML23B	400	425.41	0.399379	US 287	US287E	65	2	2	2	1177	1176
2294	ML23B	235.23	328.48	1.896386	US 287	US287E	65	2	2	2	1182	1180
2296	ML23B	400	425.41	0.399379	US 287	US287E	65	2	2	2	1179	1181
2298	ML23B	400	425.41	0.399379	US 287	US287E	65	2	2	2	1175	1179
2299	ML23B	400	425.41	0.399379	US 287	US287E	65	2	2	2	1173	1175
2301	ML23B	400	425.41	0.399379	US 287	US287E	65	2	2	2	1181	1168
2379	ML23B	235.23	328.48	1.896386	US 287	US287E	65	2	2	2	1122	1125
2381	ML23B	235.23	328.48	1.896386	US 287	US287E	65	2	2	2	1118	1122
2382	ML23B	235.23	328.48	1.896386	US 287	US287E	65	2	2	2	1116	1118
2385	ML23B	235.23	328.48	1.896386	US 287	US287E	65	2	2	2	1045	1118
2386	ML23B	235.23	328.48	1.896386	US 287	US287E	65	2	2	2	1045	1116
2387	ML23B	235.23	328.48	1.896386	US 287	US287E	65	2	2	2	1163	1182
2389	ML23B	235.23	328.48	1.896386	US 287	US287E	65	2	2	2	1125	1163
2390	ML23B	400	425.41	0.399379	US 287	US287E	65	2	2	2	1202	1214
2391	ML23B	400	425.41	0.399379	US 287	US287E	65	2	2	2	1183	1202
2392	ML23B	400	425.41	0.399379	US 287	US287E	65	2	2	2	1168	1183
544	ML85B	93.2	103.07	0.179406	US 26	US26E	75	2	2	2	2514	2513
546	ML27B	0	38.42	0.737401	US 26	US26E	75	2	2	2	2489	2512
549	ML27B	0	38.42	0.737401	US 26	US26E	75	2	2	2	2489	2512
551	ML27B	0	38.42	0.737401	US 26	US26E	75	2	2	2	2225	2324
644	ML85B	93.2	103.07	0.179406	US 26	US26E	75	2	2	2	2652	2601
645	ML85B	93.2	103.07	0.179406	US 26	US26E	75	2	2	2	2601	2592

ID	ROUTE	FROM_MP	TO_MP	Shape_Leng	Road_ID	ROAD_NAME	SPEED	NUM_LANES	FUNC_CLASS	ONEWAY_TWO	A	B
653	ML85B	93.2	103.07	0.179406	US 26	US26E	75	2	2	2	2592	2514
797	ML28B	48.3	56.26	0.144758	US 26	US26E	75	2	2	2	2992	3017
811	ML28B	48.3	56.26	0.144758	US 26	US26E	75	2	2	2	2926	2992
820	ML28B	48.3	56.26	0.144758	US 26	US26E	75	2	2	2	2881	2926
824	ML28B	48.3	56.26	0.144758	US 26	US26E	75	2	2	2	2873	2881
833	ML28B	48.3	56.26	0.144758	US 26	US26E	75	2	2	2	2872	2873
834	ML28B	48.3	56.26	0.144758	US 26	US26E	75	2	2	2	2860	2872
836	ML28B	48.3	56.26	0.144758	US 26	US26E	75	2	2	2	2793	2860
838	ML28B	48.3	56.26	0.144758	US 26	US26E	75	2	2	2	2788	2793
839	ML85B	93.2	103.07	0.179406	US 26	US26E	75	2	2	2	2788	2780
841	ML85B	93.2	103.07	0.179406	US 26	US26E	75	2	2	2	2780	2777
842	ML85B	93.2	103.07	0.179406	US 26	US26E	75	2	2	2	2777	2769
845	ML85B	93.2	103.07	0.179406	US 26	US26E	75	2	2	2	2769	2744
848	ML85B	93.2	103.07	0.179406	US 26	US26E	75	2	2	2	2744	2734
852	ML85B	93.2	103.07	0.179406	US 26	US26E	75	2	2	2	2734	2719
854	ML85B	93.2	103.07	0.179406	US 26	US26E	75	2	2	2	2719	2710
855	ML85B	93.2	103.07	0.179406	US 26	US26E	75	2	2	2	2710	2705
861	ML85B	93.2	103.07	0.179406	US 26	US26E	75	2	2	2	2705	2694
862	ML85B	93.2	103.07	0.179406	US 26	US26E	75	2	2	2	2694	2693
863	ML85B	93.2	103.07	0.179406	US 26	US26E	75	2	2	2	2693	2680
864	ML85B	93.2	103.07	0.179406	US 26	US26E	75	2	2	2	2680	2652
1793	ML27B	0	38.42	0.737401	US 26	US26E	75	2	2	2	1530	1556
1948	ML27B	0	38.42	0.737401	US 26	US26E	75	2	2	2	2013	2021
1949	ML27B	0	38.42	0.737401	US 26	US26E	75	2	2	2	2021	2105
1950	ML27B	0	38.42	0.737401	US 26	US26E	75	2	2	2	1853	1957
1951	ML27B	0	38.42	0.737401	US 26	US26E	75	2	2	2	1992	2013
1952	ML27B	0	38.42	0.737401	US 26	US26E	75	2	2	2	1957	1992
2182	ML25B	92.37	160.87	2.595858	US 26	US26E	75	2	2	2	1451	1446
2184	ML25B	92.37	160.87	2.595858	US 26	US26E	75	2	2	2	1452	1447

ID	ROUTE	FROM_MP	TO_MP	Shape_Leng	Road_ID	ROAD_NAME	SPEED	NUM_LANES	FUNC_CLASS	ONEWAY_TWO	A	B
2186	ML25B	92.37	160.87	2.595858	US 26	US26E	75	2	2	2	1447	1450
2187	ML25B	92.37	160.87	2.595858	US 26	US26E	75	2	2	2	1446	1449
2192	ML25B	92.37	160.87	2.595858	US 26	US26E	75	2	2	2	1449	1341
2194	ML25B	92.37	160.87	2.595858	US 26	US26E	75	2	2	2	1450	1342
2200	ML25B	92.37	160.87	2.595858	US 26	US26E	75	2	2	2	1341	1284
2201	ML25B	92.37	160.87	2.595858	US 26	US26E	75	2	2	2	1284	1284
2202	ML25B	92.37	160.87	2.595858	US 26	US26E	75	2	2	2	1342	1283
2204	ML25B	92.37	160.87	2.595858	US 26	US26E	75	2	2	2	1283	1283
2206	ML25B	92.37	160.87	2.595858	US 26	US26E	75	2	2	2	1283	1283
2207	ML25B	92.37	160.87	2.595858	US 26	US26E	75	2	2	2	1283	1283
2211	ML25B	92.37	160.87	2.595858	US 26	US26E	75	2	2	2	1284	1272
2212	ML25B	92.37	160.87	2.595858	US 26	US26E	75	2	2	2	1283	1271
2217	ML25B	92.37	160.87	2.595858	US 26	US26E	75	2	2	2	1272	1244
2219	ML25B	92.37	160.87	2.595858	US 26	US26E	75	2	2	2	1271	1245
2221	ML25B	92.37	160.87	2.595858	US 26	US26E	75	2	2	2	1244	1240
2223	ML25B	92.37	160.87	2.595858	US 26	US26E	75	2	2	2	1245	1241
2224	ML25B	92.37	160.87	2.595858	US 26	US26E	75	2	2	2	1241	1241
2229	ML25B	92.37	160.87	2.595858	US 26	US26E	75	2	2	2	1240	1152
2230	ML25B	92.37	160.87	2.595858	US 26	US26E	75	2	2	2	1152	1091
2282	ML27B	0	38.42	0.737401	US 26	US26E	75	2	2	2	2470	2489
2284	ML27B	0	38.42	0.737401	US 26	US26E	75	2	2	2	2401	2470
2335	ML27B	0	38.42	0.737401	US 26	US26E	75	2	2	2	1457	1499
2336	ML27B	0	38.42	0.737401	US 26	US26E	75	2	2	2	1499	1530
2368	ML25B	92.37	160.87	2.595858	US 26	US26E	75	2	2	2	1241	1153
2370	ML25B	92.37	160.87	2.595858	US 26	US26E	75	2	2	2	1153	1153
2372	ML25B	92.37	160.87	2.595858	US 26	US26E	75	2	2	2	1153	1092
2461	ML27B	0	38.42	0.737401	US 26	US26E	75	2	2	2	1679	1853
2463	ML27B	0	38.42	0.737401	US 26	US26E	75	2	2	2	1556	1571
2464	ML27B	0	38.42	0.737401	US 26	US26E	75	2	2	2	1571	1679

ID	ROUTE	FROM_MP	TO_MP	Shape_Leng	Road_ID	ROAD_NAME	SPEED	NUM_LANES	FUNC_CLASS	ONEWAY_TWO	A	B
2477	ML27B	0	38.42	0.737401	US 26	US26E	75	2	2	2	2358	2401
2480	ML27B	0	38.42	0.737401	US 26	US26E	75	2	2	2	2333	2358
2483	ML27B	0	38.42	0.737401	US 26	US26E	75	2	2	2	2324	2333
2499	ML27B	0	38.42	0.737401	US 26	US26E	75	2	2	2	2222	2225
2500	ML27B	0	38.42	0.737401	US 26	US26E	75	2	2	2	2105	2222
2196	ML58B	135.47	140.44	0.114321	US 26 Bus.	US26B	45	2	2	2	1282	1268
2197	ML58B	135.47	140.44	0.114321	US 26 Bus.	US26B	45	2	2	2	1268	1265
2198	ML58B	135.47	140.44	0.114321	US 26 Bus.	US26B	45	2	2	2	1265	1263
2199	ML58B	135.47	140.44	0.114321	US 26 Bus.	US26B	45	2	2	2	1263	1249
2203	ML58B	135.47	140.44	0.114321	US 26 Bus.	US26B	45	2	2	2	1284	1283
2205	ML58B	135.47	140.44	0.114321	US 26 Bus.	US26B	45	2	2	2	1284	1283
2208	ML58B	135.47	140.44	0.114321	US 26 Bus.	US26B	45	2	2	2	1283	1282
2209	ML58B	135.47	140.44	0.114321	US 26 Bus.	US26B	45	2	2	2	1283	1282
2222	ML58B	135.47	140.44	0.114321	US 26 Bus.	US26B	45	2	2	2	1241	1240
2522	ML58B	135.47	140.44	0.114321	US 26 Bus.	US26B	45	2	2	2	1247	1241
2524	ML58B	135.47	140.44	0.114321	US 26 Bus.	US26B	45	2	2	2	1249	1247
2526	ML58B	135.47	140.44	0.114321	US 26 Bus.	US26B	45	2	2	2	1268	1269
2527	ML58B	135.47	140.44	0.114321	US 26 Bus.	US26B	45	2	2	2	1269	1265
375	ML40B	0	40.88	0.79239	US 20	US20E	65	2	2	2	1359	1365
376	ML40B	0	40.88	0.79239	US 20	US20E	65	2	2	2	1345	1353
377	ML40B	0	40.88	0.79239	US 20	US20E	65	2	2	2	1353	1359
378	ML40B	0	40.88	0.79239	US 20	US20E	65	2	2	2	1365	1383
380	ML40B	0	40.88	0.79239	US 20	US20E	65	2	2	2	1383	1426
382	ML40B	0	40.88	0.79239	US 20	US20E	65	2	2	2	1426	1476
387	ML40B	0	40.88	0.79239	US 20	US20E	65	2	2	2	1476	1601

ID	ROUTE	FROM_MP	TO_MP	Shape_Leng	Road_ID	ROAD_NAME	SPEED	NUM_LANES	FUNC_CLASS	ONEWAY_TWO	A	B
392	ML40B	0	40.88	0.79239	US 20	US20E	65	2	2	2	1824	1850
395	ML40B	0	40.88	0.79239	US 20	US20E	65	2	2	2	1886	1961
397	ML40B	0	40.88	0.79239	US 20	US20E	65	2	2	2	1722	1824
398	ML40B	0	40.88	0.79239	US 20	US20E	65	2	2	2	1850	1886
399	ML40B	0	40.88	0.79239	US 20	US20E	65	2	2	2	2136	2299
400	ML40B	0	40.88	0.79239	US 20	US20E	65	2	2	2	1601	1722
401	ML40B	0	40.88	0.79239	US 20	US20E	65	2	2	2	1961	2023
404	ML40B	0	40.88	0.79239	US 20	US20E	65	2	2	2	2110	2136
457	ML85B	149.27	149.77	0.007212	US 20	US20E	65	2	2	2	2299	2297
484	ML39B	41.39	63.24	0.415943	US 20	US20E	65	2	2	2	2296	2355
488	ML39B	41.39	63.24	0.415943	US 20	US20E	65	2	2	2	2630	2773
490	ML39B	41.39	63.24	0.415943	US 20	US20E	65	2	2	2	2598	2630
491	ML39B	41.39	63.24	0.415943	US 20	US20E	65	2	2	2	2598	2598
492	ML39B	41.39	63.24	0.415943	US 20	US20E	65	2	2	2	2431	2598
493	ML39B	41.39	63.24	0.415943	US 20	US20E	65	2	2	2	2355	2431
496	ML39B	41.39	63.24	0.415943	US 20	US20E	65	2	2	2	2956	3003
498	ML39B	41.39	63.24	0.415943	US 20	US20E	65	2	2	2	2773	2956
2193	ML40B	0	40.88	0.79239	US 20	US20E	65	2	2	2	1341	1342
2195	ML40B	0	40.88	0.79239	US 20	US20E	65	2	2	2	1342	1345
2376	ML40B	0	40.88	0.79239	US 20	US20E	65	2	2	2	2099	2110
2377	ML40B	0	40.88	0.79239	US 20	US20E	65	2	2	2	2023	2099
417	ML45B	0	10.15	0.187159	US 18	US18E	65	2	2	2	2902	2995
418	ML45B	0	10.15	0.187159	US 18	US18E	65	2	2	2	2723	2902
430	ML85B	149.27	196.04	0.71324	US 18	US18E	65	2	2	2	2476	2540
431	ML85B	149.27	196.04	0.71324	US 18	US18E	65	2	2	2	2540	2604
432	ML85B	149.27	196.04	0.71324	US 18	US18E	65	2	2	2	2604	2608
436	ML85B	149.27	196.04	0.71324	US 18	US18E	65	2	2	2	2608	2723
444	ML85B	149.27	196.04	0.71324	US 18	US18E	65	2	2	2	2298	2300
446	ML85B	149.27	196.04	0.71324	US 18	US18E	65	2	2	2	2300	2356

ID	ROUTE	FROM_MP	TO_MP	Shape_Leng	Road_ID	ROAD_NAME	SPEED	NUM_LANES	FUNC_CLASS	ONEWAY_TWO	A	B
447	ML85B	149.27	196.04	0.71324	US 18	US18E	65	2	2	2	2356	2365
449	ML85B	149.27	196.04	0.71324	US 18	US18E	65	2	2	2	2365	2441
450	ML85B	149.27	196.04	0.71324	US 18	US18E	65	2	2	2	2441	2458
451	ML85B	149.27	196.04	0.71324	US 18	US18E	65	2	2	2	2458	2440
454	ML85B	149.27	196.04	0.71324	US 18	US18E	65	2	2	2	2440	2448
455	ML85B	149.27	196.04	0.71324	US 18	US18E	65	2	2	2	2448	2449
456	ML85B	149.27	196.04	0.71324	US 18	US18E	65	2	2	2	2449	2476
458	ML85B	149.27	196.04	0.71324	US 18	US18E	65	2	2	2	2297	2296
459	ML85B	149.27	196.04	0.71324	US 18	US18E	65	2	2	2	2296	2298
247	ML7723B	3.19	15.61	0.22549	CR 23	Twentymile Road	55	1	4	2	1725	1659
254	ML7723B	3.19	15.61	0.22549	CR 23	Twentymile Road	55	1	4	2	2037	1889
255	ML7723B	3.19	15.61	0.22549	CR 23	Twentymile Road	55	1	4	2	1889	1725
249	ML5577B	0	16.67	0.259954	CR 46	Twenty Mile Creek Road	55	1	4	2	1598	1558
388	ML5577B	0	16.67	0.259954	CR 46	Twenty Mile Creek Road	55	1	4	2	1601	1601
389	ML5577B	0	16.67	0.259954	CR 46	Twenty Mile Creek Road	55	1	4	2	1601	1598
131	ML5084B	0	20.78	0.379448	CR 727	Tunnel Road	55	1	4	2	1185	1312
133	ML5084B	0	20.78	0.379448	CR 727	Tunnel Road	55	1	4	2	1174	1185
1044	ML6781B	0	11.1	0.159393	CR 146-2	Tremble Road	55	1	4	2	2379	2380
1083	ML6781B	0	11.1	0.159393	CR 146-2	Tremble Road	55	1	4	2	2380	2381
230	ML7717B	0	3.74	0.068781	CR 15	Traphagan Road	55	1	4	2	2172	2128
465	ML7722B	0	2.75	0.041315	CR 22	Tollman Road	55	1	4	2	2921	2936
471	ML7745B	0	6.36	0.11599	CR 57	Thompson Road	55	1	4	2	2633	2808
521	ML9311B	0	6.99	0.134179	CR 94B	Tea Kettle Rd. 94B	55	1	4	2	2785	2848
518	ML9309B	0	6.76	0.124471	CR 92B	Tea Kettle Rd. 92B	55	1	4	2	2602	2785
1718	ML5559B	0	17.1	0.323266	CR 27	Tank Farm Road	55	1	4	2	1129	1089
1736	ML8034B	0	4.07	0.076668	CR 63	Tank Farm Road	55	1	4	2	2012	2081
2516	ML5559B	0	17.1	0.323266	CR 27	Tank Farm Road	55	1	4	2	1210	1209
2518	ML5559B	0	17.1	0.323266	CR 27	Tank Farm Road	55	1	4	2	1209	1129
2125	ML8061B	2.6	6.13	0.062748	CR 98	T. Y. Road	65	1	4	2	1862	1861

ID	ROUTE	FROM_MP	TO_MP	Shape_Leng	Road_ID	ROAD_NAME	SPEED	NUM_LANES	FUNC_CLASS	ONEWAY_TWO	A	B
2127	ML8061B	2.6	6.13	0.062748	CR 98	T. Y. Road	65	1	4	2	1861	1767
119	ML5003B	0	22.48	0.375722	CR 12	Sybille Road	55	1	4	2	1197	1231
123	ML5003B	0	22.48	0.375722	CR 12	Sybille Road	55	1	4	2	1231	1293
1807	ML8102B	0	11.18	0.16336	CR 190	Sybille Creek Road	55	1	4	2	1417	1419
1812	ML8102B	0	11.18	0.16336	CR 190	Sybille Creek Road	55	1	4	2	1416	1417
1826	ML8102B	0	11.18	0.16336	CR 190	Sybille Creek Road	55	1	4	2	1422	1416
1833	ML8102B	0	11.18	0.16336	CR 190	Sybille Creek Road	55	1	4	2	1414	1422
1840	ML8102B	0	11.18	0.16336	CR 190	Sybille Creek Road	55	1	4	2	1415	1414
1848	ML8102B	0	11.18	0.16336	CR 190	Sybille Creek Road	55	1	4	2	1418	1415
1855	ML8102B	0	11.18	0.16336	CR 190	Sybille Creek Road	55	1	4	2	1412	1418
1860	ML8102B	0	11.18	0.16336	CR 190	Sybille Creek Road	55	1	4	2	1413	1412
1	ML8067B	0	1.26	0.024086	CR 110	Swan Road	55	1	4	2	2008	2036
2227	ML5568B	0	4.4	0.08407	CR 36	Sunflower Road	55	1	4	2	1169	1203
1024	ML6923B	0	1.01	0.019003	CR 220-3	Sundin Road	55	1	4	2	2916	2945
2265	ML6834B	0	6.07	0.086855	CR 159-2	Suchomel Road	55	1	4	2	2841	2842
2268	ML6834B	0	6.07	0.086855	CR 159-2	Suchomel Road	55	1	4	2	2842	2843
2269	ML6834B	0	6.07	0.086855	CR 159-2	Suchomel Road	55	1	4	2	2843	2845
2270	ML6834B	0	6.07	0.086855	CR 159-2	Suchomel Road	55	1	4	2	2845	2844
2274	ML6834B	0	6.07	0.086855	CR 159-2	Suchomel Road	55	1	4	2	2844	2846
289	ML5572B	0	11.8	0.203721	CR 40	Steinle Road	55	1	4	2	1317	1318
293	ML5572B	0	11.8	0.203721	CR 40	Steinle Road	55	1	4	2	1318	1330
294	ML5572B	0	11.8	0.203721	CR 40	Steinle Road	55	1	4	2	1330	1366
12	ML6852B	0	11.42	0.164236	CR 164-3	State Line Road	55	1	4	2	2996	3015
477	ML7750B	0	9.49	0.150637	CR 65	Stage Road	55	1	4	2	2457	2541
159	ML5541B	0	23.73	0.401888	CR 11	Spring Canyon Road	55	1	4	2	1126	1112
161	ML5541B	0	23.73	0.401888	CR 11	Spring Canyon Road	55	1	4	2	1124	1126
163	ML5541B	0	23.73	0.401888	CR 11	Spring Canyon Road	55	1	4	2	1216	1206
164	ML5541B	0	23.73	0.401888	CR 11	Spring Canyon Road	55	1	4	2	1206	1157
165	ML5541B	0	23.73	0.401888	CR 11	Spring Canyon Road	55	1	4	2	1157	1124

ID	ROUTE	FROM_MP	TO_MP	Shape_Leng	Road_ID	ROAD_NAME	SPEED	NUM_LANES	FUNC_CLASS	ONEWAY_TWO	A	B
1293	ML7305B	0	2.49	0.035459	CR 744	Spring Beauty Trail	55	1	4	2	2119	2118
1303	ML7305B	0	2.49	0.035459	CR 744	Spring Beauty Trail	55	1	4	2	2120	2119
1304	ML7305B	0	2.49	0.035459	CR 744	Spring Beauty Trail	55	1	4	2	2121	2120
1316	ML7305B	0	2.49	0.035459	CR 744	Spring Beauty Trail	55	1	4	2	2122	2121
1319	ML7305B	0	2.49	0.035459	CR 744	Spring Beauty Trail	55	1	4	2	2123	2122
95	ML5032B	0	3.1	0.045467	CR 54	Sprague Lane	55	1	4	2	1093	1095
97	ML5032B	0	3.1	0.045467	CR 54	Sprague Lane	55	1	4	2	1095	1094
54	ML5065B	9.82	13.38	0.062869	CR 316	Sportsman Lake Road	55	1	4	2	1123	1104
302	ML7730B	0	10.37	0.161037	CR 34	Spanish Diggings Road	55	1	4	2	1773	1772
393	ML7730B	0	10.37	0.161037	CR 34	Spanish Diggings Road	55	1	4	2	1850	1773
394	ML7730B	0	10.37	0.161037	CR 34	Spanish Diggings Road	55	1	4	2	1850	1850
497	ML7761B	0	3.86	0.05854	CR 78	South Van Tassell Road	55	1	4	2	2947	2940
1748	ML8122B	0	4.1	0.05849	CR 231	South Moon Road	55	1	4	2	2051	2052
2235	ML8122B	0	4.1	0.05849	CR 231	South Moon Road	55	1	4	2	2050	2051
1737	ML8066B	0	15.32	0.241685	CR 109S	South Guernsey Road	55	1	4	2	2073	2074
1738	ML8066B	0	15.32	0.241685	CR 109S	South Guernsey Road	55	1	4	2	2072	2073
1740	ML8066B	0	15.32	0.241685	CR 109S	South Guernsey Road	55	1	4	2	2012	2072
1946	ML8066B	0	15.32	0.241685	CR 109S	South Guernsey Road	55	1	4	2	1981	2012
1747	ML8014B	0	12.22	0.179102	CR 2	South Gap Road	55	1	4	2	1833	1872
2239	ML8014B	0	12.22	0.179102	CR 2	South Gap Road	55	1	4	2	1872	1875
1758	ML8059B	0	4.75	0.067577	CR 96	South C. S. Road	55	1	4	2	2057	2055
1761	ML8129B	0	0.66	0.009571	CR 241	South Baker Road	55	1	4	2	2006	2007
2244	ML8141B	0	6.12	0.109579	CR 264	South Antelope Creek Road	55	1	4	2	1616	1498
2245	ML8141B	0	6.12	0.109579	CR 264	South Antelope Creek Road	55	1	4	2	1621	1616
2304	ML5060B	0	3.11	0.04991	CR 210	Soldier Springs Road	65	1	4	2	1175	1188
2234	ML8057B	8.57	11.57	0.05752	CR 93	Slater Road	55	1	4	2	2034	2050
2236	ML8057B	8.57	11.57	0.05752	CR 93	Slater Road	55	1	4	2	2050	2087
223	ML7709B	0	6.65	0.107859	CR 4	Slagle Road	55	1	4	2	1938	1958
6	ML7743B	0	10.84	0.166916	CR 54	Silver Springs Road	55	1	4	2	2241	2194

ID	ROUTE	FROM_MP	TO_MP	Shape_Leng	Road_ID	ROAD_NAME	SPEED	NUM_LANES	FUNC_CLASS	ONEWAY_TWO	A	B
20	ML5968B	0	4.88	0.075451	CR 13D	Silver Springs Rd.	55	1	4	2	2226	2194
100	ML5042B	0	8.7	0.161879	CR 64A	Sheep Creek Road	55	1	4	2	1038	1087
487	ML7759B	0	3.8	0.055551	CR 76	Shane Road	55	1	4	2	2630	2658
1022	ML6922B	0	4.07	0.077498	CR 220-2	Scheel Road	55	1	4	2	2675	2676
1026	ML6922B	0	4.07	0.077498	CR 220-2	Scheel Road	55	1	4	2	2676	2802
1897	ML8040B	0	0.51	0.00979	CR 74	Sawmill Road	55	1	4	2	1605	1622
1116	ML6941B	0	4.04	0.076961	CR 228-3	Sandberg Road	55	1	4	2	2237	2285
1119	ML6941B	0	4.04	0.076961	CR 228-3	Sandberg Road	55	1	4	2	2186	2237
52	ML5017B	0	22.53	0.355381	CR 34	Sand Creek Road	55	1	4	2	1100	1098
53	ML5017B	0	22.53	0.355381	CR 34	Sand Creek Road	55	1	4	2	1104	1100
55	ML5017B	0	22.53	0.355381	CR 34	Sand Creek Road	55	1	4	2	1102	1104
57	ML5017B	0	22.53	0.355381	CR 34	Sand Creek Road	55	1	4	2	1164	1102
461	ML7748B	0	4.29	0.06585	CR 62	S Bar Road	55	1	4	2	2904	2901
462	ML7748B	0	4.29	0.06585	CR 62	S Bar Road	55	1	4	2	2901	2901
1156	ML6952B	0	1.63	0.030417	CR 234-2	Rutledge Road	55	1	4	2	2507	2436
184	ML5563B	0	45.2	0.737506	CR 31	Ross Road	55	1	4	2	1159	1121
185	ML5563B	0	45.2	0.737506	CR 31	Ross Road	55	1	4	2	1121	1047
1501	ML6904B	0	3.56	0.064408	CR 215-1	Romsa Road	55	1	4	2	1515	1441
1502	ML6904B	0	3.56	0.064408	CR 215-1	Romsa Road	65	1	4	2	1528	1515
1803	ML8146B	0	0.45	0.008815	CR 270	Rompoon Road	55	1	4	2	1563	1555
117	ML5008B	2.27	22.18	0.362117	CR 17	Roger Canyon Road	65	1	4	2	1182	1304
1816	ML8049B	0	3.04	0.058257	CR 82	Rock Lake Road	55	1	4	2	1488	1468
1880	ML8049B	0	3.04	0.058257	CR 82	Rock Lake Road	55	1	4	2	1521	1488
1894	ML8049B	0	3.04	0.058257	CR 82	Rock Lake Road	55	1	4	2	1554	1521
1939	ML8147B	0	2.04	0.039067	CR 271	Riverview Road	55	1	4	2	1572	1532
1941	ML8147B	0	2.04	0.039067	CR 271	Riverview Road	55	1	4	2	1532	1506
141	ML5056B	0	0.6	0.009524	CR 74	River Bridge Road	55	1	4	2	1144	1160
1516	ML6913B	0	2.28	0.041679	CR 217-2	Ritzke Road 217-2	55	1	4	2	1638	1610
1912	ML8046B	0	2.1	0.029935	CR 79	Ringneck Road	55	1	4	2	1632	1634

ID	ROUTE	FROM_MP	TO_MP	Shape_Leng	Road_ID	ROAD_NAME	SPEED	NUM_LANES	FUNC_CLASS	ONEWAY_TWO	A	B
1922	ML8046B	0	2.1	0.029935	CR 79	Ringneck Road	55	1	4	2	1633	1632
579	ML5938B	0	2.47	0.039914	CR 7	Rim Rock Road	55	1	4	2	2150	2127
1479	ML6921B	0	4.06	0.077008	CR 220-1	Ridley Road	55	1	4	2	1738	1750
1611	ML6921B	0	4.06	0.077008	CR 220-1	Ridley Road	55	1	4	2	1646	1704
2096	ML6921B	0	4.06	0.077008	CR 220-1	Ridley Road	55	1	4	2	1728	1731
2098	ML6921B	0	4.06	0.077008	CR 220-1	Ridley Road	55	1	4	2	1731	1738
2099	ML6921B	0	4.06	0.077008	CR 220-1	Ridley Road	55	1	4	2	1704	1728
2449	ML6921B	0	4.06	0.077008	CR 220-1	Ridley Road	55	1	4	2	1750	1775
2450	ML6921B	0	4.06	0.077008	CR 220-1	Ridley Road	55	1	4	2	1775	1802
1474	ML6900B	0	3.63	0.069913	CR 214-1	Riding Club Road U4084	65	1	4	2	1764	1797
228	ML7718B	0	14.67	0.226463	CR 16	Ridge Road	55	1	4	2	2172	2171
316	ML5976B	0	8.45	0.126372	CR 15H	Ridge Road	55	1	4	2	2224	2182
1723	ML7718B	0	14.67	0.226463	CR 16	Ridge Road	55	1	4	2	2190	2176
1724	ML7718B	0	14.67	0.226463	CR 16	Ridge Road	55	1	4	2	2176	2172
2188	ML8080B	0	14.93	0.275141	CR 135	Ridge Road	55	1	4	2	1450	1449
2505	ML8080B	0	14.93	0.275141	CR 135	Ridge Road	55	1	4	2	1352	1296
2507	ML8080B	0	14.93	0.275141	CR 135	Ridge Road	55	1	4	2	1449	1388
2508	ML8080B	0	14.93	0.275141	CR 135	Ridge Road	55	1	4	2	1388	1352
2128	ML8142B	0	7	0.12836	CR 265	Richeau Road	55	1	4	2	1689	1512
2130	ML8142B	0	7	0.12836	CR 265	Richeau Road	55	1	4	2	1690	1689
1819	ML8073B	0	3.12	0.059246	CR 118A	Reservoir Road 118A	55	1	4	2	1486	1464
1820	ML8073B	0	3.12	0.059246	CR 118A	Reservoir Road 118A	55	1	4	2	1464	1439
1884	ML8073B	0	3.12	0.059246	CR 118A	Reservoir Road 118A	55	1	4	2	1518	1518
1885	ML8073B	0	3.12	0.059246	CR 118A	Reservoir Road 118A	55	1	4	2	1518	1486
1881	ML8074B	0	1.26	0.019567	CR 118	Reservoir Road 118	55	1	4	2	1519	1519
1896	ML8074B	0	1.26	0.019567	CR 118	Reservoir Road 118	55	1	4	2	1550	1519
115	ML6863B	0	3.72	0.065617	CR 206-1	Remount Road	55	1	4	2	1327	1301
1545	ML6863B	0	3.72	0.065617	CR 206-1	Remount Road	55	1	4	2	1324	1327
1547	ML6863B	0	3.72	0.065617	CR 206-1	Remount Road	55	1	4	2	1325	1324

ID	ROUTE	FROM_MP	TO_MP	Shape_Leng	Road_ID	ROAD_NAME	SPEED	NUM_LANES	FUNC_CLASS	ONEWAY_TWO	A	B
298	ML5581B	0	9	0.135765	CR 49	Reese Road	55	1	4	2	1475	1505
383	ML5581B	0	9	0.135765	CR 49	Reese Road	55	1	4	2	1476	1475
384	ML5581B	0	9	0.135765	CR 49	Reese Road	55	1	4	2	1476	1476
226	ML7714B	0	22.68	0.406183	CR 11	Redbird Road	55	1	4	2	2210	2115
434	ML7714B	0	22.68	0.406183	CR 11	Redbird Road	55	1	4	2	2604	2481
437	ML7714B	0	22.68	0.406183	CR 11	Redbird Road	55	1	4	2	2481	2404
440	ML7714B	0	22.68	0.406183	CR 11	Redbird Road	55	1	4	2	2404	2210
1938	ML8038B	0	1.02	0.014595	CR 73A	Red Fox Road	55	1	4	2	1535	1532
1561	ML6720B	0	1.88	0.029089	CR 106-1	Red Canyon Road	55	1	4	2	1355	1358
1940	ML8148B	0	3.1	0.048787	CR 272	Rainbow Road	55	1	4	2	1526	1506
1942	ML8148B	0	3.1	0.048787	CR 272	Rainbow Road	55	1	4	2	1506	1507
1944	ML8148B	0	3.1	0.048787	CR 272	Rainbow Road	55	1	4	2	1507	1509
1143	ML6947B	0	4.07	0.077618	CR 230-1	Rabou Road	55	1	4	2	2924	2949
1144	ML6947B	0	4.07	0.077618	CR 230-1	Rabou Road	55	1	4	2	2883	2924
5	ML7757B	0	2.3	0.035388	CR 73	Quigley Road	55	1	4	2	2330	2323
1569	ML6944B	0	2.16	0.039817	CR 228-A	Quarry Road	55	1	4	2	1349	1334
1954	ML8099B	0	1.16	0.021801	CR 180	Quarry Road	55	1	4	2	1994	2010
1955	ML8099B	0	1.16	0.021801	CR 180	Quarry Road	55	1	4	2	2011	2010
1956	ML8099B	0	1.16	0.021801	CR 180	Quarry Road	55	1	4	2	2011	2028
89	ML5063B	0	8.8	0.160885	CR 241	Pumpkin Vine Road	55	1	4	2	1219	1287
1284	ML6861B	0	9.11	0.172523	CR 205-2	Pulver Road	55	1	4	2	2571	2626
1778	ML6861B	0	9.11	0.172523	CR 205-2	Pulver Road	55	1	4	2	2626	2666
2495	ML6861B	0	9.11	0.172523	CR 205-2	Pulver Road	55	1	4	2	2542	2571
2496	ML6861B	0	9.11	0.172523	CR 205-2	Pulver Road	55	1	4	2	2485	2542
2446	ML6741B	0	2.48	0.035948	CR 124-A	Pry Road	55	1	4	2	1805	1806
2448	ML6741B	0	2.48	0.035948	CR 124-A	Pry Road	55	1	4	2	1806	1807
526	ML5960B	0	11.3	0.21051	CR 122	Prairie Center R	55	1	4	2	2770	2832
527	ML5960B	0	11.3	0.21051	CR 122	Prairie Center R	55	1	4	2	2700	2770
528	ML5960B	0	11.3	0.21051	CR 122	Prairie Center R	55	1	4	2	2474	2700

ID	ROUTE	FROM_MP	TO_MP	Shape_Leng	Road_ID	ROAD_NAME	SPEED	NUM_LANES	FUNC_CLASS	ONEWAY_TWO	A	B
1471	ML7342B	0	1.06	0.015501	CR 783	Powderhouse Road	55	1	4	2	1874	1878
2271	ML6884B	0	2.02	0.038249	CR 211-2	Potato Plant Road West	65	1	4	2	2844	2909
2312	ML5534B	0	10.65	0.188068	CR 4	Poison Lake Road	65	1	4	2	1207	1190
2314	ML5534B	0	10.65	0.188068	CR 4	Poison Lake Road	65	1	4	2	1256	1207
311	ML8100B	0	3.76	0.058806	CR 181	Plesant Valley Road	55	1	4	2	2018	2017
1953	ML8100B	0	3.76	0.058806	CR 181	Plesant Valley Road	55	1	4	2	1992	1994
1960	ML8100B	0	3.76	0.058806	CR 181	Plesant Valley Road	55	1	4	2	1994	2017
1235	ML6865B	0	18.31	0.345601	CR 206-3	Plambeck Road	55	1	4	2	2841	2908
1237	ML6865B	0	18.31	0.345601	CR 206-3	Plambeck Road	55	1	4	2	2797	2841
1238	ML6865B	0	18.31	0.345601	CR 206-3	Plambeck Road	55	1	4	2	2729	2797
1240	ML6865B	0	18.31	0.345601	CR 206-3	Plambeck Road	55	1	4	2	2704	2729
1241	ML6865B	0	18.31	0.345601	CR 206-3	Plambeck Road	55	1	4	2	2908	2989
1290	ML6865B	0	18.31	0.345601	CR 206-3	Plambeck Road	55	1	4	2	2486	2538
1780	ML6865B	0	18.31	0.345601	CR 206-3	Plambeck Road	55	1	4	2	2667	2704
427	ML7735B	0	2.96	0.059018	CR 40	Pipe Road	55	1	4	2	2763	2865
1752	ML8124B	0	9.1	0.130344	CR 236	Pioneer Road	65	1	4	2	1966	1969
1767	ML8124B	0	9.1	0.130344	CR 236	Pioneer Road	65	1	4	2	1967	1966
2231	ML8124B	0	9.1	0.130344	CR 236	Pioneer Road	65	1	4	2	1969	1968
379	ML5582B	0	5.3	0.104358	CR 50	Pickinpaugh Road	55	1	4	2	1383	1475
489	ML7758B	0	1.4	0.020594	CR 75	Pfister Road	55	1	4	2	2598	2599
448	ML7737B	0	5.61	0.09178	CR 44	Petz Road	55	1	4	2	2365	2276
1791	ML8072B	0	3.18	0.054521	CR 117	Pepper Road	65	1	4	2	1443	1442
2337	ML8072B	0	3.18	0.054521	CR 117	Pepper Road	55	1	4	2	1499	1443
344	ML8113B	0	14.81	0.265663	CR 208	Patton Creek Road	55	1	4	2	1997	1999
345	ML8113B	0	14.81	0.265663	CR 208	Patton Creek Road	55	1	4	2	2025	2026
346	ML8113B	0	14.81	0.265663	CR 208	Patton Creek Road	55	1	4	2	2025	1999
347	ML8113B	0	14.81	0.265663	CR 208	Patton Creek Road	55	1	4	2	2030	2026
349	ML8113B	0	14.81	0.265663	CR 208	Patton Creek Road	55	1	4	2	1976	1977
350	ML8113B	0	14.81	0.265663	CR 208	Patton Creek Road	55	1	4	2	1959	1960

ID	ROUTE	FROM_MP	TO_MP	Shape_Leng	Road_ID	ROAD_NAME	SPEED	NUM_LANES	FUNC_CLASS	ONEWAY_TWO	A	B
351	ML8113B	0	14.81	0.265663	CR 208	Patton Creek Road	55	1	4	2	1984	1986
352	ML8113B	0	14.81	0.265663	CR 208	Patton Creek Road	55	1	4	2	1997	1986
353	ML8113B	0	14.81	0.265663	CR 208	Patton Creek Road	55	1	4	2	1936	1937
354	ML8113B	0	14.81	0.265663	CR 208	Patton Creek Road	55	1	4	2	1959	1937
355	ML8113B	0	14.81	0.265663	CR 208	Patton Creek Road	55	1	4	2	1984	1977
356	ML8113B	0	14.81	0.265663	CR 208	Patton Creek Road	55	1	4	2	1976	1960
357	ML8113B	0	14.81	0.265663	CR 208	Patton Creek Road	55	1	4	2	1936	1900
358	ML8113B	0	14.81	0.265663	CR 208	Patton Creek Road	55	1	4	2	1899	1900
359	ML8113B	0	14.81	0.265663	CR 208	Patton Creek Road	55	1	4	2	1887	1888
360	ML8113B	0	14.81	0.265663	CR 208	Patton Creek Road	55	1	4	2	1892	1888
361	ML8113B	0	14.81	0.265663	CR 208	Patton Creek Road	55	1	4	2	1892	1893
362	ML8113B	0	14.81	0.265663	CR 208	Patton Creek Road	55	1	4	2	1899	1893
363	ML8113B	0	14.81	0.265663	CR 208	Patton Creek Road	55	1	4	2	1602	1603
365	ML8113B	0	14.81	0.265663	CR 208	Patton Creek Road	55	1	4	2	1624	1625
366	ML8113B	0	14.81	0.265663	CR 208	Patton Creek Road	55	1	4	2	1624	1603
2247	ML8113B	0	14.81	0.265663	CR 208	Patton Creek Road	55	1	4	2	1887	1724
2248	ML8113B	0	14.81	0.265663	CR 208	Patton Creek Road	55	1	4	2	1724	1625
132	ML5083B	0	33.64	0.592243	CR 721	Palmer Canyon Road	55	1	4	2	1103	1174
134	ML5083B	0	33.64	0.592243	CR 721	Palmer Canyon Road	55	1	4	2	1174	1186
136	ML5083B	0	33.64	0.592243	CR 721	Palmer Canyon Road	55	1	4	2	1186	1187
137	ML5083B	0	33.64	0.592243	CR 721	Palmer Canyon Road	55	1	4	2	1187	1221
138	ML5083B	0	33.64	0.592243	CR 721	Palmer Canyon Road	55	1	4	2	1221	1310
1837	ML5083B	33.64	49.41	0.298566	CR 204	Palmer Canyon Road	55	1	4	2	1466	1483
1839	ML5083B	33.64	49.41	0.298566	CR 204	Palmer Canyon Road	55	1	4	2	1433	1466
1841	ML5083B	33.64	49.41	0.298566	CR 204	Palmer Canyon Road	55	1	4	2	1415	1433
2395	ML5083B	33.64	49.41	0.298566	CR 204	Palmer Canyon Road	55	1	4	2	1370	1397
2397	ML5083B	33.64	49.41	0.298566	CR 204	Palmer Canyon Road	55	1	4	2	1397	1415
2398	ML5083B	33.64	49.41	0.298566	CR 204	Palmer Canyon Road	55	1	4	2	1310	1370
2536	ML5083B	33.64	49.41	0.298566	CR 204	Palmer Canyon Road	55	1	4	2	1513	1513

ID	ROUTE	FROM_MP	TO_MP	Shape_Leng	Road_ID	ROAD_NAME	SPEED	NUM_LANES	FUNC_CLASS	ONEWAY_TWO	A	B
2537	ML5083B	33.64	49.41	0.298566	CR 204	Palmer Canyon Road	55	1	4	2	1483	1513
38	ML5071B	0	7	0.130078	CR 422	Pahlow Lane	65	1	4	2	1075	1070
39	ML5071B	0	7	0.130078	CR 422	Pahlow Lane	65	1	4	2	1081	1075
41	ML5071B	0	7	0.130078	CR 422	Pahlow Lane	65	1	4	2	1106	1081
2514	ML5560B	0	0.94	0.01713	CR 28	Orpha Road	55	1	4	2	1212	1209
1849	ML8101B	0	1.53	0.029424	CR 181A	Orchard Road	55	1	4	2	1418	1405
1850	ML8101B	0	1.53	0.029424	CR 181A	Orchard Road	55	1	4	2	1437	1418
1811	ML8050B	0	5.07	0.097131	CR 83	Olson Road	55	1	4	2	1490	1469
1813	ML8050B	0	5.07	0.097131	CR 83	Olson Road	55	1	4	2	1469	1416
1878	ML8050B	0	5.07	0.097131	CR 83	Olson Road	55	1	4	2	1520	1490
1892	ML8050B	0	5.07	0.097131	CR 83	Olson Road	55	1	4	2	1553	1520
1280	ML6857B	0	2.02	0.038065	CR 204-1	Oline Road	55	1	4	2	2336	2368
1188	ML6893B	0	8.92	0.173853	CR 212-8	Old Highway Pine Bluffs West	65	1	4	2	2911	2958
1189	ML6893B	0	8.92	0.173853	CR 212-8	Old Highway Pine Bluffs West	55	1	4	2	2874	2911
1190	ML6893B	0	8.92	0.173853	CR 212-8	Old Highway Pine Bluffs West	55	1	4	2	2846	2874
1191	ML6893B	0	8.92	0.173853	CR 212-8	Old Highway Pine Bluffs West	55	1	4	2	2799	2846
1192	ML6893B	0	8.92	0.173853	CR 212-8	Old Highway Pine Bluffs West	55	1	4	2	2732	2799
1194	ML6893B	0	8.92	0.173853	CR 212-8	Old Highway Pine Bluffs West	55	1	4	2	2673	2732
1364	ML6901B	0	5.99	0.111474	CR 214-2	Old Highway Durham East	55	1	4	2	2145	2246
1202	ML6895B	0	7.51	0.153448	CR 213-2	Old Highway Burns West	55	1	4	2	2478	2497
1203	ML6895B	0	7.51	0.153448	CR 213-2	Old Highway Burns West	55	1	4	2	2406	2478
1204	ML6895B	0	7.51	0.153448	CR 213-2	Old Highway Burns West	55	1	4	2	2245	2271
1206	ML6895B	0	7.51	0.153448	CR 213-2	Old Highway Burns West	55	1	4	2	2271	2340
1208	ML6895B	0	7.51	0.153448	CR 213-2	Old Highway Burns West	55	1	4	2	2340	2406
420	ML7712B	0	20.41	0.339376	CR 9	Old Highway 85	55	1	4	2	2902	2898
426	ML7712B	0	20.41	0.339376	CR 9	Old Highway 85	55	1	4	2	2898	2865
435	ML7712B	0	20.41	0.339376	CR 9	Old Highway 85	55	1	4	2	2608	2902
1947	ML8024B	0	4.4	0.076864	CR 29	Old Highway 26	55	1	4	2	2013	2078
1195	ML6892B	0	4.11	0.077245	CR 212-7	Old Highay Burns East	55	1	4	2	2628	2672

ID	ROUTE	FROM_MP	TO_MP	Shape_Leng	Road_ID	ROAD_NAME	SPEED	NUM_LANES	FUNC_CLASS	ONEWAY_TWO	A	B
1196	ML6892B	0	4.11	0.077245	CR 212-7	Old Highay Burns East	55	1	4	2	2543	2628
155	ML5546B	0	9.2	0.137294	CR 16	Old Fort Fetterman Road	55	1	4	2	1113	1117
1069	ML6935B	0	11.11	0.210903	CR 225-2	Ogle Road	55	1	4	2	2849	2878
1070	ML6935B	0	11.11	0.210903	CR 225-2	Ogle Road	55	1	4	2	2733	2849
1071	ML6935B	0	11.11	0.210903	CR 225-2	Ogle Road	55	1	4	2	2707	2733
1072	ML6935B	0	11.11	0.210903	CR 225-2	Ogle Road	55	1	4	2	2678	2707
1073	ML6935B	0	11.11	0.210903	CR 225-2	Ogle Road	55	1	4	2	2629	2678
1075	ML6935B	0	11.11	0.210903	CR 225-2	Ogle Road	55	1	4	2	2504	2629
495	ML7756B	0	12.76	0.192347	CR 72	North Van Tassell Road	55	1	4	2	2956	2956
499	ML7756B	0	12.76	0.192347	CR 72	North Van Tassell Road	55	1	4	2	2956	2904
1911	ML8151B	0	0.55	0.010184	CR 275	North Road	55	1	4	2	1560	1586
1929	ML8042B	0	1.12	0.014937	CR 76	North Ringneck Road	55	1	4	2	1629	1628
1805	ML8039B	0	1.73	0.015007	CR 73	North Red Fox Road	55	1	4	2	1544	1547
216	ML7716B	3.32	38.04	0.584599	CR 14	North Lance Creek Road	55	1	4	2	2019	2020
217	ML7716B	3.32	38.04	0.584599	CR 14	North Lance Creek Road	55	1	4	2	2106	2107
218	ML7716B	3.32	38.04	0.584599	CR 14	North Lance Creek Road	55	1	4	2	2107	2115
219	ML7716B	3.32	38.04	0.584599	CR 14	North Lance Creek Road	55	1	4	2	2115	2043
220	ML7716B	3.32	38.04	0.584599	CR 14	North Lance Creek Road	55	1	4	2	2043	2043
221	ML7716B	3.32	38.04	0.584599	CR 14	North Lance Creek Road	55	1	4	2	2043	2020
224	ML7716B	3.32	38.04	0.584599	CR 14	North Lance Creek Road	55	1	4	2	2019	1958
225	ML7716B	3.32	38.04	0.584599	CR 14	North Lance Creek Road	55	1	4	2	1958	1656
229	ML7716B	3.32	38.04	0.584599	CR 14	North Lance Creek Road	55	1	4	2	2104	2128
231	ML7716B	3.32	38.04	0.584599	CR 14	North Lance Creek Road	55	1	4	2	2128	2106
1785	ML8082B	0	4.44	0.067162	CR 140	North Dwyer Road	55	1	4	2	1577	1575
1787	ML8082B	0	4.44	0.067162	CR 140	North Dwyer Road	55	1	4	2	1575	1567
2462	ML8082B	0	4.44	0.067162	CR 140	North Dwyer Road	55	1	4	2	1571	1571
2465	ML8082B	0	4.44	0.067162	CR 140	North Dwyer Road	55	1	4	2	1571	1577
2472	ML5943B	0	5.05	0.072125	CR 242	North County Line Road	55	1	4	2	2091	2090
2474	ML5943B	0	5.05	0.072125	CR 242	North County Line Road	55	1	4	2	2090	2088

ID	ROUTE	FROM_MP	TO_MP	Shape_Leng	Road_ID	ROAD_NAME	SPEED	NUM_LANES	FUNC_CLASS	ONEWAY_TWO	A	B
2476	ML5943B	0	5.05	0.072125	CR 242	North County Line Road	55	1	4	2	2088	2085
1766	ML8131B	0	1	0.014478	CR 245	North C. S. Road	55	1	4	2	2057	2053
1926	ML8117B	0	1.03	0.014697	CR 213	North Bellis Road	65	1	4	2	1600	1599
2135	ML8139B	0	4.14	0.060177	CR 262	Normandy Road	55	1	4	2	1709	1710
2136	ML8139B	0	4.14	0.060177	CR 262	Normandy Road	55	1	4	2	1707	1709
2137	ML8139B	0	4.14	0.060177	CR 262	Normandy Road	55	1	4	2	1708	1707
482	ML7763B	0	4.61	0.066793	CR 80	Node Road	55	1	4	2	2597	2595
494	ML7763B	0	4.61	0.066793	CR 80	Node Road	55	1	4	2	2598	2597
2435	ML6949B	0	2.5	0.047714	CR 232-1	Nimmo Road	55	1	4	2	1674	1739
413	ML7742B	0	3.14	0.050434	CR 52	Nelson Road	55	1	4	2	2108	2098
2228	ML5543B	0	4.5	0.067167	CR 13	Natural Bridge Road	65	1	4	2	1152	1157
2369	ML5543B	0	4.5	0.067167	CR 13	Natural Bridge Road	65	1	4	2	1153	1152
2371	ML5543B	0	4.5	0.067167	CR 13	Natural Bridge Road	65	1	4	2	1154	1153
390	ML7731B	0	2.62	0.037968	CR 37	N. Mahnke Road	55	1	4	2	1824	1825
411	ML7732B	0	2.85	0.041299	CR 37	N. Mahnke Road	55	1	4	2	1824	1822
116	ML6715B	0	4.18	0.057978	CR 101-1	N. Crow Rd	55	1	4	2	1308	1300
101	ML5041B	0	15.26	0.247135	CR 64	Mule Creek Road	55	1	4	2	1087	1074
111	ML5041B	0	15.26	0.247135	CR 64	Mule Creek Road	55	1	4	2	1101	1087
160	ML5545B	0	2.37	0.043903	CR 15	Moss Agate Road	55	1	4	2	1133	1126
1306	ML7306B	0	0.98	0.013957	CR 745	Morning Glory Trail	55	1	4	2	2147	2146
1317	ML7306B	0	0.98	0.013957	CR 745	Morning Glory Trail	55	1	4	2	2148	2147
171	ML5549B	0	17.91	0.286858	CR 18	Mormon Canyon Road	55	1	4	2	1073	1073
1716	ML5549B	0	17.91	0.286858	CR 18	Mormon Canyon Road	55	1	4	2	1066	1073
1717	ML5549B	0	17.91	0.286858	CR 18	Mormon Canyon Road	55	1	4	2	1071	1066
90	ML5062B	0	13	0.218584	CR 234	Monument Road	55	1	4	2	1287	1301
92	ML5062B	0	13	0.218584	CR 234	Monument Road	55	1	4	2	1259	1287
1969	ML5062B	0	13	0.218584	CR 234	Monument Road	55	1	4	2	1252	1259
1971	ML5062B	0	13	0.218584	CR 234	Monument Road	55	1	4	2	1253	1252
1973	ML5062B	0	13	0.218584	CR 234	Monument Road	55	1	4	2	1254	1253

ID	ROUTE	FROM_MP	TO_MP	Shape_Leng	Road_ID	ROAD_NAME	SPEED	NUM_LANES	FUNC_CLASS	ONEWAY_TWO	A	B
2438	ML6957B	0	9.72	0.184127	CR 238-1	Moffett Road	55	1	4	2	1696	2058
1315	ML6776B	0	3.03	0.043483	CR 144-1	Miller Road West 144-1	55	1	4	2	2303	2302
77	ML5077B	0	5.2	0.09172	CR 525	Millbrook Road	55	1	4	2	1030	1048
1307	ML6870B	0	10.12	0.191646	CR 208-1	Mikesell Road	55	1	4	2	2572	2607
1308	ML6870B	0	10.12	0.191646	CR 208-1	Mikesell Road	55	1	4	2	2539	2572
1309	ML6870B	0	10.12	0.191646	CR 208-1	Mikesell Road	55	1	4	2	2607	2627
1311	ML6870B	0	10.12	0.191646	CR 208-1	Mikesell Road	55	1	4	2	2488	2539
1313	ML6870B	0	10.12	0.191646	CR 208-1	Mikesell Road	55	1	4	2	2371	2488
1314	ML6870B	0	10.12	0.191646	CR 208-1	Mikesell Road	55	1	4	2	2357	2371
1776	ML6870B	0	10.12	0.191646	CR 208-1	Mikesell Road	55	1	4	2	2627	2669
1725	ML7719B	0	11.39	0.200415	CR 17	Meridian Road	65	1	4	2	2236	2227
1726	ML7719B	0	11.39	0.200415	CR 17	Meridian Road	65	1	4	2	2342	2236
1727	ML7719B	0	11.39	0.200415	CR 17	Meridian Road	65	1	4	2	2449	2342
305	ML8087B	0	12.27	0.23711	CR 146	Meadowdale Road	55	1	4	2	1686	1626
306	ML8087B	0	12.27	0.23711	CR 146	Meadowdale Road	55	1	4	2	1626	1596
307	ML8087B	0	12.27	0.23711	CR 146	Meadowdale Road	55	1	4	2	1859	1686
342	ML8087B	0	12.27	0.23711	CR 146	Meadowdale Road	55	1	4	2	2046	1859
474	ML7733B	0	1.6	0.023024	CR 5	Mconohay Road	55	1	4	2	2432	2433
485	ML7760B	0	5.49	0.083014	CR 77	McMaster Road	55	1	4	2	2773	2772
486	ML7760B	0	5.49	0.083014	CR 77	McMaster Road	55	1	4	2	2773	2773
1573	ML6718B	0	2.56	0.04268	CR 103-1	McLees Road	55	1	4	2	1340	1326
78	ML5074B	0	4.02	0.113586	CR 513	McGill Lane	55	1	4	2	1051	1048
80	ML5074B	0	4.02	0.113586	CR 513	McGill Lane	55	1	4	2	1048	1043
414	ML7725B	0	5.89	0.101457	CR 25	Martin Road	55	1	4	2	1766	1657
99	ML5078B	0	45.5	0.720692	CR 610	Marshall Road	55	1	4	2	1022	1038
102	ML5078B	0	45.5	0.720692	CR 610	Marshall Road	55	1	4	2	1074	1090
103	ML5078B	0	45.5	0.720692	CR 610	Marshall Road	55	1	4	2	1038	1050
104	ML5078B	0	45.5	0.720692	CR 610	Marshall Road	55	1	4	2	1050	1074
1687	ML5078B	0	45.5	0.720692	CR 610	Marshall Road	55	1	4	2	1027	1022

ID	ROUTE	FROM_MP	TO_MP	Shape_Leng	Road_ID	ROAD_NAME	SPEED	NUM_LANES	FUNC_CLASS	ONEWAY_TWO	A	B
2399	ML8095B	0	6.15	0.113531	CR 167	Marble Road	55	1	4	2	1384	1333
248	ML5586B	0	12.73	0.23883	CR 53	Manning Road	55	1	4	2	1444	1558
250	ML5586B	0	12.73	0.23883	CR 53	Manning Road	55	1	4	2	1558	1659
258	ML5586B	0	12.73	0.23883	CR 53	Manning Road	55	1	4	2	1380	1380
259	ML5586B	0	12.73	0.23883	CR 53	Manning Road	55	1	4	2	1380	1444
79	ML5088B	0	6.86	0.103786	CR 57A	Mandel Lane	55	1	4	2	1051	1061
82	ML5088B	0	6.86	0.103786	CR 57A	Mandel Lane	55	1	4	2	1053	1051
83	ML5088B	0	6.86	0.103786	CR 57A	Mandel Lane	55	1	4	2	1054	1053
2059	ML6907B	0	2.01	0.038281	CR 215-4	Macy Road	55	1	4	2	2938	2962
1016	ML6920B	0	6.11	0.115945	CR 219-2	Lyons Road	55	1	4	2	2674	2709
1018	ML6920B	0	6.11	0.115945	CR 219-2	Lyons Road	55	1	4	2	2496	2544
1019	ML6920B	0	6.11	0.115945	CR 219-2	Lyons Road	55	1	4	2	2544	2573
1020	ML6920B	0	6.11	0.115945	CR 219-2	Lyons Road	55	1	4	2	2573	2674
481	ML7753B	0	2.6	0.050776	CR 68	Lund Road	55	1	4	2	2597	2681
1210	ML6902B	0	1.68	0.033203	CR 214-3	Louth Road	55	1	4	2	2501	2562
299	ML5583B	0.09	5.42	0.088261	CR 51	Lost Springs Road/Harris Road	55	1	4	2	1597	1672
386	ML5583B	0.09	5.42	0.088261	CR 51	Lost Springs Road/Harris Road	55	1	4	2	1601	1597
105	ML5434B	15.73	30.27	0.250959	CR 62	Little Medicine Road	55	1	4	2	1009	1016
2437	ML6737B	0	6.8	0.109823	CR 123-2	Little Bear Road	55	1	4	2	1675	1696
2439	ML6737B	0	6.8	0.109823	CR 123-2	Little Bear Road	55	1	4	2	1696	1735
633	ML6018B	0	8.64	0.130717	CR 29C	Lingle-Veteran R	65	1	4	2	2427	2422
637	ML6018B	0	8.64	0.130717	CR 29C	Lingle-Veteran R	65	1	4	2	2482	2427
966	ML6018B	0	8.64	0.130717	CR 29C	Lingle-Veteran R	65	1	4	2	2424	2425
977	ML6018B	0	8.64	0.130717	CR 29C	Lingle-Veteran R	65	1	4	2	2413	2424
989	ML6018B	0	8.64	0.130717	CR 29C	Lingle-Veteran R	65	1	4	2	2416	2413
996	ML6018B	0	8.64	0.130717	CR 29C	Lingle-Veteran R	65	1	4	2	2419	2416
1006	ML6018B	0	8.64	0.130717	CR 29C	Lingle-Veteran R	65	1	4	2	2422	2419
1058	ML6930B	0	10.73	0.210508	CR 223-2	Lindbergh Road North	55	1	4	2	2918	2967
1034	ML6928B	0	10.11	0.19166	CR 222-3	Lindbergh Road	55	1	4	2	2966	2993

ID	ROUTE	FROM_MP	TO_MP	Shape_Leng	Road_ID	ROAD_NAME	SPEED	NUM_LANES	FUNC_CLASS	ONEWAY_TWO	A	B
1036	ML6928B	0	10.11	0.19166	CR 222-3	Lindbergh Road	55	1	4	2	2876	2917
1038	ML6928B	0	10.11	0.19166	CR 222-3	Lindbergh Road	55	1	4	2	2803	2876
1039	ML6928B	0	10.11	0.19166	CR 222-3	Lindbergh Road	55	1	4	2	2779	2803
1041	ML6928B	0	10.11	0.19166	CR 222-3	Lindbergh Road	55	1	4	2	2677	2779
1154	ML6951B	0	9.14	0.168447	CR 234-1	Lewis Ranch/Indian Hill Road	55	1	4	2	1993	1990
1155	ML6951B	0	9.14	0.168447	CR 234-1	Lewis Ranch/Indian Hill Road	55	1	4	2	1993	2060
2432	ML6951B	0	9.14	0.168447	CR 234-1	Lewis Ranch/Indian Hill Road	55	1	4	2	1975	1990
2433	ML6951B	0	9.14	0.168447	CR 234-1	Lewis Ranch/Indian Hill Road	55	1	4	2	1739	1975
1719	ML5558B	0	5	0.075508	CR 26	Leuenberger/Dave Johnston Road	55	1	4	2	1129	1129
1720	ML5558B	0	5	0.075508	CR 26	Leuenberger/Dave Johnston Road	55	1	4	2	1131	1129
1142	ML6844B	0	2.02	0.029004	CR 161-4	Larson Road	55	1	4	2	2923	2924
368	ML8021B	0	3	0.053301	CR 16	Lakeshore Drive	65	1	4	2	1474	1529
310	ML8119B	0	2.51	0.045434	CR 215	Lake Side Drive	55	1	4	2	1991	1885
166	ML5542B	0	1.05	0.015297	CR 12	La Prele Hall Road	55	1	4	2	1205	1206
1491	ML6728B	0	0.85	0.012134	CR 117-1	Koster Road	55	1	4	2	1543	1546
1509	ML6910B	0	3.5	0.066119	CR 216-2	Klipstein Road	55	1	4	2	1635	1648
1510	ML6910B	0	3.5	0.066119	CR 216-2	Klipstein Road	55	1	4	2	1648	1706
2423	ML6910B	0	3.5	0.066119	CR 216-2	Klipstein Road	55	1	4	2	1706	1756
2425	ML6910B	0	3.5	0.066119	CR 216-2	Klipstein Road	55	1	4	2	1756	1763
2394	ML8016B	0	5.4	0.096413	CR 4	Kittell Road	55	1	4	2	1370	1346
472	ML7751B	0	15	0.295868	CR 66	Kirtley Road	55	1	4	2	2356	2399
473	ML7751B	0	15	0.295868	CR 66	Kirtley Road	55	1	4	2	2399	2432
475	ML7751B	0	15	0.295868	CR 66	Kirtley Road	55	1	4	2	2432	2457
476	ML7751B	0	15	0.295868	CR 66	Kirtley Road	55	1	4	2	2457	2904
1150	ML6764B	0	7.86	0.127668	CR 139-2	Kirkbride Road	55	1	4	2	2237	2166
1151	ML6764B	0	7.86	0.127668	CR 139-2	Kirkbride Road	55	1	4	2	2162	2166
1153	ML6764B	0	7.86	0.127668	CR 139-2	Kirkbride Road	55	1	4	2	2162	2158
1045	ML6927B	0	5.4	0.102791	CR 222-2	King Road	55	1	4	2	2380	2498
1063	ML6929B	0	5	0.095207	CR 223-1	Keslar Road	55	1	4	2	2240	2279

ID	ROUTE	FROM_MP	TO_MP	Shape_Leng	Road_ID	ROAD_NAME	SPEED	NUM_LANES	FUNC_CLASS	ONEWAY_TWO	A	B
2457	ML8076B	0	2.9	0.053879	CR 122	Keslar Road	55	1	4	2	1781	1688
317	ML5975B	0	21.07	0.341613	CR 15G	Kaspiere Road	55	1	4	2	2182	2124
320	ML5975B	0	21.07	0.341613	CR 15G	Kaspiere Road	55	1	4	2	2215	2182
321	ML5975B	0	21.07	0.341613	CR 15G	Kaspiere Road	55	1	4	2	2253	2238
322	ML5975B	0	21.07	0.341613	CR 15G	Kaspiere Road	55	1	4	2	2238	2215
325	ML5975B	0	21.07	0.341613	CR 15G	Kaspiere Road	55	1	4	2	2224	2251
327	ML5975B	0	21.07	0.341613	CR 15G	Kaspiere Road	55	1	4	2	2251	2257
329	ML5975B	0	21.07	0.341613	CR 15G	Kaspiere Road	55	1	4	2	2257	2253
2501	ML5975B	0	21.07	0.341613	CR 15G	Kaspiere Road	55	1	4	2	2222	2224
478	ML7754B	0	8.34	0.161817	CR 69	Kaltenheuser Road	55	1	4	2	2300	2400
479	ML7754B	0	8.34	0.161817	CR 69	Kaltenheuser Road	55	1	4	2	2400	2596
1730	ML7762B	0	7.99	0.136198	CR 79	Kaan Road	55	1	4	2	2332	2445
1731	ML7762B	0	7.99	0.136198	CR 79	Kaan Road	55	1	4	2	2445	2475
256	ML7739B	0	22.56	0.375413	CR 50	K-Field Road	55	1	4	2	1725	1663
257	ML7739B	0	22.56	0.375413	CR 50	K-Field Road	55	1	4	2	1663	1658
391	ML7721B	0	9.16	0.143612	CR 19	Joss Road	55	1	4	2	1961	1961
415	ML7721B	0	9.16	0.143612	CR 19	Joss Road	55	1	4	2	1961	1734
341	ML8108B	0	1.27	0.022484	CR 201	Jireh Road	55	1	4	2	2071	2045
402	ML7734B	0	11.79	0.171899	CR 38	Jireh North Road	55	1	4	2	2029	2023
409	ML7734B	0	11.79	0.171899	CR 38	Jireh North Road	55	1	4	2	2023	2022
1261	ML6803B	0	2.8	0.040717	CR 152-1	Jennings Road	55	1	4	2	2603	2605
186	ML5566B	0	19.9	0.350757	CR 34	Jenne Trail Road	55	1	4	2	1121	1262
1823	ML8048B	0	4.99	0.095225	CR 81	Jefferson Road	55	1	4	2	1487	1467
1825	ML8048B	0	4.99	0.095225	CR 81	Jefferson Road	55	1	4	2	1467	1438
1827	ML8048B	0	4.99	0.095225	CR 81	Jefferson Road	55	1	4	2	1438	1422
1887	ML8048B	0	4.99	0.095225	CR 81	Jefferson Road	55	1	4	2	1517	1487
2542	ML8048B	0	4.99	0.095225	CR 81	Jefferson Road	55	1	4	2	1552	1517
1077	ML6934B	0	3.05	0.057755	CR 225-1	Jay Road	55	1	4	2	1998	1996
1078	ML6934B	0	3.05	0.057755	CR 225-1	Jay Road	55	1	4	2	1998	2056

ID	ROUTE	FROM_MP	TO_MP	Shape_Leng	Road_ID	ROAD_NAME	SPEED	NUM_LANES	FUNC_CLASS	ONEWAY_TWO	A	B
2374	ML6934B	0	3.05	0.057755	CR 225-1	Jay Road	55	1	4	2	1970	1996
2365	ML5593B	0	0.43	0.006712	CR 62	Jarmon Trail Road	65	1	4	2	1276	1274
1751	ML8068B	0	7.53	0.14217	CR 112	J.J. Road	55	1	4	2	1966	2053
1753	ML8068B	0	7.53	0.14217	CR 112	J.J. Road	55	1	4	2	1864	1966
2473	ML8068B	0	7.53	0.14217	CR 112	J.J. Road	55	1	4	2	2053	2090
2210	ML5531B	0	13.79	0.24556	CR 1	Irvine Road A-1	45	2	4	2	1271	1272
2213	ML5531B	0	13.79	0.24556	CR 1	Irvine Road A-1	45	2	4	2	1270	1271
2305	ML5531B	0	13.79	0.24556	CR 1	Irvine Road A-1	65	1	4	2	1272	1273
2366	ML5531B	0	13.79	0.24556	CR 1	Irvine Road A-1	65	1	4	2	1295	1353
2367	ML5531B	0	13.79	0.24556	CR 1	Irvine Road A-1	65	1	4	2	1273	1295
2506	ML5589B	0	1	0.015192	CR 57	Irvine Bridge Road	55	1	4	2	1348	1352
2509	ML5589B	0	1	0.015192	CR 57	Irvine Bridge Road	55	1	4	2	1387	1388
2383	ML5086B	0	3	0.050108	CR 740	Ione Lane	55	1	4	2	1116	1128
168	ML5561B	0	11.36	0.201047	CR 29	Inez Road	55	1	4	2	1166	1165
2512	ML5561B	0	11.36	0.201047	CR 29	Inez Road	55	1	4	2	1213	1166
1157	ML6753B	0	4.06	0.057888	CR 131-3	Indian Hill Road 131-3	55	1	4	2	2060	2059
1166	ML6753B	0	4.06	0.057888	CR 131-3	Indian Hill Road 131-3	55	1	4	2	2059	2058
2373	ML6747B	0	16.51	0.247499	CR 128-2	Indian Hill Road 128-2	55	1	4	2	1901	1970
2375	ML6747B	0	16.51	0.247499	CR 128-2	Indian Hill Road 128-2	55	1	4	2	1970	1971
2431	ML6747B	0	16.51	0.247499	CR 128-2	Indian Hill Road 128-2	55	1	4	2	1971	1975
466	ML7746B	0	7.89	0.14815	CR 60	Indian Creek Road	55	1	4	2	2936	3001
467	ML7746B	0	7.89	0.14815	CR 60	Indian Creek Road	55	1	4	2	2786	2936
1543	ML80B	0	402.78	14.940551	I 80	I80E	75	2	1	2	1338	1356
1544	ML80B	0	402.78	14.940551	I 80	I80E	75	2	1	2	1339	1357
1546	ML80B	0	402.78	14.940551	I 80	I80E	75	2	1	2	1324	1338
1548	ML80B	0	402.78	14.940551	I 80	I80E	75	2	1	2	1325	1339
1549	ML80B	0	402.78	14.940551	I 80	I80E	75	2	1	2	1291	1324
1551	ML80B	0	402.78	14.940551	I 80	I80E	75	2	1	2	1292	1325
1616	ML80B	0	402.78	14.940551	I 80	I80E	75	2	1	2	1973	2040

ID	ROUTE	FROM_MP	TO_MP	Shape_Leng	Road_ID	ROAD_NAME	SPEED	NUM_LANES	FUNC_CLASS	ONEWAY_TWO	A	B
1619	ML80B	0	402.78	14.940551	I 80	I80E	75	2	1	2	1974	2038
1639	ML80B	0	402.78	14.940551	I 80	I80E	75	2	1	2	1151	1151
1648	ML80B	0	402.78	14.940551	I 80	I80E	75	2	1	2	1150	1150
1651	ML80B	0	402.78	14.940551	I 80	I80E	75	2	1	2	1145	1150
1654	ML80B	0	402.78	14.940551	I 80	I80E	75	2	1	2	1147	1151
1656	ML80B	0	402.78	14.940551	I 80	I80E	75	2	1	2	1139	1145
1658	ML80B	0	402.78	14.940551	I 80	I80E	75	2	1	2	1138	1147
1660	ML80B	0	402.78	14.940551	I 80	I80E	75	2	1	2	1084	1138
1661	ML80B	0	402.78	14.940551	I 80	I80E	75	2	1	2	1083	1139
1666	ML80B	0	402.78	14.940551	I 80	I80E	75	2	1	2	1040	1083
1668	ML80B	0	402.78	14.940551	I 80	I80E	75	2	1	2	1041	1084
1669	ML80B	0	402.78	14.940551	I 80	I80E	75	2	1	2	1015	1040
1670	ML80B	0	402.78	14.940551	I 80	I80E	75	2	1	2	1014	1041
1964	ML80B	0	402.78	14.940551	I 80	I80E	75	2	1	2	1151	1172
1965	ML80B	0	402.78	14.940551	I 80	I80E	75	2	1	2	1150	1173
1970	ML80B	0	402.78	14.940551	I 80	I80E	75	2	1	2	1252	1291
1972	ML80B	0	402.78	14.940551	I 80	I80E	75	2	1	2	1253	1292
1974	ML80B	0	402.78	14.940551	I 80	I80E	75	2	1	2	1227	1252
1975	ML80B	0	402.78	14.940551	I 80	I80E	75	2	1	2	1228	1253
1976	ML80B	0	402.78	14.940551	I 80	I80E	75	2	1	2	1356	1411
1978	ML80B	0	402.78	14.940551	I 80	I80E	75	2	1	2	1357	1410
1981	ML80B	0	402.78	14.940551	I 80	I80E	75	2	1	2	1715	1715
1983	ML80B	0	402.78	14.940551	I 80	I80E	75	2	1	2	1715	1715
1986	ML80B	0	402.78	14.940551	I 80	I80E	75	2	1	2	1717	1718
1988	ML80B	0	402.78	14.940551	I 80	I80E	75	2	1	2	1716	1717
1990	ML80B	0	402.78	14.940551	I 80	I80E	75	2	1	2	1411	1715
1991	ML80B	0	402.78	14.940551	I 80	I80E	75	2	1	2	1410	1716
1994	ML80B	0	402.78	14.940551	I 80	I80E	75	2	1	2	1727	1730
1996	ML80B	0	402.78	14.940551	I 80	I80E	75	2	1	2	1726	1729

ID	ROUTE	FROM_MP	TO_MP	Shape_Leng	Road_ID	ROAD_NAME	SPEED	NUM_LANES	FUNC_CLASS	ONEWAY_TWO	A	B
1998	ML80B	0	402.78	14.940551	I 80	I80E	75	2	1	2	1715	1727
1999	ML80B	0	402.78	14.940551	I 80	I80E	75	2	1	2	1718	1726
2002	ML80B	0	402.78	14.940551	I 80	I80E	75	2	1	2	1730	1836
2004	ML80B	0	402.78	14.940551	I 80	I80E	75	2	1	2	1836	1837
2008	ML80B	0	402.78	14.940551	I 80	I80E	75	2	1	2	1729	1836
2010	ML80B	0	402.78	14.940551	I 80	I80E	75	2	1	2	1836	1837
2012	ML80B	0	402.78	14.940551	I 80	I80E	75	2	1	2	1837	1906
2013	ML80B	0	402.78	14.940551	I 80	I80E	75	2	1	2	1837	1905
2018	ML80B	0	402.78	14.940551	I 80	I80E	75	2	1	2	1906	1932
2020	ML80B	0	402.78	14.940551	I 80	I80E	75	2	1	2	1905	1931
2022	ML80B	0	402.78	14.940551	I 80	I80E	75	2	1	2	1932	1973
2023	ML80B	0	402.78	14.940551	I 80	I80E	75	2	1	2	1931	1974
2029	ML80B	0	402.78	14.940551	I 80	I80E	75	2	1	2	2040	2079
2030	ML80B	0	402.78	14.940551	I 80	I80E	75	2	1	2	2038	2080
2033	ML80B	0	402.78	14.940551	I 80	I80E	75	2	1	2	2080	2130
2038	ML80B	0	402.78	14.940551	I 80	I80E	75	2	1	2	2130	2209
2041	ML80B	0	402.78	14.940551	I 80	I80E	75	2	1	2	2243	2493
2043	ML80B	0	402.78	14.940551	I 80	I80E	75	2	1	2	2209	2243
2048	ML80B	0	402.78	14.940551	I 80	I80E	75	2	1	2	2493	2671
2051	ML80B	0	402.78	14.940551	I 80	I80E	75	2	1	2	2969	2997
2052	ML80B	0	402.78	14.940551	I 80	I80E	75	2	1	2	2971	2998
2273	ML80B	0	402.78	14.940551	I 80	I80E	75	2	1	2	2671	2845
2276	ML80B	0	402.78	14.940551	I 80	I80E	75	2	1	2	2845	2971
2402	ML80B	0	402.78	14.940551	I 80	I80E	75	2	1	2	1200	1227
2404	ML80B	0	402.78	14.940551	I 80	I80E	75	2	1	2	1199	1228
2406	ML80B	0	402.78	14.940551	I 80	I80E	75	2	1	2	1192	1200
2408	ML80B	0	402.78	14.940551	I 80	I80E	75	2	1	2	1193	1199
2409	ML80B	0	402.78	14.940551	I 80	I80E	75	2	1	2	1173	1192
2410	ML80B	0	402.78	14.940551	I 80	I80E	75	2	1	2	1172	1193

ID	ROUTE	FROM_MP	TO_MP	Shape_Leng	Road_ID	ROAD_NAME	SPEED	NUM_LANES	FUNC_CLASS	ONEWAY_TWO	A	B
1375	ML56B	359.55	371.28	0.259641	I 80 Bus.	I80B	45	2	1	2	1855	1880
1376	ML56B	359.55	371.28	0.259641	I 80 Bus.	I80B	45	2	1	2	1880	1907
1377	ML56B	359.55	371.28	0.259641	I 80 Bus.	I80B	45	2	1	2	1907	1942
1385	ML56B	359.55	371.28	0.259641	I 80 Bus.	I80B	45	2	1	2	1942	1962
1396	ML56B	359.55	371.28	0.259641	I 80 Bus.	I80B	45	2	1	2	1962	1980
1397	ML56B	359.55	371.28	0.259641	I 80 Bus.	I80B	45	2	1	2	1962	1988
1398	ML56B	359.55	371.28	0.259641	I 80 Bus.	I80B	45	2	1	2	1980	1988
1400	ML56B	359.55	371.28	0.259641	I 80 Bus.	I80B	45	2	1	2	1988	2003
1406	ML56B	359.55	371.28	0.259641	I 80 Bus.	I80B	45	2	1	2	2075	2075
1408	ML56B	359.55	371.28	0.259641	I 80 Bus.	I80B	45	2	1	2	2070	2075
1409	ML56B	359.55	371.28	0.259641	I 80 Bus.	I80B	45	2	1	2	2066	2070
1411	ML56B	359.55	371.28	0.259641	I 80 Bus.	I80B	45	2	1	2	2003	2024
1412	ML56B	359.55	371.28	0.259641	I 80 Bus.	I80B	45	2	1	2	2024	2024
1413	ML56B	359.55	371.28	0.259641	I 80 Bus.	I80B	45	2	1	2	2047	2066
1415	ML56B	359.55	371.28	0.259641	I 80 Bus.	I80B	45	2	1	2	2035	2047
1416	ML56B	359.55	371.28	0.259641	I 80 Bus.	I80B	45	2	1	2	2035	2035
1417	ML56B	359.55	371.28	0.259641	I 80 Bus.	I80B	45	2	1	2	2024	2031
1418	ML56B	359.55	371.28	0.259641	I 80 Bus.	I80B	45	2	1	2	2031	2035
1596	ML56B	359.55	371.28	0.259641	I 80 Bus.	I80B	45	2	1	2	1754	1810
1597	ML56B	359.55	371.28	0.259641	I 80 Bus.	I80B	45	2	1	2	1810	1855
1653	ML4200B	0	1.26	0.024066	I 80 Bus.	I80B	45	2	1	2	1146	1147
1984	ML56B	359.55	371.28	0.259641	I 80 Bus.	I80B	45	2	1	2	1717	1718
1987	ML56B	359.55	371.28	0.259641	I 80 Bus.	I80B	45	2	1	2	1715	1716
1992	ML56B	359.55	371.28	0.259641	I 80 Bus.	I80B	45	2	1	2	1716	1754
1993	ML56B	359.55	371.28	0.259641	I 80 Bus.	I80B	45	2	1	2	1718	1754
2031	ML56B	359.55	371.28	0.259641	I 80 Bus.	I80B	45	2	1	2	2080	2079
2034	ML56B	359.55	371.28	0.259641	I 80 Bus.	I80B	45	2	1	2	2075	2080
2290	ML23B	327.37	328.48	0.016111	I 80 Bus.	I80B	45	2	1	2	1178	1177
2292	ML23B	327.37	328.48	0.016111	I 80 Bus.	I80B	45	2	1	2	1180	1178

ID	ROUTE	FROM_MP	TO_MP	Shape_Leng	Road_ID	ROAD_NAME	SPEED	NUM_LANES	FUNC_CLASS	ONEWAY_TWO	A	B
2293	ML4200B	0	1.26	0.024066	I 80 Bus.	I80B	45	2	1	2	1147	1180
1691	ML25B	0	300.55	10.066813	I 25	I25E	75	2	1	2	1056	1012
1692	ML25B	0	300.55	10.066813	I 25	I25E	75	2	1	2	1058	1011
1710	ML25B	0	300.55	10.066813	I 25	I25E	75	2	1	2	1091	1056
1711	ML25B	0	300.55	10.066813	I 25	I25E	75	2	1	2	1092	1058
1534	ML212B	0	2.71	0.051117	I 25 Bus.	I25B	45	2	1	2	1780	1780
1537	ML212B	0	2.71	0.051117	I 25 Bus.	I25B	45	2	1	2	1780	1780
1538	ML212B	0	2.71	0.051117	I 25 Bus.	I25B	45	2	1	2	1736	1780
1599	ML180B	7.31	12.61	0.137688	I 25 Bus.	I25B	45	2	1	2	1811	1777
1600	ML180B	7.31	12.61	0.137688	I 25 Bus.	I25B	45	2	1	2	1815	1751
1601	ML180B	7.31	12.61	0.137688	I 25 Bus.	I25B	45	2	1	2	1840	1838
1602	ML180B	7.31	12.61	0.137688	I 25 Bus.	I25B	45	2	1	2	1842	1841
1603	ML180B	7.31	12.61	0.137688	I 25 Bus.	I25B	45	2	1	2	1841	1840
1604	ML212B	0	2.71	0.051117	I 25 Bus.	I25B	45	2	1	2	1830	1842
1605	ML212B	0	2.71	0.051117	I 25 Bus.	I25B	45	2	1	2	1780	1830
2003	ML180B	7.31	12.61	0.137688	I 25 Bus.	I25B	45	2	1	2	1838	1836
2005	ML180B	7.31	12.61	0.137688	I 25 Bus.	I25B	45	2	1	2	1838	1837
2006	ML180B	7.31	12.61	0.137688	I 25 Bus.	I25B	45	2	1	2	1836	1836
2007	ML180B	7.31	12.61	0.137688	I 25 Bus.	I25B	45	2	1	2	1837	1837
2062	ML212B	0	2.71	0.051117	I 25 Bus.	I25B	45	2	1	2	1733	1736
2064	ML212B	0	2.71	0.051117	I 25 Bus.	I25B	45	2	1	2	1732	1733
2009	ML180B	8.5	9.6	0.033714	I 180	I180E	75	2	1	2	1836	1836
2011	ML180B	8.5	9.6	0.033714	I 180	I180E	75	2	1	2	1837	1837
2014	ML180B	8.5	9.6	0.033714	I 180	I180E	75	2	1	2	1836	1826
2015	ML180B	8.5	9.6	0.033714	I 180	I180E	75	2	1	2	1837	1827
59	ML5009B	0	0.42	0.007847	CR 19	Huron Street	55	1	4	2	1167	1167
2295	ML5009B	0	0.42	0.007847	CR 19	Huron Street	55	1	4	2	1181	1167
1159	ML6954B	0	6.85	0.127295	CR 236-1	Hunter Ranch Road	55	1	4	2	2535	2556
1160	ML6954B	0	6.85	0.127295	CR 236-1	Hunter Ranch Road	55	1	4	2	2556	2609

ID	ROUTE	FROM_MP	TO_MP	Shape_Leng	Road_ID	ROAD_NAME	SPEED	NUM_LANES	FUNC_CLASS	ONEWAY_TWO	A	B
1665	ML5038B	0	1.8	0.025355	CR 59	Hunt Road	55	1	4	2	1039	1040
1667	ML5038B	0	1.8	0.025355	CR 59	Hunt Road	55	1	4	2	1040	1041
2380	ML5029B	0	17.2	0.285483	CR 51	Howell Road	55	1	4	2	1130	1122
2388	ML5029B	0	17.2	0.285483	CR 51	Howell Road	55	1	4	2	1163	1130
2302	ML5012B	0.09	3.89	0.069211	CR 22	Howe Road	55	1	4	2	1188	1196
2303	ML5012B	0.09	3.89	0.069211	CR 22	Howe Road	55	1	4	2	1170	1188
22	ML9613B	0	1.27	0.018424	CR 70	Housiaux Road	55	1	4	2	1989	1985
371	ML8032B	0	15.49	0.280606	CR 59	Horseshoe Creek Road	55	1	4	2	1393	1394
2181	ML8032B	0	15.49	0.280606	CR 59	Horseshoe Creek Road	55	1	4	2	1446	1394
2183	ML8032B	0	15.49	0.280606	CR 59	Horseshoe Creek Road	55	1	4	2	1447	1446
2185	ML8032B	0	15.49	0.280606	CR 59	Horseshoe Creek Road	55	1	4	2	1448	1447
43	ML5021B	0	1.6	0.023576	CR 43	Hornsby Road	55	1	4	2	1108	1109
2447	ML6936B	0	6.14	0.116433	CR 226-1	Holmes Road	55	1	4	2	1806	1971
2455	ML6936B	0	6.14	0.116433	CR 226-1	Holmes Road	55	1	4	2	1711	1806
1147	ML6950B	0	2.33	0.044768	CR 233-1	Holgerson Road	55	1	4	2	2972	3018
1149	ML6950B	0	2.33	0.044768	CR 233-1	Holgerson Road	55	1	4	2	2946	2972
1062	ML6772B	0	16.8	0.245518	CR 142-1	Hillsdale Road West	55	1	4	2	2232	2233
1201	ML6772B	0	16.8	0.245518	CR 142-1	Hillsdale Road West	55	1	4	2	2244	2245
1209	ML6772B	0	16.8	0.245518	CR 142-1	Hillsdale Road West	55	1	4	2	2245	2246
1212	ML6772B	0	16.8	0.245518	CR 142-1	Hillsdale Road West	55	1	4	2	2246	2248
1214	ML6772B	0	16.8	0.245518	CR 142-1	Hillsdale Road West	55	1	4	2	2248	2247
1226	ML6772B	0	16.8	0.245518	CR 142-1	Hillsdale Road West	55	1	4	2	2247	2231
2039	ML6772B	0	16.8	0.245518	CR 142-1	Hillsdale Road West	55	1	4	2	2242	2243
2044	ML6772B	0	16.8	0.245518	CR 142-1	Hillsdale Road West	55	1	4	2	2243	2244
1042	ML6774B	0	28.38	0.41575	CR 143-2	Hillsdale North Road/Midway	65	1	4	2	2277	2278
1061	ML6774B	0	28.38	0.41575	CR 143-2	Hillsdale North Road/Midway	65	1	4	2	2278	2279
1081	ML6774B	0	28.38	0.41575	CR 143-2	Hillsdale North Road/Midway	65	1	4	2	2279	2280
1103	ML6774B	0	28.38	0.41575	CR 143-2	Hillsdale North Road/Midway	65	1	4	2	2280	2281
1108	ML6774B	0	28.38	0.41575	CR 143-2	Hillsdale North Road/Midway	65	1	4	2	2281	2284

ID	ROUTE	FROM_MP	TO_MP	Shape_Leng	Road_ID	ROAD_NAME	SPEED	NUM_LANES	FUNC_CLASS	ONEWAY_TWO	A	B
1117	ML6774B	0	28.38	0.41575	CR 143-2	Hillsdale North Road/Midway	65	1	4	2	2284	2285
1165	ML6774B	0	28.38	0.41575	CR 143-2	Hillsdale North Road/Midway	65	1	4	2	2285	2308
1205	ML6774B	0	28.38	0.41575	CR 143-2	Hillsdale North Road/Midway	65	1	4	2	2272	2271
1211	ML6774B	0	28.38	0.41575	CR 143-2	Hillsdale North Road/Midway	65	1	4	2	2271	2274
1213	ML6774B	0	28.38	0.41575	CR 143-2	Hillsdale North Road/Midway	65	1	4	2	2274	2273
1220	ML6774B	0	28.38	0.41575	CR 143-2	Hillsdale North Road/Midway	65	1	4	2	2273	2275
1225	ML6774B	0	28.38	0.41575	CR 143-2	Hillsdale North Road/Midway	65	1	4	2	2275	2277
278	ML5564B	0	23.55	0.428153	CR 32	Highland Loop Road	55	1	4	2	1307	1305
279	ML5564B	0	23.55	0.428153	CR 32	Highland Loop Road	55	1	4	2	1307	1313
280	ML5564B	0	23.55	0.428153	CR 32	Highland Loop Road	55	1	4	2	1281	1305
281	ML5564B	0	23.55	0.428153	CR 32	Highland Loop Road	55	1	4	2	1281	1280
282	ML5564B	0	23.55	0.428153	CR 32	Highland Loop Road	55	1	4	2	1261	1260
283	ML5564B	0	23.55	0.428153	CR 32	Highland Loop Road	55	1	4	2	1261	1280
284	ML5564B	0	23.55	0.428153	CR 32	Highland Loop Road	55	1	4	2	1148	1260
91	ML5061B	0	8.86	0.153653	CR 222	Hermosa Road	55	1	4	2	1208	1259
2488	ML6855B	0	3	0.056842	CR 202-1	Hermann Road	55	1	4	2	2623	2661
2	ML8133B	0	2	0.038474	CR 247	Hellbaum Road	55	1	4	2	2052	2085
460	ML7749B	0	20.11	0.37191	CR 64	Hat Creek Road	55	1	4	2	2921	3004
463	ML7749B	0	20.11	0.37191	CR 64	Hat Creek Road	55	1	4	2	2901	2921
464	ML7749B	0	20.11	0.37191	CR 64	Hat Creek Road	55	1	4	2	2786	2901
468	ML7749B	0	20.11	0.37191	CR 64	Hat Creek Road	55	1	4	2	2441	2541
469	ML7749B	0	20.11	0.37191	CR 64	Hat Creek Road	55	1	4	2	2633	2786
470	ML7749B	0	20.11	0.37191	CR 64	Hat Creek Road	55	1	4	2	2541	2633
45	ML5016B	0	1.1	0.016303	CR 33	Hart Road	55	1	4	2	1119	1120
300	ML5590B	0	2.3	0.033275	CR 58	Harris Road	55	1	4	2	1597	1595
516	ML6027B	0	8.75	0.157002	CR 31E	Harris Ranch Rd.	55	1	4	2	2469	2234
153	ML5044B	23.92	33.02	0.1531	CR 210	Harris Park Road	55	1	4	2	1297	1344
33	ML5087B	0	3.3	0.047748	CR 44A	Harmony Lane	65	1	4	2	1072	1070
2255	ML8152B	0	4.11	0.064179	CR YHW	Happy Hollow Road	55	1	4	2	1832	1834

ID	ROUTE	FROM_MP	TO_MP	Shape_Leng	Road_ID	ROAD_NAME	SPEED	NUM_LANES	FUNC_CLASS	ONEWAY_TWO	A	B
2257	ML8152B	0	4.11	0.064179	CR YHW	Happy Hollow Road	55	1	4	2	1820	1832
36	ML5072B	0	4	0.076881	CR 424	Hanson Lane	55	1	4	2	1052	1042
37	ML5072B	0	4	0.076881	CR 424	Hanson Lane	65	1	4	2	1070	1052
125	ML8094B	0	2.8	0.053815	CR 165	Halleck Canyon Road	55	1	4	2	1331	1311
483	ML7755B	0	2.77	0.053447	CR 70	Gun Club Road	55	1	4	2	2355	2443
480	ML7747B	0	3	0.043652	CR 61	Gropp Road	55	1	4	2	2400	2399
569	ML9301B	0	7.64	0.138049	CR 84A	Grey Rocks Rd.	55	1	4	2	2154	2083
570	ML9301B	0	7.64	0.138049	CR 84A	Grey Rocks Rd.	55	1	4	2	2157	2154
571	ML9301B	0	7.64	0.138049	CR 84A	Grey Rocks Rd.	55	1	4	2	2183	2157
439	ML7713B	0	16.19	0.282534	CR 10	Greasewood Road	55	1	4	2	2481	2429
441	ML7713B	0	16.19	0.282534	CR 10	Greasewood Road	55	1	4	2	2429	2363
442	ML7713B	0	16.19	0.282534	CR 10	Greasewood Road	55	1	4	2	2363	2210
1800	ML8035B	0	17.45	0.313924	CR 67	Grayrocks/Power Plant Road	65	1	4	2	1569	1570
1927	ML8035B	0	17.45	0.313924	CR 67	Grayrocks/Power Plant Road	65	1	4	2	1570	1599
1928	ML8035B	0	17.45	0.313924	CR 67	Grayrocks/Power Plant Road	65	1	4	2	1599	1628
1930	ML8035B	0	17.45	0.313924	CR 67	Grayrocks/Power Plant Road	65	1	4	2	1628	1680
1931	ML8035B	0	17.45	0.313924	CR 67	Grayrocks/Power Plant Road	65	1	4	2	1680	2073
445	ML7752B	0	1.41	0.028506	CR 67	Gravel Pit Road	55	1	4	2	2356	2301
1806	ML8090B	0	10.14	0.145386	CR 151	Grange Road	55	1	4	2	1471	1470
1810	ML8090B	0	10.14	0.145386	CR 151	Grange Road	55	1	4	2	1469	1471
1815	ML8090B	0	10.14	0.145386	CR 151	Grange Road	55	1	4	2	1468	1469
1818	ML8090B	0	10.14	0.145386	CR 151	Grange Road	55	1	4	2	1464	1468
1822	ML8090B	0	10.14	0.145386	CR 151	Grange Road	55	1	4	2	1467	1464
1828	ML8090B	0	10.14	0.145386	CR 151	Grange Road	55	1	4	2	1465	1467
1836	ML8090B	0	10.14	0.145386	CR 151	Grange Road	55	1	4	2	1466	1465
1844	ML8090B	0	10.14	0.145386	CR 151	Grange Road	55	1	4	2	1463	1466
1853	ML8090B	0	10.14	0.145386	CR 151	Grange Road	55	1	4	2	1462	1463
1862	ML8090B	0	10.14	0.145386	CR 151	Grange Road	55	1	4	2	1461	1462
1082	ML6937B	0	7.04	0.13403	CR 226-2	Golden Prairie Road	55	1	4	2	2280	2381

ID	ROUTE	FROM_MP	TO_MP	Shape_Leng	Road_ID	ROAD_NAME	SPEED	NUM_LANES	FUNC_CLASS	ONEWAY_TWO	A	B
1084	ML6937B	0	7.04	0.13403	CR 226-2	Golden Prairie Road	55	1	4	2	2381	2503
1086	ML6937B	0	7.04	0.13403	CR 226-2	Golden Prairie Road	55	1	4	2	2503	2545
2333	ML5536B	0	5.73	0.10141	CR 6	Glendo Road	55	1	4	2	1278	1296
1279	ML6778B	0	1.01	0.014467	CR 145-1	Glassburn Road	55	1	4	2	2335	2336
2440	ML6963B	0	5.06	0.093299	CR 244-1	Gillaspie Road	65	1	4	2	1735	1684
2441	ML6963B	0	5.06	0.093299	CR 244-1	Gillaspie Road	65	1	4	2	1684	1590
1199	ML6828B	0	1	0.014491	CR 158-3	Gillard Road	55	1	4	2	2799	2800
1486	ML6722B	0	9.48	0.148367	CR 109-1	Gilchrist Road	55	1	4	2	1376	1372
1506	ML6722B	0	9.48	0.148367	CR 109-1	Gilchrist Road	55	1	4	2	1372	1375
1507	ML6722B	0	9.48	0.148367	CR 109-1	Gilchrist Road	55	1	4	2	1375	1378
1524	ML6722B	0	9.48	0.148367	CR 109-1	Gilchrist Road	55	1	4	2	1378	1381
1529	ML6722B	0	9.48	0.148367	CR 109-1	Gilchrist Road	55	1	4	2	1381	1382
1564	ML6722B	0	9.48	0.148367	CR 109-1	Gilchrist Road	55	1	4	2	1396	1376
47	ML5069B	0	0.5	0.008031	CR 413	Gibbs Road	55	1	4	2	1136	1136
48	ML5069B	0	0.5	0.008031	CR 413	Gibbs Road	55	1	4	2	1136	1134
130	ML9418B	18.595	21.22	0.038442	CR 713	Garrett Road	55	1	4	2	1185	1184
135	ML9418B	18.595	21.22	0.038442	CR 713	Garrett Road	55	1	4	2	1186	1185
139	ML5081B	0	18.595	0.314734	CR 713	Garrett Road	55	1	4	2	1144	1187
140	ML5081B	0	18.595	0.314734	CR 713	Garrett Road	55	1	4	2	1141	1144
142	ML5081B	0	18.595	0.314734	CR 713	Garrett Road	55	1	4	2	1105	1141
58	ML5011B	0.26	2.24	0.029046	CR 21	Ft. Sanders Road	65	1	4	2	1167	1164
60	ML5011B	0.26	2.24	0.029046	CR 21	Ft. Sanders Road	65	1	4	2	1171	1167
2297	ML9417B	0	0.26	0.004793	CR 21	Ft. Sanders Road	65	1	4	2	1179	1171
2300	ML5011B	0.26	2.24	0.029046	CR 21	Ft. Sanders Road	65	1	4	2	1164	1168
1910	ML8150B	0	2.1	0.030432	CR 274	Front Road	65	1	4	2	1586	1581
1913	ML8150B	0	2.1	0.030432	CR 274	Front Road	65	1	4	2	1585	1586
1918	ML8150B	0	2.1	0.030432	CR 274	Front Road	65	1	4	2	1583	1585
30	ML5025B	0	8	0.130265	CR 47	Fox Creek Road	55	1	4	2	1024	1024
1672	ML5025B	0	8	0.130265	CR 47	Fox Creek Road	55	1	4	2	1021	1024

ID	ROUTE	FROM_MP	TO_MP	Shape_Leng	Road_ID	ROAD_NAME	SPEED	NUM_LANES	FUNC_CLASS	ONEWAY_TWO	A	B
1673	ML5025B	0	8	0.130265	CR 47	Fox Creek Road	55	1	4	2	1005	1021
1299	ML6761B	0	3.79	0.053281	CR 138-1	Foster Road	65	1	4	2	2161	2163
1305	ML6761B	0	3.79	0.053281	CR 138-1	Foster Road	65	1	4	2	2163	2165
1739	ML8070B	0	1	0.019516	CR 113A	Fort Laramie Road	55	1	4	2	2072	2083
81	ML5075B	0	2	0.029026	CR 519	Forbes Lane	55	1	4	2	1043	1044
145	ML5082B	0	7.8	0.149052	CR 716	Fletcher Park Road	55	1	4	2	1250	1298
148	ML5082B	7.8	25.3	0.299369	CR 133	Fletcher Park Road	55	1	4	2	1321	1360
149	ML5082B	7.8	25.3	0.299369	CR 133	Fletcher Park Road	55	1	4	2	1298	1321
2400	ML5082B	7.8	25.3	0.299369	CR 133	Fletcher Park Road	55	1	4	2	1384	1408
2401	ML5082B	7.8	25.3	0.299369	CR 133	Fletcher Park Road	55	1	4	2	1360	1384
251	ML5580B	0	19.3	0.346566	CR 48	Flat Top Road	55	1	4	2	1390	1404
267	ML5580B	0	19.3	0.346566	CR 48	Flat Top Road	55	1	4	2	1329	1328
269	ML5580B	0	19.3	0.346566	CR 48	Flat Top Road	55	1	4	2	1302	1328
270	ML5580B	0	19.3	0.346566	CR 48	Flat Top Road	55	1	4	2	1374	1389
271	ML5580B	0	19.3	0.346566	CR 48	Flat Top Road	55	1	4	2	1374	1373
272	ML5580B	0	19.3	0.346566	CR 48	Flat Top Road	55	1	4	2	1329	1373
304	ML7764B	1.27	10.34	0.167137	CR 81	Flat Top Road	55	1	4	2	2045	2029
338	ML7764B	1.27	10.34	0.167137	CR 81	Flat Top Road	55	1	4	2	2029	1857
339	ML7764B	1.27	10.34	0.167137	CR 81	Flat Top Road	55	1	4	2	1857	1772
385	ML5580B	0	19.3	0.346566	CR 48	Flat Top Road	55	1	4	2	1404	1476
1565	ML6939B	0	6.73	0.109076	CR 228-1	Fisher Canyon Road	55	1	4	2	1349	1304
1566	ML6939B	0	6.73	0.109076	CR 228-1	Fisher Canyon Road	55	1	4	2	1350	1349
151	ML8071B	0	13.91	0.25625	CR 114	Fish Creek Road	55	1	4	2	1336	1321
152	ML8071B	0	13.91	0.25625	CR 114	Fish Creek Road	55	1	4	2	1344	1336
1788	ML8071B	0	13.91	0.25625	CR 114	Fish Creek Road	55	1	4	2	1440	1344
1790	ML8071B	0	13.91	0.25625	CR 114	Fish Creek Road	55	1	4	2	1442	1440
106	ML5039B	0	56.75	0.894322	CR 61	Fetterman Road	55	1	4	2	1115	1117
107	ML5039B	0	56.75	0.894322	CR 61	Fetterman Road	55	1	4	2	1107	1110
108	ML5039B	0	56.75	0.894322	CR 61	Fetterman Road	55	1	4	2	1110	1115

ID	ROUTE	FROM_MP	TO_MP	Shape_Leng	Road_ID	ROAD_NAME	SPEED	NUM_LANES	FUNC_CLASS	ONEWAY_TWO	A	B
109	ML5039B	0	56.75	0.894322	CR 61	Fetterman Road	55	1	4	2	1103	1101
110	ML5039B	0	56.75	0.894322	CR 61	Fetterman Road	55	1	4	2	1101	1105
112	ML5039B	0	56.75	0.894322	CR 61	Fetterman Road	55	1	4	2	1105	1107
1683	ML5039B	0	56.75	0.894322	CR 61	Fetterman Road	55	1	4	2	1032	1035
1686	ML5039B	0	56.75	0.894322	CR 61	Fetterman Road	55	1	4	2	1035	1103
1553	ML6723B	0	2.1	0.035891	CR 110-1	Ferguson Road	55	1	4	2	1398	1386
1556	ML6723B	0	2.1	0.035891	CR 110-1	Ferguson Road	55	1	4	2	1403	1398
1874	ML8054B	0	0.6	0.008816	CR 87	Ferguson Road	55	1	4	2	1522	1523
1469	ML6915B	0	6.21	0.117201	CR 218-2	Farris Road	55	1	4	2	1801	1871
1517	ML6915B	0	6.21	0.117201	CR 218-2	Farris Road	55	1	4	2	1712	1719
1518	ML6915B	0	6.21	0.117201	CR 218-2	Farris Road	55	1	4	2	1719	1801
1522	ML6915B	0	6.21	0.117201	CR 218-2	Farris Road	55	1	4	2	1641	1712
113	ML5080B	0	15.36	0.266119	CR 710	Esterbrook Road	55	1	4	2	1107	1198
114	ML5080B	0	15.36	0.266119	CR 710	Esterbrook Road	55	1	4	2	1198	1201
2318	ML5535B	0	24.82	0.412153	CR 5	Esterbrook Road	55	1	4	2	1223	1201
2319	ML5535B	0	24.82	0.412153	CR 5	Esterbrook Road	55	1	4	2	1223	1224
2320	ML5535B	0	24.82	0.412153	CR 5	Esterbrook Road	55	1	4	2	1232	1224
2321	ML5535B	0	24.82	0.412153	CR 5	Esterbrook Road	55	1	4	2	1232	1233
2322	ML5535B	0	24.82	0.412153	CR 5	Esterbrook Road	55	1	4	2	1237	1233
2323	ML5535B	0	24.82	0.412153	CR 5	Esterbrook Road	55	1	4	2	1266	1237
2324	ML5535B	0	24.82	0.412153	CR 5	Esterbrook Road	55	1	4	2	1266	1267
2330	ML5535B	0	24.82	0.412153	CR 5	Esterbrook Road	55	1	4	2	1235	1239
2332	ML5535B	0	24.82	0.412153	CR 5	Esterbrook Road	55	1	4	2	1278	1267
2334	ML5535B	0	24.82	0.412153	CR 5	Esterbrook Road	55	1	4	2	1239	1278
1067	ML6757B	0	2.37	0.034122	CR 135-2	Epler Road	55	1	4	2	2111	2113
2246	ML8118B	0	13.5	0.215674	CR 214	Emigrant Hill Road	55	1	4	2	1956	1724
2189	ML8115B	0	1.73	0.03295	CR 211	Elkhorn Creek Road	55	1	4	2	1407	1391
1111	ML6943B	0	7.1	0.135351	CR 228-5	Eklund Road	55	1	4	2	2811	2851
1113	ML6943B	0	7.1	0.135351	CR 228-5	Eklund Road	55	1	4	2	2713	2811

ID	ROUTE	FROM_MP	TO_MP	Shape_Leng	Road_ID	ROAD_NAME	SPEED	NUM_LANES	FUNC_CLASS	ONEWAY_TWO	A	B
275	ML5588B	0	2.23	0.044475	CR 55	Eberspecher Road	55	1	4	2	1299	1323
1908	ML8030B	0	1.53	0.029747	CR 48	East Oak Road	55	1	4	2	1634	1620
1909	ML8030B	0	1.53	0.029747	CR 48	East Oak Road	55	1	4	2	1620	1609
1797	ML8029B	0	3.97	0.073619	CR 47	East Laramie River Road	55	1	4	2	1592	1611
1943	ML8029B	0	3.97	0.073619	CR 47	East Laramie River Road	55	1	4	2	1507	1592
2163	ML8029B	0	3.97	0.073619	CR 47	East Laramie River Road	55	1	4	2	1502	1503
2165	ML8029B	0	3.97	0.073619	CR 47	East Laramie River Road	55	1	4	2	1503	1507
2170	ML8107B	0	3.04	0.054797	CR 195	East Johnson Road	65	1	4	2	1494	1495
2171	ML8107B	0	3.04	0.054797	CR 195	East Johnson Road	65	1	4	2	1495	1574
2133	ML8140B	0	1.04	0.018964	CR 263	East Hunton Creek	55	1	4	2	1685	1709
1749	ML8134B	0	4.36	0.08384	CR 249	East Havely Road	55	1	4	2	2051	2076
1750	ML8134B	0	4.36	0.08384	CR 249	East Havely Road	55	1	4	2	1969	2051
1919	ML8149B	0	4.29	0.077755	CR 273	East Fairview Road	65	1	4	2	1583	1600
1920	ML8149B	0	4.29	0.077755	CR 273	East Fairview Road	65	1	4	2	1600	1606
1923	ML8149B	0	4.29	0.077755	CR 273	East Fairview Road	65	1	4	2	1606	1629
1924	ML8149B	0	4.29	0.077755	CR 273	East Fairview Road	65	1	4	2	1629	1633
1925	ML8149B	0	4.29	0.077755	CR 273	East Fairview Road	65	1	4	2	1633	1680
1934	ML8149B	0	4.29	0.077755	CR 273	East Fairview Road	65	1	4	2	1576	1583
1936	ML8149B	0	4.29	0.077755	CR 273	East Fairview Road	65	1	4	2	1566	1576
1899	ML8098B	0	0.97	0.018598	CR 177	East Cole Road	65	1	4	2	1587	1604
381	ML5584B	0.56	19.01	0.350206	CR 52	East Antelope Road 4820	65	1	4	2	1275	1426
2528	ML5584B	0.56	3.04	0.047582	CR 4820	East Antelope Road 4820	65	1	4	2	1269	1285
84	ML5036B	0	14.06	0.220427	CR 57	Dutton Creek Road	65	1	4	2	1054	1039
85	ML5036B	0	14.06	0.220427	CR 57	Dutton Creek Road	65	1	4	2	1039	1018
443	ML7766B	0	4.39	0.067024	CR 85	Dutch Joe Road	55	1	4	2	2363	2396
628	ML5997B	0	5.45	0.088865	CR 23D	Duncan Cut Across	55	1	4	2	2287	2313
1005	ML5997B	0	5.45	0.088865	CR 23D	Duncan Cut Across	55	1	4	2	2313	2309
200	ML5570B	0	28.8	0.520804	CR 38	Dull Center Road	55	1	4	2	1580	1579
201	ML5570B	0	28.8	0.520804	CR 38	Dull Center Road	55	1	4	2	1655	1653

ID	ROUTE	FROM_MP	TO_MP	Shape_Leng	Road_ID	ROAD_NAME	SPEED	NUM_LANES	FUNC_CLASS	ONEWAY_TWO	A	B
202	ML5570B	0	28.8	0.520804	CR 38	Dull Center Road	55	1	4	2	1655	1656
203	ML5570B	0	28.8	0.520804	CR 38	Dull Center Road	55	1	4	2	1580	1653
290	ML5570B	0	28.8	0.520804	CR 38	Dull Center Road	55	1	4	2	1319	1367
292	ML5570B	0	28.8	0.520804	CR 38	Dull Center Road	55	1	4	2	1367	1366
297	ML5570B	0	28.8	0.520804	CR 38	Dull Center Road	55	1	4	2	1366	1578
1914	ML8036B	0	2.72	0.05298	CR 71	Drake Road	55	1	4	2	1632	1677
1915	ML8036B	0	2.72	0.05298	CR 71	Drake Road	55	1	4	2	1585	1607
1917	ML8036B	0	2.72	0.05298	CR 71	Drake Road	55	1	4	2	1607	1632
222	ML7707B	0	10.25	0.152272	CR 2	Dixon Road	55	1	4	2	2043	2069
245	ML7724B	0	26.92	0.441351	CR 24	Divide Road	55	1	4	2	1766	1734
246	ML7724B	0	26.92	0.441351	CR 24	Divide Road	55	1	4	2	1822	1766
253	ML7724B	0	26.92	0.441351	CR 24	Divide Road	55	1	4	2	1734	1889
412	ML7724B	0	26.92	0.441351	CR 24	Divide Road	55	1	4	2	1886	1822
1043	ML6926B	0	12.24	0.232425	CR 222-1	Divide Road	55	1	4	2	2232	2278
1047	ML6926B	0	12.24	0.232425	CR 222-1	Divide Road	55	1	4	2	2212	2232
1048	ML6926B	0	12.24	0.232425	CR 222-1	Divide Road	55	1	4	2	2178	2212
1050	ML6926B	0	12.24	0.232425	CR 222-1	Divide Road	55	1	4	2	2142	2178
1051	ML6926B	0	12.24	0.232425	CR 222-1	Divide Road	55	1	4	2	2111	2142
1052	ML6926B	0	12.24	0.232425	CR 222-1	Divide Road	55	1	4	2	2067	2111
1053	ML6926B	0	12.24	0.232425	CR 222-1	Divide Road	55	1	4	2	2067	2065
1054	ML6926B	0	12.24	0.232425	CR 222-1	Divide Road	55	1	4	2	2044	2065
61	ML5070B	0	3.5	0.058638	CR 416	Dinwiddie Road	55	1	4	2	1007	1007
63	ML5070B	0	3.5	0.058638	CR 416	Dinwiddie Road	55	1	4	2	1004	1007
65	ML5070B	0	3.5	0.058638	CR 416	Dinwiddie Road	55	1	4	2	1004	1004
4	ML8093B	0	7.91	0.13289	CR 161	Dickinson Hill Road	65	1	4	2	2005	2086
252	ML5579B	0	9.56	0.145943	CR 47	Dickau Road	55	1	4	2	1404	1444
2264	ML8063B	0	8.62	0.162774	CR 104	Diamond Road	65	1	4	2	1770	1504
1570	ML6945B	0	2.75	0.050283	CR 229-1	Dereemer Road	55	1	4	2	1351	1368
172	ML5550B	0	11.13	0.191431	CR 19	Deer Creek Road	65	1	4	2	1037	1029

ID	ROUTE	FROM_MP	TO_MP	Shape_Leng	Road_ID	ROAD_NAME	SPEED	NUM_LANES	FUNC_CLASS	ONEWAY_TWO	A	B
1688	ML5550B	0	11.13	0.191431	CR 19	Deer Creek Road	65	1	4	2	1056	1037
1689	ML5550B	0	11.13	0.191431	CR 19	Deer Creek Road	65	1	4	2	1057	1056
1741	ML8069B	0	8.92	0.147171	CR 113	Deer Creek Road	65	1	4	2	2005	2048
1744	ML8069B	0	8.92	0.147171	CR 113	Deer Creek Road	65	1	4	2	2048	2084
554	ML9287B	0	13.75	0.247721	CR 76A	Deer Creek Rd.	65	1	4	2	2319	2320
580	ML9287B	0	13.75	0.247721	CR 76A	Deer Creek Rd.	65	1	4	2	2168	2150
581	ML9287B	0	13.75	0.247721	CR 76A	Deer Creek Rd.	65	1	4	2	2150	2084
638	ML9287B	0	13.75	0.247721	CR 76A	Deer Creek Rd.	65	1	4	2	2220	2168
639	ML9287B	0	13.75	0.247721	CR 76A	Deer Creek Rd.	65	1	4	2	2239	2220
641	ML9287B	0	13.75	0.247721	CR 76A	Deer Creek Rd.	65	1	4	2	2288	2239
651	ML9287B	0	13.75	0.247721	CR 76A	Deer Creek Rd.	65	1	4	2	2320	2288
1114	ML6805B	0	2.02	0.029059	CR 152-3	Debruyn Road	55	1	4	2	2615	2617
1130	ML6805B	0	2.02	0.029059	CR 152-3	Debruyn Road	55	1	4	2	2617	2616
1197	ML6837B	0	0.49	0.00731	CR 160-1	Dean Road	55	1	4	2	2874	2875
2252	ML8015B	0	0.75	0.012025	CR 3	Deadhead Road	55	1	4	2	1377	1379
2253	ML8015B	0	0.75	0.012025	CR 3	Deadhead Road	55	1	4	2	1377	1377
1592	ML7407B	0	1.13	0.021791	CR 853	Dayshia Lane	65	1	4	2	1849	1847
1650	ML5076B	0	1.75	0.039689	CR 522	Curtis Street West	55	1	4	2	1145	1140
1652	ML5076B	0	1.75	0.039689	CR 522	Curtis Street West	55	1	4	2	1146	1145
1555	ML6879B	0	10.8	0.199337	CR 210-1	Crystal Lake Road	55	1	4	2	1355	1303
1559	ML6879B	0	10.8	0.199337	CR 210-1	Crystal Lake Road	55	1	4	2	1400	1355
1484	ML7290B	0	1.36	0.025153	CR 730	Crow Creek Road	55	1	4	2	1371	1364
1867	ML9616B	0	1.35	0.021277	CR 56	CR 56	55	1	4	2	1482	1496
190	ML5576B	0	16.17	0.295608	CR 45	Cow Creek Road	55	1	4	2	1618	1658
191	ML5576B	0	16.17	0.295608	CR 45	Cow Creek Road	55	1	4	2	1618	1619
192	ML5576B	0	16.17	0.295608	CR 45	Cow Creek Road	55	1	4	2	1454	1453
193	ML5576B	0	16.17	0.295608	CR 45	Cow Creek Road	55	1	4	2	1459	1458
194	ML5576B	0	16.17	0.295608	CR 45	Cow Creek Road	55	1	4	2	1454	1458
195	ML5576B	0	16.17	0.295608	CR 45	Cow Creek Road	55	1	4	2	1421	1420

ID	ROUTE	FROM_MP	TO_MP	Shape_Leng	Road_ID	ROAD_NAME	SPEED	NUM_LANES	FUNC_CLASS	ONEWAY_TWO	A	B
196	ML5576B	0	16.17	0.295608	CR 45	Cow Creek Road	55	1	4	2	1421	1453
197	ML5576B	0	16.17	0.295608	CR 45	Cow Creek Road	55	1	4	2	1459	1480
198	ML5576B	0	16.17	0.295608	CR 45	Cow Creek Road	55	1	4	2	1481	1480
205	ML5576B	0	16.17	0.295608	CR 45	Cow Creek Road	55	1	4	2	1614	1619
206	ML5576B	0	16.17	0.295608	CR 45	Cow Creek Road	55	1	4	2	1481	1614
207	ML7708B	0	17.1	0.310599	CR 3	Cow Creek Road	55	1	4	2	1896	1898
208	ML7708B	0	17.1	0.310599	CR 3	Cow Creek Road	55	1	4	2	1939	1938
209	ML7708B	0	17.1	0.310599	CR 3	Cow Creek Road	55	1	4	2	1938	1898
210	ML7708B	0	17.1	0.310599	CR 3	Cow Creek Road	55	1	4	2	1668	1669
211	ML7708B	0	17.1	0.310599	CR 3	Cow Creek Road	55	1	4	2	1720	1721
212	ML7708B	0	17.1	0.310599	CR 3	Cow Creek Road	55	1	4	2	1896	1721
213	ML7708B	0	17.1	0.310599	CR 3	Cow Creek Road	55	1	4	2	1668	1614
214	ML7708B	0	17.1	0.310599	CR 3	Cow Creek Road	55	1	4	2	1720	1669
215	ML7708B	0	17.1	0.310599	CR 3	Cow Creek Road	55	1	4	2	2106	1939
291	ML5576B	0	16.17	0.295608	CR 45	Cow Creek Road	55	1	4	2	1367	1420
178	ML5552B	0	1.4	0.022083	CR 21	County Line/Coal Shadow Road	55	1	4	2	1019	1020
315	ML5951B	0	10.79	0.172709	CR 9B	County Line Rd. 9B	55	1	4	2	2124	2082
2358	ML5951B	0	10.79	0.172709	CR 9B	County Line Rd. 9B	55	1	4	2	2164	2159
2359	ML5951B	0	10.79	0.172709	CR 9B	County Line Rd. 9B	55	1	4	2	2164	2164
2532	ML5951B	0	10.79	0.172709	CR 9B	County Line Rd. 9B	55	1	4	2	2144	2124
2533	ML5951B	0	10.79	0.172709	CR 9B	County Line Rd. 9B	55	1	4	2	2159	2144
335	ML5999B	0	7.59	0.12529	CR 23F	County Line Rd. 23F	55	1	4	2	2226	2325
500	ML5999B	0	7.59	0.12529	CR 23F	County Line Rd. 23F	55	1	4	2	2325	2329
1014	ML5942B	0	7.25	0.103262	CR 1A	County Line Rd. 1A	55	1	4	2	2091	2089
2360	ML5978B	0	8.13	0.127988	CR 15J	County Line Rd. 15J	55	1	4	2	2160	2159
2363	ML5978B	0	8.13	0.127988	CR 15J	County Line Rd. 15J	55	1	4	2	2226	2160
144	ML5044B	0	23.92	0.391597	CR 71	Cottonwood Park Road	55	1	4	2	1221	1250
146	ML5044B	0	23.92	0.391597	CR 71	Cottonwood Park Road	55	1	4	2	1250	1297
1177	ML5936B	0	9.31	0.15162	CR 4	Corners Road	55	1	4	2	2407	2409

ID	ROUTE	FROM_MP	TO_MP	Shape_Leng	Road_ID	ROAD_NAME	SPEED	NUM_LANES	FUNC_CLASS	ONEWAY_TWO	A	B
1180	ML5936B	0	9.31	0.15162	CR 4	Corners Road	55	1	4	2	2407	2349
1181	ML5936B	0	9.31	0.15162	CR 4	Corners Road	55	1	4	2	2412	2411
1182	ML5936B	0	9.31	0.15162	CR 4	Corners Road	55	1	4	2	2412	2423
1186	ML5936B	0	9.31	0.15162	CR 4	Corners Road	55	1	4	2	2533	2423
2393	ML8120B	0	11.93	0.210201	CR 217	Cooney Hills Road	55	1	4	2	1346	1316
2396	ML8120B	0	11.93	0.210201	CR 217	Cooney Hills Road	55	1	4	2	1397	1346
374	ML8088B	0	1.42	0.026135	CR 147	Collins Road	55	1	4	2	1445	1424
179	ML5553B	0	6.27	0.095347	CR 22	Cole Creek Road	55	1	4	2	1033	1031
154	ML5555B	0	18.27	0.30662	CR 24	Cold Springs Road	55	1	4	2	1113	1055
156	ML5555B	0	18.27	0.30662	CR 24	Cold Springs Road	55	1	4	2	1112	1113
243	ML7706B	0	8.06	0.151662	CR 1	Coffey Road	55	1	4	2	2103	1897
199	ML5571B	0	5.9	0.08828	CR 39	Clareton Road/Fiddle Back Road	55	1	4	2	1578	1579
204	ML5571B	0	5.9	0.08828	CR 39	Clareton Road/Fiddle Back Road	55	1	4	2	1579	1615
423	ML7710B	0	25.48	0.443651	CR 6	Cheyenne River Road	55	1	4	2	2776	2396
428	ML7710B	0	25.48	0.443651	CR 6	Cheyenne River Road	55	1	4	2	2396	2265
169	ML5562B	0	5.4	0.098673	CR 30	Cherokee Trail	55	1	4	2	1204	1166
87	ML5015B	0	6.7	0.106738	CR 31	Cherokee Park Road	55	1	4	2	1191	1189
88	ML5015B	0	6.7	0.106738	CR 31	Cherokee Park Road	55	1	4	2	1208	1191
2443	ML6962B	0	6.29	0.119741	CR 242-1	Chalk Hill/Bliss Road	55	1	4	2	1591	1524
2444	ML6962B	0	6.29	0.119741	CR 242-1	Chalk Hill/Bliss Road	55	1	4	2	1714	1591
2306	ML5539B	0	3.9	0.071738	CR 9	Chalk Buttes Road	65	1	4	2	1248	1217
1229	ML6856B	0	36.8	0.688897	CR 203-1	Chalk Bluff/"78" Road	55	1	4	2	2792	2794
1230	ML6856B	0	36.8	0.688897	CR 203-1	Chalk Bluff/"78" Road	55	1	4	2	2794	2840
1232	ML6856B	0	36.8	0.688897	CR 203-1	Chalk Bluff/"78" Road	55	1	4	2	2840	2906
1233	ML6856B	0	36.8	0.688897	CR 203-1	Chalk Bluff/"78" Road	55	1	4	2	2726	2792
1256	ML6856B	0	36.8	0.688897	CR 203-1	Chalk Bluff/"78" Road	55	1	4	2	2624	2625
1258	ML6856B	0	36.8	0.688897	CR 203-1	Chalk Bluff/"78" Road	55	1	4	2	2560	2568
1259	ML6856B	0	36.8	0.688897	CR 203-1	Chalk Bluff/"78" Road	55	1	4	2	2568	2569
1260	ML6856B	0	36.8	0.688897	CR 203-1	Chalk Bluff/"78" Road	55	1	4	2	2569	2605

ID	ROUTE	FROM_MP	TO_MP	Shape_Leng	Road_ID	ROAD_NAME	SPEED	NUM_LANES	FUNC_CLASS	ONEWAY_TWO	A	B
1262	ML6856B	0	36.8	0.688897	CR 203-1	Chalk Bluff/"78" Road	55	1	4	2	2605	2624
1263	ML6856B	0	36.8	0.688897	CR 203-1	Chalk Bluff/"78" Road	55	1	4	2	2537	2560
1264	ML6856B	0	36.8	0.688897	CR 203-1	Chalk Bluff/"78" Road	55	1	4	2	2506	2537
1265	ML6856B	0	36.8	0.688897	CR 203-1	Chalk Bluff/"78" Road	55	1	4	2	2477	2506
1266	ML6856B	0	36.8	0.688897	CR 203-1	Chalk Bluff/"78" Road	55	1	4	2	2451	2477
1267	ML6856B	0	36.8	0.688897	CR 203-1	Chalk Bluff/"78" Road	55	1	4	2	2450	2451
1268	ML6856B	0	36.8	0.688897	CR 203-1	Chalk Bluff/"78" Road	55	1	4	2	2439	2450
1269	ML6856B	0	36.8	0.688897	CR 203-1	Chalk Bluff/"78" Road	55	1	4	2	2405	2439
1270	ML6856B	0	36.8	0.688897	CR 203-1	Chalk Bluff/"78" Road	55	1	4	2	2366	2367
1271	ML6856B	0	36.8	0.688897	CR 203-1	Chalk Bluff/"78" Road	55	1	4	2	2367	2405
1272	ML6856B	0	36.8	0.688897	CR 203-1	Chalk Bluff/"78" Road	55	1	4	2	2335	2366
1273	ML6856B	0	36.8	0.688897	CR 203-1	Chalk Bluff/"78" Road	55	1	4	2	2268	2335
1274	ML6856B	0	36.8	0.688897	CR 203-1	Chalk Bluff/"78" Road	55	1	4	2	1995	2015
1275	ML6856B	0	36.8	0.688897	CR 203-1	Chalk Bluff/"78" Road	55	1	4	2	1982	1995
1276	ML6856B	0	36.8	0.688897	CR 203-1	Chalk Bluff/"78" Road	55	1	4	2	1877	1982
1281	ML6856B	0	36.8	0.688897	CR 203-1	Chalk Bluff/"78" Road	55	1	4	2	2229	2268
1282	ML6856B	0	36.8	0.688897	CR 203-1	Chalk Bluff/"78" Road	55	1	4	2	2161	2229
1283	ML6856B	0	36.8	0.688897	CR 203-1	Chalk Bluff/"78" Road	55	1	4	2	2015	2161
2484	ML6856B	0	36.8	0.688897	CR 203-1	Chalk Bluff/"78" Road	55	1	4	2	2662	2664
2485	ML6856B	0	36.8	0.688897	CR 203-1	Chalk Bluff/"78" Road	55	1	4	2	2664	2726
2486	ML6856B	0	36.8	0.688897	CR 203-1	Chalk Bluff/"78" Road	55	1	4	2	2625	2662
1239	ML6850B	0	12.26	0.175228	CR 164-1	Cemetery/Pine Bluff South Road	65	1	4	2	2988	2989
1242	ML6850B	0	12.26	0.175228	CR 164-1	Cemetery/Pine Bluff South Road	65	1	4	2	2989	2990
1252	ML6850B	0	12.26	0.175228	CR 164-1	Cemetery/Pine Bluff South Road	65	1	4	2	2990	2991
337	ML8097B	0	4.18	0.060408	CR 175	Cedar Top Road	55	1	4	2	1857	1859
2502	ML8062B	0	5.84	0.103131	CR 103	Cassa Road	55	1	4	2	1501	1568
2503	ML8062B	0	5.84	0.103131	CR 103	Cassa Road	55	1	4	2	1557	1511
2504	ML8062B	0	5.84	0.103131	CR 103	Cassa Road	55	1	4	2	1568	1557
96	ML5031B	0	2.7	0.047756	CR 53	Carroll Lake Road	55	1	4	2	1095	1099

ID	ROUTE	FROM_MP	TO_MP	Shape_Leng	Road_ID	ROAD_NAME	SPEED	NUM_LANES	FUNC_CLASS	ONEWAY_TWO	A	B
1257	ML6802B	0	0.61	0.011151	CR 151-A	Carpenter Road	65	1	4	2	2567	2560
536	ML7741B	0	15.92	0.307244	CR 51	Canfield Road	55	1	4	2	2987	3005
538	ML7741B	0	15.92	0.307244	CR 51	Canfield Road	55	1	4	2	2940	2987
539	ML7741B	0	15.92	0.307244	CR 51	Canfield Road	55	1	4	2	2882	2940
540	ML7741B	0	15.92	0.307244	CR 51	Canfield Road	55	1	4	2	2475	2772
542	ML7741B	0	15.92	0.307244	CR 51	Canfield Road	55	1	4	2	2772	2882
1614	ML7280B	0	0.8	0.012154	CR 720	Cadillac Road	55	1	4	2	1902	1935
367	ML8022B	0	15.68	0.265484	CR 17	C Street	55	1	4	2	1625	1626
369	ML8022B	0	15.68	0.265484	CR 17	C Street	55	1	4	2	1456	1474
370	ML8022B	0	15.68	0.265484	CR 17	C Street	55	1	4	2	1474	1625
150	ML8116B	0	1.32	0.020274	CR 212	Buttner Road	55	1	4	2	1336	1332
407	ML7738B	0	2.74	0.046857	CR 49	Business Route	45	1	4	2	2136	2109
2378	ML7738B	0	2.74	0.046857	CR 49	Business Route	45	1	4	2	2109	2099
51	ML5068B	0	1.2	0.027337	CR 322	Bull Mountain Road	55	1	4	2	1100	1096
1466	ML7338B	0	1.36	0.024262	CR 779	Buick Road	55	1	4	2	1878	1895
1472	ML7338B	0	1.36	0.024262	CR 779	Buick Road	55	1	4	2	1895	1935
1550	ML5014B	0	2.3	0.040918	CR 30	Buford Road	55	1	4	2	1291	1292
1552	ML5014B	0	2.3	0.040918	CR 30	Buford Road	55	1	4	2	1292	1303
2249	ML8056B	0	7.5	0.111041	CR 91	Brush Creek Road	55	1	4	2	1395	1385
2328	ML5540B	0	1.39	0.02621	CR 10	Bruner Road	55	1	4	2	1229	1239
1118	ML6763B	0	1.95	0.028142	CR 139-1	Bruegman Road	55	1	4	2	2179	2186
56	ML5019B	0	6.8	0.102293	CR 37	Brubaker Lane	55	1	4	2	1097	1102
1891	ML8051B	0	4	0.057142	CR 84	Brookside Road	55	1	4	2	1553	1545
1893	ML8051B	0	4	0.057142	CR 84	Brookside Road	55	1	4	2	1554	1553
1895	ML8051B	0	4	0.057142	CR 84	Brookside Road	55	1	4	2	1550	1554
2541	ML8051B	0	4	0.057142	CR 84	Brookside Road	55	1	4	2	1552	1550
2543	ML8051B	0	4	0.057142	CR 84	Brookside Road	55	1	4	2	1551	1552
1872	ML8041B	0	1.01	0.014576	CR 75	Brookie Road	55	1	4	2	1478	1477
2138	ML8138B	0	2.08	0.03383	CR 261	Brittany Road	55	1	4	2	1683	1707

ID	ROUTE	FROM_MP	TO_MP	Shape_Leng	Road_ID	ROAD_NAME	SPEED	NUM_LANES	FUNC_CLASS	ONEWAY_TWO	A	B
1575	ML6955B	0	19.08	0.352451	CR 237-1	Bristol Ridge/Hirsig Road	55	1	4	2	1652	1654
1576	ML6955B	0	19.08	0.352451	CR 237-1	Bristol Ridge/Hirsig Road	55	1	4	2	1337	1652
2325	ML5537B	0	13.81	0.226336	CR 7	Braae Road	55	1	4	2	1225	1237
2326	ML5537B	0	13.81	0.226336	CR 7	Braae Road	55	1	4	2	1225	1226
2327	ML5537B	0	13.81	0.226336	CR 7	Braae Road	55	1	4	2	1229	1226
2329	ML5537B	0	13.81	0.226336	CR 7	Braae Road	55	1	4	2	1235	1229
2331	ML5537B	0	13.81	0.226336	CR 7	Braae Road	55	1	4	2	1236	1235
170	ML5547B	0	20.59	0.344663	CR 17	Boxelder Road	55	1	4	2	1073	1049
1712	ML5547B	0	20.59	0.344663	CR 17	Boxelder Road	55	1	4	2	1080	1086
1713	ML5547B	0	20.59	0.344663	CR 17	Boxelder Road	55	1	4	2	1088	1073
1715	ML5547B	0	20.59	0.344663	CR 17	Boxelder Road	55	1	4	2	1086	1088
1231	ML6833B	0	1.89	0.026253	CR 159-1	Bowman Road	55	1	4	2	2839	2840
86	ML5067B	0	7.5	0.127046	CR 319	Boulder Ridge Road	55	1	4	2	1191	1132
27	ML5013B	0	10.5	0.191336	CR 25	Boswell Road	55	1	4	2	1025	1000
2140	ML8123B	0	13.36	0.244132	CR 232	Bordeaux Road	55	1	4	2	1708	1965
2141	ML8123B	0	13.36	0.244132	CR 232	Bordeaux Road	55	1	4	2	1588	1589
2142	ML8123B	0	13.36	0.244132	CR 232	Bordeaux Road	55	1	4	2	1589	1683
1728	ML7720B	0	18.56	0.345174	CR 18	Boner Road	55	1	4	2	2448	2682
1729	ML7720B	0	18.56	0.345174	CR 18	Boner Road	55	1	4	2	2682	2999
1873	ML8037B	0	5.03	0.08669	CR 72	Bluffview Road	55	1	4	2	1508	1477
2497	ML8037B	0	5.03	0.08669	CR 72	Bluffview Road	55	1	4	2	1429	1430
2498	ML8037B	0	5.03	0.08669	CR 72	Bluffview Road	55	1	4	2	1477	1429
1326	ML6974B	0	1.49	0.028058	CR 409	Blue Sky Road	55	1	4	2	2203	2180
1327	ML6974B	0	1.49	0.028058	CR 409	Blue Sky Road	55	1	4	2	2180	2177
7	ML6961B	0	1	0.020581	CR 241-1	Bliss Rd	55	1	4	2	1525	1491
504	ML7744B	0	1.5	0.026726	CR 56	Blackmore Road	55	1	4	2	2331	2291
1227	ML6841B	0	10.35	0.148827	CR 161-1	Black Hills Road	65	1	4	2	2903	2906
1243	ML6841B	0	10.35	0.148827	CR 161-1	Black Hills Road	65	1	4	2	2908	2910
1247	ML6841B	0	10.35	0.148827	CR 161-1	Black Hills Road	65	1	4	2	2910	2912

ID	ROUTE	FROM_MP	TO_MP	Shape_Leng	Road_ID	ROAD_NAME	SPEED	NUM_LANES	FUNC_CLASS	ONEWAY_TWO	A	B
2491	ML6841B	0	10.35	0.148827	CR 161-1	Black Hills Road	65	1	4	2	2906	2907
2492	ML6841B	0	10.35	0.148827	CR 161-1	Black Hills Road	65	1	4	2	2907	2908
261	ML5594B	0	12.3	0.23373	CR 63	Bill Hall Road	55	1	4	2	1288	1289
262	ML5594B	0	12.3	0.23373	CR 63	Bill Hall Road	55	1	4	2	1290	1289
263	ML5594B	0	12.3	0.23373	CR 63	Bill Hall Road	55	1	4	2	1290	1362
264	ML5594B	0	12.3	0.23373	CR 63	Bill Hall Road	55	1	4	2	1363	1362
265	ML5594B	0	12.3	0.23373	CR 63	Bill Hall Road	55	1	4	2	1363	1389
266	ML5594B	0	12.3	0.23373	CR 63	Bill Hall Road	55	1	4	2	1390	1389
68	ML5022B	0	5.67	0.085771	CR 44	Big Hollow Road	55	1	4	2	1075	1068
1076	ML6752B	0	2.66	0.038101	CR 131-2	Berry Road	55	1	4	2	2061	2056
1059	ML6838B	0	9.5	0.139863	CR 160-2	Berggren Road	55	1	4	2	2876	2877
1068	ML6838B	0	9.5	0.139863	CR 160-2	Berggren Road	55	1	4	2	2877	2878
1090	ML6838B	0	9.5	0.139863	CR 160-2	Berggren Road	55	1	4	2	2878	2879
1900	ML8045B	2.1	2.85	0.010875	CR 78	Bellis Road	55	1	4	2	1604	1605
1902	ML8045B	2.1	2.85	0.010875	CR 78	Bellis Road	55	1	4	2	1608	1604
1916	ML8044B	0	2.1	0.029904	CR 78	Bellis Road	55	1	4	2	1607	1609
1921	ML8044B	0	2.1	0.029904	CR 78	Bellis Road	55	1	4	2	1606	1607
2309	ML5538B	0	5.2	0.095849	CR 8	Bedtick Road	55	1	4	2	1257	1215
2115	ML6964B	0	2.76	0.053516	CR 245-1	Bear Creek/Marsh Road	65	1	4	2	1742	1744
2117	ML6964B	0	2.76	0.053516	CR 245-1	Bear Creek/Marsh Road	65	1	4	2	1740	1742
2442	ML6964B	0	2.76	0.053516	CR 245-1	Bear Creek/Marsh Road	55	1	4	2	1684	1740
143	ML5058B	0	16.59	0.275171	CR 77	Bear Creek Road	55	1	4	2	1141	1198
874	ML5939B	0	24.06	0.43986	CR 10	Bear Creek Rd.	55	1	4	2	2173	2174
875	ML5939B	0	24.06	0.43986	CR 10	Bear Creek Rd.	55	1	4	2	2193	2174
876	ML5939B	0	24.06	0.43986	CR 10	Bear Creek Rd.	55	1	4	2	2195	2193
877	ML5939B	0	24.06	0.43986	CR 10	Bear Creek Rd.	55	1	4	2	2195	2196
878	ML5939B	0	24.06	0.43986	CR 10	Bear Creek Rd.	55	1	4	2	2173	2089
879	ML5939B	0	24.06	0.43986	CR 10	Bear Creek Rd.	55	1	4	2	2377	2378
880	ML5939B	0	24.06	0.43986	CR 10	Bear Creek Rd.	55	1	4	2	2377	2196

ID	ROUTE	FROM_MP	TO_MP	Shape_Leng	Road_ID	ROAD_NAME	SPEED	NUM_LANES	FUNC_CLASS	ONEWAY_TWO	A	B
881	ML5939B	0	24.06	0.43986	CR 10	Bear Creek Rd.	55	1	4	2	2395	2378
882	ML5939B	0	24.06	0.43986	CR 10	Bear Creek Rd.	65	1	4	2	2533	2395
883	ML5939B	0	24.06	0.43986	CR 10	Bear Creek Rd.	65	1	4	2	2701	2533
1685	ML5043B	0	3	0.043479	CR 67	Banzhaf Lane	65	1	4	2	1035	1036
301	ML7727B	0	2.02	0.039862	CR 30	Baars Road	55	1	4	2	1723	1672
1814	ML8065B	4.34	7.37	0.043245	CR 106	Ayers Road	55	1	4	2	1488	1490
1817	ML8065B	4.34	7.37	0.043245	CR 106	Ayers Road	55	1	4	2	1486	1488
1821	ML8065B	4.34	7.37	0.043245	CR 106	Ayers Road	55	1	4	2	1487	1486
1835	ML8064B	1.35	4.34	0.042728	CR 106	Ayers Road	55	1	4	2	1483	1485
1842	ML8064B	1.35	4.34	0.042728	CR 106	Ayers Road	55	1	4	2	1484	1483
1851	ML8064B	1.35	4.34	0.042728	CR 106	Ayers Road	55	1	4	2	1489	1484
1480	ML7044B	0	0.3	0.004302	CR 480	Avenue B-4	55	1	4	2	1844	1843
1481	ML7044B	0	0.3	0.004302	CR 480	Avenue B-4	55	1	4	2	1845	1844
2104	ML6931B	0	4.07	0.075527	CR 224-1	Atlas Road	65	1	4	2	1700	1701
2414	ML6931B	0	4.07	0.075527	CR 224-1	Atlas Road	65	1	4	2	1647	1700
2453	ML6931B	0	4.07	0.075527	CR 224-1	Atlas Road	65	1	4	2	1701	1803
1297	ML6866B	0	17.18	0.325657	CR 207-1	Arcola Road	55	1	4	2	2303	2370
1298	ML6866B	0	17.18	0.325657	CR 207-1	Arcola Road	55	1	4	2	2270	2303
1301	ML6866B	0	17.18	0.325657	CR 207-1	Arcola Road	55	1	4	2	2163	2199
1302	ML6866B	0	17.18	0.325657	CR 207-1	Arcola Road	55	1	4	2	2199	2270
1493	ML7032B	0	0.32	0.00503	CR 468	Arabian Lane	45	1	4	2	1676	1671
189	ML5569B	0	9.33	0.159965	CR 37	Antelope Coal Mine Road	65	1	4	2	1251	1286
1138	ML6946B	0	0.64	0.012188	CR 229-2	Anderson Road	55	1	4	2	2348	2364
2310	ML5532B	0	1.09	0.020291	CR 2	Anderson Dairy Road	65	1	4	2	1258	1273
1141	ML6846B	0	10.95	0.167052	CR 162-2	Albin/LaGrange Road	65	1	4	2	2950	2949
1148	ML6846B	0	10.95	0.167052	CR 162-2	Albin/LaGrange Road	65	1	4	2	2949	2946
1168	ML6846B	0	10.95	0.167052	CR 162-2	Albin/LaGrange Road	65	1	4	2	2946	2884
1907	ML8043B	0	0.7	0.010214	CR 77	Airport Road	55	1	4	2	1620	1623
1579	ML6960B	0	5.5	0.102488	CR 238-4	A-238-4	55	1	4	2	1675	1673

ID	ROUTE	FROM_MP	TO_MP	Shape_Leng	Road_ID	ROAD_NAME	SPEED	NUM_LANES	FUNC_CLASS	ONEWAY_TWO	A	B
1580	ML6960B	0	5.5	0.102488	CR 238-4	A-238-4	55	1	4	2	1673	1527
1097	ML6739B	0	9.94	0.189044	CR 227-1	A-227-1	55	1	4	2	2410	2479
1098	ML6739B	0	9.94	0.189044	CR 227-1	A-227-1	55	1	4	2	2292	2282
1099	ML6739B	0	9.94	0.189044	CR 227-1	A-227-1	55	1	4	2	2292	2293
1100	ML6739B	0	9.94	0.189044	CR 227-1	A-227-1	55	1	4	2	2293	2410
1101	ML6739B	0	9.94	0.189044	CR 227-1	A-227-1	55	1	4	2	2505	2479
1104	ML6739B	0	9.94	0.189044	CR 227-1	A-227-1	55	1	4	2	2281	2282
1065	ML6933B	0	1.13	0.028152	CR 224-3	A-224-3	55	1	4	2	2968	3016
1032	ML6925B	0	3.02	0.057323	CR 221-1	A-221-1	55	1	4	2	2915	2965
1028	ML6924B	0	8.05	0.153075	CR 220-4	A-220-4	55	1	4	2	2277	2379
1029	ML6924B	0	8.05	0.153075	CR 220-4	A-220-4	55	1	4	2	2379	2495
1250	ML6885B	0	0.51	0.009349	CR 211-3	A-211-3	55	1	4	2	2943	2951
1244	ML6881B	0	6.05	0.114704	CR 210-4	A-210-4	55	1	4	2	2910	2942
1246	ML6881B	0	6.05	0.114704	CR 210-4	A-210-4	55	1	4	2	2730	2798
2266	ML6881B	0	6.05	0.114704	CR 210-4	A-210-4	55	1	4	2	2842	2910
2267	ML6881B	0	6.05	0.114704	CR 210-4	A-210-4	55	1	4	2	2798	2842
1287	ML6860B	0	1.52	0.028718	CR 205-1	A-205-1	55	1	4	2	2198	2191
1288	ML6860B	0	1.52	0.028718	CR 205-1	A-205-1	55	1	4	2	2230	2198
1794	ML8106B	0	1	0.019392	CR 194	A-194	55	1	4	2	1533	1573
1742	ML9405B	0	1.5	0.022065	CR 182	A-182	55	1	4	2	2048	2062
1743	ML9405B	0	1.5	0.022065	CR 182	A-182	55	1	4	2	2048	2048
1105	ML6847B	0	0.43	0.006074	CR 162-3	A-162-3	55	1	4	2	2948	2952
1249	ML6845B	0	1.08	0.015493	CR 162-1	A-162-1	55	1	4	2	2942	2943
1251	ML6845B	0	1.08	0.015493	CR 162-1	A-162-1	55	1	4	2	2943	2944
1023	ML6843B	0	8.25	0.119233	CR 161-3	A-161-3	55	1	4	2	2905	2916
1031	ML6843B	0	8.25	0.119233	CR 161-3	A-161-3	55	1	4	2	2916	2915
1035	ML6843B	0	8.25	0.119233	CR 161-3	A-161-3	55	1	4	2	2915	2917
1057	ML6843B	0	8.25	0.119233	CR 161-3	A-161-3	55	1	4	2	2917	2918
1223	ML6843B	0	8.25	0.119233	CR 161-3	A-161-3	55	1	4	2	2914	2905

ID	ROUTE	FROM_MP	TO_MP	Shape_Leng	Road_ID	ROAD_NAME	SPEED	NUM_LANES	FUNC_CLASS	ONEWAY_TWO	A	B
1187	ML6842B	0	2.48	0.035529	CR 161-2	A-161-2	55	1	4	2	2909	2911
1198	ML6842B	0	2.48	0.035529	CR 161-2	A-161-2	55	1	4	2	2911	2913
1125	ML6839B	0	2.02	0.029003	CR 160-3	A-160-3	55	1	4	2	2888	2885
1110	ML6836B	0	5.06	0.072464	CR 159-4	A-159-4	55	1	4	2	2852	2851
1122	ML6836B	0	5.06	0.072464	CR 159-4	A-159-4	55	1	4	2	2851	2850
1245	ML6820B	0	5.87	0.083886	CR 156-2	A-156-2	55	1	4	2	2729	2730
1248	ML6820B	0	5.87	0.083886	CR 156-2	A-156-2	55	1	4	2	2730	2731
1200	ML6791B	0	1.97	0.028227	CR 149-2	A-149-2	55	1	4	2	2494	2497
1277	ML6790B	0	0.69	0.00921	CR 149-1	A-149-1	55	1	4	2	2506	2484
1136	ML6785B	0	2.04	0.029249	CR 147-4	A-147-4	55	1	4	2	2410	2408
1207	ML6779B	0	2.06	0.029789	CR 145-2	A-145-2	55	1	4	2	2337	2340
1296	ML6775B	0	2	0.028916	CR 143-3	A-143-3	55	1	4	2	2269	2270
1286	ML6771B	0	1.07	0.014383	CR 141-2	A-141-2	55	1	4	2	2229	2230
2460	ML8083B	0	1.43	0.023117	CR 141	A-141	55	1	4	2	1679	1660
1511	ML6731B	0	1.03	0.015167	CR 118-A	A-118-A	55	1	4	2	1593	1594
2445	ML6729B	0	2.04	0.029331	CR 118-1	A-118-1	55	1	4	2	1591	1590
8	ML6727B	0	1.01	0.014626	CR 116-2	A-116-2	55	1	4	2	1524	1525
0	ML9404B	0	2	0.038902	CR 110A	A-110A	55	1	4	2	2009	2054
1541	ML6719B	0	1.14	0.018913	CR 103-2	A-103-2	55	1	4	2	1338	1339
1542	ML6719B	0	1.14	0.018913	CR 103-2	A-103-2	55	1	4	2	1327	1338
567	ML9308B	0	6.02	0.112409	CR 92A	92A	55	1	4	2	2170	2101
568	ML9308B	0	6.02	0.112409	CR 92A	92A	55	1	4	2	2101	2081
572	ML5949B	0	4.8	0.088154	CR 90	90	55	1	4	2	2100	2095
573	ML5949B	0	4.8	0.088154	CR 90	90	55	1	4	2	2157	2100
2479	ML9307B	0	0.25	0.004871	CR 86M	86M	55	1	4	2	2360	2362
2339	ML9306B	0	1.27	0.024439	CR 86B	86B	55	1	4	2	2574	2619
2482	ML9305B	0	0.94	0.017969	CR 86A	86A	55	1	4	2	2333	2359
2288	ML9304B	0	2.35	0.044986	CR 84D	84D	55	1	4	2	2536	2610
2280	ML9303B	0	2.25	0.041851	CR 84C	84C	55	1	4	2	2447	2438

ID	ROUTE	FROM_MP	TO_MP	Shape_Leng	Road_ID	ROAD_NAME	SPEED	NUM_LANES	FUNC_CLASS	ONEWAY_TWO	A	B
2287	ML9303B	0	2.25	0.041851	CR 84C	84C	55	1	4	2	2536	2447
560	ML9302B	0	2.31	0.041501	CR 84B	84B	55	1	4	2	2316	2264
871	ML9300B	0	3.05	0.058458	CR 82D	82D	55	1	4	2	2696	2720
2341	ML9300B	0	3.05	0.058458	CR 82D	82D	55	1	4	2	2621	2656
2343	ML9300B	0	3.05	0.058458	CR 82D	82D	55	1	4	2	2656	2696
558	ML9297B	0	1.25	0.022741	CR 82A	82A	55	1	4	2	2317	2317
869	ML9296B	0	1.01	0.019356	CR 80D	80D	55	1	4	2	2767	2721
553	ML9294B	0	1.09	0.020545	CR 80B	80B	55	1	4	2	2328	2320
576	ML9293B	0	2.05	0.038957	CR 80A	80A	55	1	4	2	2221	2169
636	ML9288B	0	1.09	0.020809	CR 76B	76B	55	1	4	2	2427	2392
858	ML6213B	0	2.11	0.037407	CR 74C	74C	55	1	4	2	2784	2829
860	ML6213B	0	2.11	0.037407	CR 74C	74C	55	1	4	2	2764	2784
23	ML8094B	2.8	6.68	0.09541	CR 730	730	55	1	4	2	1311	1279
849	ML6208B	0	6.76	0.137965	CR 72D	72D	55	1	4	2	2823	2957
621	ML6207B	0	1.95	0.037445	CR 72C	72C	55	1	4	2	2422	2518
625	ML6205B	0	1.16	0.021011	CR 72A	72A	55	1	4	2	2286	2254
1000	ML6200B	0	1.97	0.037514	CR 70B	70B	55	1	4	2	2419	2519
997	ML6199B	0	7.1	0.135785	CR 70A	70A	55	1	4	2	2255	2219
998	ML6199B	0	7.1	0.135785	CR 70A	70A	55	1	4	2	2309	2255
999	ML6199B	0	7.1	0.135785	CR 70A	70A	55	1	4	2	2419	2387
1002	ML6199B	0	7.1	0.135785	CR 70A	70A	55	1	4	2	2387	2309
617	ML6196B	0	4.26	0.081042	CR 68C	68C	55	1	4	2	2657	2550
992	ML6196B	0	4.26	0.081042	CR 68C	68C	55	1	4	2	2550	2532
985	ML6195B	0	2.01	0.038656	CR 68B	68B	55	1	4	2	2521	2516
991	ML6195B	0	2.01	0.038656	CR 68B	68B	55	1	4	2	2416	2516
993	ML6195B	0	2.01	0.038656	CR 68B	68B	55	1	4	2	2521	2530
994	ML6195B	0	2.01	0.038656	CR 68B	68B	55	1	4	2	2532	2530
986	ML6194B	0	3.05	0.058424	CR 68A	68A	55	1	4	2	2315	2311
987	ML6194B	0	3.05	0.058424	CR 68A	68A	55	1	4	2	2315	2322

ID	ROUTE	FROM_MP	TO_MP	Shape_Leng	Road_ID	ROAD_NAME	SPEED	NUM_LANES	FUNC_CLASS	ONEWAY_TWO	A	B
988	ML6194B	0	3.05	0.058424	CR 68A	68A	55	1	4	2	2384	2322
990	ML6194B	0	3.05	0.058424	CR 68A	68A	55	1	4	2	2416	2384
835	ML6189B	0	1.04	0.01894	CR 66C	66C	55	1	4	2	2871	2838
615	ML6188B	0	3.7	0.070591	CR 66B	66B	55	1	4	2	2648	2622
814	ML6188B	0	3.7	0.070591	CR 66B	66B	55	1	4	2	2768	2748
815	ML6188B	0	3.7	0.070591	CR 66B	66B	55	1	4	2	2748	2712
816	ML6188B	0	3.7	0.070591	CR 66B	66B	55	1	4	2	2712	2688
817	ML6188B	0	3.7	0.070591	CR 66B	66B	55	1	4	2	2688	2648
978	ML6187B	0	7.1	0.135609	CR 66A	66A	55	1	4	2	2304	2305
979	ML6187B	0	7.1	0.135609	CR 66A	66A	55	1	4	2	2306	2305
980	ML6187B	0	7.1	0.135609	CR 66A	66A	55	1	4	2	2304	2217
982	ML6187B	0	7.1	0.135609	CR 66A	66A	55	1	4	2	2217	2181
983	ML6187B	0	7.1	0.135609	CR 66A	66A	55	1	4	2	2181	2152
2139	ML8123B	0	13.36	0.244132	CR 232	65	65	1	4	2	1683	1708
801	ML6185B	0	3.71	0.069621	CR 64C	64C	55	1	4	2	2821	2937
17	ML6178B	0	1.03	0.014745	CR 63B	63B	55	1	4	2	3014	3013
2348	ML6177B	0	10.27	0.145949	CR 63A	63A	55	1	4	2	3006	3002
2351	ML6177B	0	10.27	0.145949	CR 63A	63A	55	1	4	2	3009	3006
2353	ML6177B	0	10.27	0.145949	CR 63A	63A	55	1	4	2	3010	3009
2354	ML6177B	0	10.27	0.145949	CR 63A	63A	55	1	4	2	3008	3010
2356	ML6177B	0	10.27	0.145949	CR 63A	63A	55	1	4	2	3007	3008
792	ML6176B	0	0.1	0.001904	CR 62E	62E	55	1	4	2	2735	2738
793	ML6175B	0	0.52	0.009989	CR 62D	62D	55	1	4	2	2735	2724
606	ML6174B	0	4.17	0.080194	CR 62C	62C	55	1	4	2	2547	2578
607	ML6174B	0	4.17	0.080194	CR 62C	62C	55	1	4	2	2612	2634
608	ML6174B	0	4.17	0.080194	CR 62C	62C	55	1	4	2	2578	2612
970	ML6174B	0	4.17	0.080194	CR 62C	62C	55	1	4	2	2511	2509
971	ML6174B	0	4.17	0.080194	CR 62C	62C	55	1	4	2	2511	2517
973	ML6174B	0	4.17	0.080194	CR 62C	62C	55	1	4	2	2517	2547

ID	ROUTE	FROM_MP	TO_MP	Shape_Leng	Road_ID	ROAD_NAME	SPEED	NUM_LANES	FUNC_CLASS	ONEWAY_TWO	A	B
968	ML6173B	0	1.33	0.026873	CR 62B	62B	55	1	4	2	2426	2424
975	ML6172B	0	2.62	0.050908	CR 62A	62A	55	1	4	2	2184	2149
742	ML6169B	0	4.1	0.058473	CR 61E	61E	55	1	4	2	2977	2978
749	ML6169B	0	4.1	0.058473	CR 61E	61E	55	1	4	2	2978	2985
765	ML6169B	0	4.1	0.058473	CR 61E	61E	55	1	4	2	2984	2979
712	ML6167B	0	1.02	0.014542	CR 61C	61C	55	1	4	2	2981	2980
693	ML6166B	0	4.18	0.059973	CR 61B	61B	55	1	4	2	2976	2975
698	ML6166B	0	4.18	0.059973	CR 61B	61B	55	1	4	2	2982	2976
705	ML6166B	0	4.18	0.059973	CR 61B	61B	55	1	4	2	2981	2982
98	ML5089B	0	2.14	0.040534	CR 610A	610A	55	1	4	2	1022	1008
796	ML6163B	0	1.48	0.025435	CR 60D	60D	55	1	4	2	2992	2986
788	ML6162B	0	2.05	0.039108	CR 60C	60C	55	1	4	2	2817	2855
952	ML6161B	0	1.98	0.037804	CR 60B	60B	55	1	4	2	2415	2461
953	ML6161B	0	1.98	0.037804	CR 60B	60B	55	1	4	2	2461	2524
947	ML6160B	0	9.03	0.167594	CR 60A	60A	55	1	4	2	2294	2295
951	ML6160B	0	9.03	0.167594	CR 60A	60A	55	1	4	2	2415	2383
956	ML6160B	0	9.03	0.167594	CR 60A	60A	55	1	4	2	2383	2351
957	ML6160B	0	9.03	0.167594	CR 60A	60A	55	1	4	2	2351	2310
958	ML6160B	0	9.03	0.167594	CR 60A	60A	55	1	4	2	2252	2250
959	ML6160B	0	9.03	0.167594	CR 60A	60A	55	1	4	2	2249	2250
961	ML6160B	0	9.03	0.167594	CR 60A	60A	55	1	4	2	2249	2185
962	ML6160B	0	9.03	0.167594	CR 60A	60A	55	1	4	2	2310	2295
963	ML6160B	0	9.03	0.167594	CR 60A	60A	55	1	4	2	2294	2252
776	ML6153B	0	6.56	0.12532	CR 58D	58D	55	1	4	2	2920	2929
777	ML6153B	0	6.56	0.12532	CR 58D	58D	55	1	4	2	2853	2891
778	ML6153B	0	6.56	0.12532	CR 58D	58D	55	1	4	2	2891	2920
780	ML6153B	0	6.56	0.12532	CR 58D	58D	55	1	4	2	2818	2853
783	ML6153B	0	6.56	0.12532	CR 58D	58D	55	1	4	2	2706	2742
782	ML6152B	0	1.63	0.031085	CR 58C	58C	55	1	4	2	2706	2632

ID	ROUTE	FROM_MP	TO_MP	Shape_Leng	Road_ID	ROAD_NAME	SPEED	NUM_LANES	FUNC_CLASS	ONEWAY_TWO	A	B
940	ML6151B	0	1.02	0.019284	CR 58B	58B	55	1	4	2	2420	2462
938	ML6150B	0	3.07	0.058512	CR 58A	58A	55	1	4	2	2420	2385
941	ML6150B	0	3.07	0.058512	CR 58A	58A	55	1	4	2	2341	2345
943	ML6150B	0	3.07	0.058512	CR 58A	58A	55	1	4	2	2385	2352
944	ML6150B	0	3.07	0.058512	CR 58A	58A	55	1	4	2	2352	2345
945	ML6150B	0	3.07	0.058512	CR 58A	58A	55	1	4	2	2341	2312
810	ML6149B	0	0.24	0.003469	CR 57E	57E	55	1	4	2	2926	2925
785	ML6148B	0	0.52	0.008096	CR 57D	57D	55	1	4	2	2929	2931
762	ML6147B	0	2.05	0.029077	CR 57C	57C	55	1	4	2	2932	2933
763	ML6144B	0	5.19	0.099337	CR 56D	56D	55	1	4	2	2984	3014
764	ML6144B	0	5.19	0.099337	CR 56D	56D	55	1	4	2	2919	2933
770	ML6144B	0	5.19	0.099337	CR 56D	56D	55	1	4	2	2933	2979
768	ML6143B	0	4	0.076248	CR 56C	56C	55	1	4	2	2711	2745
772	ML6143B	0	4	0.076248	CR 56C	56C	55	1	4	2	2698	2711
935	ML6142B	0	1.02	0.019422	CR 56B	56B	55	1	4	2	2418	2463
775	ML6140B	0	1.03	0.014645	CR 55S	55S	55	1	4	2	2919	2920
740	ML6139B	0	4.18	0.060192	CR 55D	55D	55	1	4	2	2892	2893
743	ML6139B	0	4.18	0.060192	CR 55D	55D	55	1	4	2	2893	2894
752	ML6139B	0	4.18	0.060192	CR 55D	55D	55	1	4	2	2894	2890
706	ML6138B	0	2.04	0.028966	CR 55C	55C	55	1	4	2	2895	2896
711	ML6138B	0	2.04	0.028966	CR 55C	55C	55	1	4	2	2897	2895
1183	ML6136B	0	5.22	0.073413	CR 55A	55A	55	1	4	2	2887	2884
1184	ML6136B	0	5.22	0.073413	CR 55A	55A	55	1	4	2	2889	2887
181	ML5554B	0	17.71	0.273982	CR 23	55 Ranch Road	55	1	4	2	1078	1077
750	ML6135B	0	5.1	0.097134	CR 54E	54E	55	1	4	2	2985	3013
751	ML6135B	0	5.1	0.097134	CR 54E	54E	55	1	4	2	2932	2985
753	ML6135B	0	5.1	0.097134	CR 54E	54E	55	1	4	2	2890	2932
754	ML6135B	0	5.1	0.097134	CR 54E	54E	55	1	4	2	2854	2890
756	ML6134B	0	3.06	0.058328	CR 54D	54D	55	1	4	2	2854	2819

ID	ROUTE	FROM_MP	TO_MP	Shape_Leng	Road_ID	ROAD_NAME	SPEED	NUM_LANES	FUNC_CLASS	ONEWAY_TWO	A	B
758	ML6134B	0	3.06	0.058328	CR 54D	54D	55	1	4	2	2783	2751
759	ML6134B	0	3.06	0.058328	CR 54D	54D	55	1	4	2	2819	2783
603	ML6133B	0	3.85	0.073338	CR 54C	54C	55	1	4	2	2586	2553
761	ML6133B	0	3.85	0.073338	CR 54C	54C	55	1	4	2	2679	2586
928	ML6132B	0	2.05	0.038914	CR 54B	54B	55	1	4	2	2464	2417
932	ML6132B	0	2.05	0.038914	CR 54B	54B	55	1	4	2	2417	2390
929	ML6131B	0	5.84	0.110808	CR 54A	54A	55	1	4	2	2155	2156
930	ML6131B	0	5.84	0.110808	CR 54A	54A	55	1	4	2	2188	2156
2344	ML6131B	0	5.84	0.110808	CR 54A	54A	55	1	4	2	2155	2094
2346	ML6131B	0	5.84	0.110808	CR 54A	54A	55	1	4	2	2094	2068
819	ML6130B	0	0.34	0.005932	CR 53S	53S	55	1	4	2	2881	2880
818	ML6125B	0	0.53	0.007464	CR 53D	53D	55	1	4	2	2870	2867
821	ML6125B	0	0.53	0.007464	CR 53D	53D	55	1	4	2	2869	2870
822	ML6125B	0	0.53	0.007464	CR 53D	53D	55	1	4	2	2868	2869
823	ML6125B	0	0.53	0.007464	CR 53D	53D	55	1	4	2	2866	2868
825	ML6125B	0	0.53	0.007464	CR 53D	53D	55	1	4	2	2871	2866
832	ML6125B	0	0.53	0.007464	CR 53D	53D	55	1	4	2	2872	2871
786	ML6124B	0	2.11	0.030526	CR 53C	53C	55	1	4	2	2853	2855
707	ML6123B	0	6.77	0.098677	CR 53B	53B	55	1	4	2	2862	2863
715	ML6123B	0	6.77	0.098677	CR 53B	53B	55	1	4	2	2858	2862
725	ML6123B	0	6.77	0.098677	CR 53B	53B	55	1	4	2	2857	2858
695	ML6122B	0	3.07	0.043666	CR 53A	53A	55	1	4	2	2859	2861
699	ML6122B	0	3.07	0.043666	CR 53A	53A	55	1	4	2	2864	2859
746	ML6121B	0	2.74	0.05107	CR 52K	52K	55	1	4	2	2753	2715
925	ML6118B	0	1.1	0.021335	CR 52A	52A	55	1	4	2	2580	2546
530	ML6117B	0	4.21	0.060199	CR 51G	51G	55	1	4	2	2836	2836
532	ML6117B	0	4.21	0.060199	CR 51G	51G	55	1	4	2	2836	2837
856	ML6114B	0	1.98	0.029846	CR 51D	51D	55	1	4	2	2828	2829
744	ML6112B	0	2.74	0.03882	CR 51B	51B	55	1	4	2	2824	2825

ID	ROUTE	FROM_MP	TO_MP	Shape_Leng	Road_ID	ROAD_NAME	SPEED	NUM_LANES	FUNC_CLASS	ONEWAY_TWO	A	B
755	ML6112B	0	2.74	0.03882	CR 51B	51B	55	1	4	2	2819	2824
766	ML6112B	0	2.74	0.03882	CR 51B	51B	55	1	4	2	2813	2819
773	ML6112B	0	2.74	0.03882	CR 51B	51B	55	1	4	2	2815	2813
774	ML6112B	0	2.74	0.03882	CR 51B	51B	55	1	4	2	2815	2815
660	ML6111B	0	6.74	0.097819	CR 51A	51A	55	1	4	2	2826	2822
665	ML6111B	0	6.74	0.097819	CR 51A	51A	55	1	4	2	2822	2814
668	ML6111B	0	6.74	0.097819	CR 51A	51A	55	1	4	2	2814	2816
672	ML6111B	0	6.74	0.097819	CR 51A	51A	55	1	4	2	2816	2827
722	ML6110B	0	4.24	0.081126	CR 50B	50B	55	1	4	2	2900	2899
726	ML6110B	0	4.24	0.081126	CR 50B	50B	55	1	4	2	2899	2857
730	ML6110B	0	4.24	0.081126	CR 50B	50B	55	1	4	2	2857	2759
734	ML6110B	0	4.24	0.081126	CR 50B	50B	55	1	4	2	2759	2737
916	ML6109B	0	8.23	0.156607	CR 50A	50A	55	1	4	2	2258	2223
917	ML6109B	0	8.23	0.156607	CR 50A	50A	55	1	4	2	2350	2258
918	ML6109B	0	8.23	0.156607	CR 50A	50A	55	1	4	2	2421	2350
922	ML6109B	0	8.23	0.156607	CR 50A	50A	55	1	4	2	2223	2187
923	ML6109B	0	8.23	0.156607	CR 50A	50A	55	1	4	2	2428	2421
683	ML6108B	0	3.19	0.047296	CR 49N	49N	55	1	4	2	2795	2806
908	ML6103B	0	4.09	0.076454	CR 48A	48A	55	1	4	2	2551	2522
910	ML6103B	0	4.09	0.076454	CR 48A	48A	55	1	4	2	2522	2466
911	ML6103B	0	4.09	0.076454	CR 48A	48A	55	1	4	2	2466	2414
913	ML6103B	0	4.09	0.076454	CR 48A	48A	55	1	4	2	2414	2388
541	ML6101B	0	12.33	0.175312	CR 47E	47E	55	1	4	2	2771	2772
646	ML6100B	0	8.26	0.142391	CR 47D	47D	55	1	4	2	2594	2592
647	ML6100B	0	8.26	0.142391	CR 47D	47D	55	1	4	2	2654	2594
847	ML6100B	0	8.26	0.142391	CR 47D	47D	55	1	4	2	2744	2746
851	ML6100B	0	8.26	0.142391	CR 47D	47D	55	1	4	2	2746	2749
853	ML6100B	0	8.26	0.142391	CR 47D	47D	55	1	4	2	2749	2750
859	ML6100B	0	8.26	0.142391	CR 47D	47D	55	1	4	2	2750	2764

ID	ROUTE	FROM_MP	TO_MP	Shape_Leng	Road_ID	ROAD_NAME	SPEED	NUM_LANES	FUNC_CLASS	ONEWAY_TWO	A	B
865	ML6100B	0	8.26	0.142391	CR 47D	47D	55	1	4	2	2764	2765
867	ML6100B	0	8.26	0.142391	CR 47D	47D	55	1	4	2	2695	2654
840	ML9335B	0	0.87	0.01261	CR 47C	47C	55	1	4	2	2743	2741
843	ML9335B	0	0.87	0.01261	CR 47C	47C	55	1	4	2	2747	2743
844	ML9335B	0	0.87	0.01261	CR 47C	47C	55	1	4	2	2744	2747
827	ML6099B	0	1.02	0.014538	CR 47B	47B	55	1	4	2	2740	2748
686	ML9343B	6.57	18.43	0.169051	CR 47A	47A	55	1	4	2	2760	2758
697	ML9343B	6.57	18.43	0.169051	CR 47A	47A	55	1	4	2	2755	2760
708	ML9343B	6.57	18.43	0.169051	CR 47A	47A	55	1	4	2	2761	2755
717	ML9343B	6.57	18.43	0.169051	CR 47A	47A	55	1	4	2	2756	2761
729	ML9343B	6.57	18.43	0.169051	CR 47A	47A	55	1	4	2	2759	2756
737	ML9343B	6.57	18.43	0.169051	CR 47A	47A	55	1	4	2	2757	2759
747	ML6098B	1.03	6.57	0.079597	CR 47A	47A	55	1	4	2	2753	2762
757	ML6098B	1.03	6.57	0.079597	CR 47A	47A	55	1	4	2	2751	2753
769	ML6098B	1.03	6.57	0.079597	CR 47A	47A	55	1	4	2	2745	2751
784	ML6098B	1.03	6.57	0.079597	CR 47A	47A	55	1	4	2	2742	2745
790	ML6098B	1.03	6.57	0.079597	CR 47A	47A	55	1	4	2	2738	2742
795	ML6098B	1.03	6.57	0.079597	CR 47A	47A	55	1	4	2	2739	2738
806	ML9344B	0	1.03	0.014982	CR 47A	47A	55	1	4	2	2736	2754
720	ML6097B	0	3.04	0.05796	CR 46C	46C	55	1	4	2	2928	2983
2357	ML6097B	0	3.04	0.05796	CR 46C	46C	55	1	4	2	2983	3007
664	ML6094B	0	0.45	0.006552	CR 45M	45M	55	1	4	2	2727	2728
870	ML6093B	0	2.02	0.028739	CR 45F	45F	55	1	4	2	2721	2720
745	ML6090B	0	3.07	0.043762	CR 45C	45C	55	1	4	2	2717	2715
767	ML6090B	0	3.07	0.043762	CR 45C	45C	55	1	4	2	2715	2711
694	ML6088B	0	1.01	0.014391	CR 45A	45A	55	1	4	2	2716	2718
716	ML6086B	0	3.08	0.058571	CR 44B	44B	55	1	4	2	2635	2686
718	ML6086B	0	3.08	0.058571	CR 44B	44B	55	1	4	2	2686	2756
899	ML6085B	0	13.85	0.259025	CR 44A	44A	55	1	4	2	2283	2256

ID	ROUTE	FROM_MP	TO_MP	Shape_Leng	Road_ID	ROAD_NAME	SPEED	NUM_LANES	FUNC_CLASS	ONEWAY_TWO	A	B
900	ML6085B	0	13.85	0.259025	CR 44A	44A	55	1	4	2	2314	2283
902	ML6085B	0	13.85	0.259025	CR 44A	44A	55	1	4	2	2256	2214
905	ML6085B	0	13.85	0.259025	CR 44A	44A	55	1	4	2	2386	2314
906	ML6085B	0	13.85	0.259025	CR 44A	44A	55	1	4	2	2214	2087
531	ML6083B	0	4.12	0.05891	CR 43J	43J	55	1	4	2	2700	2699
872	ML6082B	0	1.43	0.020182	CR 43I	43I	55	1	4	2	2696	2697
829	ML6079B	0	1.02	0.014486	CR 43F	43F	55	1	4	2	2690	2688
691	ML6075B	0	1.03	0.014562	CR 43B	43B	55	1	4	2	2691	2689
714	ML6073B	0	3.05	0.058014	CR 42E	42E	55	1	4	2	2934	2980
2355	ML6073B	0	3.05	0.058014	CR 42E	42E	55	1	4	2	2980	3008
713	ML6072B	0	1.01	0.019332	CR 42D	42D	55	1	4	2	2934	2897
1786	ML8027B	0	5.45	0.10433	CR 42	42	55	1	4	2	1425	1577
2468	ML8023B	5.6	11.42	0.100334	CR 42	42	55	1	4	2	1575	1665
2469	ML8023B	5.6	11.42	0.100334	CR 42	42	55	1	4	2	1665	1678
634	ML6068B	0	3.51	0.050252	CR 41C	41C	55	1	4	2	2652	2653
648	ML6068B	0	3.51	0.050252	CR 41C	41C	55	1	4	2	2653	2654
2342	ML6068B	0	3.51	0.050252	CR 41C	41C	55	1	4	2	2654	2656
631	ML6067B	0	1.65	0.024154	CR 41B	41B	55	1	4	2	2652	2646
612	ML6066B	0	4.09	0.058238	CR 41A	41A	55	1	4	2	2632	2639
614	ML6066B	0	4.09	0.058238	CR 41A	41A	55	1	4	2	2639	2648
709	ML6065B	0	5.21	0.099565	CR 40B	40B	55	1	4	2	2862	2761
710	ML6065B	0	5.21	0.099565	CR 40B	40B	55	1	4	2	2895	2862
9	ML6745B	0.97	1.02	0.000753	CR 4030	4030	45	1	4	2	1908	1910
10	ML6745B	1.1	1.25	0.002249	CR 4030	4030	45	1	4	2	1911	1912
1402	ML6745B	1.61	1.86	0.003757	CR 4030	4030	55	1	4	2	1913	1914
1405	ML6745B	1.61	1.86	0.003757	CR 4030	4030	55	1	4	2	1914	1915
574	ML5946B	0	4.23	0.065311	CR 3B	3B	55	1	4	2	2101	2100
1945	ML5946B	0	4.23	0.065311	CR 3B	3B	55	1	4	2	2105	2101
2338	ML6063B	0	2.08	0.030478	CR 39F	39F	55	1	4	2	2610	2619

ID	ROUTE	FROM_MP	TO_MP	Shape_Leng	Road_ID	ROAD_NAME	SPEED	NUM_LANES	FUNC_CLASS	ONEWAY_TWO	A	B
2340	ML6063B	0	2.08	0.030478	CR 39F	39F	55	1	4	2	2619	2620
18	ML6062B	0	1.23	0.018622	CR 39E	39E	55	1	4	2	2621	2610
610	ML6059B	0	1.02	0.014523	CR 39B	39B	55	1	4	2	2613	2612
700	ML6057B	0	5.08	0.09667	CR 38C	38C	55	1	4	2	2982	2955
701	ML6057B	0	5.08	0.09667	CR 38C	38C	55	1	4	2	2935	2896
702	ML6057B	0	5.08	0.09667	CR 38C	38C	55	1	4	2	2955	2935
704	ML6057B	0	5.08	0.09667	CR 38C	38C	55	1	4	2	2896	2864
2350	ML6057B	0	5.08	0.09667	CR 38C	38C	55	1	4	2	3009	2982
703	ML6056B	0	0.42	0.008113	CR 38B	38B	55	1	4	2	2649	2659
586	ML6055B	0	13.23	0.251842	CR 38A	38A	55	1	4	2	2649	2589
587	ML6055B	0	13.23	0.251842	CR 38A	38A	55	1	4	2	2589	2555
893	ML6055B	0	13.23	0.251842	CR 38A	38A	55	1	4	2	2455	2473
894	ML6055B	0	13.23	0.251842	CR 38A	38A	55	1	4	2	2555	2473
895	ML6055B	0	13.23	0.251842	CR 38A	38A	55	1	4	2	2452	2382
896	ML6055B	0	13.23	0.251842	CR 38A	38A	55	1	4	2	2382	2216
643	ML6053B	0	1.21	0.018857	CR 37H	37H	55	1	4	2	2601	2591
626	ML9333B	0	0.5	0.007283	CR 37F1	37F1	55	1	4	2	2582	2583
654	ML6051B	0	2.07	0.029646	CR 37F	37F	65	1	4	2	2594	2593
622	ML6050B	0	0.51	0.007279	CR 37E	37E	55	1	4	2	2582	2579
601	ML6048B	0	2.86	0.041447	CR 37C	37C	55	1	4	2	2577	2580
602	ML6048B	0	2.86	0.041447	CR 37C	37C	55	1	4	2	2580	2586
604	ML6048B	0	2.86	0.041447	CR 37C	37C	55	1	4	2	2586	2587
585	ML6047B	0	8.64	0.125372	CR 37B	37B	55	1	4	2	2589	2588
589	ML6047B	0	8.64	0.125372	CR 37B	37B	55	1	4	2	2584	2589
591	ML6047B	0	8.64	0.125372	CR 37B	37B	55	1	4	2	2600	2584
593	ML6047B	0	8.64	0.125372	CR 37B	37B	55	1	4	2	2581	2600
595	ML6047B	0	8.64	0.125372	CR 37B	37B	55	1	4	2	2576	2581
1784	ML6047B	0	8.64	0.125372	CR 37B	37B	55	1	4	2	2588	2590
696	ML6044B	0	1.01	0.019277	CR 36A	36A	55	1	4	2	2718	2755

ID	ROUTE	FROM_MP	TO_MP	Shape_Leng	Road_ID	ROAD_NAME	SPEED	NUM_LANES	FUNC_CLASS	ONEWAY_TWO	A	B
605	ML6043B	0	7.15	0.101994	CR 35D	35D	55	1	4	2	2547	2553
609	ML6043B	0	7.15	0.101994	CR 35D	35D	55	1	4	2	2549	2547
616	ML6043B	0	7.15	0.101994	CR 35D	35D	55	1	4	2	2550	2549
599	ML6042B	0	1.1	0.014518	CR 35C	35C	55	1	4	2	2548	2551
690	ML6039B	0	2.05	0.03887	CR 34B	34B	55	1	4	2	2645	2689
692	ML6039B	0	2.05	0.03887	CR 34B	34B	55	1	4	2	2689	2716
889	ML6038B	0	4.1	0.077871	CR 34A	34A	55	1	4	2	2528	2525
890	ML6038B	0	4.1	0.077871	CR 34A	34A	55	1	4	2	2528	2531
629	ML6036B	0	3.15	0.04552	CR 33E	33E	55	1	4	2	2534	2518
1001	ML6036B	0	3.15	0.04552	CR 33E	33E	55	1	4	2	2519	2530
1003	ML6036B	0	3.15	0.04552	CR 33E	33E	55	1	4	2	2520	2519
1007	ML6036B	0	3.15	0.04552	CR 33E	33E	55	1	4	2	2518	2520
948	ML6035B	0	2.14	0.030809	CR 33D	33D	55	1	4	2	2524	2523
969	ML6035B	0	2.14	0.030809	CR 33D	33D	55	1	4	2	2517	2524
684	ML6031B	0	11.27	0.213829	CR 32C	32C	55	1	4	2	2861	2975
685	ML6031B	0	11.27	0.213829	CR 32C	32C	55	1	4	2	2795	2861
687	ML6031B	0	11.27	0.213829	CR 32C	32C	55	1	4	2	2691	2760
688	ML6031B	0	11.27	0.213829	CR 32C	32C	55	1	4	2	2760	2795
689	ML6031B	0	11.27	0.213829	CR 32C	32C	55	1	4	2	2642	2691
2349	ML6031B	0	11.27	0.213829	CR 32C	32C	55	1	4	2	2975	3006
887	ML6030B	0	7.16	0.13609	CR 32B	32B	55	1	4	2	2526	2453
1782	ML6030B	0	7.16	0.13609	CR 32B	32B	55	1	4	2	2643	2590
1783	ML6030B	0	7.16	0.13609	CR 32B	32B	55	1	4	2	2590	2526
888	ML6029B	0	4.05	0.077682	CR 32A	32A	55	1	4	2	2153	2114
2475	ML6029B	0	4.05	0.077682	CR 32A	32A	55	1	4	2	2114	2088
15	ML6028B	0	1.05	0.015024	CR 31F	31F	55	1	4	2	2472	2475
2279	ML6026B	0	0.61	0.009561	CR 31D	31D	55	1	4	2	2471	2447
2281	ML6024B	0	0.64	0.009138	CR 31B	31B	55	1	4	2	2470	2468
891	ML6023B	0	18.4	0.254486	CR 31A	31A	55	1	4	2	2455	2453

ID	ROUTE	FROM_MP	TO_MP	Shape_Leng	Road_ID	ROAD_NAME	SPEED	NUM_LANES	FUNC_CLASS	ONEWAY_TWO	A	B
892	ML6023B	0	18.4	0.254486	CR 31A	31A	55	1	4	2	2452	2455
897	ML6023B	0	18.4	0.254486	CR 31A	31A	55	1	4	2	2456	2452
898	ML6023B	0	18.4	0.254486	CR 31A	31A	55	1	4	2	2459	2456
909	ML6023B	0	18.4	0.254486	CR 31A	31A	55	1	4	2	2466	2459
920	ML6023B	0	18.4	0.254486	CR 31A	31A	55	1	4	2	2467	2466
926	ML6023B	0	18.4	0.254486	CR 31A	31A	55	1	4	2	2465	2467
933	ML6023B	0	18.4	0.254486	CR 31A	31A	55	1	4	2	2463	2464
939	ML6023B	0	18.4	0.254486	CR 31A	31A	55	1	4	2	2462	2463
1013	ML6023B	0	18.4	0.254486	CR 31A	31A	55	1	4	2	2453	2454
681	ML6022B	0	1.04	0.019935	CR 30C	30C	55	1	4	2	2637	2692
919	ML6017B	0	1.01	0.014417	CR 29B	29B	55	1	4	2	2421	2414
1170	ML6016B	0	1.33	0.02316	CR 29A	29A	55	1	4	2	2435	2437
1171	ML6016B	0	1.33	0.02316	CR 29A	29A	55	1	4	2	2435	2434
1176	ML6016B	0	1.33	0.02316	CR 29A	29A	55	1	4	2	2409	2434
1178	ML6016B	0	1.33	0.02316	CR 29A	29A	55	1	4	2	2411	2409
673	ML6015B	0	11.86	0.221362	CR 28B	28B	55	1	4	2	2827	2953
674	ML6015B	0	11.86	0.221362	CR 28B	28B	55	1	4	2	2806	2805
675	ML6015B	0	11.86	0.221362	CR 28B	28B	55	1	4	2	2807	2806
676	ML6015B	0	11.86	0.221362	CR 28B	28B	55	1	4	2	2807	2827
677	ML6015B	0	11.86	0.221362	CR 28B	28B	55	1	4	2	2758	2805
679	ML6015B	0	11.86	0.221362	CR 28B	28B	55	1	4	2	2647	2758
2347	ML6015B	0	11.86	0.221362	CR 28B	28B	55	1	4	2	2953	3002
453	ML7736B	0	22.61	0.352258	CR 42	28 Road	55	1	4	2	2298	2192
19	ML6013B	0	2	0.028882	CR 27F	27F	55	1	4	2	2398	2397
2285	ML6012B	0	0.42	0.006089	CR 27E	27E	55	1	4	2	2401	2402
563	ML6011B	0	2.04	0.029054	CR 27D	27D	55	1	4	2	2393	2394
649	ML6011B	0	2.04	0.029054	CR 27D	27D	55	1	4	2	2394	2392
950	ML6009B	0	4.07	0.057888	CR 27B	27B	55	1	4	2	2383	2385
903	ML6008B	0	8.18	0.11634	CR 27A	27A	55	1	4	2	2386	2382

ID	ROUTE	FROM_MP	TO_MP	Shape_Leng	Road_ID	ROAD_NAME	SPEED	NUM_LANES	FUNC_CLASS	ONEWAY_TWO	A	B
907	ML6008B	0	8.18	0.11634	CR 27A	27A	55	1	4	2	2389	2386
912	ML6008B	0	8.18	0.11634	CR 27A	27A	55	1	4	2	2388	2389
127	ML5084B	20.78	24.64	0.06794	CR 266	266	55	1	4	2	1315	1314
128	ML5084B	20.78	24.64	0.06794	CR 266	266	55	1	4	2	1315	1335
129	ML5084B	20.78	24.64	0.06794	CR 266	266	55	1	4	2	1312	1314
2478	ML6007B	0	0.6	0.008726	CR 25H	25H	55	1	4	2	2358	2360
2481	ML6007B	0	0.6	0.008726	CR 25H	25H	55	1	4	2	2360	2359
936	ML6005B	0	5.16	0.073187	CR 25C	25C	55	1	4	2	2353	2350
942	ML6005B	0	5.16	0.073187	CR 25C	25C	55	1	4	2	2352	2353
955	ML6005B	0	5.16	0.073187	CR 25C	25C	55	1	4	2	2351	2352
884	ML6004B	0	7.05	0.110897	CR 25B	25B	55	1	4	2	2347	2395
886	ML6004B	0	7.05	0.110897	CR 25B	25B	55	1	4	2	2346	2347
1008	ML6004B	0	7.05	0.110897	CR 25B	25B	55	1	4	2	2361	2346
1172	ML6003B	0	2.31	0.033915	CR 25A	25A	55	1	4	2	2343	2344
1173	ML6003B	0	2.31	0.033915	CR 25A	25A	55	1	4	2	2338	2307
1174	ML6003B	0	2.31	0.033915	CR 25A	25A	55	1	4	2	2338	2339
1175	ML6003B	0	2.31	0.033915	CR 25A	25A	55	1	4	2	2343	2339
1179	ML6003B	0	2.31	0.033915	CR 25A	25A	55	1	4	2	2349	2344
1700	ML5556B	0	0.66	0.011261	CR 25A	25A	55	1	4	2	1065	1064
1703	ML5556B	0	0.66	0.011261	CR 25A	25A	55	1	4	2	1064	1067
1754	ML6000B	0	0.2	0.003866	CR 24A	24A	55	1	4	2	1870	1881
331	ML5998B	0	5.09	0.072262	CR 23E	23E	55	1	4	2	2321	2326
332	ML5998B	0	5.09	0.072262	CR 23E	23E	55	1	4	2	2326	2327
984	ML5996B	0	1	0.014316	CR 23C	23C	55	1	4	2	2311	2306
954	ML5995B	0	1.01	0.014491	CR 23B	23B	55	1	4	2	2310	2312
670	ML5993B	0	3.5	0.067453	CR 22B	22B	55	1	4	2	2655	2778
14	ML5992B	0	3.11	0.059062	CR 22A	22A	55	1	4	2	2655	2559
1089	ML6740B	0	6.44	0.122546	CR 227-2	227-2	55	1	4	2	2852	2879
1091	ML6740B	0	6.44	0.122546	CR 227-2	227-2	55	1	4	2	2879	2888

ID	ROUTE	FROM_MP	TO_MP	Shape_Leng	Road_ID	ROAD_NAME	SPEED	NUM_LANES	FUNC_CLASS	ONEWAY_TWO	A	B
1093	ML6740B	0	6.44	0.122546	CR 227-2	227-2	55	1	4	2	2964	2974
1094	ML6740B	0	6.44	0.122546	CR 227-2	227-2	55	1	4	2	2974	2996
1095	ML6740B	0	6.44	0.122546	CR 227-2	227-2	55	1	4	2	2948	2964
1096	ML6740B	0	6.44	0.122546	CR 227-2	227-2	55	1	4	2	2888	2948
13	ML5991B	0	1	0.014412	CR 21E	21E	55	1	4	2	2289	2290
627	ML5989B	0	2.29	0.033046	CR 21C	21C	55	1	4	2	2287	2286
642	ML5989B	0	2.29	0.033046	CR 21C	21C	55	1	4	2	2288	2287
1215	ML6906B	0	12.258	0.223843	CR 215-3	215-3	55	1	4	2	2247	2273
1216	ML6906B	0	12.258	0.223843	CR 215-3	215-3	55	1	4	2	2211	2247
1218	ML9378B	12.434	18.47	0.115658	CR 215-3	215-3	55	1	4	2	2376	2442
1219	ML9378B	12.434	18.47	0.115658	CR 215-3	215-3	55	1	4	2	2442	2499
1221	ML9378B	12.434	18.47	0.115658	CR 215-3	215-3	55	1	4	2	2275	2376
1360	ML6906B	0	12.258	0.223843	CR 215-3	215-3	55	1	4	2	2096	2102
1363	ML6906B	0	12.258	0.223843	CR 215-3	215-3	55	1	4	2	2102	2116
1366	ML6906B	0	12.258	0.223843	CR 215-3	215-3	55	1	4	2	2116	2126
1367	ML6906B	0	12.258	0.223843	CR 215-3	215-3	55	1	4	2	2126	2135
1368	ML6906B	0	12.258	0.223843	CR 215-3	215-3	55	1	4	2	2135	2143
1370	ML6906B	0	12.258	0.223843	CR 215-3	215-3	55	1	4	2	2143	2151
1372	ML6906B	0	12.258	0.223843	CR 215-3	215-3	55	1	4	2	2151	2211
1407	ML6906B	0	12.258	0.223843	CR 215-3	215-3	55	1	4	2	2075	2075
1425	ML6906B	0	12.258	0.223843	CR 215-3	215-3	55	1	4	2	2075	2096
1340	ML212B	0	14.06	0.241987	CR 213-4	213-4	55	1	4	2	1947	1948
1342	ML212B	0	14.06	0.241987	CR 213-4	213-4	55	1	4	2	1948	1946
1345	ML212B	0	14.06	0.241987	CR 213-4	213-4	55	1	4	2	1946	1944
1348	ML212B	0	14.06	0.241987	CR 213-4	213-4	55	1	4	2	1944	1943
1350	ML212B	0	14.06	0.241987	CR 213-4	213-4	55	1	4	2	1943	1945
1351	ML212B	0	14.06	0.241987	CR 213-4	213-4	55	1	4	2	1945	1950
1354	ML212B	0	14.06	0.241987	CR 213-4	213-4	55	1	4	2	1950	1953
1357	ML212B	0	14.06	0.241987	CR 213-4	213-4	55	1	4	2	1953	1954

ID	ROUTE	FROM_MP	TO_MP	Shape_Leng	Road_ID	ROAD_NAME	SPEED	NUM_LANES	FUNC_CLASS	ONEWAY_TWO	A	B
1358	ML212B	0	14.06	0.241987	CR 213-4	213-4	55	1	4	2	1954	1955
1359	ML212B	0	14.06	0.241987	CR 213-4	213-4	55	1	4	2	1955	1941
1362	ML212B	0	14.06	0.241987	CR 213-4	213-4	55	1	4	2	1941	1930
1387	ML212B	0	14.06	0.241987	CR 213-4	213-4	55	1	4	2	1942	1951
1395	ML212B	0	14.06	0.241987	CR 213-4	213-4	55	1	4	2	1951	1952
1419	ML212B	0	14.06	0.241987	CR 213-4	213-4	55	1	4	2	1952	1949
1424	ML212B	0	14.06	0.241987	CR 213-4	213-4	55	1	4	2	1949	1947
1432	ML212B	0	14.06	0.241987	CR 213-4	213-4	55	1	4	2	1890	1891
1433	ML212B	0	14.06	0.241987	CR 213-4	213-4	55	1	4	2	1930	1891
1434	ML212B	0	14.06	0.241987	CR 213-4	213-4	55	1	4	2	1884	1883
1435	ML212B	0	14.06	0.241987	CR 213-4	213-4	55	1	4	2	1890	1884
1436	ML212B	0	14.06	0.241987	CR 213-4	213-4	55	1	4	2	1858	1856
1437	ML212B	0	14.06	0.241987	CR 213-4	213-4	55	1	4	2	1879	1858
1438	ML212B	0	14.06	0.241987	CR 213-4	213-4	55	1	4	2	1883	1879
1440	ML212B	0	14.06	0.241987	CR 213-4	213-4	55	1	4	2	1856	1848
1441	ML212B	0	14.06	0.241987	CR 213-4	213-4	55	1	4	2	1848	1839
1442	ML212B	0	14.06	0.241987	CR 213-4	213-4	55	1	4	2	1835	1835
1443	ML212B	0	14.06	0.241987	CR 213-4	213-4	55	1	4	2	1839	1835
1444	ML212B	0	14.06	0.241987	CR 213-4	213-4	55	1	4	2	1835	1828
1445	ML212B	0	14.06	0.241987	CR 213-4	213-4	55	1	4	2	1828	1823
1446	ML212B	0	14.06	0.241987	CR 213-4	213-4	55	1	4	2	1823	1821
1447	ML212B	0	14.06	0.241987	CR 213-4	213-4	55	1	4	2	1821	1818
1448	ML212B	0	14.06	0.241987	CR 213-4	213-4	55	1	4	2	1818	1814
1449	ML212B	0	14.06	0.241987	CR 213-4	213-4	55	1	4	2	1814	1809
1450	ML212B	0	14.06	0.241987	CR 213-4	213-4	55	1	4	2	1809	1808
1452	ML212B	0	14.06	0.241987	CR 213-4	213-4	55	1	4	2	1808	1793
1473	ML212B	0	14.06	0.241987	CR 213-4	213-4	55	1	4	2	1793	1768
1535	ML212B	0	14.06	0.241987	CR 213-4	213-4	55	1	4	2	1780	1780
1536	ML212B	0	14.06	0.241987	CR 213-4	213-4	55	1	4	2	1780	1780

ID	ROUTE	FROM_MP	TO_MP	Shape_Leng	Road_ID	ROAD_NAME	SPEED	NUM_LANES	FUNC_CLASS	ONEWAY_TWO	A	B
1607	ML212B	0	14.06	0.241987	CR 213-4	213-4	55	1	4	2	1842	1865
2016	ML212B	0	14.06	0.241987	CR 213-4	213-4	55	1	4	2	1865	1926
2025	ML212B	0	14.06	0.241987	CR 213-4	213-4	55	1	4	2	1933	1942
1378	ML6880B	0.04	8.39	0.159764	CR 210-2	210-2	55	1	4	2	1987	2000
1379	ML6880B	0.04	8.39	0.159764	CR 210-2	210-2	55	1	4	2	1983	1987
1380	ML6880B	0.04	8.39	0.159764	CR 210-2	210-2	55	1	4	2	1979	1983
1381	ML6880B	0.04	8.39	0.159764	CR 210-2	210-2	55	1	4	2	1972	1978
1382	ML6880B	0.04	8.39	0.159764	CR 210-2	210-2	55	1	4	2	1978	1978
1383	ML6880B	0.04	8.39	0.159764	CR 210-2	210-2	55	1	4	2	1978	1979
1384	ML6880B	0.04	8.39	0.159764	CR 210-2	210-2	55	1	4	2	1963	1972
1386	ML6880B	0.04	8.39	0.159764	CR 210-2	210-2	55	1	4	2	1962	1963
1388	ML6880B	0.04	8.39	0.159764	CR 210-2	210-2	55	1	4	2	1951	1962
1389	ML6880B	0.04	8.39	0.159764	CR 210-2	210-2	55	1	4	2	1934	1951
1391	ML6880B	0.04	8.39	0.159764	CR 210-2	210-2	55	1	4	2	1909	1934
1392	ML6880B	0.04	8.39	0.159764	CR 210-2	210-2	55	1	4	2	1873	1909
1393	ML6880B	0.04	8.39	0.159764	CR 210-2	210-2	55	1	4	2	1866	1873
1394	ML6880B	0.04	8.39	0.159764	CR 210-2	210-2	55	1	4	2	1866	1873
1624	ML6880B	0.04	8.39	0.159764	CR 210-2	210-2	55	1	4	2	1816	1866
1626	ML6880B	0.04	8.39	0.159764	CR 210-2	210-2	55	1	4	2	1812	1816
2068	ML6880B	0.04	8.39	0.159764	CR 210-2	210-2	55	1	4	2	1753	1812
2070	ML6880B	0.04	8.39	0.159764	CR 210-2	210-2	55	1	4	2	1752	1753
1620	ML6877B	0.34	5.02	0.087468	CR 209-3	209-3	55	1	4	2	2038	2039
2019	ML6877B	0.34	5.02	0.087468	CR 209-3	209-3	55	1	4	2	1926	1932
2021	ML6877B	0.34	5.02	0.087468	CR 209-3	209-3	55	1	4	2	1932	1931
2024	ML6877B	0.34	5.02	0.087468	CR 209-3	209-3	55	1	4	2	1931	1933
2026	ML6877B	0.34	5.02	0.087468	CR 209-3	209-3	55	1	4	2	1933	2016
2027	ML6877B	0.34	5.02	0.087468	CR 209-3	209-3	55	1	4	2	2016	2038
1318	ML6875B	5.02	13.82	0.161296	CR 209-2	209-2	55	1	4	2	2148	2165
1320	ML6875B	5.02	13.82	0.161296	CR 209-2	209-2	55	1	4	2	2123	2148

ID	ROUTE	FROM_MP	TO_MP	Shape_Leng	Road_ID	ROAD_NAME	SPEED	NUM_LANES	FUNC_CLASS	ONEWAY_TWO	A	B
1321	ML6875B	5.02	13.82	0.161296	CR 209-2	209-2	55	1	4	2	2112	2123
1331	ML6875B	5.02	13.82	0.161296	CR 209-2	209-2	55	1	4	2	2041	2112
1617	ML6875B	5.02	13.82	0.161296	CR 209-2	209-2	55	1	4	2	2040	2041
1618	ML6875B	5.02	13.82	0.161296	CR 209-2	209-2	55	1	4	2	2039	2040
2345	ML5944B	0	2.59	0.038688	CR 1C	1C	55	1	4	2	2094	2092
319	ML5986B	0	6.36	0.091428	CR 19C	19C	55	1	4	2	2259	2260
323	ML5986B	0	6.36	0.091428	CR 19C	19C	55	1	4	2	2253	2259
1004	ML5985B	0	1.01	0.01443	CR 19B	19B	55	1	4	2	2254	2255
914	ML5984B	0	7.73	0.110135	CR 19A	19A	55	1	4	2	2256	2258
946	ML5984B	0	7.73	0.110135	CR 19A	19A	55	1	4	2	2258	2252
1852	ML9406B	0.747	4.5	0.07235	CR 191	191	55	1	4	2	1496	1489
1854	ML9406B	0.747	4.5	0.07235	CR 191	191	55	1	4	2	1489	1462
1856	ML9406B	0.747	4.5	0.07235	CR 191	191	55	1	4	2	1412	1406
1858	ML9406B	0.747	4.5	0.07235	CR 191	191	55	1	4	2	1462	1435
1859	ML9406B	0.747	4.5	0.07235	CR 191	191	55	1	4	2	1435	1412
667	ML5982B	0	4.61	0.085409	CR 18B	18B	55	1	4	2	2683	2814
2534	ML5980B	0	2.47	0.035068	CR 17B	17B	55	1	4	2	2144	2125
324	ML5977B	0	6.13	0.088203	CR 15I	15I	55	1	4	2	2215	2218
577	ML5973B	0	8.03	0.118908	CR 15E	15E	55	1	4	2	2189	2221
652	ML5973B	0	8.03	0.118908	CR 15E	15E	55	1	4	2	2221	2220
995	ML5972B	0	2.01	0.028771	CR 15D	15D	55	1	4	2	2219	2217
915	ML5971B	0	3.04	0.043735	CR 15C	15C	55	1	4	2	2214	2223
901	ML5970B	0	3.07	0.043752	CR 15B	15B	55	1	4	2	2214	2216
1109	ML6830B	0	1.01	0.014481	CR 158-5	158-5	55	1	4	2	2812	2811
1025	ML6829B	0	6.08	0.086952	CR 158-4	158-4	55	1	4	2	2801	2802
1037	ML6829B	0	6.08	0.086952	CR 158-4	158-4	55	1	4	2	2802	2803
1060	ML6829B	0	6.08	0.086952	CR 158-4	158-4	55	1	4	2	2803	2804
1228	ML6826B	0	2.776	0.040268	CR 158-1	158-1	55	1	4	2	2791	2792
1234	ML9389B	2.776	5.85	0.043362	CR 158-1	158-1	55	1	4	2	2794	2796

ID	ROUTE	FROM_MP	TO_MP	Shape_Leng	Road_ID	ROAD_NAME	SPEED	NUM_LANES	FUNC_CLASS	ONEWAY_TWO	A	B
1236	ML9389B	2.776	5.85	0.043362	CR 158-1	158-1	55	1	4	2	2796	2797
1021	ML9385B	2.797	26.22	0.337958	CR 154-1	154-1	55	1	4	2	2674	2675
1040	ML9385B	2.797	26.22	0.337958	CR 154-1	154-1	55	1	4	2	2676	2677
1193	ML9385B	2.797	26.22	0.337958	CR 154-1	154-1	55	1	4	2	2672	2673
1224	ML9385B	2.797	26.22	0.337958	CR 154-1	154-1	55	1	4	2	2673	2674
1775	ML9385B	2.797	26.22	0.337958	CR 154-1	154-1	55	1	4	2	2668	2669
1777	ML9385B	2.797	26.22	0.337958	CR 154-1	154-1	55	1	4	2	2665	2666
1779	ML9385B	2.797	26.22	0.337958	CR 154-1	154-1	55	1	4	2	2666	2667
1781	ML9385B	2.797	26.22	0.337958	CR 154-1	154-1	55	1	4	2	2667	2668
2045	ML9385B	2.797	26.22	0.337958	CR 154-1	154-1	55	1	4	2	2669	2670
2047	ML9385B	2.797	26.22	0.337958	CR 154-1	154-1	55	1	4	2	2670	2671
2049	ML9385B	2.797	26.22	0.337958	CR 154-1	154-1	55	1	4	2	2671	2672
2487	ML9385B	2.797	26.22	0.337958	CR 154-1	154-1	55	1	4	2	2664	2665
2489	ML6814B	0	2.797	0.040555	CR 154-1	154-1	55	1	4	2	2660	2661
2490	ML6814B	0	2.797	0.040555	CR 154-1	154-1	55	1	4	2	2661	2662
1253	ML6799B	0	2.741	0.0407	CR 151-1	151-1	55	1	4	2	2564	2565
1254	ML6799B	0	2.741	0.0407	CR 151-1	151-1	55	1	4	2	2565	2566
1255	ML6799B	0	2.741	0.0407	CR 151-1	151-1	55	1	4	2	2566	2567
2493	ML9387B	2.741	4.86	0.028914	CR 151-1	151-1	55	1	4	2	2569	2570
2494	ML9387B	2.741	4.86	0.028914	CR 151-1	151-1	55	1	4	2	2570	2571
1162	ML6798B	0	0.576	0.00837	CR 150-6	150-6	55	1	4	2	2556	2554
1169	ML9384B	0.576	4.69	0.063824	CR 150-6	150-6	55	1	4	2	2557	2437
1015	ML6792B	2.8	19.8	0.249875	CR 149-3	149-3	55	1	4	2	2502	2500
1017	ML6792B	2.8	19.8	0.249875	CR 149-3	149-3	55	1	4	2	2500	2496
1027	ML6792B	2.8	19.8	0.249875	CR 149-3	149-3	55	1	4	2	2496	2495
1046	ML6792B	2.8	19.8	0.249875	CR 149-3	149-3	55	1	4	2	2495	2498
1074	ML6792B	2.8	19.8	0.249875	CR 149-3	149-3	55	1	4	2	2498	2504
1085	ML6792B	2.8	19.8	0.249875	CR 149-3	149-3	55	1	4	2	2504	2503
1102	ML6792B	2.8	19.8	0.249875	CR 149-3	149-3	55	1	4	2	2503	2505

ID	ROUTE	FROM_MP	TO_MP	Shape_Leng	Road_ID	ROAD_NAME	SPEED	NUM_LANES	FUNC_CLASS	ONEWAY_TWO	A	B
1115	ML6792B	2.8	19.8	0.249875	CR 149-3	149-3	55	1	4	2	2505	2527
1133	ML6792B	2.8	19.8	0.249875	CR 149-3	149-3	55	1	4	2	2527	2529
1146	ML6792B	2.8	19.8	0.249875	CR 149-3	149-3	55	1	4	2	2529	2510
1217	ML6792B	2.8	19.8	0.249875	CR 149-3	149-3	55	1	4	2	2501	2499
1222	ML6792B	2.8	19.8	0.249875	CR 149-3	149-3	55	1	4	2	2499	2502
501	ML9331B	0	2.29	0.044576	CR 146A	146A	55	1	4	2	2334	2329
502	ML9331B	0	2.29	0.044576	CR 146A	146A	55	1	4	2	2329	2263
1278	ML6780B	0	7.985	0.115767	CR 146-1	146-1	55	1	4	2	2368	2367
1291	ML6780B	0	7.985	0.115767	CR 146-1	146-1	55	1	4	2	2369	2368
1295	ML6780B	0	7.985	0.115767	CR 146-1	146-1	55	1	4	2	2370	2369
1312	ML6780B	0	7.985	0.115767	CR 146-1	146-1	55	1	4	2	2371	2370
1333	ML6780B	0	7.985	0.115767	CR 146-1	146-1	55	1	4	2	2374	2371
1334	ML6780B	0	7.985	0.115767	CR 146-1	146-1	55	1	4	2	2373	2374
1335	ML6780B	0	7.985	0.115767	CR 146-1	146-1	55	1	4	2	2372	2373
1337	ML6780B	0	7.985	0.115767	CR 146-1	146-1	55	1	4	2	2375	2372
508	ML9329B	0	2.42	0.044571	CR 144B	144B	55	1	4	2	2391	2472
336	ML9328B	0	1.53	0.029941	CR 144A	144A	55	1	4	2	2325	2266
1292	ML6766B	0	1.58	0.021593	CR 140-1	140-1	55	1	4	2	2198	2197
661	ML5940B	0	4	0.074782	CR 14	14	55	1	4	2	2727	2822
663	ML5940B	0	4	0.074782	CR 14	14	55	1	4	2	2702	2727
931	ML5967B	0	8.18	0.116542	CR 13C	13C	55	1	4	2	2187	2188
960	ML5967B	0	8.18	0.116542	CR 13C	13C	55	1	4	2	2188	2185
976	ML5967B	0	8.18	0.116542	CR 13C	13C	55	1	4	2	2185	2184
981	ML5967B	0	8.18	0.116542	CR 13C	13C	55	1	4	2	2184	2181
885	ML5965B	0	3.67	0.054984	CR 13A	13A	55	1	4	2	2175	2193
1049	ML9381B	6.22	8.23	0.029135	CR 136-1	136-1	55	1	4	2	2141	2142
1344	ML6758B	0	3.349	0.049144	CR 136-1	136-1	55	1	4	2	2131	2132
1347	ML6758B	0	3.349	0.049144	CR 136-1	136-1	55	1	4	2	2132	2133
1356	ML6758B	0	3.349	0.049144	CR 136-1	136-1	55	1	4	2	2133	2134

ID	ROUTE	FROM_MP	TO_MP	Shape_Leng	Road_ID	ROAD_NAME	SPEED	NUM_LANES	FUNC_CLASS	ONEWAY_TWO	A	B
1365	ML6758B	0	3.349	0.049144	CR 136-1	136-1	55	1	4	2	2134	2145
1369	ML9380B	3.443	6.22	0.040255	CR 136-1	136-1	55	1	4	2	2135	2137
1371	ML9380B	3.443	6.22	0.040255	CR 136-1	136-1	55	1	4	2	2137	2138
1373	ML9380B	3.443	6.22	0.040255	CR 136-1	136-1	55	1	4	2	2138	2139
1374	ML9380B	3.443	6.22	0.040255	CR 136-1	136-1	55	1	4	2	2139	2140
1621	ML6758B	0	3.349	0.049144	CR 136-1	136-1	55	1	4	2	2129	2130
1622	ML6758B	0	3.349	0.049144	CR 136-1	136-1	55	1	4	2	2130	2131
534	ML5964B	0	8.54	0.164359	CR 136	136	55	1	4	2	2444	2771
533	ML5963B	0	5.17	0.099198	CR 132	132	55	1	4	2	2939	2837
1401	ML6749B	0.4	2.98	0.037483	CR 129-1	129-1	55	1	4	2	2000	2003
1403	ML6749B	0.4	2.98	0.037483	CR 129-1	129-1	55	1	4	2	2003	2002
1404	ML6749B	0.4	2.98	0.037483	CR 129-1	129-1	55	1	4	2	2002	2001
1414	ML6749B	0.4	2.98	0.037483	CR 129-1	129-1	55	1	4	2	2001	2004
1338	ML6745B	0	4.86	0.073023	CR 127-1	127-1	55	1	4	2	1917	1920
1339	ML6745B	0	4.86	0.073023	CR 127-1	127-1	55	1	4	2	1920	1921
1341	ML6745B	0	4.86	0.073023	CR 127-1	127-1	55	1	4	2	1921	1922
1343	ML6745B	0	4.86	0.073023	CR 127-1	127-1	55	1	4	2	1922	1923
1346	ML6745B	0	4.86	0.073023	CR 127-1	127-1	55	1	4	2	1923	1924
1349	ML6745B	0	4.86	0.073023	CR 127-1	127-1	55	1	4	2	1924	1925
1352	ML6745B	0	4.86	0.073023	CR 127-1	127-1	55	1	4	2	1925	1927
1353	ML6745B	0	4.86	0.073023	CR 127-1	127-1	55	1	4	2	1927	1928
1355	ML6745B	0	4.86	0.073023	CR 127-1	127-1	55	1	4	2	1928	1929
1361	ML6745B	0	4.86	0.073023	CR 127-1	127-1	55	1	4	2	1929	1930
1390	ML6745B	0	4.86	0.073023	CR 127-1	127-1	55	1	4	2	1907	1909
1399	ML6745B	0	4.86	0.073023	CR 127-1	127-1	55	1	4	2	1909	1913
1410	ML6745B	0	4.86	0.073023	CR 127-1	127-1	55	1	4	2	1915	1916
1420	ML6745B	0	4.86	0.073023	CR 127-1	127-1	55	1	4	2	1916	1919
1421	ML6745B	0	4.86	0.073023	CR 127-1	127-1	55	1	4	2	1919	1918
1422	ML6745B	0	4.86	0.073023	CR 127-1	127-1	55	1	4	2	1918	1918

ID	ROUTE	FROM_MP	TO_MP	Shape_Leng	Road_ID	ROAD_NAME	SPEED	NUM_LANES	FUNC_CLASS	ONEWAY_TWO	A	B
1423	ML6745B	0	4.86	0.073023	CR 127-1	127-1	55	1	4	2	1918	1917
1426	ML1108B	0	5.49	0.082864	CR 124-2	124-2	55	1	4	2	1786	1782
1427	ML1108B	0	5.49	0.082864	CR 124-2	124-2	55	1	4	2	1786	1782
1428	ML1108B	0	5.49	0.082864	CR 124-2	124-2	55	1	4	2	1782	1783
1429	ML1108B	0	5.49	0.082864	CR 124-2	124-2	55	1	4	2	1783	1784
1430	ML1108B	0	5.49	0.082864	CR 124-2	124-2	55	1	4	2	1784	1785
1431	ML1108B	0	5.49	0.082864	CR 124-2	124-2	55	1	4	2	1785	1788
1439	ML1108B	0	5.49	0.082864	CR 124-2	124-2	55	1	4	2	1788	1792
1451	ML1108B	0	5.49	0.082864	CR 124-2	124-2	55	1	4	2	1792	1793
1453	ML1108B	0	5.49	0.082864	CR 124-2	124-2	55	1	4	2	1793	1794
1454	ML1108B	0	5.49	0.082864	CR 124-2	124-2	55	1	4	2	1794	1790
1455	ML1108B	0	5.49	0.082864	CR 124-2	124-2	55	1	4	2	1790	1791
1456	ML1108B	0	5.49	0.082864	CR 124-2	124-2	55	1	4	2	1791	1795
1457	ML1108B	0	5.49	0.082864	CR 124-2	124-2	55	1	4	2	1795	1796
1458	ML1108B	0	5.49	0.082864	CR 124-2	124-2	55	1	4	2	1796	1797
1459	ML1108B	0	5.49	0.082864	CR 124-2	124-2	55	1	4	2	1789	1798
1460	ML1108B	0	5.49	0.082864	CR 124-2	124-2	55	1	4	2	1798	1799
1461	ML1108B	0	5.49	0.082864	CR 124-2	124-2	55	1	4	2	1799	1800
1463	ML1108B	0	5.49	0.082864	CR 124-2	124-2	55	1	4	2	1800	1804
1468	ML9382B	0	10.84	0.163327	CR 124-2	124-2	55	1	4	2	1804	1801
1475	ML1108B	0	5.49	0.082864	CR 124-2	124-2	55	1	4	2	1797	1787
1477	ML1108B	0	5.49	0.082864	CR 124-2	124-2	55	1	4	2	1787	1789
2451	ML9382B	0	10.84	0.163327	CR 124-2	124-2	55	1	4	2	1801	1802
2452	ML9382B	0	10.84	0.163327	CR 124-2	124-2	55	1	4	2	1802	1803
2454	ML9382B	0	10.84	0.163327	CR 124-2	124-2	55	1	4	2	1803	1711
2456	ML9382B	0	10.84	0.163327	CR 124-2	124-2	55	1	4	2	1711	1699
318	ML5961B	0	10.86	0.204443	CR 124	124	55	1	4	2	2260	2218
512	ML5961B	0	10.86	0.204443	CR 124	124	55	1	4	2	2446	2260
2361	ML5961B	0	10.86	0.204443	CR 124	124	55	1	4	2	2164	2160

ID	ROUTE	FROM_MP	TO_MP	Shape_Leng	Road_ID	ROAD_NAME	SPEED	NUM_LANES	FUNC_CLASS	ONEWAY_TWO	A	B
2362	ML5961B	0	10.86	0.204443	CR 124	124	55	1	4	2	2218	2164
1497	ML222B	0	27.08	0.402903	CR 120-1	120-1	55	1	4	2	1671	1649
1505	ML222B	0	27.08	0.402903	CR 120-1	120-1	55	1	4	2	1649	1642
1508	ML222B	0	27.08	0.402903	CR 120-1	120-1	55	1	4	2	1642	1635
1513	ML222B	0	27.08	0.402903	CR 120-1	120-1	55	1	4	2	1635	1637
1514	ML222B	0	27.08	0.402903	CR 120-1	120-1	55	1	4	2	1637	1639
1515	ML222B	0	27.08	0.402903	CR 120-1	120-1	55	1	4	2	1639	1638
1519	ML222B	0	27.08	0.402903	CR 120-1	120-1	55	1	4	2	1638	1641
1523	ML222B	0	27.08	0.402903	CR 120-1	120-1	55	1	4	2	1641	1645
1525	ML222B	0	27.08	0.402903	CR 120-1	120-1	55	1	4	2	1645	1636
1527	ML222B	0	27.08	0.402903	CR 120-1	120-1	55	1	4	2	1636	1640
1528	ML222B	0	27.08	0.402903	CR 120-1	120-1	55	1	4	2	1640	1643
1531	ML222B	0	27.08	0.402903	CR 120-1	120-1	55	1	4	2	1643	1644
1532	ML222B	0	27.08	0.402903	CR 120-1	120-1	55	1	4	2	1644	1646
2110	ML222B	0	27.08	0.402903	CR 120-1	120-1	55	1	4	2	1666	1667
2111	ML222B	0	27.08	0.402903	CR 120-1	120-1	55	1	4	2	1667	1670
2415	ML222B	0	27.08	0.402903	CR 120-1	120-1	55	1	4	2	1646	1647
2417	ML222B	0	27.08	0.402903	CR 120-1	120-1	55	1	4	2	1647	1651
2418	ML222B	0	27.08	0.402903	CR 120-1	120-1	55	1	4	2	1651	1666
510	ML5959B	0	2.28	0.042852	CR 120	120	55	1	4	2	2480	2398
575	ML5958B	0	7.59	0.114512	CR 11B	11B	55	1	4	2	2154	2169
578	ML5958B	0	7.59	0.114512	CR 11B	11B	55	1	4	2	2168	2168
582	ML5958B	0	7.59	0.114512	CR 11B	11B	55	1	4	2	2169	2168
524	ML5956B	0	4.05	0.078155	CR 118	118	55	1	4	2	2833	2856
333	ML9326B	0	4.1	0.078514	CR 116A	116A	55	1	4	2	2397	2327
334	ML9326B	0	4.1	0.078514	CR 116A	116A	55	1	4	2	2327	2259
330	ML5955B	0	2.03	0.039076	CR 114	114	55	1	4	2	2326	2326
1734	ML5955B	0	2.03	0.039076	CR 114	114	55	1	4	2	2835	2886
1554	ML6725B	0	0.93	0.013431	CR 110-A	110-A	55	1	4	2	1398	1399

ID	ROUTE	FROM_MP	TO_MP	Shape_Leng	Road_ID	ROAD_NAME	SPEED	NUM_LANES	FUNC_CLASS	ONEWAY_TWO	A	B
16	ML9324B	0	0.98	0.019065	CR 106A	106A	55	1	4	2	2290	2321
2530	ML9323B	0	3.03	0.057824	CR 104B	104B	55	1	4	2	2831	2722
328	ML9322B	0	1.04	0.019824	CR 104A	104A	55	1	4	2	2257	2289
11	ML6716B	0	7.32	0.118588	CR 102-1	102-1	55	1	4	2	1354	1322
326	ML5953B	0	0.66	0.01191	CR 100	100	55	1	4	2	2251	2267

APPENDIX 7: PERSON TRIP PER HOUSEHOLD (NCHRP 365 PAGE 25)

TABLE 5 Average daily person trips per household by persons per household and income

	Persons per Household					
Income	1	2	3	4	5+	Weighted Average
Urbanized Area Size = 50,000 - 199,999						
Low*	3.6	6.5	9.1	11.5	13.8	6.0
Medium	3.9	7.3	10.0	13.1	15.9	9.3
High	4.5	9.2	12.2	14.8	18.2	12.7
Weighted Average	3.7	7.6	10.6	13.6	16.6	9.2
Urbanized Area Size = 200,000 - 499,999						
Low	3.1	6.3	9.4	12.5	14.7	6.0
Medium	4.8	7.2	10.1	13.3	15.5	9.4
High	4.9	7.7	12.5	13.8	16.7	11.8
Weighted Average	3.7	7.1	10.8	13.4	15.9	9.0
Urbanized Area Size = 500,000 - 999,999						
Low	3.6	7.1	9.0	12.0	14.0	6.0
Medium	4.8	7.1	9.8	12.7	14.6	8.9
High	4.8	7.8	11.5	13.6	16.6	11.5
Weighted Average	4.0	7.3	10.2	13.0	15.4	8.7
Urbanized Area Size = 1,000,000+						
Low	3.7	6.3	8.1	10.0	11.8	5.7
Medium	4.9	7.6	9.1	12.3	15.1	9.0
High	5.4	7.9	10.3	12.4	15.3	10.8
Weighted Average	4.2	7.3	9.3	12.0	14.8	8.5

* In actual 1990 dollars: Low = less than $20,000, Medium = $20,000 to 39,999, and High = $40,000 and up.

APPENDIX 8: TRIP ESTIMATING VARIABLES BY AREA

TABLE 9 Trip estimation variables by urban size

	Average Autos per Household	Average Daily Person Trips per Household	Average Daily Vehicle Trips per Household	% Average Daily Person Trips by Purpose		
				HBW	HBO	NHB
Urban Area = 50,000 to 199,999						
Income						
Low*	1.2	6.0	4.8	16	60	24
Medium	1.9	9.3	8.1	21	56	23
High	2.4	12.7	11.7	20	55	25
Weighted Average	1.8	9.2	8.1	20	57	23
Household Size						
One Person	0.9	3.7	3.2	20	54	26
Two Person	1.8	7.6	6.5	22	54	24
Three Person	2.1	10.6	9.4	19	56	25
Four Person	2.4	13.6	11.8	19	58	23
Five Person Plus	2.4	16.6	14.0	17	62	21
Weighted Average	1.8	9.2	8.1	20	57	23
Urban Areas = 200,000 to 499,999						
Income						
Low*	1.3	6.0	4.8	17	60	23
Medium	1.8	9.4	8.2	20	56	24
High	2.4	11.8	10.7	23	52	25
Weighted Average	1.8	9.0	7.8	21	56	23
Household Size						
One Person	1.0	3.7	3.3	20	56	24
Two Person	9.9	7.1	6.4	23	53	24
Three Person	2.1	10.8	9.8	22	54	24
Four Person	2.2	13.4	11.2	18	61	21
Five Person Plus	2.4	15.9	12.8	19	59	22
Weighted Average	1.8	9.0	7.8	21	56	23

(continued on next page)

TABLE 9 *(Continued)*

	Average Autos per Household	Average Daily Person Trips per Household	Average Daily Vehicle Trips per Household	% Average Daily Person Trips by Purpose HBW	HBO	NHB
Urban Area = 500,000 to 999,999						
Income						
Low*	1.1	6.0	4.8	18	59	23
Medium	1.7	8.9	7.5	23	55	22
High	2.3	11.5	10.3	22	54	24
Weighted Average	1.8	8.7	7.5	22	56	22
Household Size						
One Person	0.9	4.0	3.5	23	54	23
Two Person	1.8	7.3	6.7	24	53	23
Three Person	2.0	10.2	8.8	23	54	23
Four Person	2.3	13.0	10.6	21	57	22
Five Person plus	2.4	15.4	12.5	18	62	20
Weighted Average	1.8	8.7	7.5	22	56	22
Urban Area = 1,000,000 +						
Income						
Low*	1.2	5.7	3.8	16	62	22
Medium	1.8	9.0	6.9	21	56	23
High	2.4	10.8	8.9	24	51	25
Weighted Average	1.9	8.5	6.9	21	56	23
Household Size						
One Person	0.9	4.2	3.1	23	50	27
Two Person	1.7	7.3	5.9	25	52	23
Three Person	1.9	9.3	7.7	25	52	23
Four Person	2.2	12.0	9.9	21	59	20
Five Person plus	2.3	14.8	11.2	19	62	19
Weighted Average	1.7	8.5	6.9	22	56	22

* In actual 1990 dollars: Low = less than $20,000, Medium = $20,000 to 39,999, and High = $40,000 and up.

APPENDIX 9: PERSON-TRIP ATTRACTION ESTIMATING RELATIONSHIPS

TABLE 8 Person-trip attraction estimating relationships for all population groups

To estimate trip attractions for an analysis area, use[1]

HBW Attractions = 1.45 × *Total Employment*

HBO Attractions CBD = 2.00 × *CBD RE* + 1.7 × *SE* = 0.5 × *OE* + 0.9 × *HH*

HBO Attractions NBD = 9.00 × *NCBD RE* + 1.7 × *SE* + 0.5 × *OE* + 0.9 × *HH*

NHB Attractions CBD = 1.40 × *DBD RE* + 1.2 × *SE* + 0.5 × *OE* + 0.5 × *HH*

NHB Attractions NCBD = 4.10 × *NCBD RE* + 1.2 × SE + 0.5 × OE + 0.5 × *HH*

where

CBD RE	= Retail Employment in Central Business District Zones,
NCBD RE	= Retail Employment in Non-Central Business District Zones,
SE	= Service Employment,
OE	= Other Employment (Basic and Government), and
HH	= Households.

[1] Note: The coefficients for these equations were derived from a variety of trip attraction models for urban area studies and represent a consensus of these models.

APPENDIX 10: TRAVEL DEMAND MODEL VALIDATION

Road_Name	ADT	PredADT	Difference
Gilchrist Road	33	33	0
Marsh Road	3	3	0
Slater Road	42	42	0
Normandy Road	24	23	1
Windy Ridge Rd	22	23	1
Van Ortwick Hill Rd	10	11	1
27 A	8	7	1
Silver Springs Rd	7	6	1
Berggren Road	7	8	1
Arcola Road	102	100	2
South Moon Rd	20	18	2
Plambeck Road	16	14	2
Goodrich Rd	13	15	2
11 B	7	5	2
A-221-1	6	4	2
South Gap Road	5	7	2
Ogle Road	36	33	3
Hillsdale Road	12	9	3
Range Rd	6	3	3
151	6	9	3
130	5	2	3
South Gap	4	7	3
Van Tassel Rd	21	25	4
Highland	12	16	4
Golden Praire	8	4	4
Wisroth Road	5	9	4
158-5	5	1	4
Sybille Creek Rd	49	54	5
Twenty Mile Creek Rd	22	27	5
North Ringneck Rd	19	24	5
Prairie Center Rd	11	6	5
South C. S. Rd	8	3	5
CR 158-4	4	9	5
124	29	23	6
King RD	18	12	6
South Baker Rd	11	17	6
Tremble Road	10	16	6
47E	7	1	6

Road_Name	ADT	PredADT	Difference
Indian Hill Road	4	10	6
Crystal Lake Road	77	84	7
154-1	21	28	7
Whitaker Rd	20	13	7
County Line Rd 9B	17	10	7
South Anelope Creek Rd	15	8	7
Highline Rd	14	7	7
Miller Road West 226-3	9	16	7
Hunter Ranch Road	8	1	7
70 A	45	37	8
Olson Rd	29	37	8
Steinle Rd	21	13	8
Mormon Canyon	19	11	8
38 A	19	11	8
Diamond	16	8	8
38 A	16	8	8
E Bear Creek Road	15	7	8
Chalk Hill Road	14	6	8
44B	10	2	8
Cottonwood Rd	10	2	8
West Romsa Road	7	15	8
102-1	81	72	9
A-161-3	51	60	9
136	12	3	9
Berry Road	17	7	10
Little Bear Road	17	7	10
T. Y. Rd	15	5	10
Tea Kettle Rd 94B	14	4	10
124	14	4	10
East Havely Rd	12	2	10
County Line Rd 15J	11	1	10
Hillsdale North Road/Midway Road	11	1	10
45B	9	19	10
Rabou Road	6	16	10
Bill Hall Rd	21	10	11
Windmil Rd	14	3	11
Hunter Ranch Road	12	1	11
Ritzke Road 217-2	36	48	12
Cassa RD	31	19	12
County Line Rd 23F	26	38	12
Eklund Road	21	33	12

Road_Name	ADT	PredADT	Difference
Poison Lake Rd	13	1	12
Sandberg road	24	11	13
Kirkbride Road	18	5	13
Prairie Center Rd	16	3	13
23 E	14	1	13
Plambeck Road	44	30	14
RD 68 W OF RD 27	24	10	14
Van Tassel Rd	44	59	15
County Line Rd 9B	16	1	15
Windmill Road	19	3	16
Leuenberger/ dave johnston rd	21	4	17
Harris Ranch Rd	21	4	17
Thunder Basin Road/ Road	18	1	17
56D	43	61	18
Glendo Rd	39	57	18
16	48	29	19
Windy Ridge Rd	23	4	19
Kitell Rd	20	39	19
North Dwyer Rd	32	12	20
82D	31	11	20
CR 22A	24	4	20
Fletcher Park Rd	23	43	20
Patton Creek Rd	11	31	20
Cold Springs Rd	40	19	21
Olson Rd	35	14	21
CR 158-4	24	3	21
Inez Rd	19	40	21
Bluffview Rd	15	36	21
Reeder Road	61	39	22
Bellis Rd	30	8	22
Cow Creek Rd	25	3	22
State Line	53	30	23
Farris Road	32	9	23
Patton Creek Rd	26	3	23
55C	17	40	23
CR 153-1	33	9	24
Holgerson	25	1	24
Linbergh Road	25	1	24
Red Fox Rd	61	36	25
Manning Rd	42	17	25
Richeau Rd	33	8	25

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