2006 Regional Travel Demand Model

Prepared for:

Kern Council of Governments

Prepared by:

PARSONS

August 2009

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1. INTRODUCTION

This document describes the estimation and validation of the 2006 Kern Council of Governments (COG) Regional Travel Demand Model. Hereafter and throughout this report, this model is referenced as the Kern2006 Model.

The Kern2006 Model represents an evolution of travel forecasting models and model components specifically developed for Kern County. The origin of the Kern2006 Model is a 1995/1996-era MINUTP model developed for Kern COG by Barton-Aschman Associates, Inc., a business unit of Parsons, in support of a Major Transportation Investment Study. Over time, the traffic analysis zone system and highway network were expanded and features added as indicated in Table 1-1. In 2004, Dowling Associates was commissioned to re-estimate the trip generation, distribution, time-of-day factors, external trips and auto occupancies based on information available from the 2000 census and the 2001 statewide survey. In 2006, Parsons was commissioned to complete the overall model validation. The validation included fine tuning all aspects of the model, with the primary focus on highway assignment validation.

Following the completion of the model calibration described in this document, a significant effort was undertaken to improve the accuracy of the planning variable database, particularly with regard to employment variables. This re-estimation of base year planning variables was undertaken for the year 2006 timeframe based on a detailed accounting of dwelling units (available from the County Assessor's office), and employer records (available from the California Department of Employment). This work was completed in January 2007 and is currently being used in the Kern2006 Model for base year traffic forecasting.

Table 1-1: Kern2006 Model Chronology and Components

Name of Model	Developer	Software Platform	Calibration Year	No. of TAZs	Updated Features
1996 Kern COG Model	Barton-Aschman Associates (Parsons)	MINUTP	1996	794	• 4-step model structure • Mode choice model
2001 Travel Model Update	Dowling Associates	TP+	1998	1,484	• Update model from MINUTP to TP+ • TAZ structure • Feedback looping
2006 Regional Travel Model Update	Dowling Associates/ Parsons	TP+	2006	1,984	• TAZ structure • Socio economic data • Master highway network

2. OVERVIEW OF TRAVEL DEMAND MODELING PROCESS

The travel demand modeling process for Kern County is a cooperative effort between the Kern Council of Governments (Kern COG), being the Metropolitan Planning Organization (MPO), Kern County, the incorporated cities within the county including Bakersfield, and the California Department of Transportation (Caltrans). Kern COG provides the lead role in the process and assumes responsibility for modeling activities with all entities reaching consensus on selective process decisions. Kern COG is comprised of representatives of local governmental units and is the umbrella organization responsible for carrying out transportation planning in cooperation with Caltrans and the Federal Highway Administration. This is typically accomplished by full coordination of the local agencies with the MPO.

The results of the modeling effort are to provide an important decision making tool for the Regional Transportation Plan (RTP) development as well as any transportation related studies that might follow. The modeling process is a systems-level effort. Although individual links of a highway network can be analyzed, the results are intended for determination of system-wide impacts. At the systems level, impacts are assessed on a broader scale than the project level.

The travel demand modeling for Kern County has been completed through the use of TP+ software. The model is a computer simulation of current and future traffic conditions and is a system-level transportation planning model. The deficiencies identified are generalized 24-hour (daily) deficiencies based on generalized 24-hour capacities and traffic assignment volumes. The model also produces morning (AM) and afternoon (PM) peak period assignments, as well as off-peak period forecasts.

The urban travel demand forecasting process used has six phases:

1. ***Data Collection***, in which socio-economic and facility inventory data are collected.
2. ***Trip Generation***, which calculates the number of trips produced in or attracted to a traffic analysis zone (TAZ).
3. ***Trip Distribution***, which takes the trips produced in a TAZ and distributes them to all other TAZs, based on the relative travel time attractiveness of the zone.
4. ***Traffic Assignment*** determines what routes are utilized for trips.
5. ***Model Calibration/Validation***, which involves verifying that the volumes (trips) simulated in traffic assignment replicate observed traffic counts.
6. ***System Analysis*** tests alternatives and analyzes changes in order to improve the transportation system.

There are two basic systems of data organization in the travel demand forecasting process. The first system of data is organized based on the street system. Roads with a national functional class designation of "minor collector" and higher are included in the network. Some local roads are included to provide connectivity in the network or because they were deemed regionally significant. The unit of analysis is called a "link." Usually, a link is a segment of roadway which is terminated at each end by an intersection. In a traffic assignment network, intersections are called "nodes." Therefore, a link has a node at each end.

The second data organization mechanism is the traffic analysis zones. Zones are determined based upon several criteria including similarity of land use, compatibility with jurisdictional boundaries, the presence of physical boundaries, and compatibility with the street system. Streets are generally utilized as zone boundary edges. All socio-economic and trip generation information for both the base year and future years are summarized by zone.

The two data systems, the street system (network) and the zone system (socio-economic data), are interrelated through the use of “centroids.” Each zone is portrayed on the network by a point (centroid) which represents the weighted center of activity for that zone. A centroid is connected by a set of links to the adjacent street system. That is, the network is provided with a special set of links for each zone which connects the zone to the street system. Since every zone is connected to the street system by these “centroid connectors,” it is possible for trips from each zone to reach every other zone by way of a number of paths through the street system.

Network

A computerized "network" (traffic assignment network) is built to represent the existing street system. The Kern2006 Model network is based on the Kern Geographic Information Network (Kern GEONET) and includes most streets within the study area classified as a “minor collector” or higher by the national functional classification system. Other roads are added to provide continuity and/or to allow interchange between these facilities.

Transportation system information or network attributes required for each link include roadway type, link type, area type, number of through lanes, volume of truck traffic, free flow speeds, national functional classification, traffic counts (where available), and hourly capacity. If the information is not the same for the entire length of a link, the predominant value is used. The network attributes were assembled by Kern COG staff.

The street network is used in the traffic assignment process. The traffic assignment process takes the trip interactions between zones from trip distribution and loads them onto the network. The travel paths for each zone-to-zone interchange are based on the minimum travel time between zones. They are calculated by a computer program which examines all possible paths from each origin zone to all destination zones. The shortest path is determined by the distance of each link and the speed at which it operates. The program then calculates travel times for all of the possible paths between centroids and records the links which comprise the shortest travel time path.

Speeds used to calculate minimum travel times are based on each link’s national functional classification, posted speed, and number of travel lanes. Speeds represent a relative impedance to travel and not posted speed limits.

Socioeconomic Data

Travel demand models are driven, in part, by the relationship of land use activities and characteristics to the transportation network. Specific inputs to the modeling process are land use activity including the number of households, population-in-households, household income, and employment located in a given TAZ. The modeling process translates this data into vehicle trips on the modeled transportation network. Socioeconomic data were developed for the 2006 base year and multiple future forecast years.

It is important to remember that socioeconomic forecasting is essentially a matter of judgment. Judgment is required in selecting the type of forecast to be implemented; in determining the procedures for making the forecast; and the process used in reviewing the effects of the factors that induce changes in population and employment. The establishment of a large new industry or the loss of a similar size industry can lead to considerable impact on an area's development.

Therefore, although socio-economic projections are a useful and required tool in the planning of an area's future growth and development, it is important to note that the projections are not infallible and are typically modified as time progresses to better reflect development impacts occurring within Kern County.

The TAZs were created from the 2000 census blocks and constrained by the network and Minor Civil Division boundaries. Values for population and occupied households were aggregated from the 2000 census blocks to arrive at TAZ totals for year 2000. Counts of dwelling units were made to update household data for year 2006, the base year for the Kern2006 Model. Kern COG staff and Parsons used this, as well as input from local officials, to develop the TAZ values for the base year of 2006 and the future forecast years.

Employment data was obtained from the State of California Employment Development Department (EDD) for 2006. The employment data for future years were developed by Kern COG using growth rates based on the REMI (Regional Econometric, Inc.) projections as well as local knowledge of expected development.

Kern County and City of Bakersfield staff reviewed the estimates and projections and made adjustments given their local knowledge and greater understanding of the unique local circumstances in each TAZ.

Trip Generation

The trip generation process calculates the number of person-trips produced from or attracted to a zone based on the socio-economic characteristics of that zone. The Kern County travel forecasting models do not consider travel characteristics such as direction, length, or time of occurrence as part of trip generation. The relationship between person-trip making and land activity are expressed in equations for use in the modeling process. The formulas were derived from data collected by a 2001 California statewide household survey of travel characteristics and other research examined by Dowling Associates from throughout the United States. Productions were generated with a cross-classification look-up process based on household size and income. Attractions were generated with a regression approach. In order to develop a trip table, productions and attractions must be balanced—also referred to as normalization.

Trips that begin or end beyond the study area boundary are called "cordon trips." These trips are made up of two components: external-to-internal (EI) or internal-to-external (IE) trips and external-to-external through trips (EE). EI trips are those trips which start outside the study area and end in the study area. IE trips start inside the study area and end outside the study area. EE trips are those trips that pass through the study area without stopping; this matrix is referred to as the through-trip table.

Trip Distribution

Trip distribution involves the use of mathematical formulae which determine how many of the trips produced in a zone will be attracted to each of the other zones. It connects the ends of trips produced in one zone to the ends of trips attracted to other zones. The equations are based on travel time between zones and the relative level of activity in each zone. Trip purpose is an important factor in the development of these relationships. The trip relationship formula developed in this process is based on principals and algorithms commonly referred to as the gravity model.

The process which connects productions to attractions is called trip distribution. The most widely used and documented technique is the gravity model which was originally derived from Newton's law of gravity. Newton's law states that the attractive force between any two bodies is directly related to the masses of the bodies and inversely related to the distance between them. Analogously, in the trip distribution model, the number of trips between two areas is directly related to the level of activity in an area (represented by its trip generation) and inversely related to the distance between the areas (represented as a function of travel time).

Research has determined that the pure gravity model equation does not adequately predict the distribution of trips between zones. In most models the value of time for each purpose is modified by an exponentially determined travel time factor or F factor—also known as a friction factor. F factors represent the average area-wide effect that various levels of travel time have on travel between zones. The F factors used were developed from the process described in the *Travel Estimation Techniques for Urban Planning,* published by the National Cooperative Highway Research Program (NCHRP) in January 1996. The matrix is generated in TP+ during the gravity model process.

The primary inputs to the gravity model are the normalized productions and attractions by trip purpose developed in the trip generation phase. The second data input is a measure of the temporal separation between zones. This measure is an estimate of travel time over the transportation network. Zone-to-zone travel times are referred to as "skims."

In order to more closely approximate actual times between zones and to account for the travel time for intra-zonal trips, the skims include terminal and intra-zonal times. Terminal times account for the non-driving portion of each end of the trip and are generated from a table based on area type. Terminal times represent that portion of the total travel time used for parking and walking to the actual destination. Intra-zonal travel time is the time of trips that begin and end within the same zone. Intra-zonal travel times were calculated utilizing a nearest neighbor routine.

The gravity model utilizes the by-purpose productions and attractions, the by-purpose F factors, and the travel times, including terminal and intra-zonal. Mode split models are then applied by purpose to convert the total person trips to motorized (automobile and transit) and non-motorized (walk, bicycle and school bus) person trips. The motorized person trips are then utilized by the logit mode-choice models to produce person trips by mode. The person trips by mode and by purpose are then converted to automobile trips by applying automobile occupancy factors. The resulting total trip table is used for subsequent analysis.

Traffic Assignment

The traffic assignment process takes the trips produced in a zone (trip generation) and distributed to other zones (trip distribution) and loads them onto the network via the centroid connectors. A program examines all of the possible paths from each zone to all other zones and calculates all reasonable time paths from each zone (centroid) to all other zones. Trips are assigned to paths that are the shortest path between each combination of zones. As the volumes assigned to links approach capacity, travel times on all paths are recalculated to reflect the congestion, and the remaining trips are assigned to the next shortest path. This process continues through several iterations until no trip can reduce its travel time by taking the next shortest path. This is a user equilibrium assignment method and reflects the alternative routes that motorists use as the shortest paths become congested. The assignment produces an assigned volume for each link.

Model Calibration/Validation

Model calibration/validation verifies that the assigned volumes simulate actual traffic counts on the street system. When significant differences occur, additional analysis is conducted to determine the reason. At this time, modifications may be made to the network speeds and configurations (hence, paths), trip generation (special generators), trip distribution (F factors), socioeconomic data, or traffic counts.

The purpose of the model calibration phase is to verify that the base year assigned volumes from the traffic assignment model simulate actual base year traffic counts. When this step is completed, the systems model is considered statistically acceptable. This means that future socioeconomic data can be substituted for base (existing) data; the trip generation, trip distribution, and traffic assignment steps can be repeated; and future trips can be simulated for systems analysis. It is assumed that the quantifiable relationships modeled in the base year will remain reasonably stable over time.

3. DEMOGRAPHIC INFORMATION

Zone Structure

The whole of Kern County is the area that is currently being modeled by the Kern 2006 Regional travel demand model. The Kern2006 Model is consistent with its predecessors in terms of the geographic area that is being modeled. The zone structure, however, has been further disaggregated to 1,692 internal zones and 34 external zones (gateways). External gateways have been defined for all major roadways crossing Kern County. In addition to these internal zones and external zones, the Kern2006 Model includes dummy zones (1693–1950), which are reserved for future use. With the inclusion of these dummy zones, the number of TAZs is equal to 1,984 zones.

Demographic Forecasting Needs

Travel models require a number of data items to be counted or estimated for each TAZ in the region. These items are as follows:

- ***Occupied Households*** are the occupied dwelling units in each TAZ. Vacant dwelling units and group quarters are not included in the household projections. Households by TAZ are the primary data used to estimate trip productions.
- ***Population in Households*** is used in conjunction with household data to estimate average household size for each TAZ. Population in group quarters is not included in the household population projections. Population in households is used in conjunction with the number of households to estimate average household size for each TAZ and distributions of households by household size.
- ***Median Household Income for each TAZ*** has been summarized from the 2000 census data and is expressed in 1999 dollars. This data is used to estimate distributions of households by income group for the modeling process. Income level is a strong explanatory variable for trip generation.
- ***Basic production (BASIC) (Basic/Production)*** is defined as employment in the manufacturing industry. Examples include basic production of goods including oil fields, farms, food processing, and manufacturing. Equivalent general plan land use: resource/industrial. It includes employment in categories such as mining, manufacturing and transportation. Employment is defined at the work location. The employees are defined at the work location.
- ***Basic Warehousing (BWOTH) (Service/Warehousing)*** is defined as employment in the warehousing industry. Examples include transportation, utilities, other such as warehousing, maintenance yards. Equivalent general plan land use: light/medium industrial. The employees are defined at the work location.
- ***Retail High (RHRET) (Retail/Heavy)*** is defined as employment in the retail industry and includes Retail stores, Other-Retail and specialty stores. Examples include high-intensity retail such as fast food, grocery, convenience, and restaurant. Equivalent general plan land use: neighborhood commercial, highway commercial. The employees are defined at the work location.
- ***Retail Medium (RMRET) (Retail/Medium)*** is defined as employment in the retail Industry and includes Shopping malls, Commercial-Shops and Other Big Box retail stores.

Examples include medium-intensity retail such as malls, home improvement, and specialty retail. Equivalent general plan land use: regional commercial. The employees are defined at the work location.

- ***Service Commercial (SCSER) (Retail/Service)*** is defined as employment in the non-retail industry, such as hospitals, service/industry, etc. Examples include low intensity retail/office such as automobile dealerships, repair shops, education, health, other. Equivalent general plan land use: mixed office/commercial, light industrial. The employees are defined at the work location.
- ***Service Office (SOSER) (Service/Office)*** includes employment in finance and real estate, personal services, business services, and government. Examples include traditional offices such as business, government, office commercial, civic center, and school (daily trips/employee: Office 3.3, Education 17.0, Health 7.0, Government 12.0). The employees are defined at the work location.
- ***Elementary and Middle School Enrollment (F18)*** is the student enrollment at public and private elementary and middle schools (first through eighth grades). Enrollment is defined at the school location.
- ***High School Enrollment (F912)*** is the student enrollment at public and private high schools. Enrollment is defined at the school location.
- ***College Enrollment (F13)*** is the student enrollment at public and private colleges. Both part-time and full-time students are included. Enrollment is defined at the school location.

In addition to the above items, the number of external station to external station vehicle trips passing through each external station is projected. The external-external trips include all trips passing through the study area (not stopping in the study area).

Base Year (2006) Socioeconomic Data Summaries

The base year data for households and household population was obtained from year 2000 census information and year 2006 parcel data information from the county assessor's office. The census information at the block level was aggregated to the TAZ level for the Kern County area. Employment information was obtained from the California Employment Development Department (EDD) for individual employers by employment site. Median income was also obtained from census data and was provided by Kern COG at the TAZ level.

Kern County was divided into 16 jurisdictions based on city boundaries as shown in Figure 3-1. Table 3-1 reports the base year summaries by jurisdictions.

The distribution of households by TAZ is illustrated in Figure 3-2. As a simplifying assumption to improve the accuracy of the model calibration process, the number of occupied households was set equal to the number of dwelling units. As of 2006, Kern County faced a severe housing shortage, and no data was available regarding vacancy rates by geographic area. As forecasts of future dwelling unit growth also assumed near zero vacancy levels, this base year assumption was deemed valid given documented year 2006 housing shortages throughout Kern County.
Figure 3-3 illustrates the corresponding distribution of year 2006 population, while Figure 3-4 illustrates the distribution of employment by work site summed to TAZ geographic boundaries.

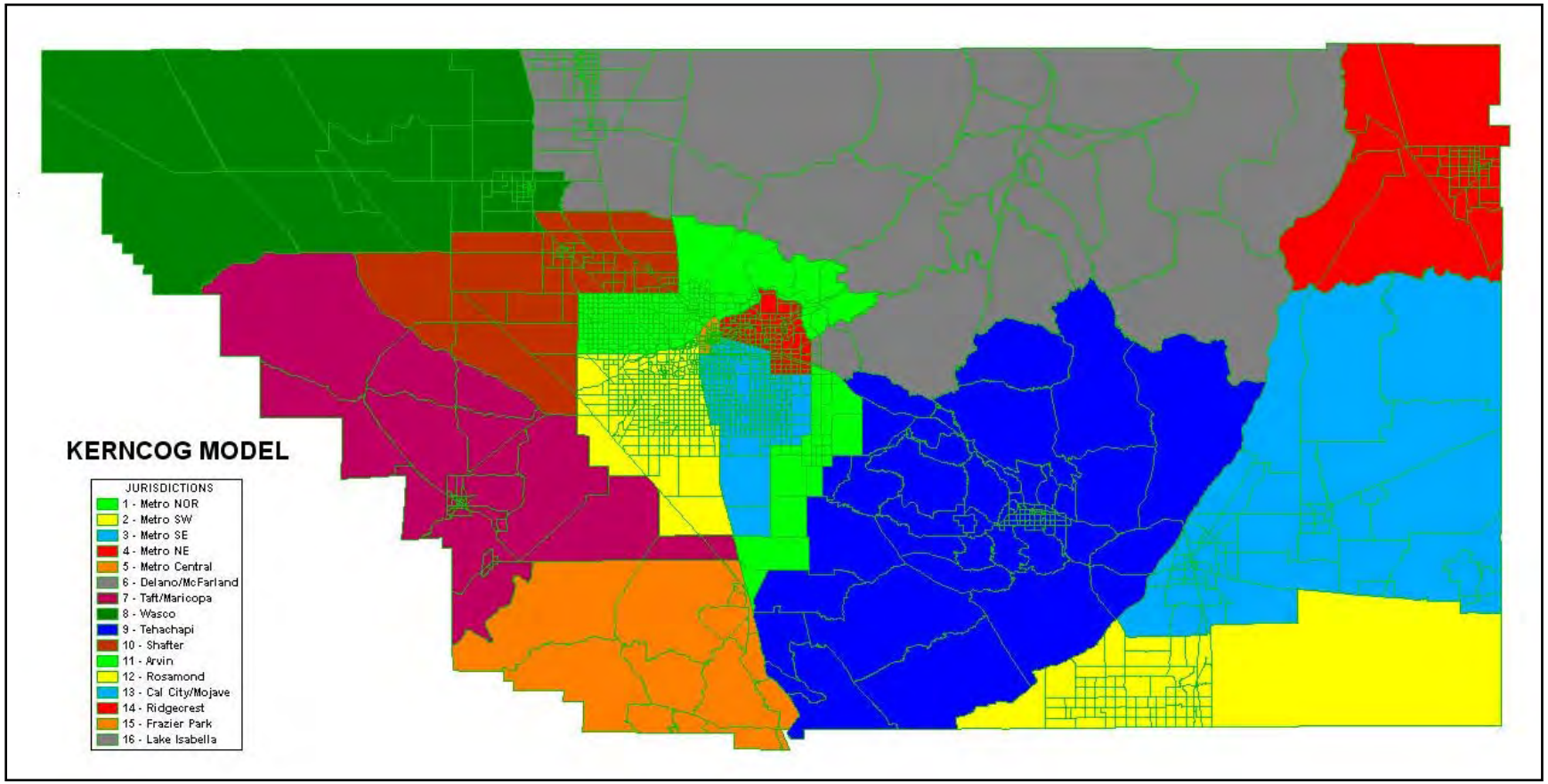


Figure 3-1. Kern County Jurisdiction Map

Table 3-1: Kern COG Socioeconomic Data for 2006

RSA	HOUSE-HOLDS	HHPOP	GROUP QTS	TOTAL POP	ELEM SCHOOL	HIGH SCHOOL	COLLEGE
Metro - N.O.R.	44,441	123,346	327	123,673	13,767	8,108	427
Metro - Southwest	47,673	132,954	328	133,282	18,826	8,006	10,570
Metro - Southeast	36,583	123,872	329	124,201	22,852	4,067	—
Metro - Northeast	30,777	93,119	330	93,449	16,200	7,608	13,809
Metro - Central	8,454	19,700	331	20,031	3,501	4,453	—
Greater Delano/ McFarland	13,412	51,039	332	51,371	9,624	5,110	1,029
Greater Taft/Maricopa	7,136	18,419	333	18,752	3,507	1,193	1,172
Greater Wasco	5,858	20,535	334	20,869	4,317	1,543	—
Greater Tehachapi	11,368	26,275	335	26,610	4,270	1,789	—
Greater Shafter	6,208	21,909	336	22,245	4,651	1,692	—
Greater Arvin	4,370	17,914	337	18,251	4,481	2,582	—
Greater Rosamond	8,189	23,259	338	23,597	3,747	1,518	1,506
Greater Cal City/ Mojave	7,678	16,787	339	17,126	2,532	1,219	—
Greater Ridgecrest	14,717	33,122	340	33,462	4,364	1,777	1,349
Greater Frazier Park	4,436	7,500	341	7,841	383	584	—
Greater Lake Isabella	10,836	16,204	342	16,546	1,554	736	812
Total	**262,136**	**745,954**	**33,248**	**33,248**	**118,576**	**51,985**	**30,674**

RSA	BASIC EMP	RHRET EMP	RMRET EMP	SCSER EMP	SOSER EMP	BWOTH EMP	TOTALEMP
Metro - N.O.R.	16,523	4,671	2,367	7,615	10,584	4,077	45,837
Metro - Southwest	10,559	5,539	2,290	12,684	18,053	2,096	51,221
Metro - Southeast	7,161	3,695	2,293	6,878	3,359	2,871	26,257
Metro - Northeast	3,898	2,424	1,382	4,746	3,145	469	16,064
Metro - Central	1,600	2,475	794	9,902	16,753	1,598	33,122
Greater Delano/ McFarland	9,104	1,252	263	2,960	5,733	2,221	21,533
Greater Taft/Maricopa	6,190	448	162	1,665	1,367	396	10,228
Greater Wasco	8,963	582	101	1,006	1,964	256	12,872
Greater Tehachapi	2,396	656	309	1,668	3,700	554	9,283
Greater Shafter	9,576	903	7	1,365	1,706	3,179	16,736
Greater Arvin	1,803	219	—	749	639	65	3,475
Greater Rosamond	11,679	327	41	661	4,238	76	16,950
Greater Cal City/ Mojave	2,157	378	29	863	592	465	4,484
Greater Ridgecrest	5,261	1,111	573	2,406	3,115	244	12,710
Greater Frazier Park	1,111	188	31	201	324	1,073	2,928
Greater Lake Isabella	915	350	157	854	268	152	2,696
Total	**98,896**	**25,218**	**10,727**	**56,223**	**75,540**	**19,792**	**286,396**

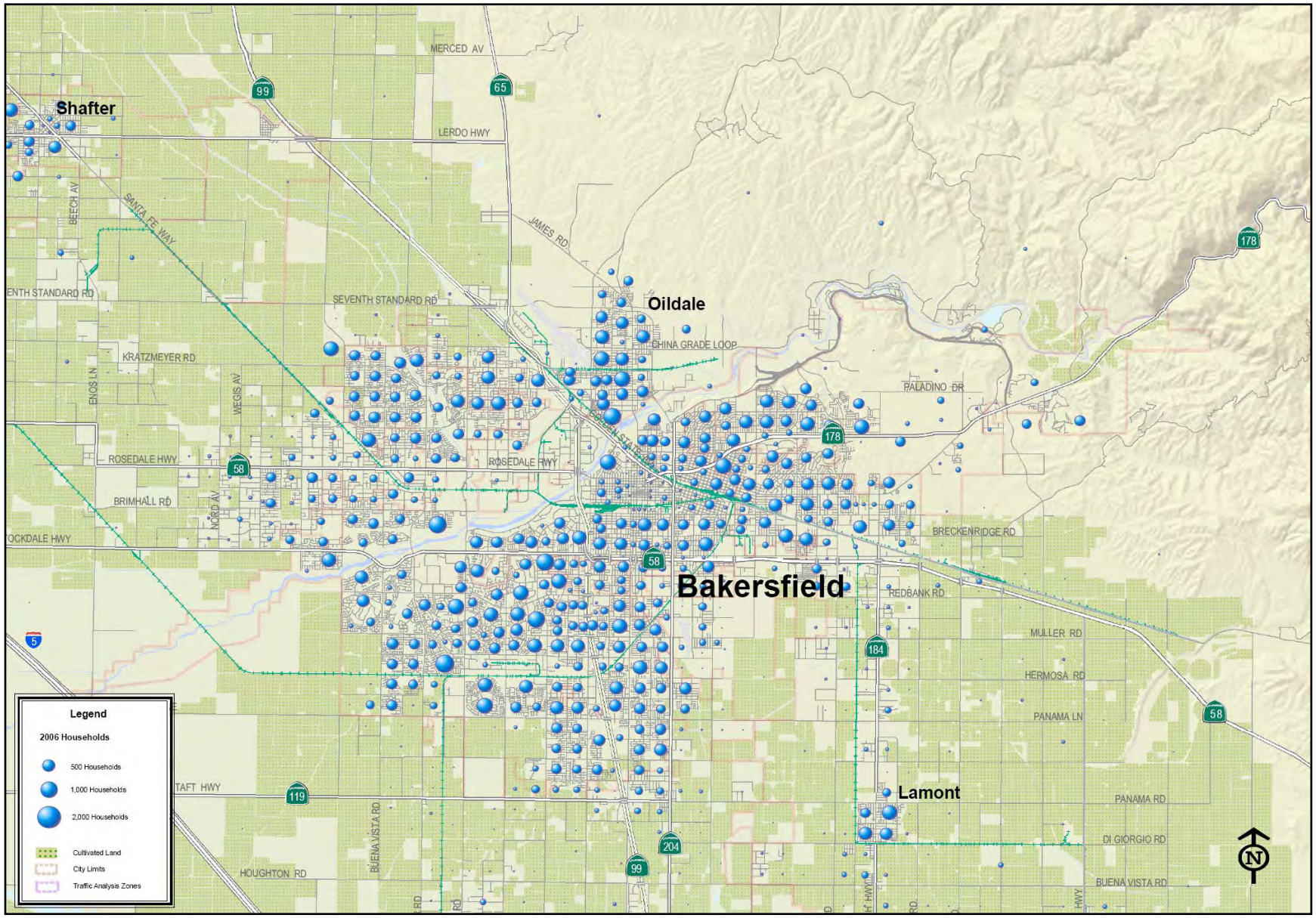


Figure 3-2. Bakersfield 2006 Households (May 2009)

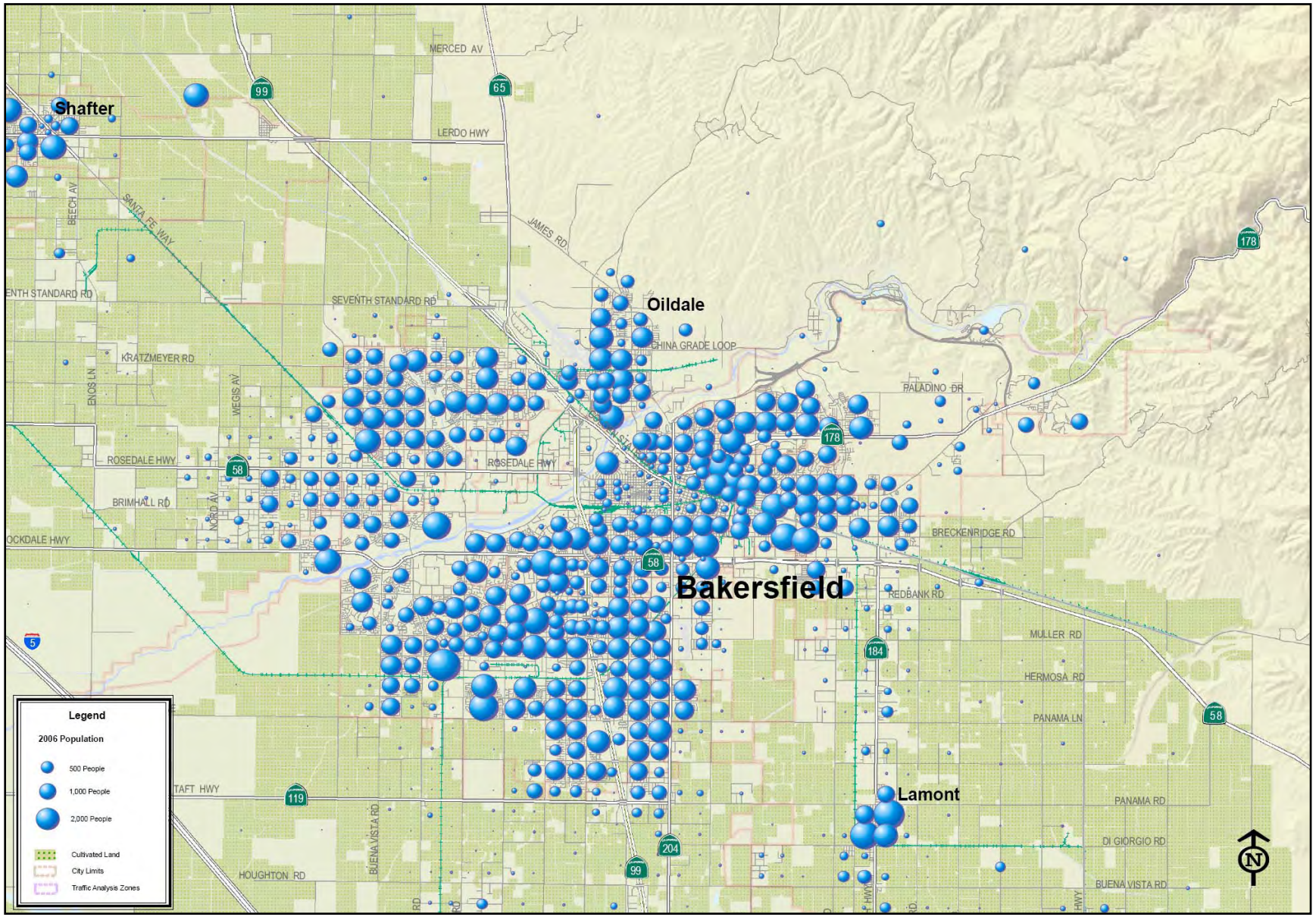


Figure 3-3. Bakersfield 2006 Household Population (May 2009)

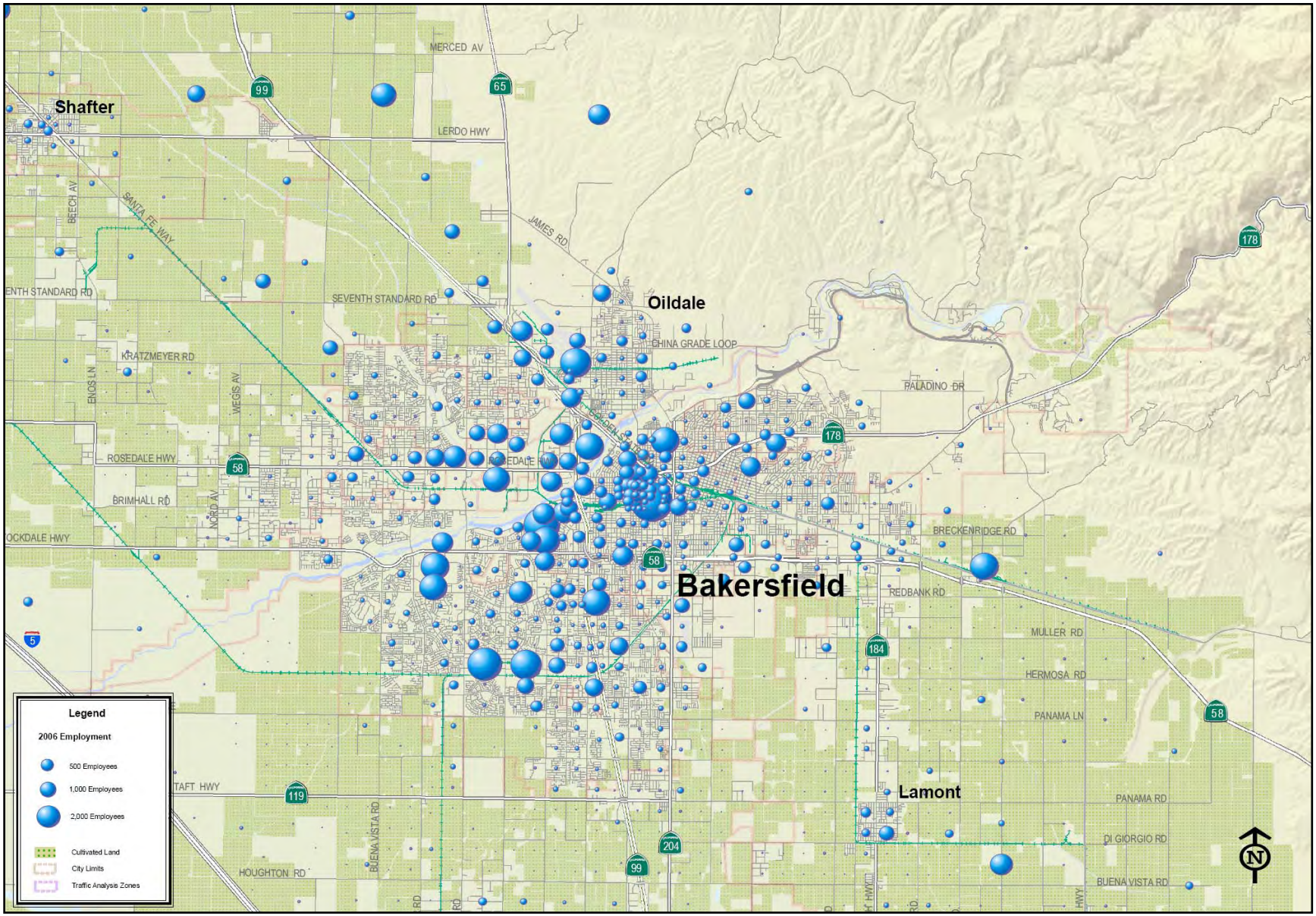


Figure 3-4. Bakersfield 2006 Employment (May 2009)

4. NETWORK

Master Network Development

The development of a master network for Kern County required the consolidation of networks from numerous horizon years between 2003 and 2030. The benefits of a master network include consistency between variables and simplified network coding and analysis of alternatives. Kern COG staff input all roadway projects and new TAZs into a 2030 "catch-all" network. This network included all City of Bakersfield specific plans. Dowling Associates staff consolidated the various network layers into one consistent master network that was used to separately "build" each horizon year. A year 2003 network was created out of the master network to develop travel times for the initial calibration of the trip distribution model based on 2001 statewide travel survey characteristics for like-sized areas.

Traffic Analysis Zones and Highway Network

The traffic analysis zones and the highway network are based on a 1984 zone structure. Of these zones, zones 1 to 1692 are internal zones and zone numbers 1951 to 1984 are external zones. Node numbers in the highway network less than 2000 are reserved for TAZs. Zone numbers 1693 to 1950 are reserved for future use. The TAZ geography is included as a shape file and is not used by the model other than for display purposes. The TAZ geography exists so that users can link model inputs and outputs (e.g., demographics and output trips) to the files and view results geographically.

Network attributes include traffic signal spacing, lookup tables for capacities, green times and other attributes required for the direct travel impact model (DTIM) as a post-processor to the traffic assignment process. The network attributes used in the assignment process are listed in Table 4-1. The functional classification of highway links based on area type and facility type is shown in Table 4-2. Table 4-3 shows the default capacity per lane per hour of green time and Table 4-4 shows the ratio of the default green time to the cycle length (GC). The actual capacity of the link is obtained by multiplying the appropriate default capacity and GC ratio.

Table 4-1: Network Attributes

Attribute	Description
Name	Minimum
A	A node
B	B node
STREET	Street name
TSVA	Free flow speed
CMP	CMP designation
BASIN	Air basin designation
SIGSPC	Average signal spacing in 1,000th miles (e.g., 125 = 0.125 miles)
CYCLE	Signal cycle length in seconds
GC	Approach green to cycle ratio in 100ths (e.g., 50 = 0.50) (see Table 4-4)
HRCAPL	Hourly capacity per lane (see Table 4-3)
DF	Delay adjustment factor in 1,000ths (e.g., 1286 = 1.286)

Table 4-1: Network Attributes

Attribute	Description
M	Delay calibration term
AMPEAK	AM peak period traffic volumes
MDPEAK	Midday period traffic volumes
PMPEAK	PM peak period traffic volumes
OFPEAK	Off peak period traffic volumes
TOTADT	Total daily volumes
BASETM	Base time on a link without congestion
SCREEN	Screenline locations
LINEPOST	Linepost designation
METRO	Metro designation
EJ	Environmental justice designation
DISTANCE	Link length
ACTUAL_SIG	Actual spacing of signals in 1,000th miles
COUNT	Counts
AVGDAILY	Average daily count
AVGAM2	AM peak period count
AVGMID3	Midday count
AVGPM3	PM peak period count
AVGOFPK	Off-peak period count
CAPCLASS	Functional classification for a link (see Table 4-2)
LANES	Number of lanes
DIR	Direction of link
ITERYEAR	Iteris count year
TOT_AM	AM peak period counts
TOT_MD	Midday period counts
TOT_PM	PM peak period counts
TOT_OF	Off-peak period counts
TOT_DY	Total daily counts
TRK_AM	Truck AM peak counts
TRK_MD	Truck midday counts
TRK_PM	Truck PM peak counts
TRK_OF	Truck off-peak counts
TRK_DY	Truck daily counts
ITERAADT	Iteris ADT counts
ITERTOTALC	Total two-way counts
HPMS_LOCT	HPMS locations
HPMS_ID	HPMS ID
HPMS_CDATE	HPMS count date
TOT_DY07	Total daily 2007 counts
TOT_DY06	Total daily 2006 counts
TOT_DY05	Total daily 2005 counts

Table 4-2: Functional Classification of Highway Network

Facility Type	Area Type				
	Rural	Suburban	Urban	Fringe	CBD
Freeway	1	11	21	31	41
Expressway	2	12	22	32	42
Major arterial	3	13	23	33	43
Minor arterial	4	14	24	34	44
Collector	5	15	25	35	45
Centroid connector	6	16	26	36	46
Diamond ramp	7	17	27	37	47
Loop ramp	8	18	28	38	48
Cordon connector	9	N/A	N/A	N/A	N/A

Table 4-3: Default Capacities per Lane per Hour Green[1]

Facility Type	Area Type				
	Rural	Suburban	Urban	Fringe	CBD
Freeway	2,000	2,000	1,800	1,750	1,750
Expressway	1,900	1,900	1,800	1,600	1,500
Major arterial	1,900	1,900	1,800	1,600	1,500
Minor arterial	1,800	1,800	1,800	1,600	1,500
Collector	1,600	1,600	1,600	1,600	1,500
Centroid connector	N/A	N/A	N/A	N/A	N/A
Diamond ramp	1,000	1,000	1,000	1,000	1,000
Loop ramp	1,250	1,250	1,250	1,250	1,250
Cordon connector	N/A	N/A	N/A	N/A	N/A

[1] Capacity per lane per hour of green must be multiplied by the green/cycle ratio to estimate hourly capacity.

Table 4-4: Default Green/Cycle Ratios

Facility Type	Area Type				
	Rural	Suburban	Urban	Fringe	CBD
Freeway	N/A	N/A	N/A	N/A	N/A
Expressway	0.90	0.90	0.90	0.90	0.90
Major arterial	0.60	0.60	0.55	0.55	0.55
Minor arterial	0.50	0.50	0.50	0.50	0.50
Collector	0.40	0.40	0.45	0.45	0.45
Centroid connector	N/A	N/A	N/A	N/A	N/A
Diamond ramp	N/A	N/A	N/A	N/A	N/A
Loop ramp	N/A	N/A	N/A	N/A	N/A
Cordon connector	N/A	N/A	N/A	N/A	N/A

The functional classification by facility type and area type lookup table automatically fills in link DTIM default values and hourly lane capacities. Free flow speeds are hard coded on a link attribute (TSVA) and are not obtained from a lookup table.

Traffic signal spacing was calculated based on the location of existing signals in the roadway network using geographic information system software, ARCINFO, and was transferred to the highway network variable called "ACTUAL_SIG." In the absence of any signal spacing information, default values are used during the traffic assignment stage. Figure 4-1 shows the actual locations of signals on the roadway network.

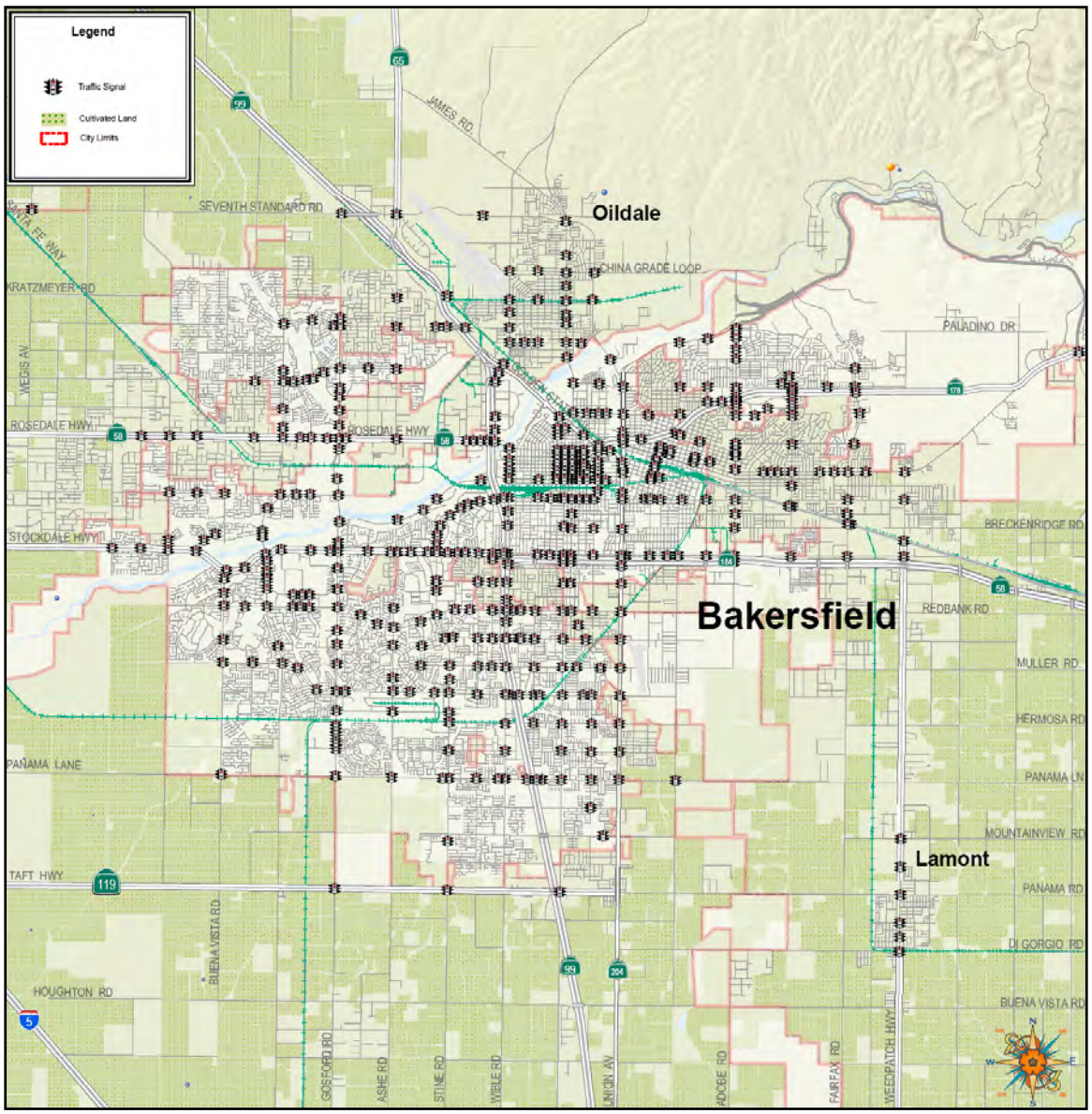


Figure 4-1. Traffic Signal Locations

Turn Penalties Table

A turn penalties file is also included within the model stream and the following table describes the fields of the table:

Turn Penalties

Field	Description
A	From node
B	Through node
C	To node
Parameter	Value of -1 prevents turns

Base Year Network Road Classification

Figures 4-2 and 4-3 illustrate the classification of roadways coded in the Year 2006 Highway Network. This network was initially used for model development purposes. During model validation, which is described in Section 8 of this document, roadways were reclassified to more accurately reflect their functionality.

Transit Network

Public transportation service in metropolitan Bakersfield is operated by Golden Empire Transit (GET). The 2006 route network was obtained from GET and was coded into the model. There are 18 bus routes in the Bakersfield area, some of which represent new service from 2006. Figure 4-4 displays the location of the bus routes in relation to the model roadway system.

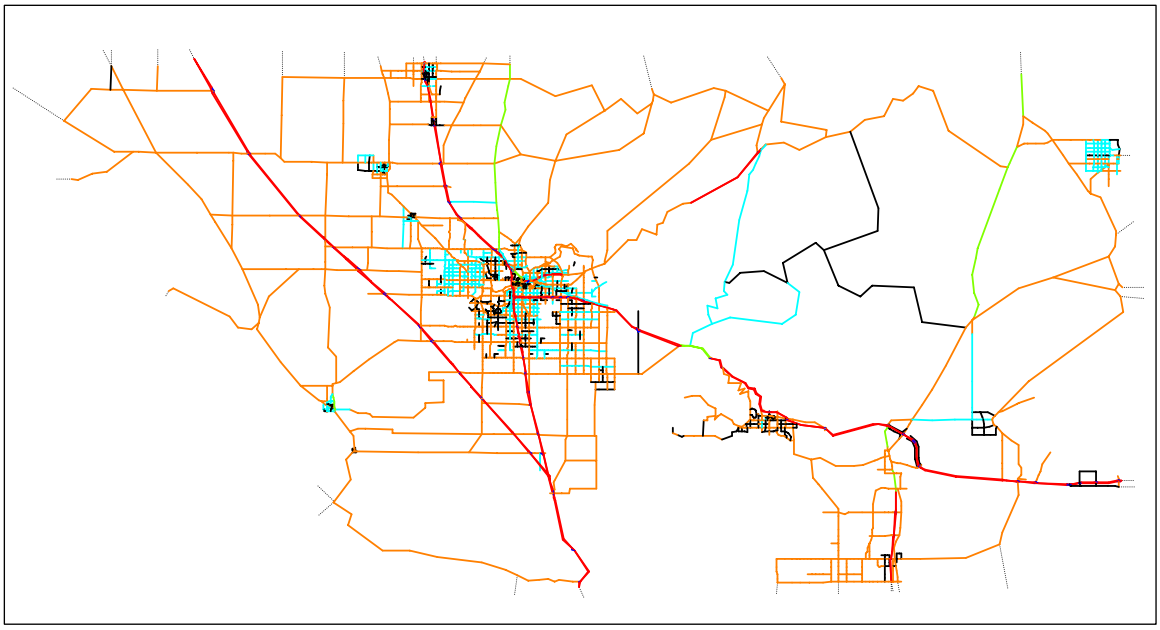


Figure 4-2. 2006 Kern County Roadway Network

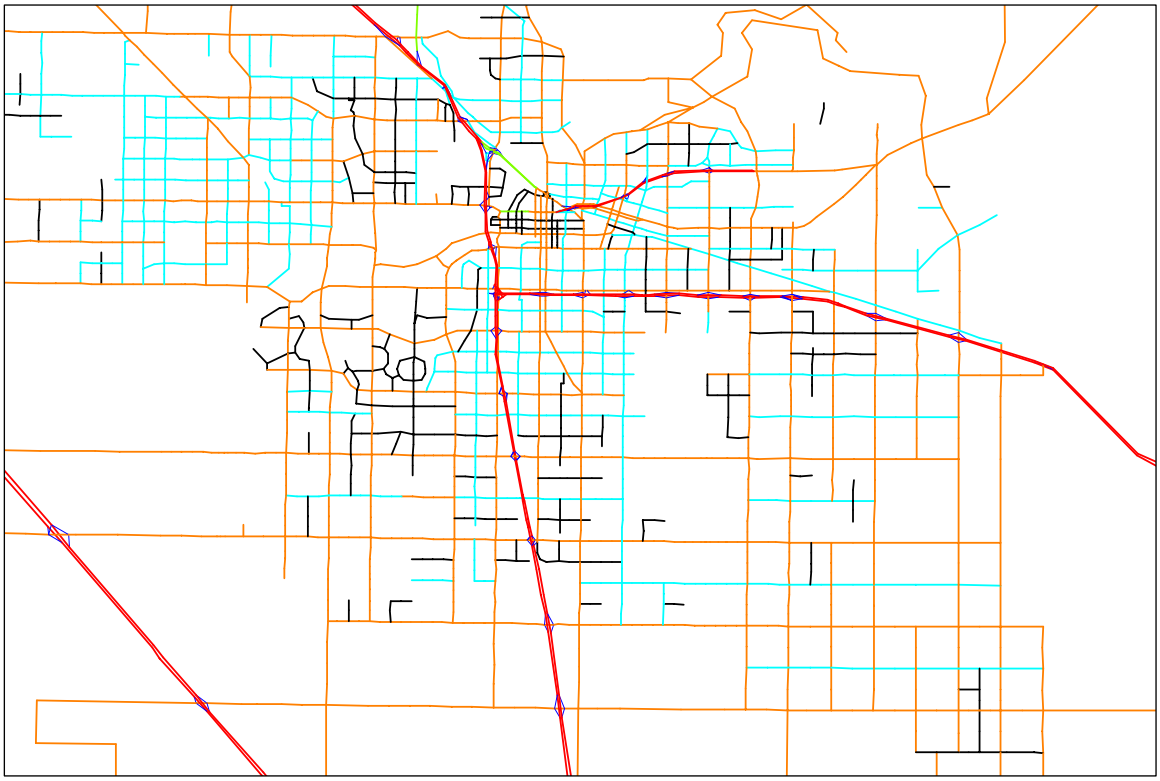


Figure 4-3. 2006 Kern County Roadway Network (Metro Bakersfield Inset)

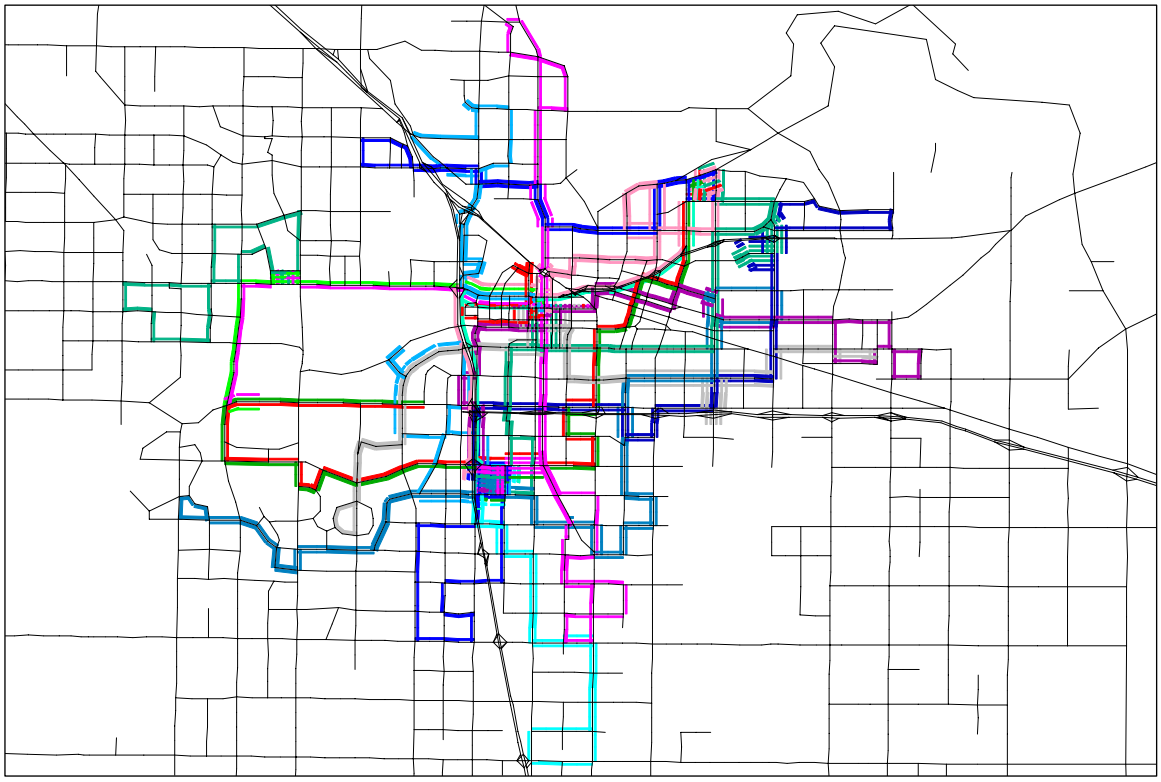


Figure 4-4. 2006 Golden Empire Transit Network

Highway and Transit Skims

Once the highway network is created, the model performs highway skims from centroid node to centroid node. The travel distance is "minimized" and travel time is skimmed. Both the off-peak and peak travel periods are skimmed as input to the downstream models. To calculate the off-peak skims, free-flow travel times are used, while congested travel times are used to calculate peak skims. Congested travel times are calculated from the output of previous traffic assignments. In the absence of a previous traffic assignment, the free flow travel times are used. Even during the feedback process, the first iteration always uses the free flow travel times for both peak and off-peak skims.

After the peak and off-peak travel time matrices are calculated, intrazonal travel times are calculated and then origin and terminal times are added to them. The procedure used for calculating intrazonal travel times was the closest neighbors approach. For each row origin, the travel time to its two closest neighbors is found from the matrix. The intrazonal time is computed as one-half of the travel time to its closest neighbor.

After intrazonal travel times are estimated, additional origin and terminal times are added to the skim matrix. The additional origin and terminal times added to the travel time matrix depend on the location of the TAZ and are provided in a database file called addtimes.dbf.

Development of the transit skims relied primarily on the highway skims for congestion. Transit path-building between each pair of TAZs relies on the coded representation of the transit network as outlined above and a set of "weights" used to value each time component of the trip: walking, waiting, in-vehicle time, and transferring. The transit procedures and the path building parameters used are consistent with the previous version of the model and were not altered.

5. TRIP GENERATION

Overview

The Kern2006 Model trip generation models have been developed from the 2001 Caltrans statewide survey. Both trip production and trip attraction models have been estimated. The trip production models are cross-classification models stratified by income group and household size. In effect, the models provide trip production rates by trip purpose for each household size and income group stratum. The independent variable used is the number of households in the stratum. Four household size strata are used:

- 1 person households
- 2 person households
- 3 person households
- 4 or more person households

This household income stratification follows a similar specification to the original 1996 model with the groupings adjusted for inflation and to better match the categories found in the 2001 survey. The new household income groupings were defined following discussion with Kern COG staff as estimates of relative Consumer Price Index values, and include the following income group stratifications:

- Low income (less than $25,000)
- Lower-middle income ($25,000 to $49,999)
- Upper-middle income ($50,000 to $74,499)
- High income ($75,000 or more)

It is necessary to estimate a joint distribution of households by income group and household size (i.e., 16 separate cells) for each TAZ. Submodels (documented below) are developed to produce these data from normal socioeconomic information forecast for each TAZ: population in households, number of households, and median income.

The trip attraction models are cross-classification-like models with the number of employees by employment type and households being the explanatory variables. The employment and household data are normally forecast by TAZ.

Trip generation models have been developed for the following trip purposes:

- Home-based work (HBWork)
- Home-based school (HBSchool)
- Home-based shop (HBShop)
- Home-based other (HBOther)
- Non-home-based work—Other (NHWO)
- Non-home-based other—Other (NHOO)
- Truck trips

The area of study is divided into TAZs and the number of trips that start and end in each TAZ is calculated for every trip purpose. Therefore, the estimation includes trip productions and trip attractions.

A traffic analysis zone, or TAZ, is a traffic model concept described as a grouping of land use with similar characteristics that is used to generate and assign traffic. TAZs usually have homogeneous land use types and similar access to major streets and transit lines. The TAZs used in this calibration were developed in 2005 by Kern COG and include additional subdivisions of the 1998 era TAZs to better define areas surrounding Bakersfield.

Socioeconomic Submodels

The trip production process uses the number of households stratified by household size and income group as the primary independent variables. Thus, it is necessary to have an estimate of the number of households for each income group-household size stratum for each TAZ. However, the socioeconomic data for each TAZ that are available include only the total number of households (dwelling units), the total population in households, and the TAZ median income. For that reason, socioeconomic submodels have been developed from 2000 census data to provide the necessary disaggregate household data for the trip production models for each TAZ, based on the available socioeconomic data.

Socioeconomic submodels were developed from 2000 census data to estimate the number of households by income group and household size for each TAZ. Three submodels were developed:

- A submodel to estimate the number of households by household size based on the average household size of the TAZ and the number of households in the TAZ as shown in Figure 5-1.
- A submodel to estimate the number of households by income group based on the ratio of the median income for the TAZ to the regional median income and the number of households in the TAZ as shown in Figure 5-2.
- A submodel to estimate the joint distribution of households by income group and household size based on the results from the above two submodels and based on targets from the 2000 census data (shown in Table 5-1).

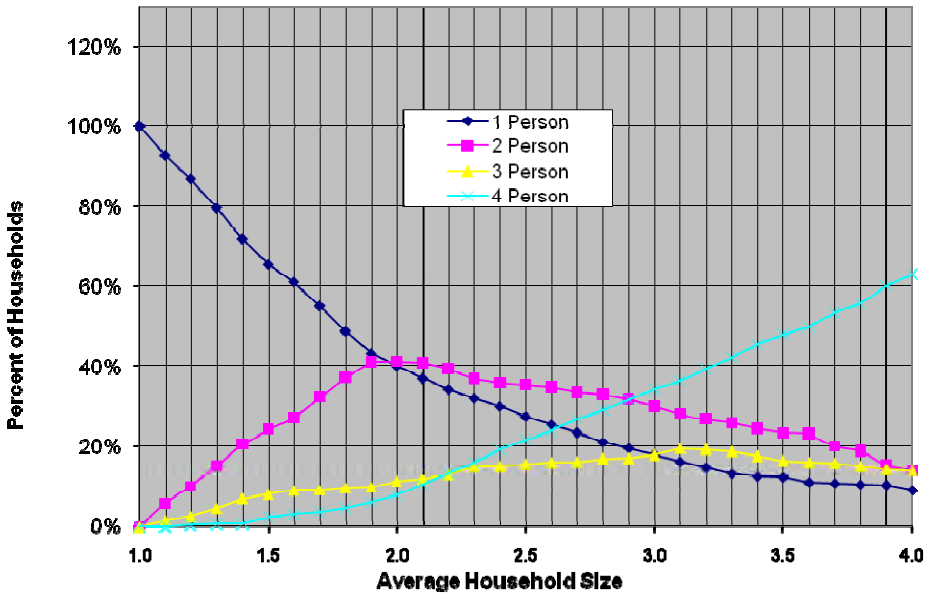
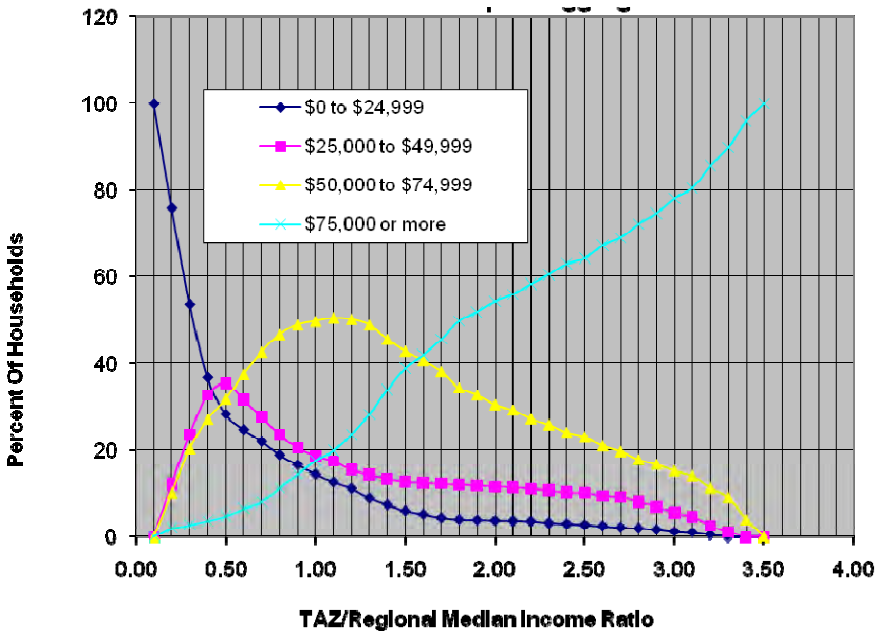


Figure 5-1. Household Size Disaggregation Model



Source: Barton-Aschman Associates, Inc.

Figure 5-2. Income Group Disaggregation Model

Table 5-1: Proportion of Households by Income Group and Household Size from 2000 PUMS Data

Income Group (2000 $)	Household Size, percent				Total
	1	2	3	4+	
$0 – $24,999	12%	9%	6%	9%	36%
$25,000 – $49,999	5%	9%	4%	11%	30%
$50,000 – $74,999	2%	5%	3%	7%	17%
$75,000 or more	1%	6%	3%	7%	18%
Total	**20%**	**28%**	**17%**	**35%**	**100%**

Households by Household Size Disaggregation Submodel

The hypothesis underlying the household size disaggregation model is that for any given zonal average household size (i.e., persons per household) there is a specific "mix" of households for each integer household size (i.e., one person households, two person households, etc.). In order to implement this hypothesis as a functional model, household data from the 2000 Census for Kern County were summarized and grouped by average household size. This data was grouped by ranges of 0.1 persons per dwelling unit (for example, 1.0 to 1.04 were grouped to the 1.0 range, 1.05 to 1.14 were grouped to 1.1, 1.15 to 1.24 were grouped to 1.2, etc.). The summarized data showed a reasonable relationship between average household size and the distribution of the integer persons per household when they were plotted.

Households by Income Group Disaggregation Model

The income group disaggregation model is similar in form to the household size disaggregation model. The independent variable for the model is the ratio of the TAZ median income to the

regional median income. The income ranges defined by the 2000 census and used for this purpose are listed at beginning of this section.

For future forecasts, median incomes can be left unchanged in stable TAZs. For TAZs that are developed or redeveloped between the base and forecast years, TAZ median incomes can be estimated from similar TAZs. Future year income forecasts can be in 2000 or future year dollars. The effect of changing the base year for income forecasts will be accounted for by using the ratio of the TAZ median income to the regional median income. In effect, the income group disaggregation model is "self-correcting" for changes in real or inflationary income.

The ratios of the TAZ median incomes to the regional median income and the proportions of households in each of the four income groups were calculated. Four curves were then developed for the income group disaggregation submodel to represent the proportions of households within the income ranges for each value of the income ratio. The proportions defining the curves were constrained to sum to 1.0 for each value of the income ratio. In addition, the curves were defined such that the implied TAZ median income would fall in the income group implied by the input income ratio. For example, if the input TAZ median income is $31,200, the TAZ to regional median income ratio is 0.7. The income group disaggregation model, a total of 48.1 percent of the households would have incomes in the low and lower-middle income group ranges. The lowest 5.96 percent of the 31.9 percent of the households in the upper-middle income range (i.e., 1.9 percent of all households in the region) would also have incomes less than $31,200. If incomes in the upper-middle income range are assumed to be uniformly distributed (an unlikely case), the implied median income for the TAZ would be 5.96 percent of the range from $30,000 to $49,999, or $31,192.

Estimating Joint Distributions of Households by Socioeconomic Strata

The two submodels described in the previous sections result in estimates of the following "univariate," or "marginal," distributions of households for each TAZ:

- Households by household size
- Households by income group

The initial applications of the models result in preliminary estimates for the following reason. If the households are summed over the strata included in each univariate distribution for each TAZ, the total will be the number of households for the TAZ. For example, if the estimated households by household size are summed for TAZ 1, the total will be the number of households in TAZ 1. However, there is no guarantee that the households for a stratum summed over all TAZs in the region will match the estimated number of regional households for that stratum. For example, the sum of all one person households over all TAZs in the region might not match the total number of one person households estimated for the region.

To ensure that the regional sums match, a marginal weighting, or fratar, process can be applied on a regional basis. For this application, the input "matrices" are the estimates of households for each TAZ in the region from the preliminary applications of the household size or income group disaggregation submodels. The marginal distributions for this application of the marginal weighting process are the total numbers of households for each TAZ and the estimated regional households for the socioeconomic stratum being factored—regional households by household size or regional households by income group. The results of this marginal weighting step will ensure that the total number of households for each TAZ is correct when the various socioeconomic distributions are summed by TAZ, and that the regional households by

socioeconomic stratum are correct when the households for the stratum are summed across all TAZs. Regional distributions of households by income group *and* household size are used to develop the regional control totals for households.

A third submodel completes the disaggregation and results in estimates of households jointly stratified by income group and household size for each TAZ. The submodel uses the results from the modified marginal distributions of households by income group and households by household size for each TAZ along with the regional joint distribution of households by income group and household size. The joint distribution shown in Table 5-1 was developed using Public Use Micro Sample (PUMS) data from the 2000 census.

The third submodel effectively fratars the regional joint distribution of households by income group and household size on a TAZ-by-TAZ basis to match the modified marginal distributions of households by income group and households by household size for each TAZ.

All three submodels have been coded in TP+ script for automatic application each time the trip generation module is invoked.

Socioeconomic Model Application Summary

In summary, the process for estimating the number of households for the joint distribution of households by income group and household size for each TAZ makes extensive use of the marginal weighting technique. The process is as follows:

- Preliminary estimates of the number of households by income group and households by household size are developed for each TAZ using the appropriate socioeconomic disaggregation submodel.
- The preliminary estimates of households for each marginal socioeconomic distribution for each TAZ are marginally weighted so that the numbers of households for each TAZ and the total number of households for each socioeconomic group for the region are matched.
- The regional distribution of households by income group and household size are marginally weighted to match the estimated marginal distributions of households by income group and household size on a TAZ-by-TAZ basis.

Internal-External Trips

As part of this calibration effort, the internal-external trips were updated using the 2000 Statewide Model. The previously separate Internal-External (I-X) trip purpose was then combined into each of the above home-based and home-based trip purposes using the survey, as shown in Tables 5-2 and 5-3. The production-attraction estimates will be adjusted in the final balancing process.

District Based Balancing

Due to the improved accuracy in the latest Kern socio-demographic data, this calibration effort also included the removal of the previously incorporated district-based balancing in favor of a region wide balancing. The initial calibration of trip distribution and validation of traffic assignment will exclude the district balancing. However, some form of district balancing may be implemented if necessary. It would most likely only be used for selected trip purposes such as schools which would be expected to remain in local areas. This decision would be made during initial model validation.

Table 5-2: Kern 2006 External-Internal Trips—Productions (XI trips)

ZONE	GATEWAY	COUNTY LINE	HW_P	HSE_P	HSH_P	HSC_P	HS_P	HO_P	WO_P	OO_P	TR_P	TOTAL_P
1951	Route 33	Kings	956	0	0	0	452	909	4	21	280	2622
1952	Barker Road	Kings	177	0	0	0	83	168	1	4	52	485
1953	King Road	Kings	77	0	0	0	36	73	0	2	23	211
1954	I-5 N	Kings	233	0	0	0	910	841	81	391	750	3206
1955	Corcoran Road	Kings	0	0	0	0	0	0	0	0	0	0
1956	Wildwood Road	Tulare	14	0	0	0	2	7	4	2	6	35
1957	Route 43	Tulare	562	0	0	0	66	298	158	93	237	1414
1958	Melcher Road	Tulare	149	0	0	0	98	207	62	94	91	701
1959	Route 99	Tulare	3505	0	0	0	2306	4865	786	1196	3834	16492
1960	Driver Road	Tulare	569	0	0	0	884	680	378	163	233	2907
1961	Famoso-Porterville Highway	Tulare	592	0	0	0	164	775	268	240	168	2207
1962	Route 65	Tulare	1378	0	0	0	382	1804	89	80	1405	5138
1963	Jack Ranch Road	Tulare	74	0	0	0	21	97	34	30	21	277
1964	Sierra Way	Tulare	17	0	0	0	104	235	22	223	58	659
1965	US 395 N	Inyo	39	0	0	0	245	551	37	376	298	1546
1966	Route 178	San Bernardino	443	0	0	0	340	806	0	34	34	1657
1967	Searles Station Road	San Bernardino	3	0	0	0	2	33	1	37	8	84
1968	US 395 S	San Bernardino	29	0	0	0	20	270	3	117	254	693
1969	Mojave-Randsburg Road	San Bernardino	1	0	0	0	1	14	0	6	13	35
1970	Route 58 E	San Bernardino	317	0	0	0	469	541	30	222	689	2268
1971	20 Mule Team Road	San Bernardino	129	0	0	0	192	221	12	91	281	926
1972	Sierra Kemper Highway	Los Angeles	28	0	0	0	3	76	8	43	54	212
1973	Route 14	Los Angeles	235	0	0	0	14	335	118	1188	1067	2957
1974	90th Street	Los Angeles	49	0	0	0	0	11	2	94	141	297
1975	170th Street	Los Angeles	3	0	0	0	0	1	0	6	8	18
1976	I-5 S	Los Angeles	148	0	0	0	354	1038	42	507	2215	4304
1977	Mount Pinos Road	Ventura	24	0	0	0	58	169	8	96	346	701
1978	Route 166	San Luis Obispo	116	0	0	0	29	91	52	290	203	781
1979	Soda Lake Road	San Luis Obispo	3	0	0	0	1	2	1	7	5	19
1980	Route 58 W	San Luis Obispo	9	0	0	0	0	0	1	39	14	63
1981	Bitterwater Valley Road	San Luis Obispo	7	0	0	0	0	1	1	20	14	43
1982	Route 46	San Luis Obispo	733	0	0	0	26	123	108	1992	1354	4336
1983	Edwards Air Force Base	0.000000	0	0	0	0	0	0	0	0	0	0
1984	Edwards Air Force Base	0.000000	0	0	0	0	0	0	0	0	0	0

Table 5-3: Kern 2006 Internal-External Trips—Attractions (IX trips)

ZONE	GATEWAY	COUNTY LINE	HW_A	HSE_A	HSH_A	HSC_A	HS_A	HO_A	WO_A	OO_A	TR_A	TOTAL_A
1951	Route 33	Kings	8	0	0	0	1	33	4	4	280	330
1952	Barker Road	Kings	1	0	0	0	0	6	1	1	52	61
1953	King Road	Kings	1	0	0	0	0	3	0	0	23	27
1954	I-5 N	Kings	86	0	0	0	275	282	24	217	750	1634
1955	Corcoran Road	Kings	0	0	0	0	0	0	0	0	0	0
1956	Wildwood Road	Tulare	15	0	0	0	0	6	2	5	6	34
1957	Route 43	Tulare	631	0	0	0	5	228	83	191	237	1375
1958	Melcher Road	Tulare	84	0	0	0	14	53	18	111	91	371
1959	Route 99	Tulare	2466	0	0	0	420	1551	376	2247	3834	10894
1960	Driver Road	Tulare	814	0	0	0	40	145	121	406	233	1759
1961	Famoso-Porterville Highway	Tulare	354	0	0	0	30	44	80	471	168	1147
1962	Route 65	Tulare	823	0	0	0	70	103	39	230	1405	2670
1963	Jack Ranch Road	Tulare	44	0	0	0	4	6	10	59	21	144
1964	Sierra Way	Tulare	4	0	0	0	93	269	32	38	58	494
1965	US 395 N	Inyo	8	0	0	0	218	632	1	1	298	1158
1966	Route 178	San Bernardino	0	0	0	0	0	2	0	17	34	53
1967	Searles Station Road	San Bernardino	8	0	0	0	108	72	42	66	8	304
1968	US 395 S	San Bernardino	68	0	0	0	881	592	266	425	254	2486
1969	Mojave-Randsburg Road	San Bernardino	4	0	0	0	46	31	14	22	13	130
1970	Route 58 E	San Bernardino	116	0	0	0	148	302	51	150	689	1456
1971	20 Mule Team Road	San Bernardino	47	0	0	0	61	123	21	61	281	594
1972	Sierra Kemper Highway	Los Angeles	277	0	0	0	145	375	61	68	54	980
1973	Route 14	Los Angeles	4971	0	0	0	4417	7965	974	1353	1067	20747
1974	90th Street	Los Angeles	330	0	0	0	1200	821	278	66	141	2836
1975	170th Street	Los Angeles	20	0	0	0	72	49	17	4	8	170
1976	I-5 S	Los Angeles	2063	0	0	0	2587	3994	715	1840	2215	13414
1977	Mount Pinos Road	Ventura	336	0	0	0	421	651	121	310	346	2185
1978	Route 166	San Luis Obispo	99	0	0	0	30	243	136	200	203	911
1979	Soda Lake Road	San Luis Obispo	2	0	0	0	1	6	3	5	5	22
1980	Route 58 W	San Luis Obispo	1	0	0	0	2	21	17	7	14	62
1981	Bitterwater Valley Road	San Luis Obispo	1	0	0	0	4	18	4	4	14	45
1982	Route 46	San Luis Obispo	64	0	0	0	368	1787	446	381	1354	4400
1983	Edwards Air Force Base	0.000000	0	0	0	0	0	0	0	0	0	0
1984	Edwards Air Force Base	0.000000	0	0	0	0	0	0	0	0	0	0

Trip Production Rates

In trip production, the rate of trips per household that are produced in every TAZ on an average weekday is calculated, for every trip purpose.

According to the state-of-practice, it has been assumed that the factors which determine trip production rates are mainly the size and income of each household. Therefore, households in Kern County were grouped into one, two, three, and four-or-more person households. The Household incomes were also stratified into lower, lower–middle, upper–middle and high income groups.

For the model estimation, data were extrapolated from the *Caltrans 2001 Statewide Travel Survey* database. However, as shown in Table 5-4, due to the small sample size for Kern County alone, it was proposed to add data from Fresno, Merced and Tulare counties (Table 5-5). The combined data set from the 2001 Caltrans Statewide Survey was used to calculate initial (non-calibrated) trip production rates.

Table 5-4: Number of Surveyed Households by Income Group and Household Size in Kern County—2001 Caltrans Statewide Travel Survey

Income Group (2000 $)	Household Size				Total
	1	2	3	4+	
$0 – $24,999	56	36	18	19	129
$25,000 – $49,999	41	56	19	35	151
$50,000 – $74,999	20	47	19	24	110
$75,000 or more	12	44	18	30	104
Total	**129**	**183**	**74**	**108**	**494**

Table 5-5: Number of Surveyed Households by Income Group and Household Size for Combined Kern, Fresno, Merced, Tulare Counties—2001 Caltrans Statewide Travel Survey

Income Group (2000 $)	Household Size				Total
	1	2	3	4+	
$0 – $24,999	190	126	69	85	470
$25,000 – $49,999	153	250	100	146	649
$50,000 – $74,999	72	194	77	114	457
$75,000 or more	33	172	76	85	366
Total	**448**	**742**	**322**	**430**	**1,942**

During the model calibration step, trip generation rates are adjusted so that trip productions closely match trip attractions. For home-based work trips it was assumed that the trip production rates estimated from the 2001 Caltrans Statewide Survey are accurate; therefore, home-based work trip attraction rates were factored until attractions are balanced to home-based work trip productions.

The calibrated trip production rates are shown in Tables 5-6 to 5-16. As can be seen, trip rates in the models increase reasonably as household size increases. The home-based shop and home-based other trip purposes were further refined to include metro and non-metro areas.

Table 5-6: Home-Based Work Trip Production Model

Income Group	Household Size			
	1	2	3	4+
Low	0.4466	0.9038	1.1939	1.4922
Lower–middle	0.9800	1.2138	1.9418	2.2540
Lower–upper	1.1006	1.8230	2.4725	2.2129
High	0.9667	1.9154	3.0500	2.9865

Table 5-7: Home-Based Elementary/Middle School Trip Production Model

Income Group	Household Size			
	1	2	3	4+
Low	0.0000	0.0558	0.3211	1.8394
Lower–middle	0.0000	0.0228	0.338	1.4798
Lower–upper	0.0000	0.0328	0.4436	1.5516
High	0.0000	0.0114	0.3642	1.2528

Table 5-8: Home-Based High School Trip Production Model

Income Group	Household Size			
	1	2	3	4+
Low	0.0221	0.0767	0.2272	0.5867
Lower–middle	0.0212	0.0313	0.2391	0.472
Lower–upper	0	0.0451	0.3138	0.4949
High	0	0.0156	0.2576	0.3996

Table 5-9: Home-Based University/College Trip Production Model

Income Group	Household Size			
	1	2	3	4+
Low	0.0478	0.0987	0.3308	0.0641
Lower–middle	0.0216	0.0331	0.1627	0.1029
Lower–upper	0	0.0128	0.2011	0.2261
High	0	0.0415	0.1536	0.4303

Table 5-10: Home-Based Shop Trip Production Model (Metro)

Income Group	Household Size			
	1	2	3	4+
Low	0.3956	1.1317	1.1317	1.2498
Lower–middle	0.8192	1.228	1.3338	1.4038
Lower–upper	0.5324	1.3625	1.3625	1.9793
High	0.4445	1.6639	1.6639	1.6639

Table 5-11: Home-Based Shop Trip Production Model (Metro)

Income Group	Household Size			
	1	2	3	4+
Low	0.3597	1.0288	1.0288	1.1362
Lower–middle	0.7447	1.1164	1.2126	1.2762
Lower–upper	0.484	1.2387	1.2387	1.7993
High	0.4041	1.5127	1.5127	1.5127

Table 5-12: Home-Based Other Trip Production Model (Metro)

Income Group	Household Size			
	1	2	3	4+
Low	1.45422	2.59983	4.86558	6.57351
Lower–middle	1.29132	2.24046	3.65904	7.94322
Lower–upper	1.39041	2.56527	5.08329	9.75258
High	0.85446	2.65617	3.00096	8.83998

Table 5-13: Home-Based Other Trip Production Model (Metro)

Income Group	Household Size			
	1	2	3	4+
Low	1.03005	1.84149	3.44646	4.65624
Lower–middle	0.91467	1.58697	2.59182	5.62644
Lower–upper	0.98487	1.81701	3.60063	6.90804
High	0.60525	1.88145	2.12571	6.26166

Table 5-14: Non-Home-Based Work-Other Trip Production Model

Income Group	Household Size			
	1	2	3	4+
Low	0.23283	0.4185	0.61155	0.61155
Lower–middle	0.69048	0.86238	1.05741	1.06857
Lower–upper	0.90027	1.47681	2.49192	1.87839
High	1.3374	1.78758	2.67471	2.66769

Table 5-15: Non-Home-Based Other-Other Trip Production Model

Income Group	Household Size			
	1	2	3	4+
Low	1.07649	2.2023	3.21255	3.76506
Lower–middle	1.51155	1.93968	2.00898	4.73301
Lower–upper	1.18377	2.58219	3.2238	6.0237
High	0.70929	2.28681	2.26485	5.81148

The truck trips rates reported in Table 5-16 are based on axle type and are estimated as vehicle trips expressed as PCEs (passenger car equivalents).

Table 5-16: Internal Truck Trip Production Model

Type of Truck	Basic Production (BASIC_EMP)	Basic Warehousing (BWOTH_EMP)	Retail High (RHRET_EMP)	Retail Medium (RMRET_EMP)	Service Office (SOSER_EMP)	Service Commercial (SCSER_EMP)
2-axle	0.0554	0.0610	0.0464	0.0464	0.0610	0.0610
3-axle	0.0059	0.0058	0.0040	0.0040	0.0058	0.0058
4- or more axle	0.0123	0.0129	0.0073	0.0073	0.0129	0.0129

Trip Attraction Rates

In the trip attraction procedure, the total number of trips that end in each TAZ are calculated for every trip purpose. The estimated rates are the number of trips per household, per type of employee (basic, basic warehousing, retail high, retail medium, service office and service commercial), and per school enrollment (elementary/middle, high and college/university). The trip rates have been estimated based on the 2001 statewide travel survey. Tables 5-17 through 5-21 show the trip attraction rates.

Table 5-17: Home-Based Work Trip Attraction Model

Income Group	House-holds	Basic Production (BASIC_EMP)	Basic Warehouse (BWOTH_EMP)	Retail High (RHRET_ EMP)	Retail Medium (RMRET_ EMP)	Service Office (SOSER_ EMP)	Service Commercial (SCSER_ EMP)
Lower	0.0182	0.425	0.200	0.444	0.409	0.266	0.193
Lower–middle	0.0133	0.511	0.504	0.598	0.544	0.380	0.413
Upper–middle	0.0038	0.299	0.412	0.154	0.337	0.374	0.329
Higher	0.0027	0.300	0.278	0.253	0.145	0.447	0.672

Table 5-18: Home-Based School and College Trip Attraction Models

Purpose	Elementary/Middle School Enrollment	High School Enrollment	College Enrollment
Elementary/middle school	1.319		
High school		1.142	
College/university			0.994

Table 5-19: Home-Based Shop and Non-Home Based Trip Attraction Models

Income Group	House-holds	Basic Production (BASIC_EMP)	Basic Warehouse (BWOTH_EMP)	Retail High (RHRET_ EMP)	Retail Medium (RMRET_ EMP)	Service Office (SOSER_ EMP)	Service Commercial (SCSER_ EMP)
HBShop				10.0	6.0		
NHWO–production allocation		0.463	0.661	0.227	0.444	0.651	0.755
NHWO–attraction allocation	0.0921	0.25	0.25	2.16	2.16	0.25	0.25
NHOO	0.4499	0.25	1.50	16.4	10.25	1.20	0.25

Table 5-20: Home-Based Other Trip Attraction Models

Income Type	Household Size 1	Household Size 2	Household Size 3	Household Size4
Lower	0.516	1.061	1.760	2.574
Lower–middle	0.683	1.040	1.673	2.976
Upper–middle	0.659	1.274	2.154	3.536
Higher	0.494	1.375	1.851	3.396

Purpose	Basic Production	Basic Warehousing	Retail High	Retail Medium	Service Office	Service Other
Home-based other	0.0554	0.0610	0.0464	0.0464	0.0610	0.0610

Table 5-21: Internal Truck Trip Attraction Model

Type of Truck	Basic Production (BASIC_EMP)	Basic Warehousing (BWOTH_EMP)	Retail High (RHRET_EMP)	Retail Medium (RMRET_EMP)	Service Office (SOSER_EMP)	Service Commercial (SCSER_EMP)
2-axle	0.0502	0.0502	0.0502	0.0502	0.0502	0.0502
3-axle	0.0051	0.0051	0.0051	0.0051	0.0051	0.0051
4- or more axle	0.0188	0.0188	0.0188	0.0188	0.0188	0.0188

Tables 5-22 and 5-23 show the total number of productions and attractions by trip purpose and district. The five districts in the trip generation model are Bakersfield, northeast Kern County, southeast Kern county, southwest Kern County, and northwest Kern County.

Table 5-22: Trip Productions by Purpose and District

Trip Purpose	Dist1	Dist2	Dist3	Dist4	Dist5	Total
Home-based work						
Low income	59,383.3	15,656.2	7,127.4	10,196.7	2,874.3	95,237.9
Lower–middle income	87,822.1	17,325.2	11,529.0	13,261.0	3,273.6	133,210.9
Upper–middle income	59,711.8	10,278.7	8,571.7	10,126.7	2,126.3	90,815.2
High income	82,152.9	8,156.5	10,824.3	10,250.0	2,853.2	114,236.9
Home-based elementary school	112,912.4	23,484.8	6,988.2	11,177.1	3,472.1	158,034.6
Home-based high school	42,297.7	8,321.6	3,237.5	4,651.5	1,393.5	59,901.8
Home-based college/university	21,817.7	3,281.2	2,277.7	2,999.5	812.4	31,188.5
Home-based shop	217,533.6	38,107.4	29,904.0	32,399.4	8,911.6	326,856.0
Home-based other	808,536.8	150,022.9	84,857.9	101,908.2	30,057.4	1,175,383.2
Non-home-based work—other	203,142.8	28,150.4	28,042.9	28,896.9	7,648.5	295,881.5
Non-home-based other—other	580,356.3	80,826.3	52,023.2	57,898.8	18,129.6	789,234.2
Truck	13,420.4	12,422.5	1,753.7	4,186.7	3,346.1	35,129.4
Total	**2,289,087.8**	**396,033.7**	**247,137.5**	**287,952.5**	**84,898.6**	**3,305,110.1**

Table 5-23: Trip Attractions by Purpose and District

Trip Purpose	Trip Generation - Attractions					Total
	Dist1	Dist2	Dist3	Dist4	Dist5	
Home-Based Work						
Low income	54,695.8	18,732.5	5,798.3	12,653.2	3,352.3	95,232.1
Lower–middle income	79,402.1	25,146.5	7,791.3	16,662.7	4,204.6	133,207.2
Upper–middle income	54,423.8	16,918.0	5,114.7	11,362.6	3,005.9	90,825.0
High Income	71,274.2	19,421.6	6,508.4	13,659.3	3,369.9	114,233.4
Home-based elementary school	106,674.9	23,307.5	8,071.4	14,597.7	5,383.1	158,034.6
Home-based high school	40,363.3	9,379.7	2,895.7	5,888.2	1,374.7	59,901.6
Home-based college/university	25,222.0	1,046.2	2,197.2	1,531.3	1,191.7	31,188.4
Home-based shop	248,134.7	26,518.0	20,346.2	23,703.7	8,155.5	326,858.1
Home-based other	842,855.7	123,860.0	77,447.1	99,337.7	31,885.1	1,175,385.6
Non-home-based work—other	201,517.8	37,931.0	19,907.5	28,220.9	8,305.6	295,882.8
Non-home-based other—other	580,356.3	80,826.3	52,023.2	57,898.8	18,129.6	789,234.2
Truck	13,036.3	12,199.6	1,912.0	4,657.3	3,330.0	35,135.2
Total	**2,317,956.9**	**395,286.9**	**210,013.0**	**290,173.4**	**91,688.0**	**3,305,118.2**

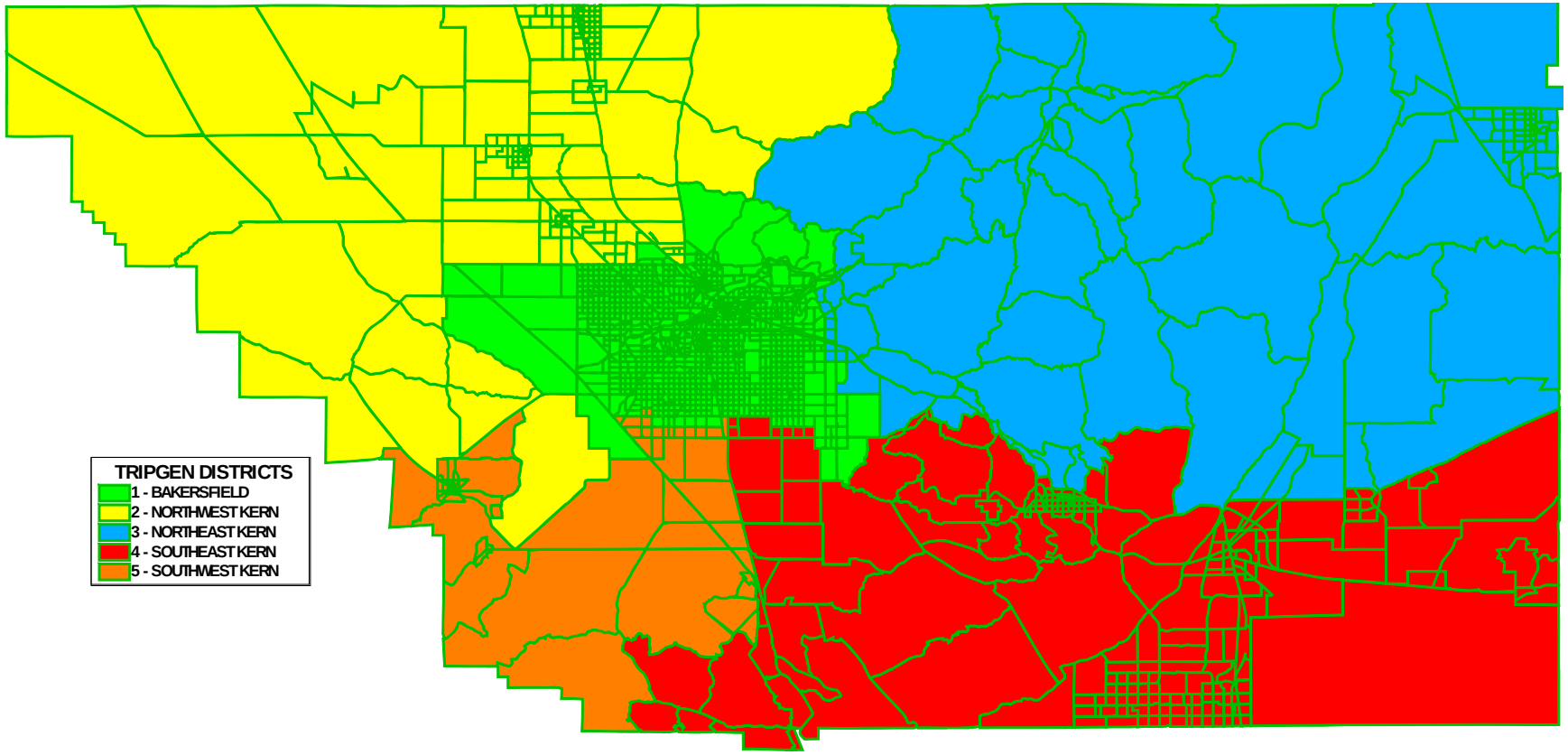


Figure 5-3. District Map

6. TRIP DISTRIBUTION

Introduction

Trip distribution assigns the trips calculated during trip generation to the appropriate production and attraction TAZ pairs. The trips to each TAZ pair are determined based on the gravity model.

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

where:

T_{ij} = trips between zone i and zone j
P_i = productions in zone i
A_j = attractions in zone j
K_{ij} = K-factor adjustment between zone i and zone j
F_{ij} = friction factor between zone i and zone j
i = production zone
j = attraction zone
n = total number of zones

The calibration process calculates the friction factors and K-factors used in the above equation. The goal in calibrating trip distribution is to arrive at friction factors and K-factors such that the average trip lengths and trip length frequency distributions resulting for each trip purpose are similar to those from survey data.

In trip distribution calibration, the gamma function coefficients were adjusted so that the modeled trip length frequency distribution more closely matched the observed trip length frequency distribution. Observed trip length frequency distributions were obtained by combining observed trip tables and modeled travel times between TAZs. Modeled trip length frequency distributions were obtained by applying the trip distribution model using the modeled productions, attractions, and travel times.

The primary source for observed trip length frequency distribution information was the Caltrans 2001 Statewide Travel Survey for Kern County. Only Kern County data were used since the observed trips are combined with network travel time data for model calibration. Since Fresno, Merced and Tulare County trips are made in those counties, as opposed to Kern County, the combined data set was not used. In order to correct for rounding errors and inaccurately reported departure and arrival times, the duration of the trips was corrected using travel times from the 1998 trip distribution model.

Table 6-1 reports the calibrated gamma function coefficients for Kern County, along with the observed and modeled average trip lengths. The gamma functions were converted to friction factors to be used in the model. The friction factors that were estimated for the home-based work trip purpose (by each income group) and home-based school/university trips are shown in Figure 6-1. Figure 6-2 shows the friction factors that were estimated for non-work trip purposes.

Table 6-1: Final Gamma Function Parameters

Trip Purpose	Gamma Function Coefficients			Average Trip Length (minutes)	
	a	b	c	Observed	Modeled
Home-based work					
Low income	1000000	0.18323	–0.07111	17.7	18.3
Lower–middle income	1000000	0.25362	–0.06524	18.3	19.1
Upper–middle income	1000000	1.31742	–0.13338	19.8	20.0
High Income	1000000	0.09313	–0.08360	19.5	19.6
Home-based elementary school	1000000	–1.04075	–0.01912	16.6	9.2
Home-based high school	1000000	–1.04075	–0.01912	16.6	9.2
Home-based college/university	1000000	–0.75402	–0.02930	23.1	18.5
Home-based shop	1000000	–0.84351	–0.02348	12.9	13.6
Home-based other	1000000	–1.06515	–0.01418	14.2	13.8
Non-home-based work—other	1000000	–1.32201	–0.00687	14.8	15.1
Non-home-based other—other	1000000	–1.32801	–0.00444	13.6	10.5
Truck	1000000	–1.32801	–0.00444	—	16.6

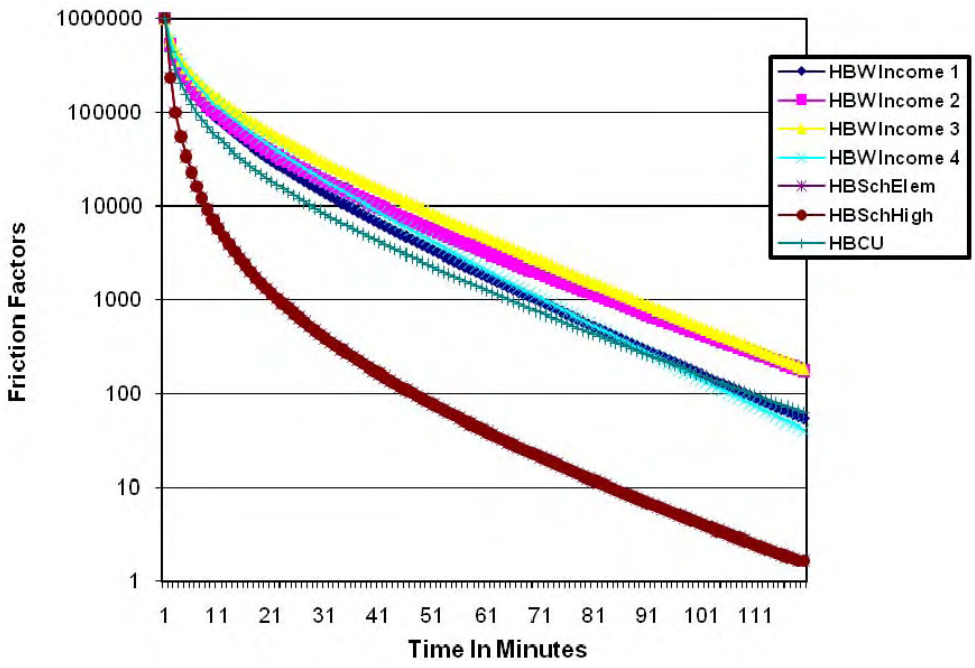


Figure 6-1. Friction Factors (Work and School)

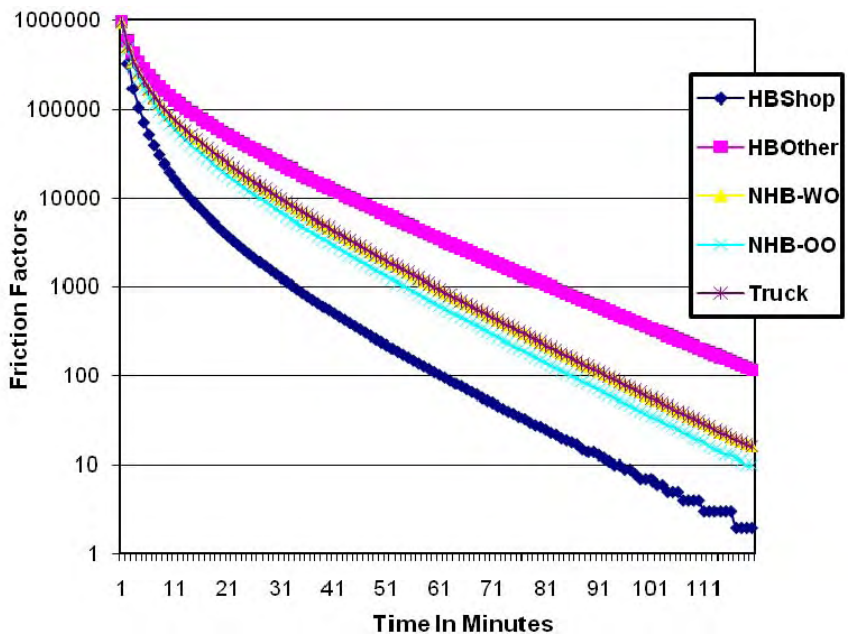


Figure 6-2. Friction Factors (Non Work)

The frequency distributions for all the trip purposes are illustrated in Figures 6-3 through 6-12. Table 6-2 reports the friction factors in a tabular form. Note that the reliability of observed trip lengths for home-based college/university trips is suspect due to the small number of observations.

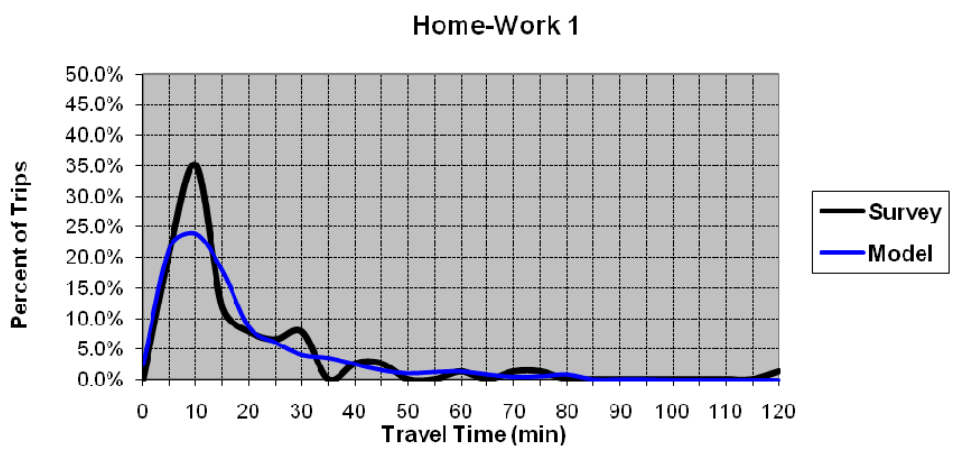


Figure 6-3. Home-based Work (Low Income) Observed (from Survey) and Modeled Trip Length Frequency Distribution

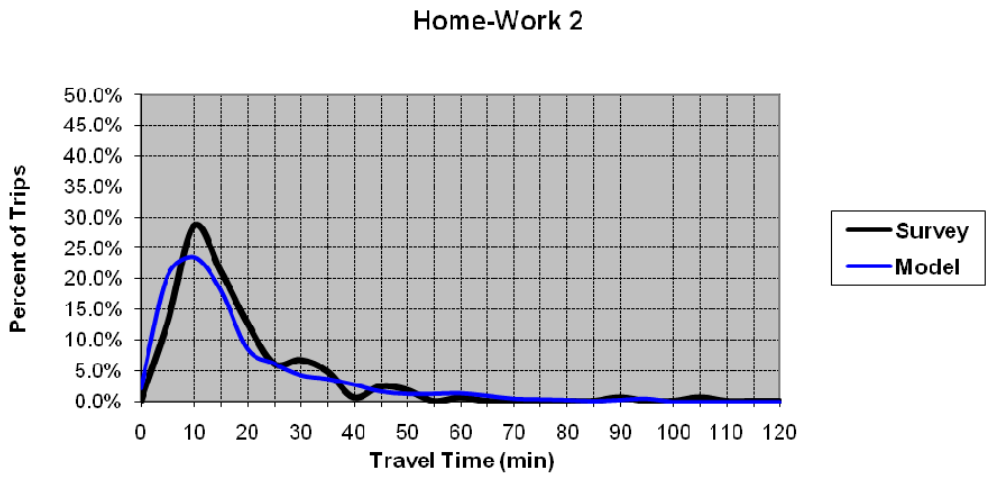


Figure 6-4. Home-based Work (Lower-Middle Income) Observed (from Survey) and Modeled Trip Length Frequency Distribution

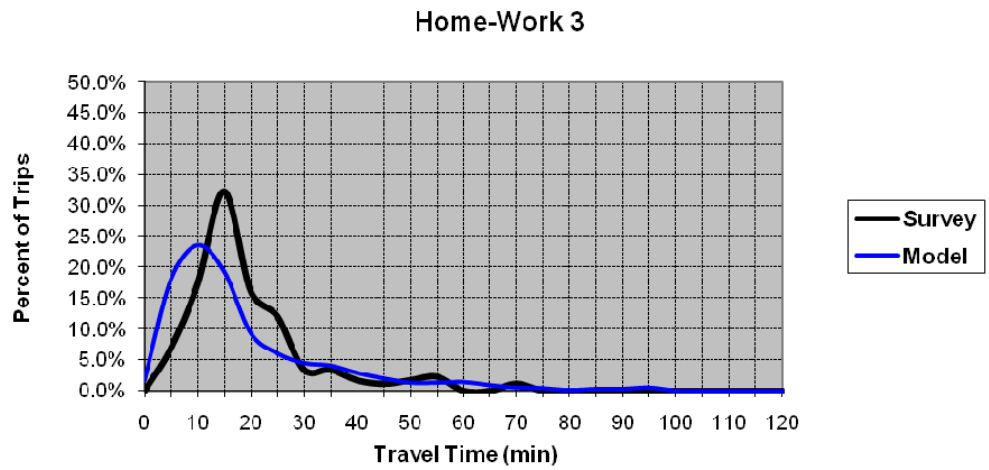


Figure 6-5. Home-based Work (Upper-Middle Income) Observed (from Survey) and Modeled Trip Length Frequency Distribution

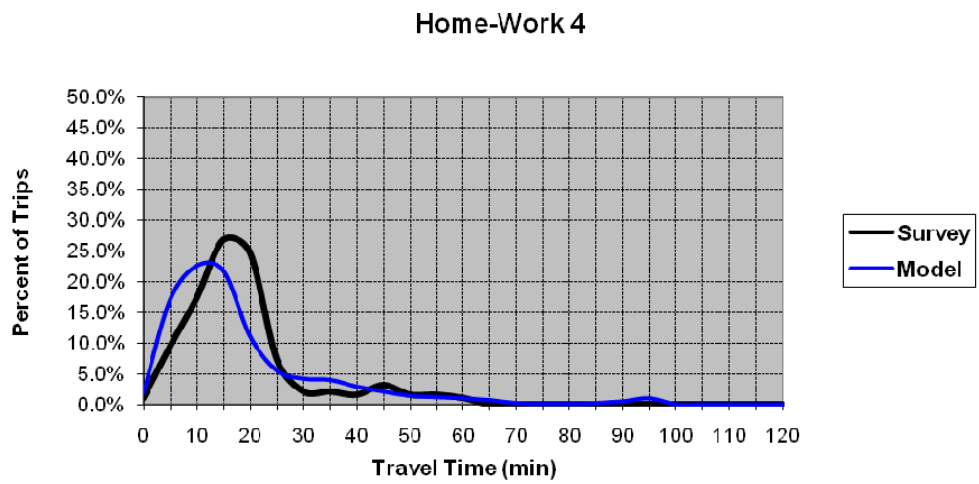


Figure 6-6. Home-based Work (High Income) Observed (from Survey) and Modeled Trip Length Frequency Distribution

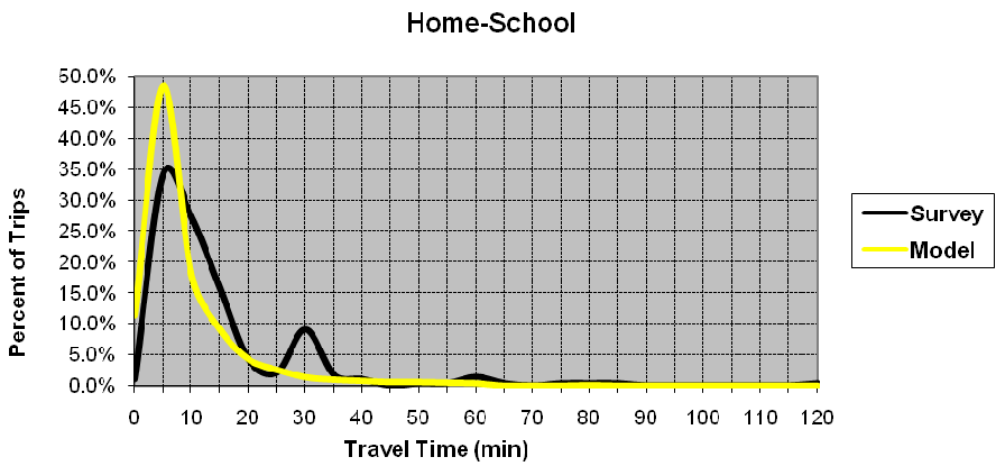


Figure 6-7. Home-based School Observed (from Survey) and Modeled Trip Length Frequency Distribution

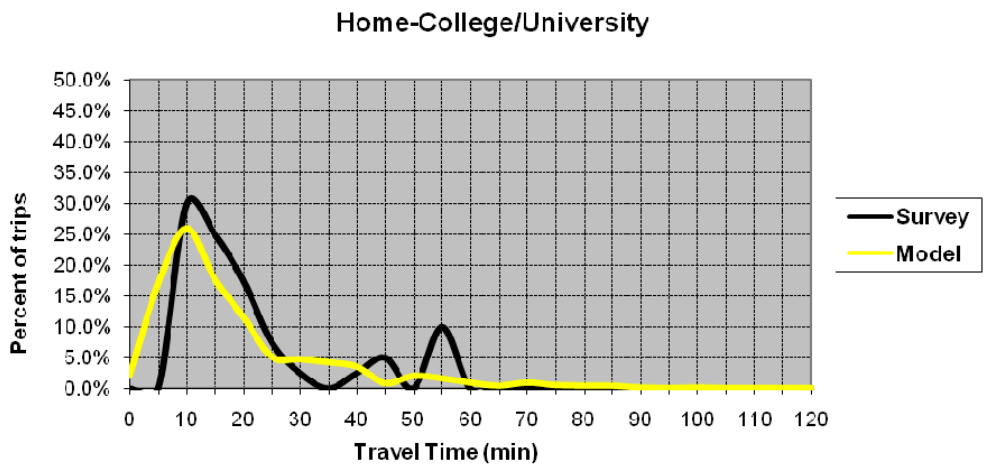


Figure 6-8. Home-based College/University Observed (from Survey) and Modeled Trip Length Frequency Distribution

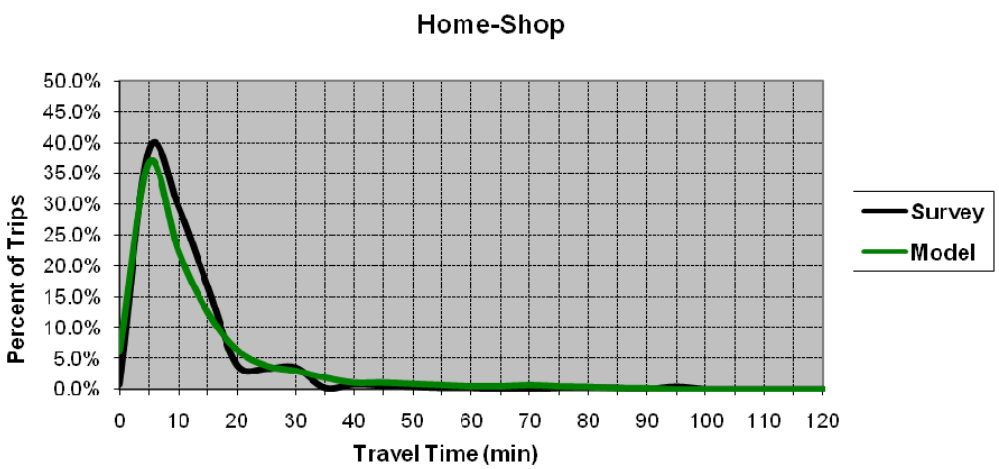


Figure 6-9. Home-based Shop Observed (from Survey) and Modeled Trip Length Frequency Distribution

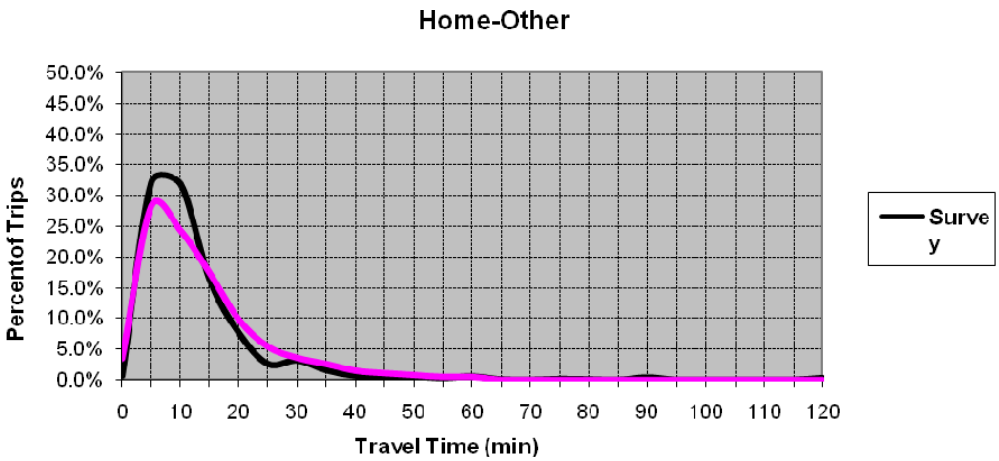


Figure 6-10. Home-based Other Observed (from Survey) and Modeled Trip Length Frequency Distribution

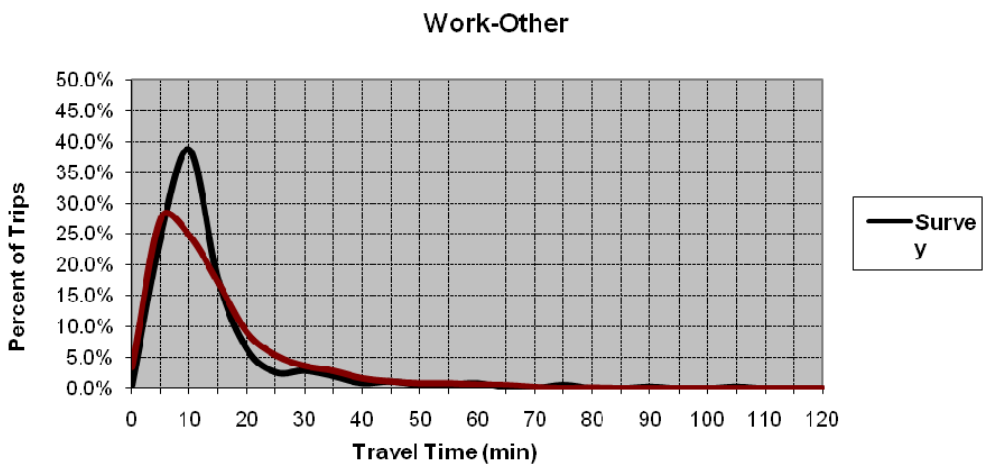


Figure 6-11. Non-home-based Work-Other Observed (from Survey) and Modeled Trip Length Frequency Distribution

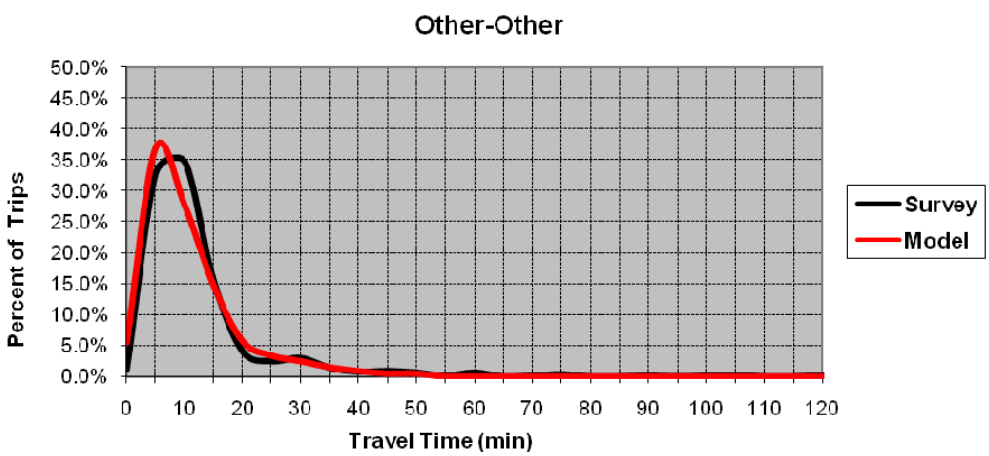


Figure 6-12. Non-home-based other-Other Observed (from Survey) and Modeled Trip Length Frequency Distribution

Table 6-2: Friction Factors in Tabular Format

Travel Time In Minutes	Home Based Work				Home-Based Elementary School	Home-Based High School	Home-Based College	Home-Based Shop	Home-Based Other	Non-Home-Based Work—Other	Non-Home-Based Other—Other	Truck
	Low Income	Lower Middle Income	Upper Middle Income	High Income								
1	951229	960789	953610	942707	969136	969136	961876	951229	951229	941765	941765	941765
2	519693	530191	599962	574254	234806	234806	447629	321799	581855	506936	472006	506936
3	357404	368288	448580	419318	101137	101137	281570	167197	427494	344184	307360	344184
4	270080	281103	359955	329768	55134	55134	200372	103554	338555	256984	222790	256984
5	214907	225925	300243	270105	34197	34197	152561	70618	279372	202136	171257	202136
6	176681	187607	256646	226999	23015	23015	121234	51180	236608	164318	136627	164318
7	148566	159338	223120	194189	16387	16387	99224	38684	204018	136648	111830	136648
8	127002	137580	196388	168293	12159	12159	82984	30153	178244	115543	93267	115543
9	109944	120298	174499	147305	9311	9311	70555	24061	157295	98948	78908	98948
10	96129	106239	156210	129947	7309	7309	60774	19559	139911	85590	67519	85590
11	84727	94579	140684	115363	5854	5854	52903	16140	125248	74638	58304	74638
12	75176	84761	127334	102952	4767	4767	46453	13484	112716	65525	50729	65525
13	67074	76386	115733	92281	3937	3937	41089	11383	101889	57849	44418	57849
14	60130	69166	105564	83026	3290	3290	36570	9695	92451	51318	39104	51318
15	54126	62885	96585	74940	2777	2777	32724	8320	84161	45712	34585	45712
16	48895	57379	88606	67831	2365	2365	29419	7188	76832	40865	30713	40865
17	44309	52520	81478	61549	2031	2031	26556	6246	70316	36648	27372	36648
18	40264	48205	75078	55970	1755	1755	24059	5456	64495	32958	24472	32958
19	36679	44354	69310	50997	1527	1527	21868	4788	59273	29713	21940	29713
20	33487	40902	64092	46546	1335	1335	19934	4219	54569	26848	19720	26848
21	30635	37794	59355	42551	1174	1174	18219	3732	50320	24308	17765	24308
22	28076	34985	55044	38955	1037	1037	16691	3312	46468	22049	16037	22049
23	25774	32439	51109	35709	919	919	15324	2948	42968	20034	14504	20034
24	23696	30124	47509	32772	818	818	14097	2632	39779	18230	13141	18230
25	21816	28013	44209	30110	731	731	12992	2356	36868	16612	11924	16612
26	20111	26083	41178	27692	655	655	11994	2113	34204	15157	10836	15157
27	18561	24315	38388	25492	588	588	11089	1900	31763	13846	9861	13846
28	17150	22692	35817	23487	530	530	10268	1712	29522	12663	8984	12663
29	15862	21198	33444	21658	479	479	9520	1546	27462	11592	8195	11592
30	14685	19822	31251	19985	434	434	8837	1398	25564	10623	7483	10623
31	13607	18552	29220	18455	394	394	8214	1266	23815	9743	6840	9743
32	12619	17377	27339	17053	358	358	7642	1149	22200	8943	6258	8943
33	11711	16290	25594	15768	326	326	7118	1044	20707	8216	5731	8216
34	10877	15282	23973	14587	298	298	6635	950	19326	7553	5253	7553
35	10110	14346	22467	13503	272	272	6192	865	18047	6949	4818	6949
36	9402	13476	21066	12505	250	250	5782	789	16862	6397	4423	6397
37	8750	12667	19761	11587	229	229	5405	720	15762	5893	4063	5893
38	8147	11914	18545	10741	210	210	5055	659	14741	5432	3734	5432
39	7591	11211	17411	9961	194	194	4732	603	13792	5009	3435	5009
40	7076	10556	16353	9242	178	178	4433	552	12909	4622	3161	4622
41	6599	9943	15365	8578	165	165	4155	506	12088	4267	2911	4267
42	6157	9371	14442	7965	152	152	3897	464	11323	3941	2682	3941
43	5748	8836	13579	7398	140	140	3657	427	10611	3642	2472	3642
44	5368	8335	12772	6874	130	130	3434	392	9947	3367	2280	3367
45	5015	7865	12016	6389	120	120	3226	361	9327	3114	2104	3114
46	4687	7425	11309	5940	112	112	3032	332	8749	2881	1942	2881
47	4383	7012	10646	5524	104	104	2852	306	8209	2666	1793	2666
48	4099	6625	10025	5139	96	96	2683	282	7704	2469	1657	2469
49	3835	6261	9442	4782	90	90	2526	260	7233	2287	1531	2287
50	3590	5919	8895	4451	83	83	2379	240	6792	2119	1416	2119
51	3361	5597	8383	4144	78	78	2241	222	6380	1964	1310	1964
52	3148	5295	7901	3859	72	72	2112	205	5994	1820	1212	1820
53	2949	5010	7449	3595	68	68	1991	189	5633	1688	1122	1688
54	2764	4743	7024	3349	63	63	1878	175	5295	1566	1039	1566
55	2591	4490	6625	3121	59	59	1772	162	4978	1453	962	1453
56	2429	4252	6250	2909	55	55	1673	150	4681	1349	891	1349
57	2278	4028	5897	2712	52	52	1580	139	4403	1252	826	1252
58	2137	3817	5565	2529	48	48	1492	129	4142	1163	765	1163
59	2005	3617	5253	2358	45	45	1410	120	3898	1080	710	1080
60	1882	3429	4959	2200	42	42	1332	111	3668	1004	658	1004

Table 6-2: Friction Factors in Tabular Format

Travel Time In Minutes	Home Based Work				Home-Based Elementary School	Home-Based High School	Home-Based College	Home-Based Shop	Home-Based Other	Non-Home-Based Work—Other	Non-Home-Based Other—Other	Truck
	Low Income	Lower Middle Income	Upper Middle Income	High Income								
61	1767	3251	4682	2052	40	40	1259	103	3453	933	611	933
62	1659	3083	4421	1915	37	37	1191	96	3250	867	567	867
63	1558	2925	4176	1787	35	35	1127	89	3061	806	526	806
64	1463	2775	3945	1668	33	33	1066	82	2882	749	488	749
65	1375	2633	3727	1557	31	31	1009	77	2715	697	453	697
66	1292	2499	3522	1454	29	29	955	71	2557	648	421	648
67	1214	2373	3328	1358	27	27	904	66	2409	603	391	603
68	1141	2253	3146	1268	26	26	856	62	2270	561	363	561
69	1073	2139	2974	1184	24	24	811	57	2140	522	338	522
70	1009	2032	2811	1107	23	23	768	53	2017	486	314	486
71	949	1930	2658	1034	21	21	728	50	1901	453	292	453
72	893	1834	2514	966	20	20	690	46	1792	422	271	422
73	840	1743	2377	903	19	19	655	43	1690	393	252	393
74	790	1656	2249	844	18	18	621	40	1594	366	235	366
75	744	1574	2127	789	17	17	589	38	1503	341	218	341
76	700	1497	2012	737	16	16	558	35	1418	318	203	318
77	659	1423	1904	689	15	15	530	33	1337	296	189	296
78	620	1353	1802	645	14	14	503	30	1262	276	176	276
79	584	1287	1705	603	13	13	477	28	1191	257	164	257
80	550	1224	1614	564	13	13	453	27	1123	240	153	240
81	518	1164	1527	527	12	12	430	25	1060	223	142	223
82	488	1108	1446	493	11	11	408	23	1001	208	132	208
83	460	1054	1369	462	11	11	388	22	945	194	123	194
84	433	1003	1296	432	10	10	368	20	892	181	115	181
85	408	955	1227	404	10	10	350	19	842	169	107	169
86	385	909	1162	378	9	9	333	18	795	158	100	158
87	362	865	1100	354	9	9	316	17	750	147	93	147
88	342	824	1042	331	8	8	300	15	709	137	87	137
89	322	784	987	310	8	8	286	14	669	128	81	128
90	304	747	935	290	7	7	271	14	632	120	75	120
91	286	711	886	272	7	7	258	13	597	112	70	112
92	270	677	839	254	7	7	245	12	564	104	65	104
93	255	645	795	238	6	6	233	11	533	97	61	97
94	240	615	753	223	6	6	222	10	503	91	57	91
95	226	585	714	209	6	6	211	10	476	85	53	85
96	214	558	676	196	5	5	201	9	449	79	49	79
97	201	532	641	183	5	5	191	9	425	74	46	74
98	190	507	608	172	5	5	182	8	401	69	43	69
99	179	483	576	161	5	5	173	7	379	65	40	65
100	169	460	546	151	4	4	165	7	359	60	38	60
101	160	439	517	141	4	4	157	7	339	56	35	56
102	151	418	491	132	4	4	149	6	320	53	33	53
103	142	399	465	124	4	4	142	6	303	49	31	49
104	134	380	441	116	4	4	135	5	286	46	28	46
105	127	362	418	109	3	3	129	5	271	43	27	43
106	120	345	396	102	3	3	123	5	256	40	25	40
107	113	329	376	95	3	3	117	4	242	38	23	38
108	107	314	356	89	3	3	111	4	229	35	22	35
109	101	300	338	84	3	3	106	4	216	33	20	33
110	95	286	321	79	3	3	101	4	205	31	19	31
111	90	273	304	74	3	3	96	3	194	29	18	29
112	85	260	288	69	2	2	92	3	183	27	16	27
113	80	248	274	65	2	2	87	3	173	25	15	25
114	76	237	260	61	2	2	83	3	164	23	14	23
115	71	226	246	57	2	2	79	3	155	22	13	22
116	68	215	234	53	2	2	76	3	147	20	13	20
117	64	206	222	50	2	2	72	2	139	19	12	19
118	60	196	210	47	2	2	69	2	131	18	11	18
119	57	187	199	44	2	2	66	2	124	17	10	17
120	54	179	189	41	2	2	63	2	117	16	10	16

K-factors

K-factors are used to adjust the attractions between zonal interchanges after the friction factors are applied to the gravity model equation. K-factoring was not used in the final model validation; however, the model is designed to use K-factors. For the time being, all K-factors are set to 1.0 so that in the future, if necessary, the K-factor matrix can be revised.

External-External Trip Distribution

The distribution of external-external vehicle trips has been calibrated using the latest 2001 Caltrans Statewide Model. The model was used to obtain the distribution of traffic flows from all gateways that pass through Kern County for the years 2000 and 2025. These flows were then fratared to the 2003 traffic counts obtained from Kern County to produce the external-external trips. Table 6-18 provides the 2003 external-external trip table for all gateways into Kern County. The external-external vehicle trips are origin-destination based and are added to the internal Kern County trips prior to trip assignment after factoring for each time-of-day period.

For all horizon years including 2006, the calibrated 2003 external-external vehicle trip table was used as a base platform. For those origin-destination pairs which are included in the 2001 Caltrans Statewide Model, the future year volumes were estimated by first calculating the growth between 2003 and 2025. Then the different forecast years were interpolated or extrapolated. The base 2003 external-external trips are shown in Table 6-3. The actual trips for each of the gateways into Kern County based on extrapolation are shown in Table 6-4 for various forecast years.

Non-Motorized Mode Split

The trip generation model for Kern County projects trips made by all modes, including walk and bicycle. The trip distribution models also model travel by all modes. Currently, trips are distributed based on auto impedances. These procedures were not modified and are consistent with the previous model validation.

After the trip distribution step, the current model produces total person trips (by all modes) for each interchange. A post-distribution non-motorized mode split process is used to allocate proportions of trips to each of the following modes for each interchange:

- walk
- bicycle
- school bus
- motorized modes of travel (auto and public transit).

As documented in the following chapter, motorized modes are processed using detailed mode choice models to estimate trips by auto and transit.

Table 6-3: 2003 External-External Vehicle Trip Table

Descriptions	TAZ	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1/2ADT	1/2XX	IX
Route 33	1951	-	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9	-	-	1	-	-	24	2	25	-	28	-	-	-	-	1150	94	1056
Barker Rd	1952	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	200	5	195
King Rd	1953	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	85	0	85
I-5 N	1954	-	-	-	-	-	-	-	-	1	-	-	1	-	-	111	65	-	-	-	1,046	-	-	-	-	-	14,333	-	56	-	-	-	-	-	-	17000	15612	1388
Corcoran Rd	1955	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	245	0	245
Wildwood Rd	1956	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	1	-	-	-	1	-	-	30	4	26
Route 43	1957	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	1	-	-	10	-	6	-	4	-	5	-	-	1100	30	1070
Melcher Rd	1958	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	-	1	-	0	-	-	-	2	-	1	-	-	-	1	-	-	385	6	379
Route 99	1959	-	-	-	1	-	-	-	-	-	-	-	-	-	-	40	22	-	-	-	1,000	-	10	341	2	-	10,580	-	20	-	1	-	12	-	-	23000	12029	10971
Driver Rd	1960	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	2	-	1	-	-	-	1	-	-	1725	5	1720
Famoso-Porterville Hwy	1961	-	-	-	-	-	-	-	-	-	-	-	-	-	-	18	1	-	-	-	20	-	0	18	-	-	391	-	4	-		-	6	-	-	1675	458	1217
Route 65	1962	-	-	-	1	-	-	-	-	-	-	-	-	-	-	42	1	-	-	-	46	-	1	42	-	-	910	-	9	-	7	-	7	-	-	3900	1067	2833
Jack Ranch Rd	1963	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	0	-	-	-	2	-	0	2	-	-	49	-	1	-	-	-	1	-	-	210	57	153
Sierra Way	1964	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	87	-	272	-	35	-	3	468	1	-	35	-	1	-	0	-	3	-	-	1275	906	369
US 395 N	1965	-	-	-	111	-	-	-	-	40	-	18	42	2	-	-	209	-	650	-	-	-	7	1,120	5	-	-	-	2	-	1	-	8	-	-	3050	2215	835
Route 178	1966	-	-	-	65	-	-	-	0	22	-	1	1	0	87	209	-	-	118	-	-	-	0	66	2	-	-	-	0	-	0	-	1	-	-	1150	573	577
Searles Station Rd	1967	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	130	0	130
US 395 S	1968	-	-	-	-	-	-	-	-	-	-	-	-	-	272	650	118	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2100	1040	1060
Mojave-Randsburg Rd	1969	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	55	0	55
Route 58 E	1970	9	-	-	1,046	-	-	4	1	1,000	1	20	46	2	35	-	-	-	-	-	-	-	19	3,584	10	-	-	-	30	-	17	-	107	-	-	6850	5931	919
20 Mule Team Rd	1971	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	500	2	498
Sierra Kemper Hwy	1972	-	-	-	-	-	-	-	0	10	-	0	1	0	3	7	0	-	-	-	19	1	-	-	-	-	-	-	-	-	-	-	-	-	-	270	42	228
Route 14	1973	1	-	-	-	-	-	1	-	341	-	18	42	2	468	1,120	66	-	-	-	3,584	1	-	-	-	-	-	-	-	-	-	-	-	-	-	14750	5645	9105
90th St	1974	-	-	-	-	-	-	-	-	2	-	-	-	-	1	5	2	-	-	-	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1075	20	1055
170th St	1975	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	65	0	65
I-5 S	1976	24	-	-	14,333	-	2	10	2	10,580	2	391	910	49	35	-	-	-	-	-	-	-	-	-	-	-	-	-	881	-	27	-	618	-	-	33500	27864	5636
Mount Pinos Rd	1977	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	27	-	9	-	10	-	-	1025	48	977
Route 166	1978	25	-	-	56	-	1	6	1	20	1	4	9	1	1	2	0	-	-	-	30	-	-	-	-	-	881	27	-	-	-	-	-	-	-	1563	1066	497
Soda Lake Rd	1979	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15	0	15
Route 58 W	1980	28	-	-	-	-	-	4	-	-	1	-	7	-	0	1	0	-	-	-	17	-	-	-	-	-	27	9	-	-	-	-	-	-	-	133	94	39
Bitterwater Valley Rd	1981	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	30	0	30
Route 46	1982	-	-	-	-	-	1	5	1	12	1	6	7	1	3	8	1	-	-	-	107	-	-	-	-	-	618	10	-	-	-	-	-	-	-	3752	781	2970
Edwards AFB	1983	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0
Edwards AFB	1984	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0

1/2 Total ADT		1150	200	85	17000	245	30	1100	385	23000	1725	1675	3900	210	1275	3050	1150	130	2100	55	6850	500	270	14750	1075	65	33500	1025	1563	15	133	30	3752	0	0
1/2 External - External		94	5	0	15612	0	4	30	6	12028	6	458	1067	57	906	2215	573	0	1040	0	5931	2	42	5645	20	0	27864	48	1066	0	94	0	781	0	0
1/2 Internal - External		1056	195	85	1388	245	26	1070	379	10972	1719	1217	2833	153	369	835	577	130	1060	55	919	498	228	9105	1055	65	5636	977	497	15	39	30	2970	0	0

Table 6-4: Traffic Forecasts for Gateway Locations

Gateway Location	TAZ	2003	2006	2010	2015	2020	2025	2030	2035
Route 33	1951	2,300	2,300	2,300	2,300	2,300	2,300	2,300	2,300
Barker Road	1952	400	400	400	400	400	400	400	400
King Road	1953	170	170	170	170	170	170	170	170
I-5 N	1954	34,000	38,880	45,386	53,519	61,652	69,785	77,918	86,050
Corcoran Road	1955	490	490	490	490	490	490	490	490
Wildwood Road	1956	60	60	60	60	60	60	60	60
Route 43	1957	2,200	2,203	2,206	2,211	2,215	2,220	2,224	2,229
Melcher Road	1958	770	770	770	770	770	770	770	770
Route 99	1959	46,000	46,649	47,514	48,596	49,678	50,760	51,842	52,923
Driver Road	1960	3,450	3,450	3,450	3,450	3,451	3,451	3,451	3,451
Famoso-Porterville Highway	1961	3,350	3,350	3,350	3,350	3,350	3,350	3,350	3,350
Route 65	1962	7,800	7,800	7,800	7,800	7,800	7,800	7,800	7,800
Jack Ranch Road	1963	420	420	420	420	420	420	420	420
Sierra Way	1964	2,550	2,550	2,550	2,550	2,550	2,550	2,550	2,550
US 395 N	1965	6,100	6,340	6,661	7,062	7,462	7,863	8,263	8,664
Route 178	1966	2,300	2,300	2,300	2,300	2,300	2,300	2,300	2,300
Searles Station Road	1967	260	260	260	260	260	260	260	260
US 395 S	1968	4,200	4,211	4,226	4,244	4,262	4,280	4,299	4,317
Mojave-Randsburg Road	1969	110	110	110	110	110	110	110	110
Route 58 E	1970	13,700	18,151	24,086	31,505	38,923	46,342	53,760	61,179
20 Mule Team Road	1971	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Sierra Kemper Highway	1972	540	985	1,578	2,319	3,061	3,802	4,544	5,285
Route 14	1973	29,500	32,635	36,815	42,039	47,264	52,488	57,713	62,938
90th Street	1974	2,150	2,221	2,316	2,434	2,552	2,671	2,789	2,907
170th Street	1975	130	130	130	130	130	130	130	130
I-5 S	1976	67,000	71,308	77,053	84,234	91,415	98,596	105,776	112,957
Mount Pinos Road	1977	2,050	2,050	2,050	2,050	2,050	2,050	2,050	2,050
Route 166	1978	3,125	3,743	4,568	5,598	6,629	7,659	8,690	9,720
Soda Lake Road	1979	30	30	30	30	30	30	30	30
Route 58 W	1980	266	301	348	407	465	524	582	641
Bitterwater Valley Road	1981	60	60	60	60	60	60	60	60
Route 46	1982	7,503	7,595	7,718	7,871	8,025	8,178	8,332	8,485
Edwards Air Force Base	1983	—	—	—	—	—	—	—	—
Edwards Air Force Base	1984	—	—	—	—	—	—	—	—
Total		**243,984**	**262,923**	**288,174**	**319,739**	**351,303**	**382,868**	**414,432**	**445,997**

7. MODE CHOICE

The motorized person trips are used in the mode choice model. The home-based work and home-based college trip purposes use the nested logit model structure, while the non-work and the home-based school trip purposes use the binary logit model structure.

Home-Based Work and College

The home-based work and college mode choice model structure is shown in Figure 7-1. In the nesting structure, shared ride is an equally competing mode with drive alone and transit at the top level of the nest. This implies that improvements in transit service will draw new riders proportionately from existing drive alone and shared ride users.

Likewise, improvements in service to shared ride users will draw new riders proportionately from transit and drive alone, rather than drawing first from drive alone and at a lower rate from transit.

Note that the lowest level choice for transit drive access is between formal and informal park and ride. Modeling the formal and informal drive access shares is productive since these will be affected by, say, the addition of new park-and-ride lots, or the locations and accessibility of park-and-ride lots.

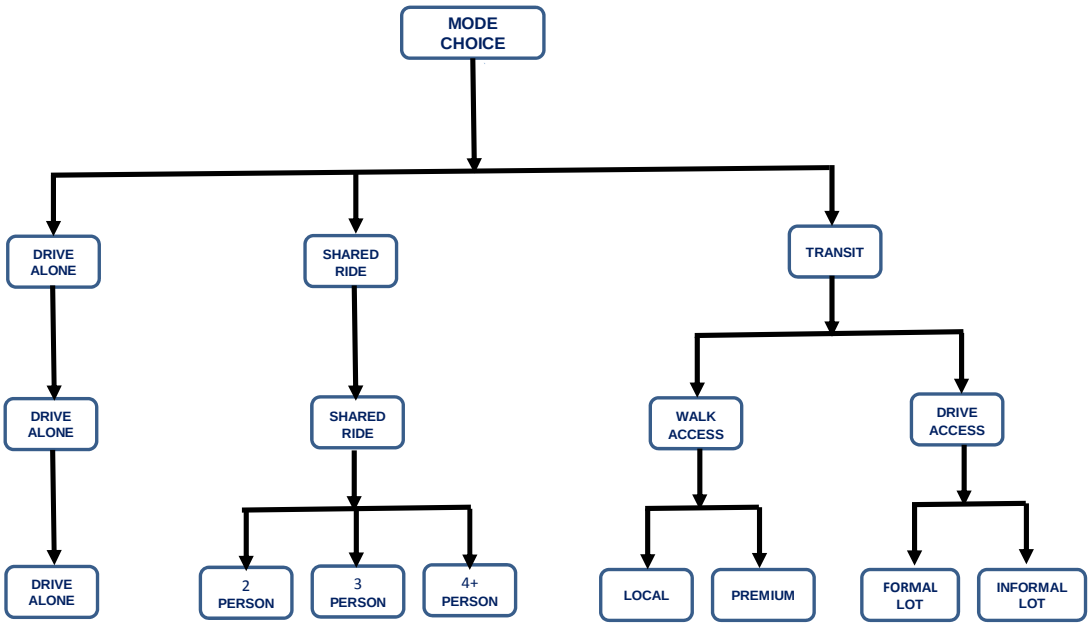


Figure 7-1. Nested-Logit Mode Choice Model

The home-based work mode choice model also uses market segmentation. Market segmentation is a procedure used in modeling to improve the accuracy of the models. In mode choice modeling, it is an attempt to subdivide the travelers or possible trips into relatively homogeneous groups so that the groups of travel can be represented within the model by mean values. In the home-based work mode choice model, two types of market segmentation are employed: access/egress market segmentation, and income-group segmentation. The only structural difference between the home-based work and home-based college/university mode choice models is that the home-based

college/university model is not stratified by income group. The home-based work and college mode choice models are consistent with the previous validation and have not been altered.

Access/Egress Markets

Walk time is extremely important to the choice of mode, and can vary greatly over the zones used for modeling. The access/egress markets defined for the home-based work mode choice model are:

- short walk, or the market where the total walk time is between 0 and 10 minutes,
- medium walk, or the market where the total walk time is between 10 and 20 minutes,
- long walk, or the market where the total walk time is between 20 and 30 minutes,
- drive access-short walk, or the market where the total walk time at the production end of the trip is more than 30 minutes, and between 0 and 10 minutes at the egress end,
- drive access-medium walk, or the market where the total walk time at the production end of the trip is greater than 30 minutes, and between 10 and 20 minutes at the attraction end,
- drive access-long walk, or the market there the total walk time at the production end of the trip is greater than 30 minutes, and between 20 and 30 minutes at the attraction end,
- no transit available, or the market where the total walk time at the attraction end of the trip is greater than 30 minutes.

The access/egress markets can also be defined by the walk time at the origin and the walk time at the destination. Based on the classifications listed above, 12 separate markets can be defined as shown in Table 7-1. The mode choice model is applied separately for each market and each Income group.

Table 7-1: Transit Access/Egress Markets

Access Market	Egress Market			
	Short Walk	Medium Walk	Long Walk	Drive Only
Short walk	X	X	X	N/A
Medium walk	X	X	X	N/A
Long walk	X	X	X	N/A
Drive only	X	X	X	N/A

The income–group segmentation is consistent with the trip generation and is divided into four income groups and is as follows:

- Low income (less than $25,000)
- Lower-middle income ($25,000 to $49,999)
- Upper-middle income ($50,000 to $74,499)
- High income ($75,000 or more)

Mode Choice Model Constants and Coefficients

Model estimation and development of application procedures provided the basis for the calibration of the model constants. In logit-based mode choice models, all but one of the possible

modes or submodes has a constant. The constant represents all attributes of the modes that have not been included in the mode's utility through the modeling process. Table 7-2 shows the home-based work model choice model coefficients and Table 7-3 shows the calibrated mode choice constants. The constants shown are applied at the lowest level of the nesting structure.

Table 7-2: Home-Based Work Mode Choice Model Coefficients

Coefficient	Value	Notes
In-vehicle travel time (minutes)	–0.02087	
0–9.9 minute walk time (minutes)	–0.02185	Apply to increment with 9.9 max
10–19.9 minute walk time (minutes)	–0.05376	Apply to increment with 9.9 max
20+ minute walk time (minutes)	–0.1460	Apply to increment
Short wait time (≤ 7.5 minutes)	–0.09775	Apply to increment with 7.5 max
Long wait time (> 7.5 minutes)	–0.02296	Apply to increment
Transfer wait time (minutes)	–0.09775	
Drive access time (minutes)	–0.1475	
Formal park and ride (0/1 dummy)	0.7859	Apply to drive access submodes
Highway Terminal Time (minutes)	–0.09775	
Cost (cents)	–0.003114	
CBD attraction–shared ride	0.1368	Apply to all submodes
CBD attraction–transit walk access	1.153	Apply to all submodes
CBD attraction–transit drive access	–0.05312	Apply to all submodes
Access mode nesting coefficient	0.7	Upper level nest
Submode nesting coefficient	0.5	Lower level nest

Table 7-3: Home-Based Work and College Mode Choice Model Constants[1]

Sub-mode	Low Income	Lower–Middle Income	Upper–Middle Income	High Income	College/ University
Drive alone	0	0	0	0	0
Shared ride 2	–5.29382	–5.28034	–6.60175	–6.84048	–0.22757
Shared ride 3	–7.40370	–7.38225	–8.00587	–8.90713	–1.01175
Shared ride 4+	–10.26029	–10.23345	–9.71463	–10.21303	–1.53877
Walk to local	–2.06557	–3.67933	–8.38208	–9.65257	–0.61957
Walk to premium[2]	–3.77947	–8.04883	–10.13848	–11.08922	–5.33347
Drive to formal lot[2]	–8.74426	–8.61201	–10.9722	–9.5979	–6.22498
Drive to informal lot[2]	–3.92042	–4.45411	–9.5979	–8.9722	–2.40114

[1]Constants shown at lowest level of nesting structure
[2]Mode not available in base year.

Non-Work Mode Choice Models

The non-work mode choice models use the binary logit model choice model structure as shown in the Figure 7-2.

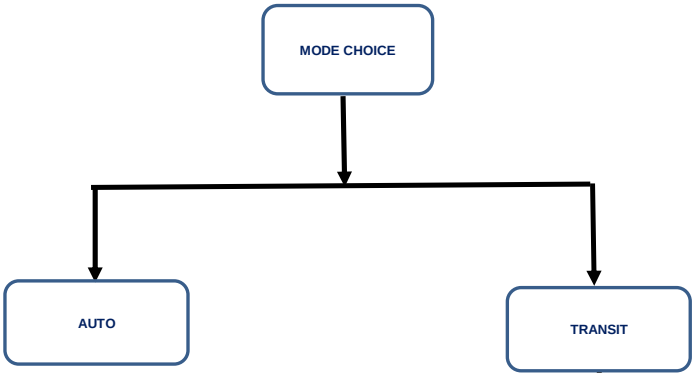


Figure 7-2. Binary-Logit Mode Choice Model

Mode Choice Model Constants and Coefficients

The specified model coefficients for the home-based non-work (excluding home-based college/university) and non-home-based model are shown in Table 7-4. The home-based work model coefficients (at the top level of the nesting structure) are also shown in Table 7-4 for comparison purposes. Table 7-5 shows the calibrated constants for the non-work mode choice model.

Table 7-4: Non-Work Mode Choice Model Coefficients

Coefficient	Home-Based Work[1]	Home-Based Non-Work	Non-Home-Based
In-vehicle travel time	–0.02087	–0.00696	–0.02609
Out-of-vehicle travel time	–0.09775	–0.01740	–0.06523
First wait (≥7.5 min)	–0.09775	–0.01740	–0.06523
First wait (>7.5 min)	–0.02296	–0.00696	–0.02609
Cost	–0.003114	–0.00522	–0.00779
Implied value of time	$4.02/hr	$0.80/hr	$2.01/hr

[1]Home-based work shown for comparison purposes.

Table 7-5: Calibrated Non-Work Mode Choice Constants

Constant	Home-Based				Non-Home-Based	
	Elem/Middle School	High School	Shop	Other	Work–Other	Other–Other
Auto	0	0	0	0	0	0
Transit-walk access	–3.76418	0.419855	–4.65068	–5.682513	–4.51037	–4.79049
Fringe dummy (or transit)	—	—	—	1.056	—	—

Auto Occupancy

The person trip tables from trip distribution are used in the mode choice model to estimate person trips by transit and person trips by auto. Auto occupancy factors are then applied to convert person trips made in automobiles to vehicle trips for traffic assignment.

Home-Based Work Average Auto Occupancies

No significant variation in the home-based work average auto occupancies was observed in the data when stratified by income group and household size of the trip maker. As a result, the home-based work average auto occupancy model defaults to the estimated regional average auto occupancy for home-based work trips as shown in Table 7-6. The lack of variation by income group and household size is reasonable considering that home-based work trips are less discretionary in nature than the other trip purposes.

Table 7-6: Home-Based Work Average Auto Occupancies

Income Group	Household Size				
	1	2	3	4	5+
Low (less than $25,000)	1.00	1.08	1.11	1.09	1.00
Lower-middle ($25,000–$49,999)	1.00	1.07	1.01	1.15	1.00
Upper-middle ($50,000–$74,499)	1.01	1.05	1.14	1.12	1.01
High ($75,000 or more)	1.08	1.03	1.06	1.08	1.08

Home-Based Non-Work Auto Occupancy Models

A basic assumption underlying the estimation of the home-based non-work average auto occupancy models is that the average auto occupancies are largely a function of socioeconomic characteristics in the production zone. While the resulting models do not account for changes in average auto occupancy due to network characteristics (such as travel time or travel cost), they do account for variations in average household size, and if meaningful, different income levels. By doing this, home-based non-work average auto occupancy models are an improvement over the typical state-of-the-practice of using average regional auto occupancy for home-based non-work trips. The models do not account for variation in auto occupancies at the attraction end of the trip, except as indirectly affected by the variation in average auto occupancies of trips attracted to the zone.

The auto occupancy models were updated based on data collected in the 2001 Caltrans Statewide Travel Survey. The combined Kern County, Fresno County and Tulare County dataset was used to calibrate the model. Tables 7-7 through 7-11 show the average auto occupancies stratified by income group and household size.

Table 7-7: Home-Based Elementary School Average Auto Occupancies

Income Group	Household Size			
	1	2	3	4+
Low	2.35	2.35	2.35	2.35
Lower–middle	2.35	2.35	2.35	2.35
Upper–middle	2.35	2.35	2.35	2.35
High	2.35	2.35	2.35	2.35

Table 7-8: Home-Based High School Average Auto Occupancies

Income Group	Household Size			
	1	2	3	4+
Low	1.88	1.88	1.88	1.88
Lower–middle	1.88	1.88	1.88	1.88
Upper–middle	1.88	1.88	1.88	1.88
High	1.88	1.88	1.88	1.88

Table 7-9: Home-Based College/University Average Auto Occupancies

Income Group	Household Size			
	1	2	3	4+
Low	1.54	1.54	1.54	1.54
Lower–middle	1.54	1.54	1.54	1.54
Upper–middle	1.54	1.54	1.54	1.54
High	1.54	1.54	1.54	1.54

Table 7-10: Home-Based Shop Average Auto Occupancies

Income Group	Household Size			
	1	2	3	4+
Low	1.34	1.74	1.69	2.16
Lower–middle	1.26	1.61	1.68	1.76
Upper–middle	1.45	1.64	1.73	1.76
High	1.33	1.53	1.51	1.79

Table 7-11: Home-Based Other Average Auto Occupancies

Income Group	Household Size			
	1	2	3	4+
Low	1.41	1.70	1.98	2.15
Lower–middle	1.46	1.70	1.79	2.01
Upper–middle	1.45	1.65	1.81	2.00
High	1.65	1.58	1.75	1.98

Non-Home-Based Auto Occupancy Models

The non-home-based trips were assumed to be related to the number of people (potential travelers) and the number of vehicles available in the zones where the non-home-based trips actually originated. This assertion was straightforward—the more potential travelers there were per vehicle, the higher the average auto occupancy for non-home-based trips.

The non-home-based auto occupancy models are consistent with the previous validation and have not been altered.

8. TRIP ASSIGNMENT

Production/Attraction (PA) to Origin/Destination (OD) and Time of Day Distribution

The PA to OD and time of day distribution process converts all auto PA person trip matrices into vehicle OD matrices by time period. The 24-hour day was split into 4 time periods: 7:00–9:00 a.m. (AM peak), 9:00–3:00 p.m. (mid-day), 3:00–6:00 p.m. (PM peak), and the remaining hours (off-peak). The hours are consistent with the previous version of the validation. The time of day distributions for Kern County were extracted from the 2001 Caltrans Statewide Travel Survey and are shown on Figure 8-1.

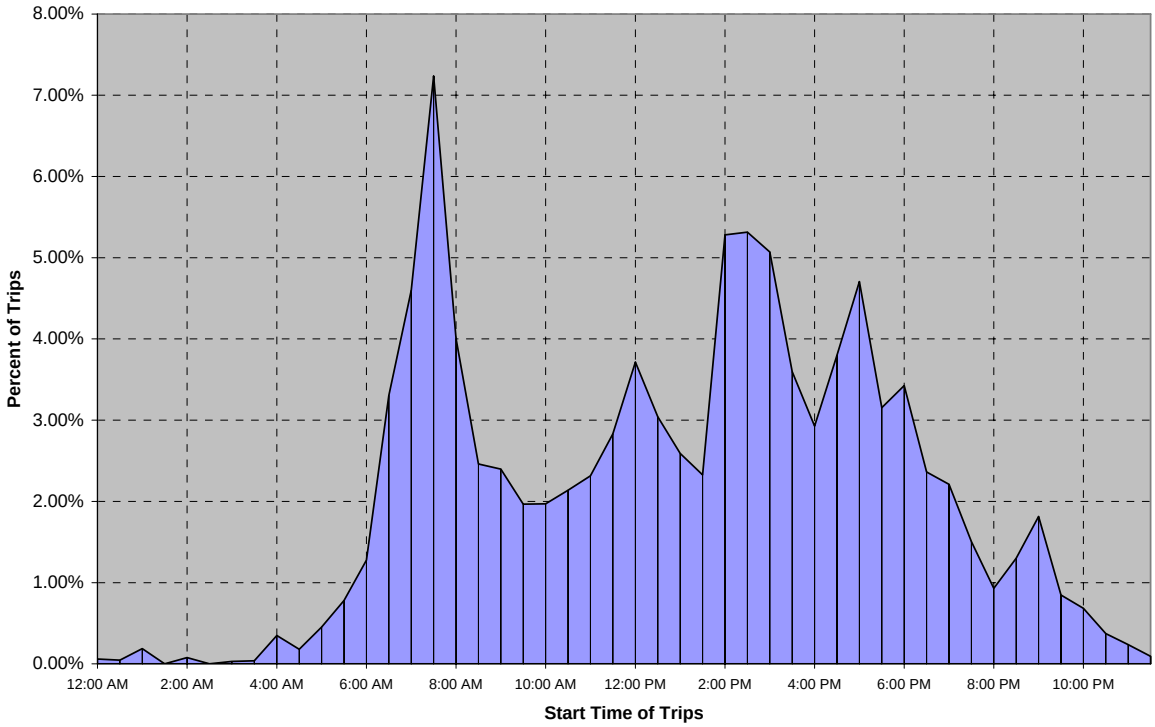


Figure 8-1. Traffic Count Trips by Time of Day

Once the time periods were established, departure and return trip percentages were estimated for each time period. The percentages were estimated based on the 2001 Caltrans Statewide Travel Survey. These departure and return trip percentages were then adjusted to conform to the hourly counts. Table 8-1 lists the departure and return percentages for each trip purpose for each time period of the day.

Other Trips Matrix

The input other trips matrix consists of an estimated OD matrix of truck, external-to-external and taxi trips, previously developed for prior versions of the Kern2006 Model.

Table 8-1: Time-of-Day and Directional Split Factors for Kern County

		AMPEAK	MDPEAK	PMPEAK	OFFPEAK	TOTAL
Home-Based Work	H-W	18.970	4.570	2.650	25.640	51.830
	W-H	0.730	5.880	27.370	14.200	48.180
Home-Based Elementary/Middle School	H-SCH	46.030	2.140	0.210	3.740	52.120
	SCH-H	0.340	4.540	21.630	21.370	47.880
Home-Based High School	H-SCH	46.030	2.140	0.210	3.740	52.120
	SCH-H	0.340	4.540	21.630	21.370	47.880
Home-Based College/University	H-COL	13.700	14.170	0.850	16.370	45.090
	COL-H	0.000	19.300	7.440	28.160	54.900
Home-Based Shop	H-O	4.000	9.860	8.240	22.070	44.170
	O-H	1.590	12.710	14.990	26.540	55.830
Home-Based Other	H-O	10.200	6.160	8.060	28.860	53.280
	O-H	2.000	5.890	12.420	29.660	49.970
Non-Home-Based Work-Other	H-O	1.370	15.660	20.850	13.920	51.800
	O-H	4.610	18.740	5.730	19.390	48.470
Non-Home-Based Other-Other	O-O	3.900	14.510	11.010	20.840	50.260
Truck	O-D	3.000	16.610	6.000	24.400	50.010
Ext-Ext	E-E	3.400	12.000	7.000	27.450	49.850

Source: 2001 Statewide Survey and Dowling Associates, Inc.
Note: Internal-external trips are incorporated as part of the above trip purposes.

Traffic Assignment

The traffic assignment procedure uses the direct travel impact model (DTIM) as a post-processor to the traffic assignment process, in addition to cost-based assignment procedures. In a cost-based assignment, the total impedance between two zones is a function of the congested travel time and the travel distance. The default values for the DTIM parameters are posted on the network using a lookup table. The signal spacing on the roadway network was updated based on actual roadway information. The actual signal spacing values replaced the default values where information was available.

Six basic volume-delay functions (based on facility type) have been used to implement the DTIM procedures in TP+. The functions by facility type are as follows:

Facility Type	**Function**
Freeways	BPR-like with coefficient = 0.15 and exponent = 10.0
Expressways	HCM
Divided arterials	HCM
Undivided arterials	HCM
Collectors	HCM
Centroid connectors	No delay
Loop ramps	BPR-like with coefficient = 0.15 and exponent = 10.0
Diamond ramps	BPR-like with coefficient = 0.15 and exponent = 10.0
Cordon links	No delay

No delay means that the congested travel time on a link is unaffected by the volume on the link. BPR (Bureau of Public Roads) means that the facilities are treated as non-signalized facilities using the BPR-like function. HCM (Highway Capacity Manual) means that the facility is treated as a signalized intersection using HCM-type calculations.

The traffic assignment procedures are consistent with the previous validation and have not been altered.

Transit Assignment

Transit assignments are somewhat easier to perform than traffic assignments since there is no "capacity restraint" function. The transit assignments are performed using the network developed for transit path-building. However, for consistency, the transit assignments are performed after the traffic assignments so that the congested traffic speeds can be used as a "cap" on transit speeds (for mixed flow operation).

Only two transit assignments are performed: peak and base. Home-based work and home-based college/university trips are assigned (in production-attraction format) to the morning peak transit network and the remainder of the trips are assigned to the off-peak base network (again, in production-attraction format).

The transit assignment procedures are consistent with the previous validation and have not been altered.

9. MODEL VALIDATION

Overview

Travel model validation should focus on the entire travel modeling sequence—trip generation, trip distribution, mode choice, and trip assignment. In a typical model development process, the individual model components (trip generation, trip distribution, mode choice (or mode split), and time-of-day of travel) are calibrated using travel survey data and evaluated for reasonableness. After all of the model components are calibrated, the model is run as a system, including trip assignment. Assigned volumes are then compared to observed traffic counts for reasonability. The comparison to traffic counts, in effect, forms a "super" validation point. If the assigned traffic volumes do not reasonably match observed traffic counts, adjustments, such as those listed below, are made to the various model components to improve the match.

- Demographic Information: Revise base year socioeconomic data
- Highway Network: Revise highway network
- Trip Generation: Update trip generation
- Trip Distribution: Calibrate trip distribution
- Mode Choice: Calibrate mode choice
- Time-of-Day: Update time of day factors
- Traffic Assignment: Revise capacities for freeway ramps

As implied by the changes listed above, the approach used for making model adjustments for validation purposes was to minimize the number and magnitude of the adjustments. Assigned traffic volumes will never exactly match observed traffic counts for several reasons. First, models are abstractions or simplifications of regional travel that can never account for all of the nuances of daily travel throughout the region. Second, traffic counts are not perfect. Traffic counts can easily vary by 10 percent or more depending on the day of the count, the time of year the count is performed, or the method used to perform the count. In addition, counts used for model validations are typically collected over several years due to the costs of counting traffic. Thus, matching traffic volumes on screenlines within 10 to 15 percent is typically considered a success. Third, demographic information is not precise.

Demographic Information

The demographic data for the households and population was obtained from the 2000 census and updated to 2006 using tax assessor parcel data. The 2006 employment data was obtained from the California State Employment Development Department (EDD). The 2006 socioeconomic data were shown in Table 3-1.

Highway Network

The 2006 highway network was extracted from Kern COG's master network. The transit network was also obtained from Kern COG. The highway and transit networks were shown in Figures 4-2 to 4-4.

Trip Generation

Table 9-1 shows the weekday daily person trips and the proportions of trips by purpose mode by Kern County residents (stratified by income for HBW). Subtracting out the truck trips, this level of trip making equals 9.6 person trips per household on average.

Table 9-1: Year 2006 Validation Trip Generation Summary

Trip Purpose	2006 Model	
	Trips	Percent
Home-based work low income	95,237.9	22%
Home-based work lower–middle income	133,210.9	31%
Home-based work upper–middle income	90,815.2	21%
Home-based work high income	114,236.9	26%
Total Home-Based Work	**433,500.9**	**100%**
Home-based school	158,034.6	
Home-based university	59,901.8	
Home-based shop	31,188.5	
Home-based other	326,856.0	
Non-home-based work-other	1,175,383.2	
Non-home-based other-other	295,881.5	
Truck	789,234.2	
Total Trips	**3,305,110.1**	

Note: The daily person trips include both motorized and non-motorized trips.

Trip Distribution

Table 9-2 summarizes the final validated average trip length in minutes. The observed average trip length in minutes was obtained from the 2001 Caltrans Statewide Travel Survey. K-factors were not used in the model validation.

Table 9-2: Year 2006 Trip Distribution Summary

Trip Purpose	Average trip length	
	Observed (Minutes)	Modeled (Minutes)
Home-based work low income	17.7	18.3
Home-based work lower–middle income	18.3	19.1
Home-based work upper–middle income	19.8	20.0
Home-based work high income	19.5	19.6
Home-based school	16.6	9.2
Home-based university	16.6	9.2
Home-based shop	23.1	18.5
Home-based other	12.9	13.6
Non-home-based work–other	14.2	13.8
Non-home-based other–other	14.8	15.1
Home-based work low income	13.6	10.5
Truck	—	16.6

Mode Choice Validation

The mode choice results by mode are shown in the table that follows.

Table 9-3: Year 2006 Mode Choice Summary

Purpose	Drive Alone	Shared Ride	Total Auto	Total Transit	Total
Home-Based Work	335,481.9	60,105.5	395,587.4	4,915.2	400,502.6
Home-based School			111,189.4	7,147.0	118,336.4
Home-based University	11,577.0	16,931.2	28,508.2	1,018.0	29,526.2
Home-based Shop			318,764.1	622.2	319,386.3
Home-based Other			1,103,524.8	831.2	1,104,356.0
Non-home-based work-other			285,493.6	227.9	285,721.5
Non-home-based other-other			760,535.2	726.4	761,261.6
Total			**3,003,602.7**	**15,487.9**	**3,019,090.6**
Percent Shares					
Purpose	**Drive Alone**	**Shared Ride**	**Total Auto**	**Total Transit**	**Total**
Home-Based Work	84.8%	15.2%	98.8%	1.2%	100.0%
Home-based School			94.0%	6.0%	100.0%
Home-based University	40.6%	59.4%	96.5%	3.4%	100.0%
Home-based Shop			99.8%	0.2%	100.0%
Home-based Other			99.9%	0.1%	100.0%
Non-home-based work-other			99.9%	0.1%	100.0%
Non-home-based other-other			99.9%	0.1%	100.0%
Total	**11.5%**	**2.5%**	**99.4%**	**0.6%**	**100.0%**

Traffic Assignment Validation

Model validation refers to comparing the model outputs (traffic volumes) to observed conditions (traffic counts and vehicle miles of travel estimates). During validation, adjustments are made primarily to model inputs, such as the road network and base year land uses, rather than calibrated parameters such as trip generation rates or peak factors. Once validated, the model can be used to predict future travel patterns with a high degree of confidence.

The Kern COG highway and transit base year model results were validated using traffic counts and transit boardings. The 2006 traffic data from the Kern COG traffic count database and Caltrans were used and was the most current data that was available. Transit ridership data for 2006 conditions was obtained from GET.

The Kern2006 Model validation targets are based on several criteria which are as follows:

- Comparison of modeled traffic volumes to observed traffic counts across screenlines by percent volume deviation, with the maximum desirable deviation being 10 percent.
- Comparison of modeled vehicle miles of travel (VMT) to estimates obtained from the Caltrans Highway Performance Monitoring System (HPMS), with the maximum deviation being three percent.
- Total volume and percent root mean square error (RMSE) by facility type and volume group should be less than 40 percent for appropriate aggregate group of links.
- The percentage of links falling within the FHWA validation curve. The FHWA suggested link-specific validation criteria is that 75 percent of freeway and principal arterials (expressways), and 65 percent of all links and all screenlines should fall below the validation curve shown in Figure 9-1.

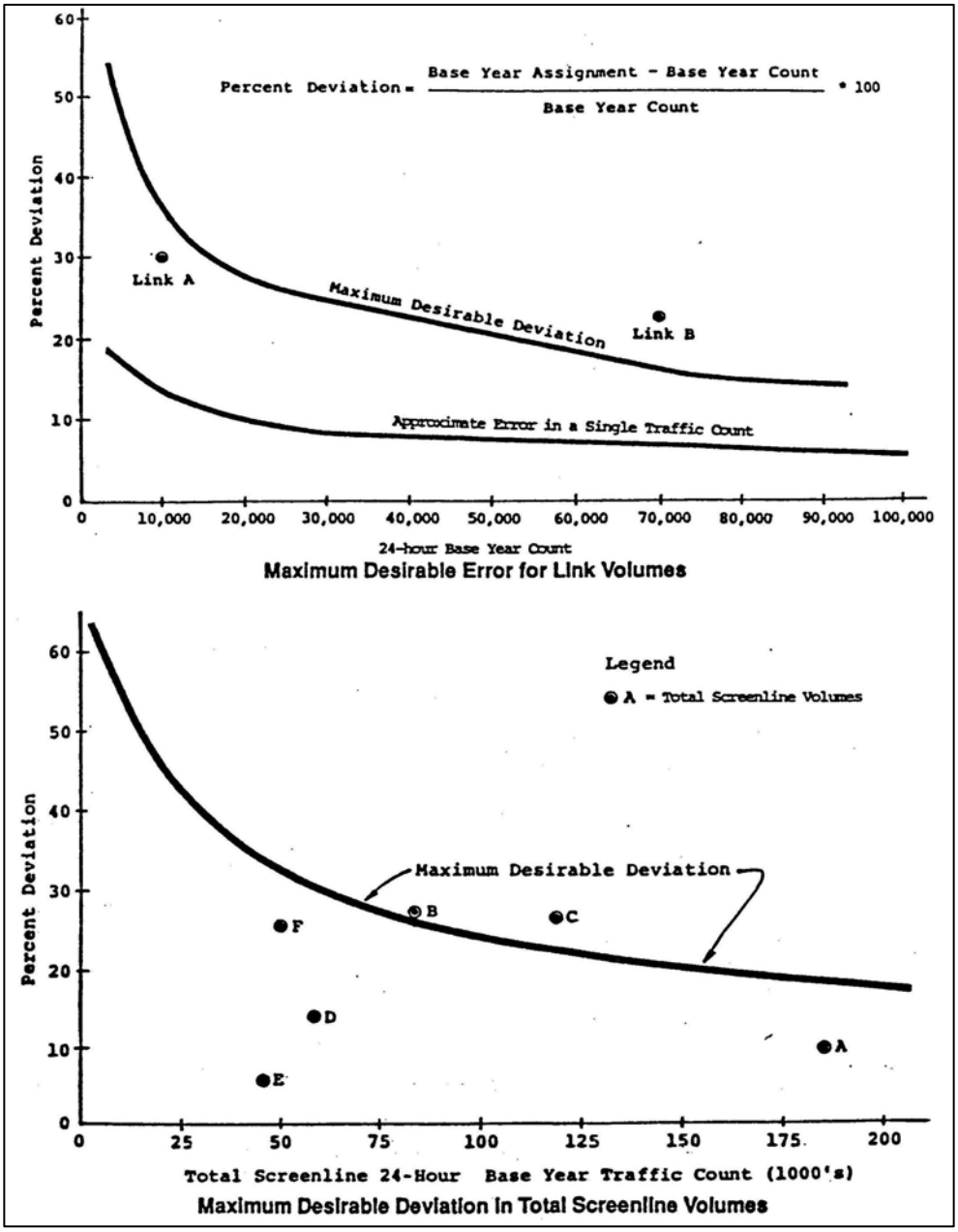


Figure 9-1. Maximum Desirable Error for Links and Screenlines

- Use the Federal Highway Administration and Caltrans recommended error limits for total error by functional classification (type of road) as a region-wide validation:
  - Freeways less than seven percent error
  - Expressways less than 10 percent error
  - Arterials less than 15 percent error
  - Collectors less than 25 percent error
  - Frontage roads less than 25 percent error
- Comparison of observed total transit boardings to the model transit boardings should be within the maximum desirable deviation, being five percent.

All the above targets are specified for comparisons to the daily traffic volumes. The AM and PM peak periods were also compared, and in most cases, are well within the desired criteria.

Traffic Counts

The Kern COG maintains a database of local traffic counts for roads within the cities and Kern County. Daily and peak period directional traffic counts from the database were coded onto the appropriate road network links. Additional counts from Caltrans were added to the appropriate network links. The model was validated against 2,000 observed counts.

Caltrans HPMS

Caltrans prepares estimates of vehicle miles of travel (VMT) for all roads in each California county for the Highway Performance Monitoring System (HPMS). The VMT estimates are based on an extensive traffic counting program on a large sample of roads throughout the state. Local jurisdictions provide Caltrans with updates on the number of lane-miles of road within each classification type. Caltrans statistically extrapolates the traffic counts to provide estimates of total traffic volume on all lane-miles of each functional classification, and VMT. The Caltrans HPMS estimate of VMT for Kern County in 2006 was 22,400,280. The detailed table showing HPMS by jurisdiction for Kern County is shown in Table 9-4.

Vehicle Miles of Travel

Vehicle miles of travel (VMT) is calculated as the number of vehicles on a road segment multiplied by the length of the segment, summed over all road segments in a certain geographic area. The Caltrans Highway Performance Monitoring System (HPMS) estimates daily vehicle miles of travel for each county in California based on a sample of traffic counts on various road types. A comparison of model-estimated VMT with VMT from the HPMS can indicate if the model is generating the correct magnitude of travel, even if there are inaccuracies in the specific road segment traffic volumes.

Vehicle miles of travel are calculated from the Kern Countywide travel demand model by multiplying link volumes by link distances. These model-generated estimates of VMT can then be compared to the HPMS estimates reported in Table 9-4. The model validation goal is that the VMT calculated from the model should be within five percent of the HPMS estimate. The 2006 model base year estimated 23,059,855 VMT for all highway links in the network including gateway links that are external to the county. The 2006 model VMT estimate excluding the gateway links that are external to the county is 22,652,971, which compares well with the Caltrans HPMS estimate of 22,400,280 for Kern County (see Table 9-5). This is within one percent of the Caltrans HPMS VMT estimate for the county and well within the validation target of ±5 percent. This measure indicates that the model is generating a reasonable amount of traffic within Kern County including the regional county-to-county movements that are being estimated.

The daily, AM peak and PM peak period VMT by facility type are also shown in Table 9-6.

Table 9-4: Kern County HPMS by Jurisdiction

County/ Location	Jurisdiction	Maintained Miles			Daily Vehicle Miles of Travel		
		Rural	Urban	Total	Rural	Urban	Total
Kern							
Citiies:	Arvin	0.00	33.60	33.60	0.00	47.64	47.64
	Bakersfield	15.68	937.20	952.88	5.49	3,750.27	3,755.76
	California City	2.22	599.79	602.01	0.78	408.11	408.89
	Delano	5.10	88.17	93.27	2.27	181.34	183.61
	Maricopa	10.94	0.00	10.94	3.65	0.00	3.65
	McFarland	2.50	19l88	22.38	3.15	29.32	32.47
	Ridgecrest	0.00	124.66	124.66	0.00	225.21	225.21
	Shafter	19.46	45.79	65.24	8.12	125.62	133.74
	Taft	0.00	42.69	42.69	0.00	52.04	52.04
	Tehachapi	0.00	37.70	37.70	0.00	80.86	80.86
	Wasco	9.05	46.54	55.59	4.25	62.04	66.29
Other:	Army Corps of Engineers	6.00	0.00	6.00	2.10	0.00	2.10
	Bureau of Indian Affairs	1.20	0.00	1.20	0.07	0.00	0.07
	County (unincorporated)	2,537.85	764.23	3.302.07	1,599.21	1,867.09	3,466.30
	Department of Defense	40.00	6.12	46.12	14.00	18.12	32.12
	State Highway	727.23	145.61	872.84	9,686.41	4,215.01	13,901.42
	State Park Service	6.52	0.00	6.52	0.59	0.00	0.59
	U.S. Fish & Wildlife Service	6.15	0.00	6.15	2.15	0.00	2.15
	U.S. Forest Service	109.03	0.00	109.03	5.36	0.00	5.36
		3,498.92	**2,891.97**	**6,390.89**	**11,337.60**	**11,062.67**	**22,400.28**

Traffic Assignment Validation

The traffic assignment validation is conducted for daily, AM peak and PM peak period traffic conditions and is based on several criteria, including total volume by road type, percent of links within acceptable limits, screenlines and VMT.

The traffic counts and the model volumes are compared by facility type (Tables 9-7 through 9-9) and by the volume range in which they are classified (Tables 9-10 through 9-12). The comparison is made in terms of total model volume compared to total traffic counts and the root mean square error (RMSE), which is also used as a validation criterion.

Table 9-5: Daily VMT/VHT by Facility Type

Road Type	Vehicle Miles	HPMS	Percent	Vehicle Hours	Average
Freeways	10,045,792			153,048	65.64
Expressways	580,683			12,266	47.34
Major arterials	8,764,719			255,003	34.37
Minor arterials	1,126,486			42,477	26.52
Collectors	473,039			22,885	20.67
Centroids	1,410,616			64,249	21.96
Diamond ramps	232,442			10,697	21.73
Loop ramps	19,192			1,051	18.25
Total (Kern County)	**22,652,969**	**22,400,280**	**+1%**	**561,676**	
Cordon	406,884			20,345	20.00
Total—All Roads	**23,059,855**	**22,400,280**	**+3%**	**582,020**	**39.62**

Table 9-6: AM Peak and PM Peak VMT/VHT by Facility Type

Road Type	AM Peak Period (2-hour)			PM Peak Period (3-hour)		
	Vehicle	Vehicle	Average	Vehicle	Vehicle	Average
Freeways	1,067,752	16,293	65.54	1,792,961	27,648	64.85
Expressways	66,924	1,412	47.41	116,628	2,468	47.25
Major arterials	1,096,168	31,487	34.81	2,031,668	61,206	33.19
Minor arterials	133,550	5,065	26.37	274,355	10,442	26.28
Collectors	55,855	2,738	20.4	116,366	5,955	19.54
Centroids	182,744	8,166	22.38	338,104	15,263	22.15
Diamond ramps	30,013	1,293	23.22	51,191	2,161	23.69
Loop ramps	2,559	130	19.68	3,970	234	16.93
Cordon	37,487	1,874	20	68,306	3,415	20
Total—All Roads	**2,673,054**	**68,459**	**39.05**	**4,793,549**	**128,793**	**37.22**

Table 9-7: Daily Highway Validation by Road Type

Road Type	Number of Links	Traffic Counts	Model Volume	Difference Percent	Criteria	Percent RMSE
Freeways	59	1,699,736	1,840,272	8%	±7%	
Expressways	25	338,157	364,327	8%	±10%	
Arterials	1,481	6,329,110	5,935,837	–6%	±15%	
Collectors	203	326,934	217,011	–34%	±25%	
Ramps	271	736,288	811,590	10%	±25%	
Cordon	14	1,380	1,251	–9%	±10%	
Count > 4,999	**576**	**7,085,267**	**6,984,944**	**–1%**	**±5%**	**33%**
Total—All Roads	**2,053**	**9,431,605**	**9,170,288**	**3%**	**±5%**	**52%**

Table 9-8: AM Peak Highway Validation by Road Type

Road Type	Number of Links	Traffic Counts	Model Volume	Difference Percent	Criteria	Percent RMSE
Freeways	59	190,399	216,123	14%	±7%	
Expressways	25	43,936	47,146	7%	±10%	
Arterials	1,411	696,431	708,535	2%	±15%	
Collectors	187	36,723	22,083	–40%	±25%	
Ramps	272	97,275	106,969	10%	±25%	
Cordon	12	148	68	–54%	±10%	
Count >4,999	**614**	**837.621**	**861,994**	**3%**	**±5%**	**43%**
Total—All Roads	**1,966**	**1,064,912**	**1,100,924**	**3%**	**±5%**	**66%**

Table 9-9: PM Peak Highway Validation by Road Type

Road Type	Number of Links	Traffic Counts	Model Volume	Difference Percent	Criteria	Percent RMSE
Freeways	59	353,406	359,162	2%	±7%	
Expressways	25	73,470	76,484	4%	±10%	
Arterials	1,411	1,316,782	1,343,785	2%	±15%	
Collectors	187	67,689	51,229	–24%	±25%	
Ramps	272	170,759	184,024	8%	±25%	
Cordon	12	278	159	–43%	±10%	
Count >4,999	**963**	**1,789,980**	**1,789,754**	**0%**	**±5%**	**41%**
Total—All Roads	**1,966**	**1,982,384**	**2,014,843**	**2%**	**±5%**	**55%**

Table 9-10: Highway Validation by Volume Range—Daily

Volume Range	Links	Count	Volume	Difference Percent	Criteria	Percent RMSE
<4,999	1,477	2,346,338	2,185,344	–7%	60%	
>5,000 to <9,999	332	2,306,161	2,016,598	–13%	41%	
>10,000 to <14,999	113	1,357,087	1,292,926	–5%	33%	
>15,000 to <19,999	64	1,090,621	1,141,772	5%	29%	
>20,000 to <24,999	16	344,985	352,645	2%	27%	
>25,000 to <29,999	29	778,277	882,416	13%	25%	
>30,000 to <34,999	5	161,916	167,091	3%	24%	
>35,000 to <39,999	1	35,415	35,643	1%	23%	
>40,000 to <44,999	6	250,350	304,360	22%	22%	
>44,999	10	760,455	791,493	4%	20%	
Total >4,999	**576**	**7,085,267**	**6,984,944**	**–1%**		**33%**
Total—All	**2,053**	**9,431,605**	**9,170,288**	**–3%**		**52%**

Table 9-11: Highway Validation by Volume Range—AM Peak

Volume Range	Links	Count	Volume	Difference Percent	Criteria	Percent RMSE
<499	1,350	226,293	237,907	5%	60%	
>500 to <999	340	240,355	226,126	–6%	41%	
>1,000 to <1,999	173	234,792	241,293	3%	33%	
>2,000 to <2,999	55	136,006	147,963	9%	29%	
>3,000 to <3,999	26	91,724	95,056	4%	27%	
>4,000 to <4,999	6	26,005	28,050	8%	25%	
>5,000 to <5,999	5	26,629	32,932	24%	24%	
>6,000 to <6,999	2	12,940	16,416	27%	23%	
>7,000 to <7,999	2	14,620	16,146	0%	22%	
>7,999	5	54,550	58,012	6%	20%	
Total >499	**614**	**837,621**	**861,994**	**3%**		**43%**
Total—All	**1,964**	**1,063,914**	**1,099,901**	**3%**		**66%**

Table 9-12: Highway Validation by Volume Range—PM Peak

Volume Range	Links	Count	Volume	Difference Percent	Criteria	Percent RMSE
<500	1,003	192,404	216,089	12%	60%	
>500 to <999	372	253,950	255,774	1%	41%	
>1,000 to <1,999	317	453,177	425,742	–6%	33%	
>2,000 to <2,999	128	306,476	294,632	–4%	29%	
>3,000 to <3,999	65	230,079	248,574	8%	27%	
>4,000 to <4,999	31	136,453	142,784	5%	25%	
>5,000 to <5,999	21	117,178	126,346	8%	24%	
>6,000 to <6,999	11	69,575	69,241	0%	23%	
>7,000 to <7,999	2	15,049	15,093	0%	22%	
>7,999	16	208,043	220,568	6%	20%	
Total >499	**963**	**1,789,980**	**1,798,754**	**0%**		**41%**
Total—All	**1,966**	**1,982,384**	**2,014,843**	**2%**		**55%**

The root mean square error (RMSE) is a statistical indicator that is intended to represent the average percent error between an estimated value (such as a model volume) and an observed value (such as a traffic count). The RMSE is calculated as:

$$RMSE = \sqrt{\frac{\sum_{i=1}^{n}(C_i - V_i)^2}{n-1}}$$

where:

n = the total number of links
C_i = the observed count for road i
V_i = the model volume for road i
i = represents a road link

The RMSE provides a measure of accuracy based on the statistical standard deviation. The RMSE places a greater emphasis on larger errors that may cancel each other out in the comparison of total model volumes and traffic counts. The overall RMSE target is 40 percent. The 2006 model meets the RMSE target for total volumes with daily counts greater than 5,000.

Percent Error by Facility Type and Volume Range

The Federal Highway Administration and Caltrans recommended error limits for total error by functional classification (type of road) are as follows:

- Freeways: less than 7 percent error
- Principal arterials: less than 10 percent error
- Arterials: less than 15 percent error
- Collectors less: than 25 percent error
- Frontage roads: less than 25 percent error

The daily 2006 traffic validation reported in Table 9-7 meets the criteria for all facilities other than collectors. The overall percent difference is three percent, which is well below the criteria of five percent. Cordon links or gateway links are external to Kern County and are a mix of all types of facilities including freeways, expressways and arterials, and are not part of the highway network internal to Kern County. Because of this mixture, the target was set at 10 percent for the cordon links.

The 2006 traffic validation for the AM peak period reported in Table 9-8 shows the expressways, arterials and ramps meet the criteria listed above. The freeways are seven percent higher while the collectors are 15 percent higher. The overall percent difference is three percent and is well within the allowable criteria of five percent.

The 2006 traffic validation for the PM peak period reported in Table 9-9 shows that the freeways, expressways, arterials, collectors and ramps meet the criteria. The overall percent difference is three percent and is well within the allowable criteria of five percent.
The FHWA and Caltrans travel forecasting guidelines include a figure showing the maximum desirable deviation between daily model volumes and traffic counts for individual link volumes

(Figure 9-1). The maximum desirable deviations in total volume from the FHWA figure are recommended for the validation by volume range and are included as criteria in the tables.

- The suggested link-specific validation criteria are that 75 percent of freeways and expressways meet the maximum desirable deviation.
- The 2006 Kern COG model validation meets the maximum desirable deviation for 83 percent of links when considering freeways and expressways that are over 5,000 ADT.
- The 2006 Kern COG model validation meets the maximum desirable deviation for 70 percent of links when considering freeways, expressways and major arterials that are over 5,000 ADT.
- Though it is not part of the validation criteria, when considering all links in the model, the 2006 Kern COG model validation achieves the maximum desirable deviation for 68 percent of links (includes roadways greater than 5,000 ADT).
- Though it is not part of the validation criteria, when considering all links in the model, the 2006 Kern COG model validation achieves the maximum desirable deviation for 65 percent of links (includes roadways greater than 500 ADT).
- Though it is not part of the validation criteria, when considering all links in the model, the 2006 Kern COG model validation achieves the maximum desirable deviation for 64 percent of links (includes all roadways).

Therefore, the 2006 Kern Regional Travel Demand Model adequately meets the validation criteria for percent error.

The 2006 daily model validation reported in Table 9-10 meets the FHWA criteria for all ten of the volume ranges. The 2006 AM peak and PM peak model validations, reported in Tables 9-11 and 9-12, respectively, meet the FHWA criteria for all 10 of the volume ranges with the exception of the 6,000 to 7,000 range in the AM peak. Even in this case, it is only three percent higher and there are only two links with counts in this volume range.

Screenlines are imaginary lines, often along natural or man-made physical barriers (e.g., rivers, railroad tracks) that have a limited number of crossings. The screenlines "cut" the entire study area, intercepting all travel across them, thereby eliminating issues about individual route choice. Use of a system of screenlines allows systematic comparison of model estimated versus observed travel in different parts of the model area.

The Kern COG model validation employs 13 screenline locations which are graphically displayed on Figure 9-2. The resulting highway validation by screenline location for daily, AM peak and PM peak periods are presented in the following section.

It is common practice to attempt to validate models to within 10 percent on all major screenlines. The 2006 model validation for the daily volumes is within 10 percent for 10 out of the 13 screenlines as reported in Table 9-13. However, the total volume of all screenlines when compared to the counts is within two percent. The total volume crossing all screenlines, when compared to the AM peak counts, is within nine percent as shown in Table 9-14. The AM peak screenline volumes are within 10 percent for nine out of the 13 screenlines. The PM peak screenline volumes are within 10 percent for 10 out of the 13 screenlines as shown in Table 9-15. However, the total volume of all screenlines when compared to the counts is within seven percent.

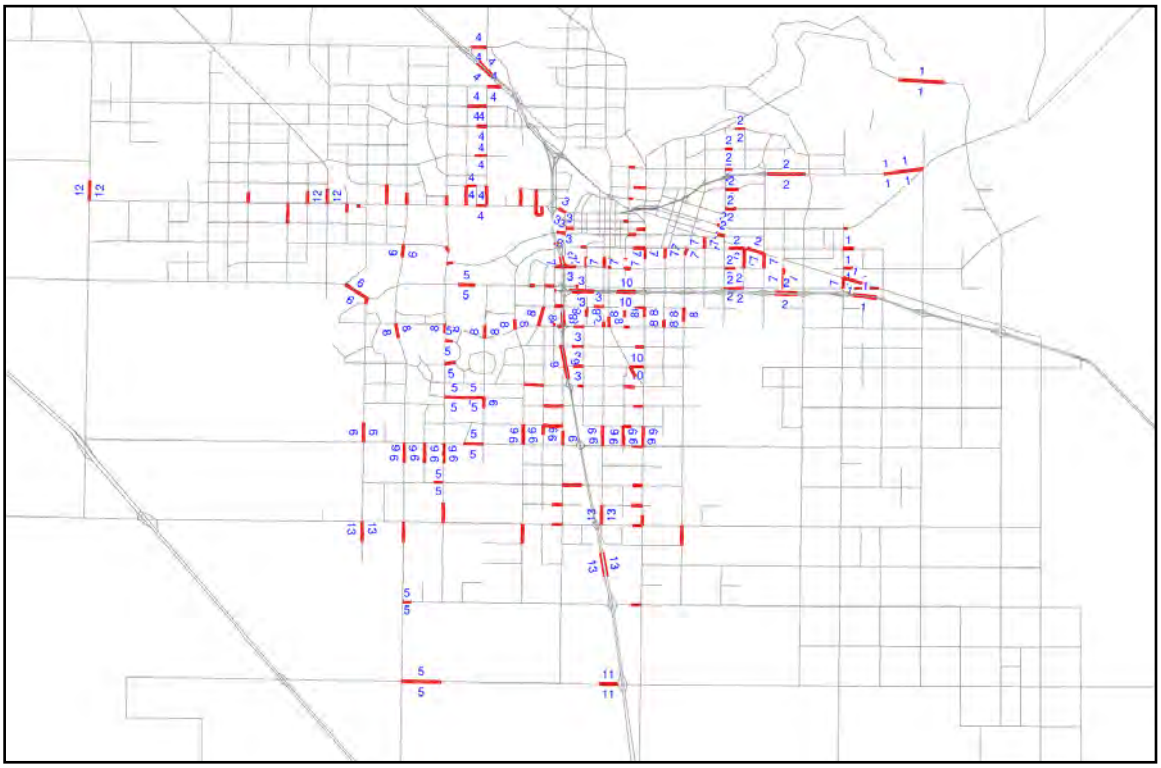


Figure 9-2. Location of Screenlines

Table 9-13: Validation by Screenline Volumes—Daily

Screenline	Location	Links	Volume	Count	Difference	Criteria
1	East of Route 184	10	13,941	21,515	54%	
2	West of Oswell Street	9	94,543	101,358	7%	
3	East of Oak Street	8	127,782	132,878	4%	
4	West Of Fruitvale Avenue	8	126,393	127,704	1%	
5	East of Coffee Road	8	18,099	21,453	19%	
6	North of Kern River	6	246,000	253,141	3%	
7	South of California Avenue	12	224,345	229,718	2%	
8	North of Ming Avenue	10	211,064	231,028	9%	
9	North of Panama Lane	16	199,024	190,219	–4%	
10	West of Chester Avenue	18	148,672	146,838	–1%	
11	North of Panama Lane	8	57,896	60,376	4%	
12	North of Rosedale Highway	32	97,966	97,870	0%	
13	South of Taft Highway	18	26,770	12,913	–52%	
Sum		163	1,592,495	1,627,011	2%	10%

Table 9-14: Validation by Screenline Volumes—AM Peak

Screenline	Location	Links	Volume	Count	Difference	Criteria
1	East of Route 184	10	1,933	2,623	36%	
2	West of Oswell Street	9	10,762	11,659	8%	
3	East of Oak Street	8	15,263	18,439	21%	
4	West of Fruitvale Avenue	8	13,936	15,571	12%	
5	East of Coffee Road	8	2,398	2,925	22%	
6	North of Kern River	6	27,838	30,262	9%	
7	South of California Avenue	12	25,780	28,808	12%	
8	North of Ming Avenue	10	25,839	28,252	9%	
9	North of Panama Lane	16	22,216	23,683	7%	
10	West of Chester Avenue	18	18,301	18,171	–1%	
11	North of Panama Lane	8	6,841	7,055	3%	
12	North of Rosedale Highway	32	10,027	10,854	8%	
13	South of Taft Highway	18	2,944	1,654	–44%	
Sum		163	184,078	199,956	9%	10%

Table 9-15: Validation by Screenline Volumes—PM Peak

Screenline	Location	Links	Volume	Count	Difference	Criteria
1	East of Route 184	10	13,941	21,515	54%	
2	West of Oswell Street	9	94,543	101,358	7%	
3	East of Oak Street	8	127,782	132,878	4%	
4	West Of Fruitvale Avenue	8	126,393	127,704	1%	
5	East of Coffee Road	8	18,099	21,453	19%	
6	North of Kern River	6	246,000	253,141	3%	
7	South of California Avenue	12	224,345	229,718	2%	
8	North of Ming Avenue	10	211,064	231,028	9%	
9	North of Panama Lane	16	199,024	190,219	–4%	
10	West of Chester Avenue	18	148,672	146,838	–1%	
11	North of Panama Lane	8	57,896	60,376	4%	
12	North of Rosedale Highway	32	97,966	97,870	0%	
13	South of Taft Highway	18	26,770	12,913	–52%	
Sum		163	330,133	353,381	7%	10%

Transit Ridership Validation

The transit validation results are shown in Table 9-16. Overall transit validation is two percent higher than the 2006 observed transit boardings. The total trips constitute less than 0.6 percent of the total person trips for Kern County, thus indicating that the major mode of travel is still by automobile. However, on individual routes, errors in modeled boarding are substantially higher. The same reasons apply as before: transit assignments are done as an “all-or-nothing” process, where all trips for a selected origin-destination are assigned to the minimum impedance path, even if another slightly slower transit route exists (i.e., no capacity restraint). This tends to overload certain lines, while other routes remain underutilized.

Table 9-16: GET Transit—Daily Ridership Validation

Transit Route No.	Transit Route Description	Boardings		Difference	Percent Difference
		Observed	Modeled		
1	Olive Drive/Bakersfield College	650	656	6	1%
2	Chester Avenue/Oildale	3,189	2,725	(464)	–15%
3	Airport/Downtown	270	397	127	47%
4	Bakersfield College/Downtown	1,286	1,067	(219)	–17%
5	Bakersfield College/Valley Plaza	3,495	2,203	(1,292)	–37%
6	Cal State/East Hills	437	1,082	645	148%
7	Stockdale High/Kern Medical Center	1,780	2,202	422	24%
8	Foothill High/Valley Plaza	2,582	2,132	(450)	–17%
9	Foothill/Half Moon	2,054	2,971	917	45%
10	Southwest Loop	762	901	139	18%
11	Cal State/Bakersfield College	2,273	2,071	(202)	–9%
12	Westchester	196	34	(162)	–83%
13	Greenfield	802	988	186	23%
14	Rosedale/Cal State	571	981	410	72%
15	Mervyn's/Valley Plaza	28	408	380	1,357%
17	Crosstown Express	920	323	(597)	–65%
18	Rosedale Connector	163	704	541	332%
	Total Boardings	**21,458**	**21,845**	**387**	**2%**

Furthermore, GET transit ridership indicates a downward or near flat trend from 2006 to 2003, so the model was recalibrated to reflect this.

Traffic Assignment Results

Figures 9-3 through 9-22 illustrate various results from the traffic assignment validation effort.

The traffic validation indicates that the Kern COG model provides a good overall estimation of travel demand patterns in Kern County. However, it is recommended that traffic forecasts on specific road segments use an adjustment process that accounts for validation errors. Where base year traffic counts are available, forecast traffic volumes are calculated based on the increment between the base year and future year model results:

Adjusted Forecast Volume = Base Year Count + (Model Forecast Volume – Base Year Model Volume)

An incremental adjustment is generally recommended instead of an adjustment based on ratios. A ratio adjustment factor does not guarantee continuity of traffic volumes between adjacent road segments, and can result in very large adjustments on low-volume links.

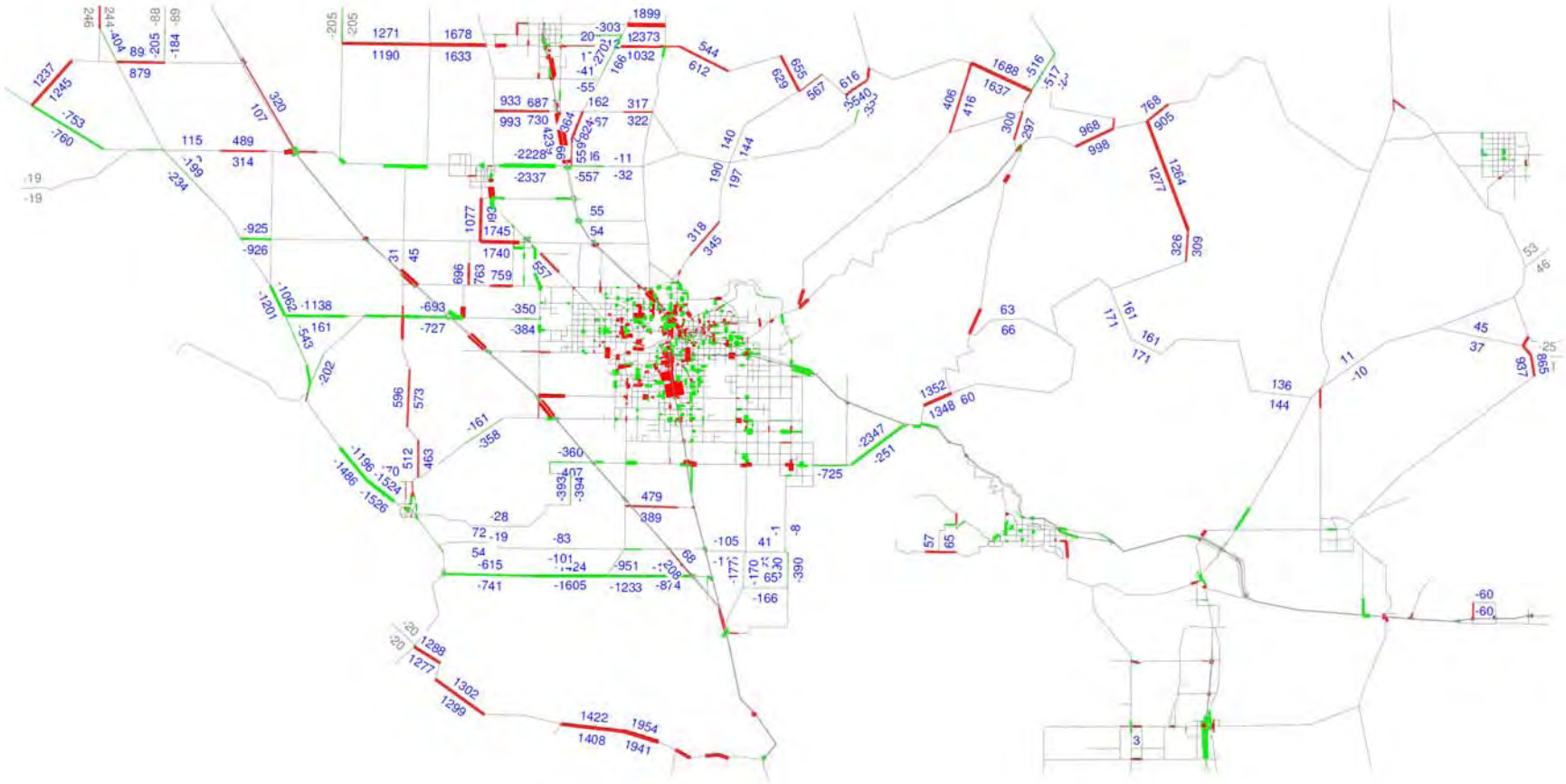


Figure 9-3. 2006 Daily Differences Model vs. Count—County

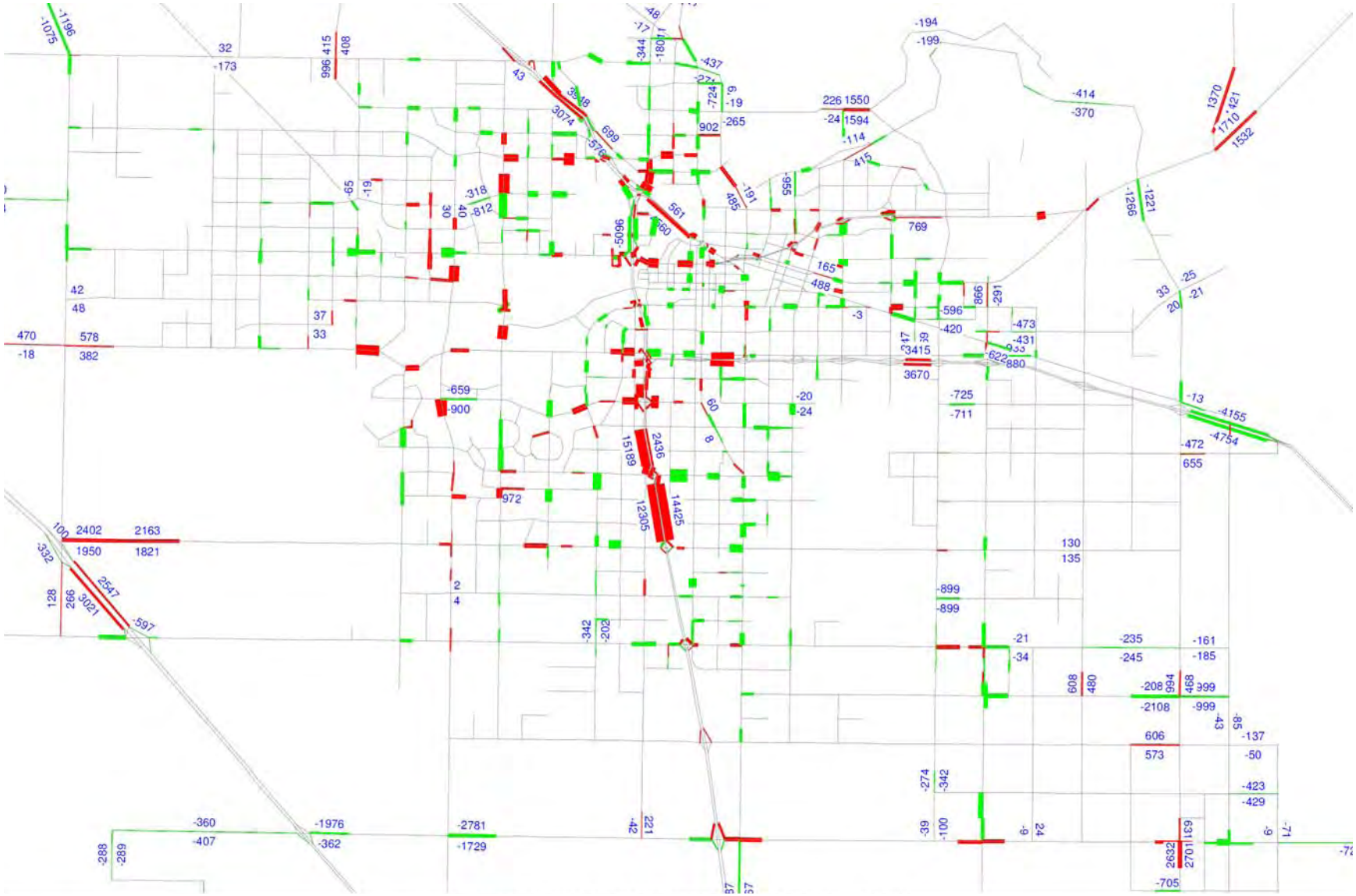


Figure 9-4. 2006 Daily Differences Model vs. Count—Metro

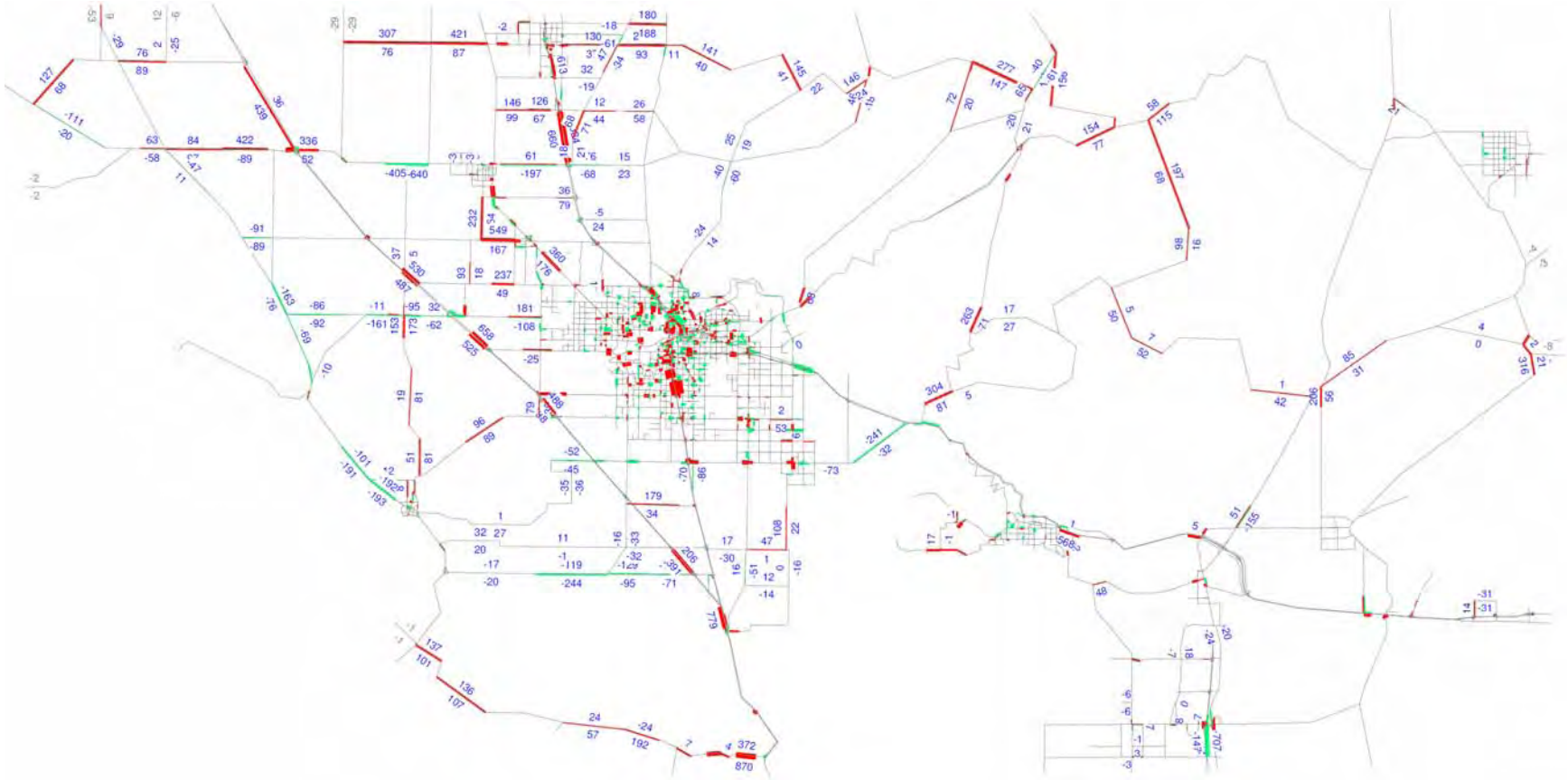


Figure 9-5. 2006 AM Peak Period Differences Model vs. County—County

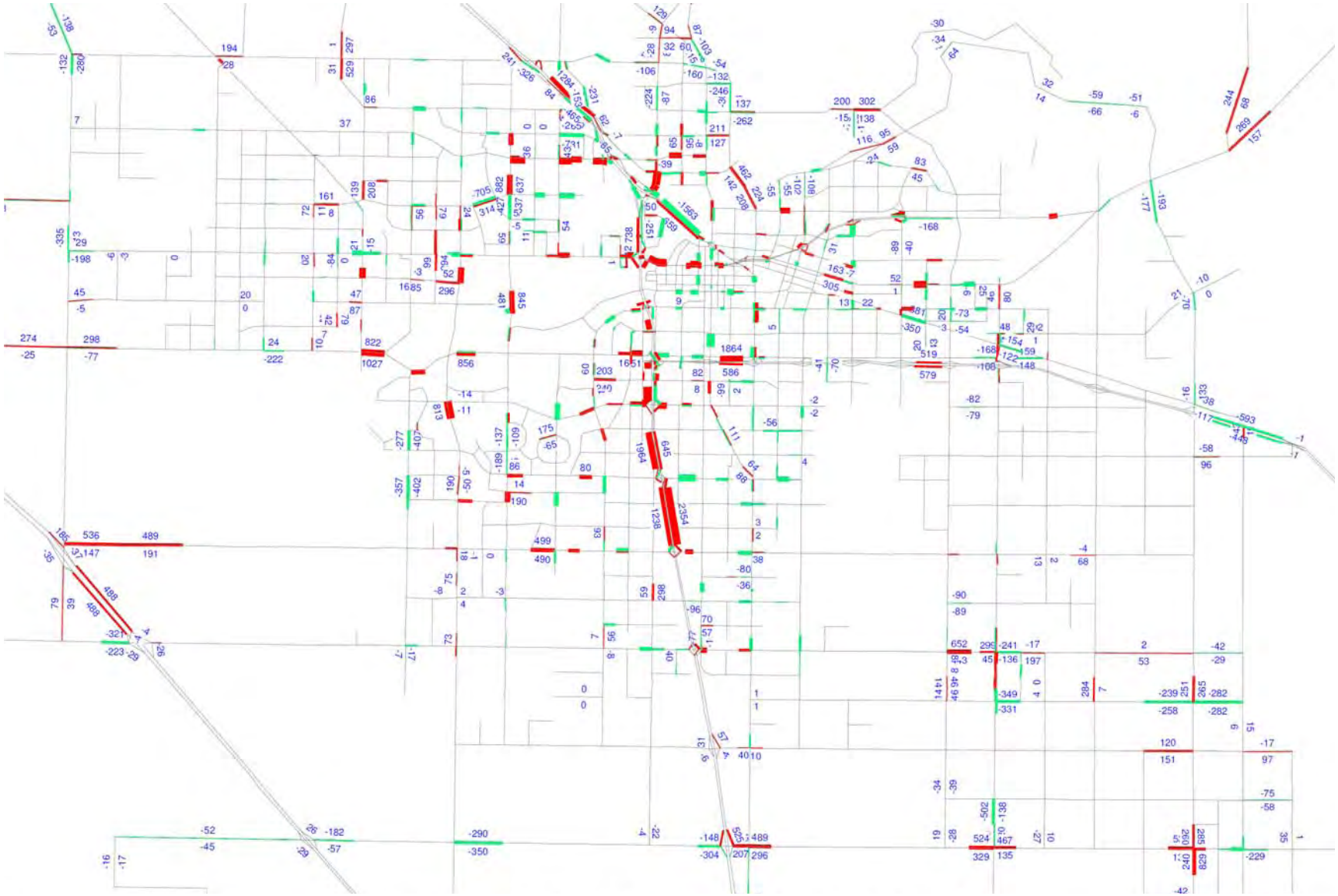


Figure 9-6. 2006 AM Peak Period Differences Model vs. Count—Metro

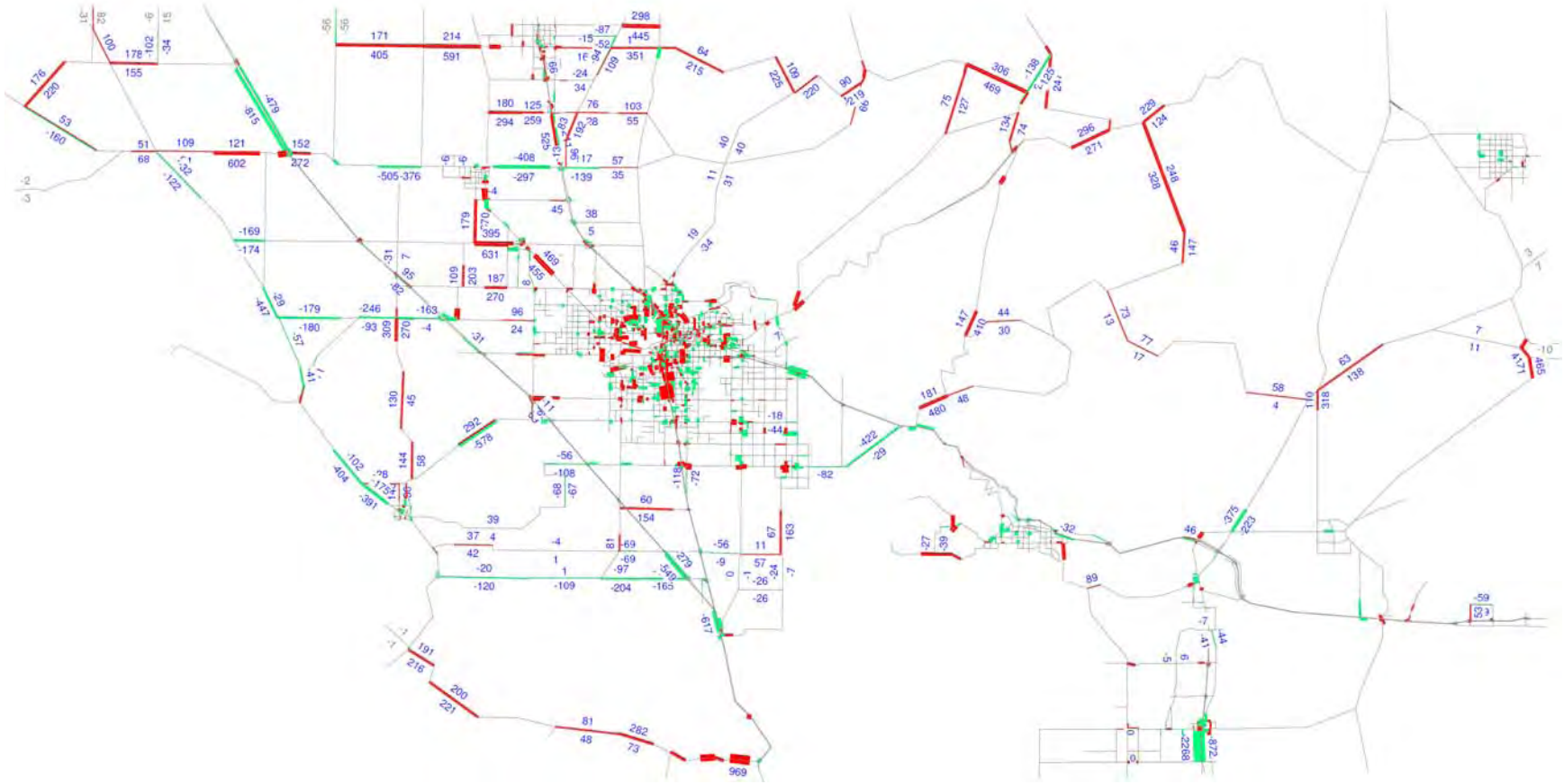


Figure 9-7. 2006 PM Peak Period Differences Model vs. Count—County

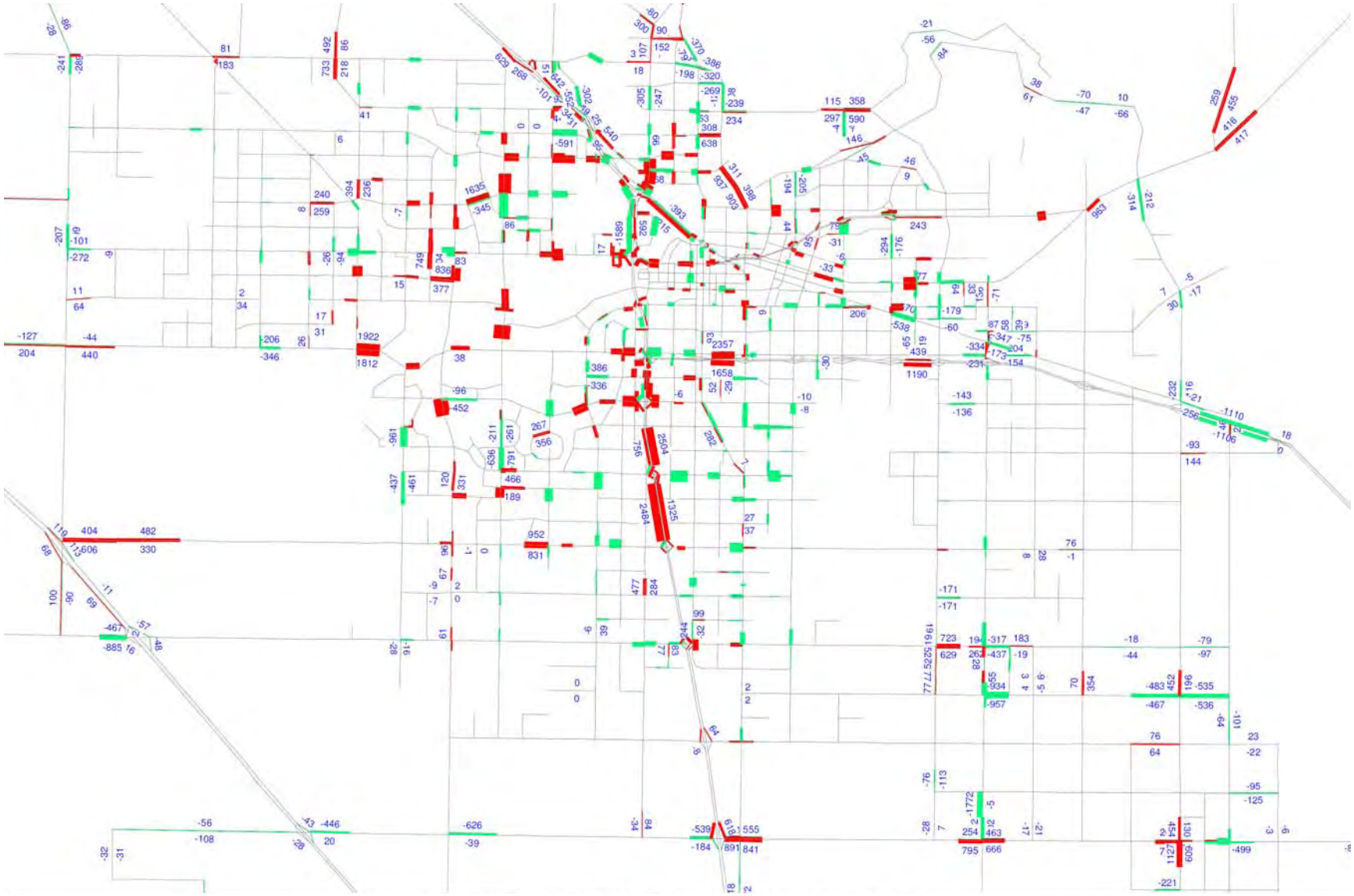


Figure 9-8. 2006 PM Peak Period Differences Model vs. Count—Metro

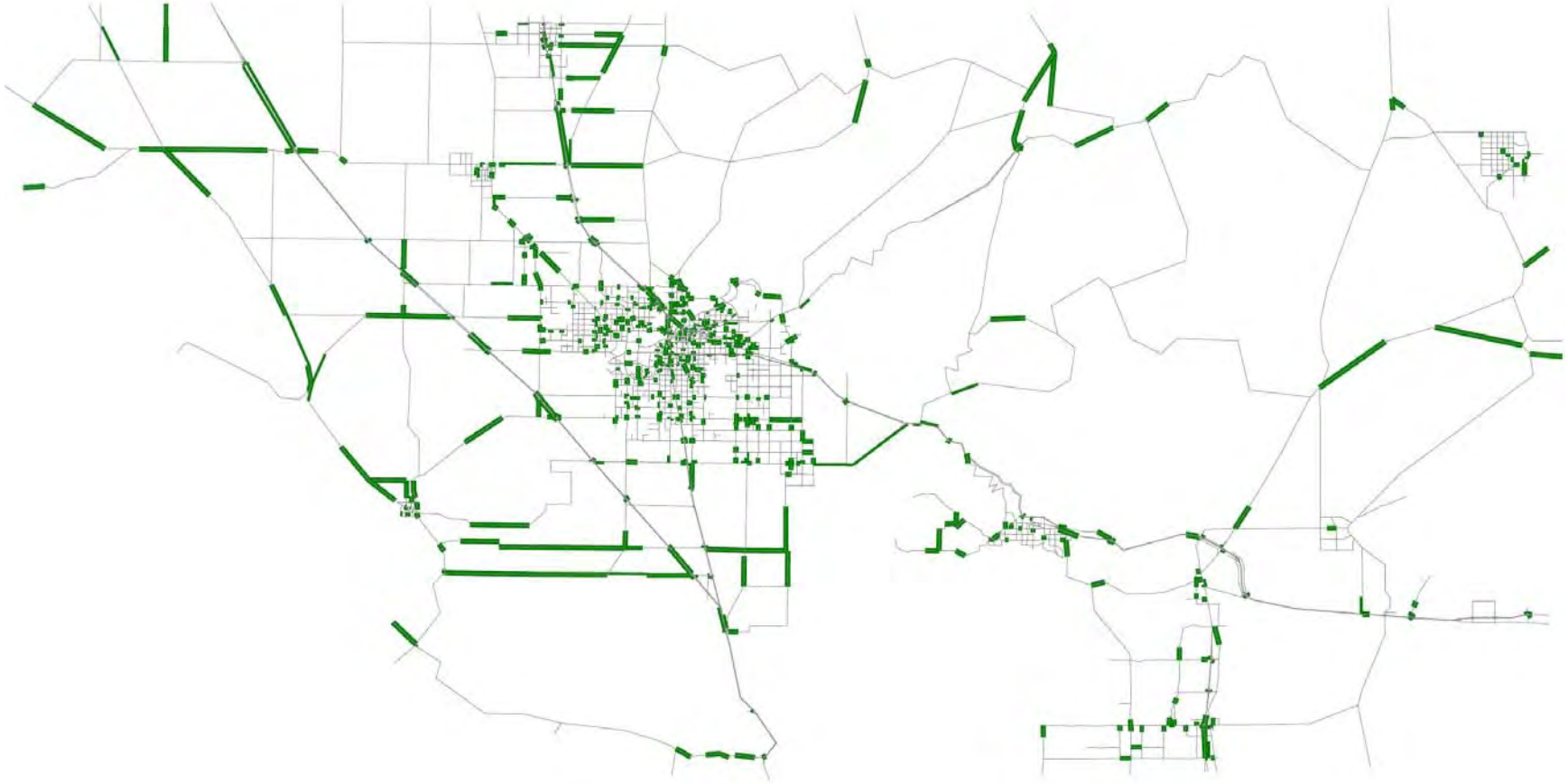


Figure 9-9. 2006 Links within NCHRP Guidelines—County—Daily

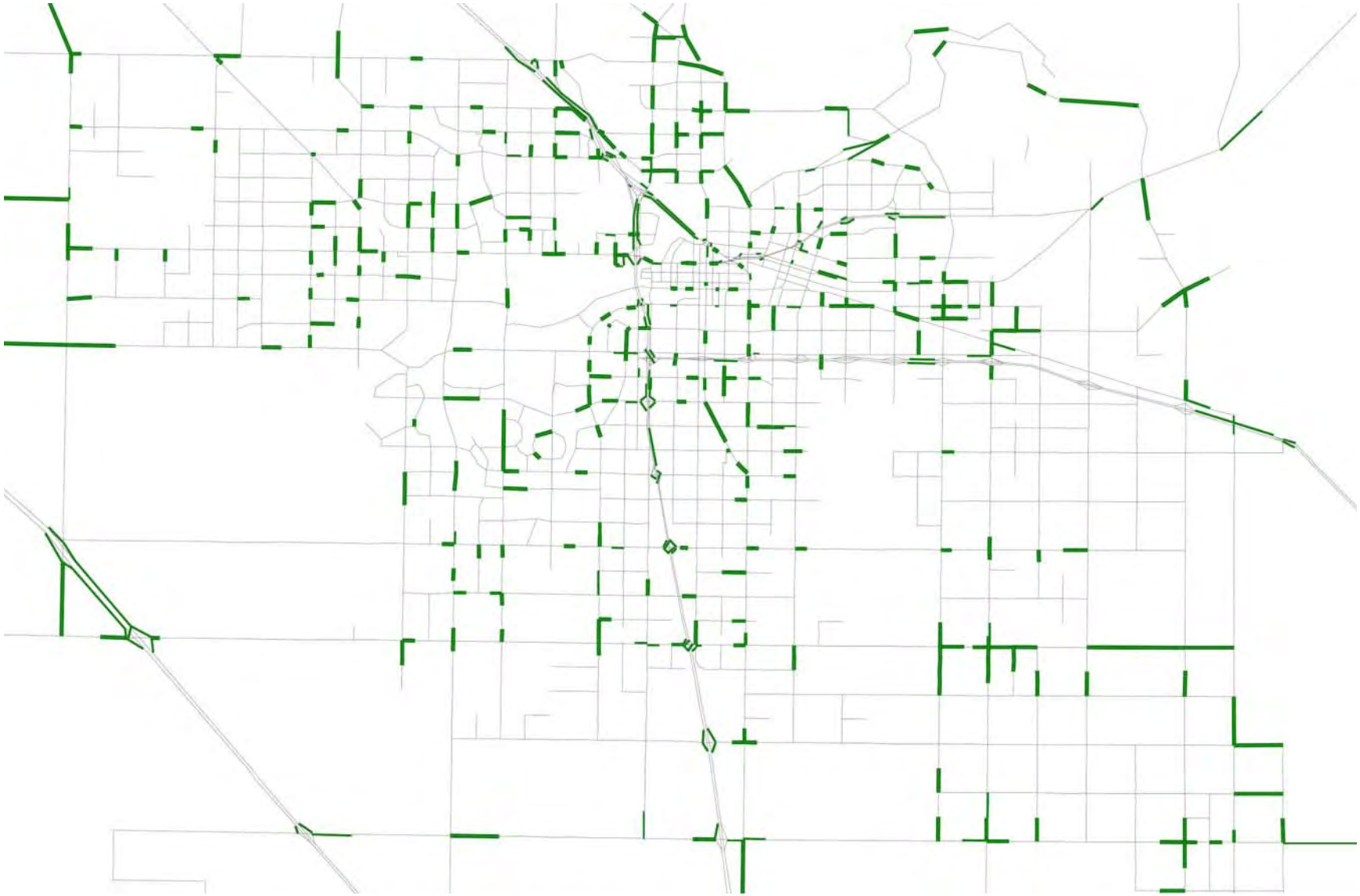


Figure 9-10. 2006 Links within NCHRP Guidelines—Metro—Daily

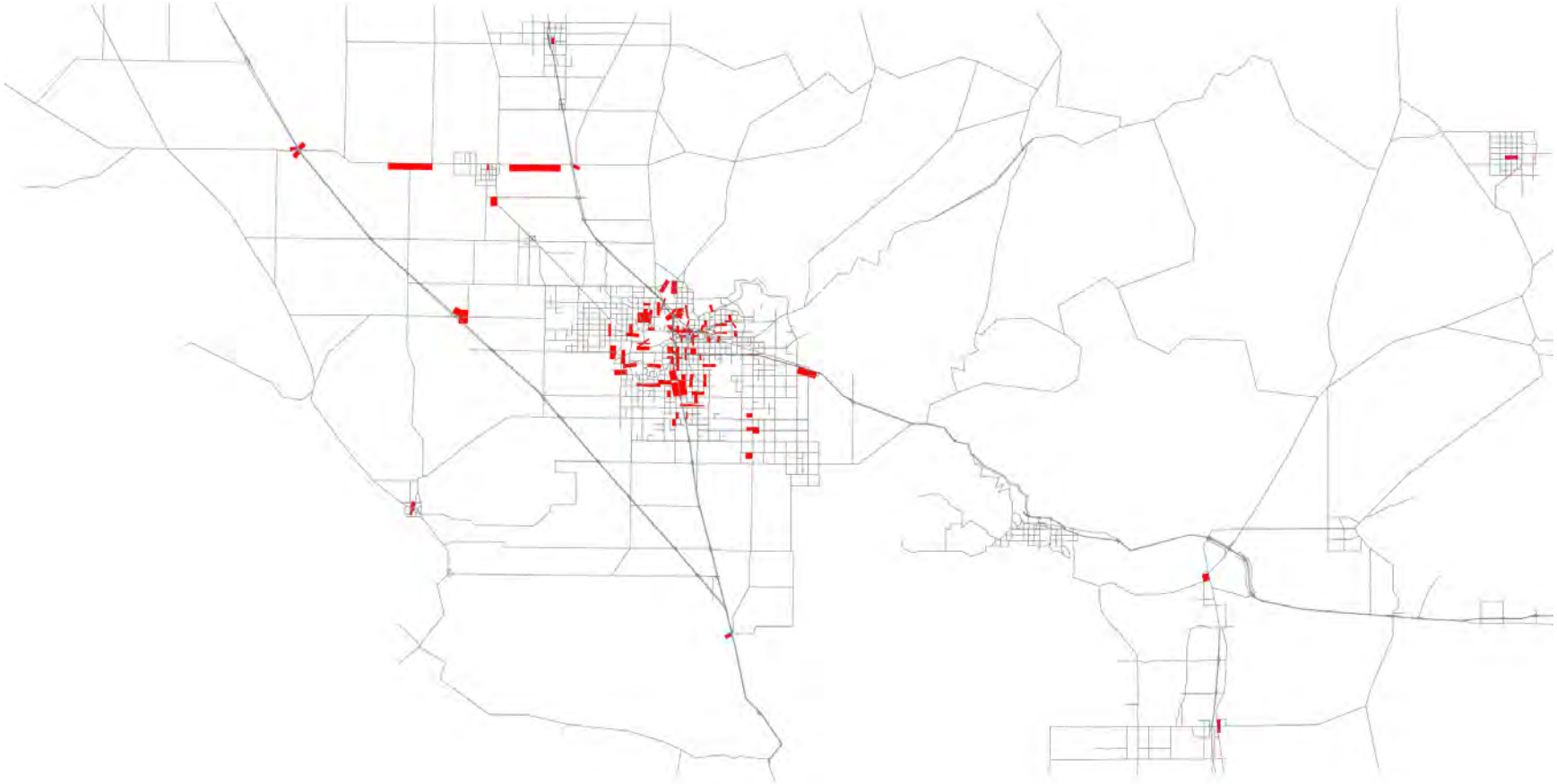


Figure 9-11. 2006 Links Exceeding NCHRP Guidelines—County—Daily (Counts >5000)

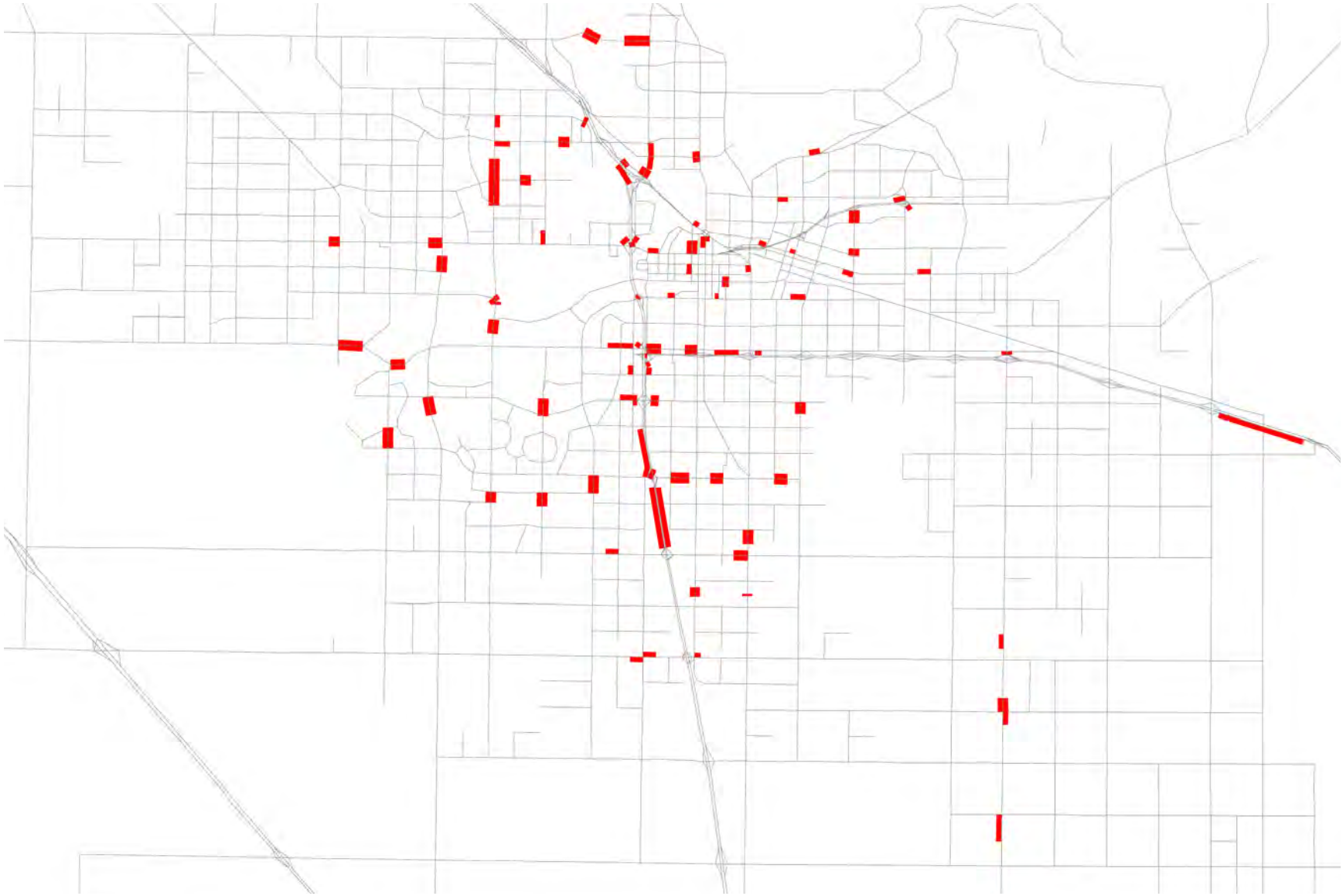


Figure 9-12. 2006 Links Exceeding NCHRP Guidelines—Metro—Daily (Counts >5000)

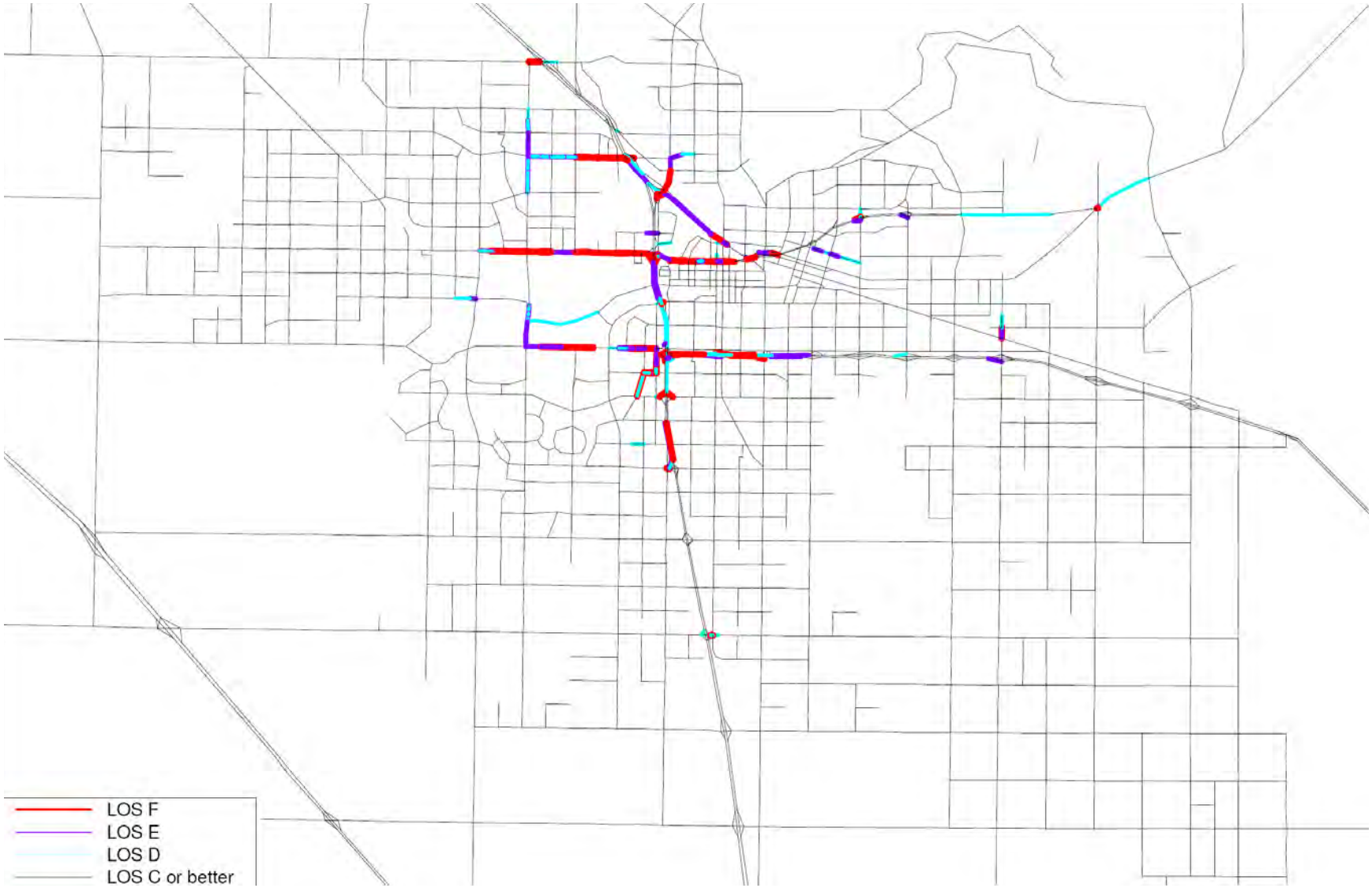


Figure 9-13. 2006 Daily LOS Plot—Metro

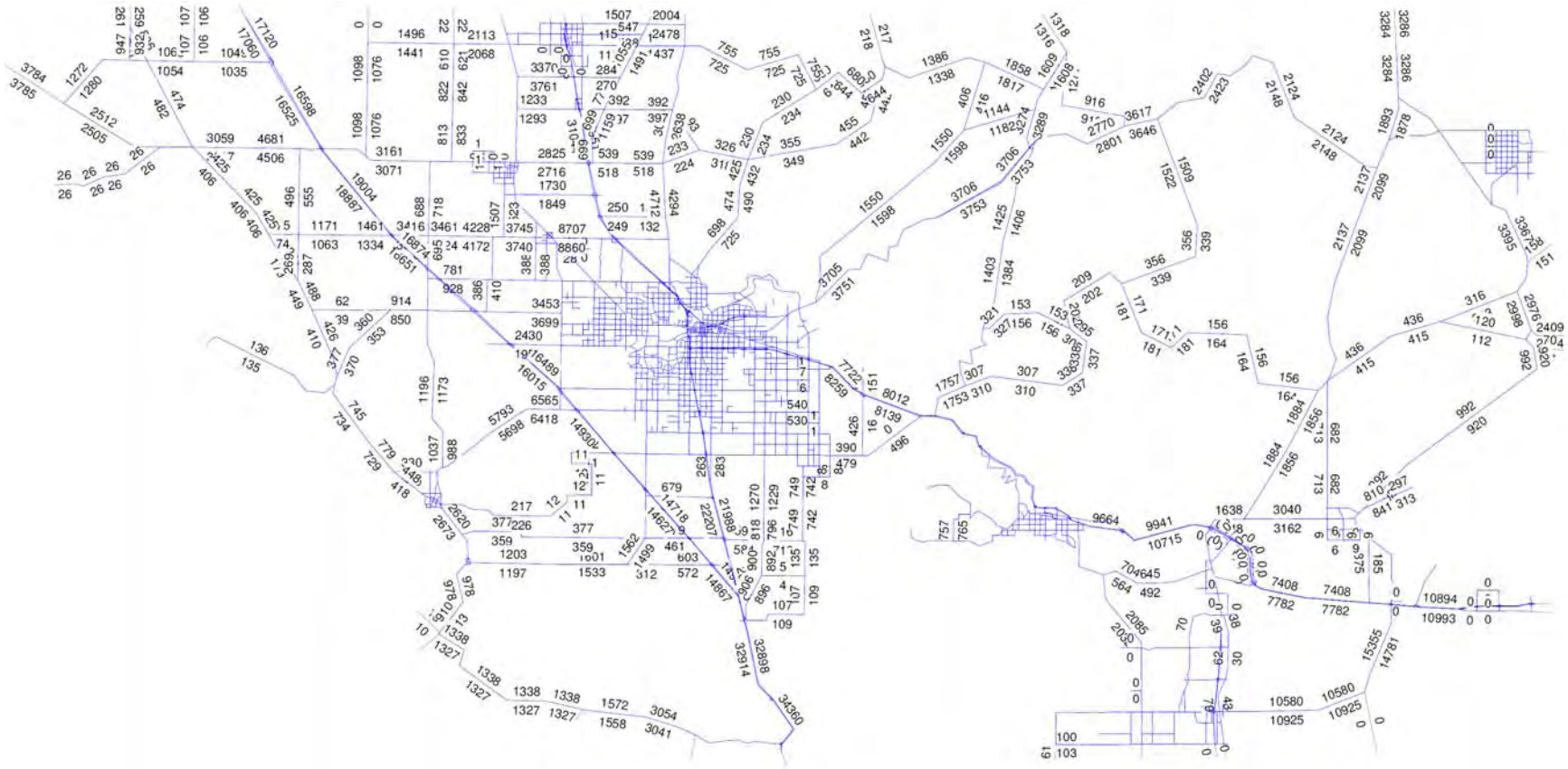


Figure 9-14. 2006 Daily Traffic Volumes Plot—County

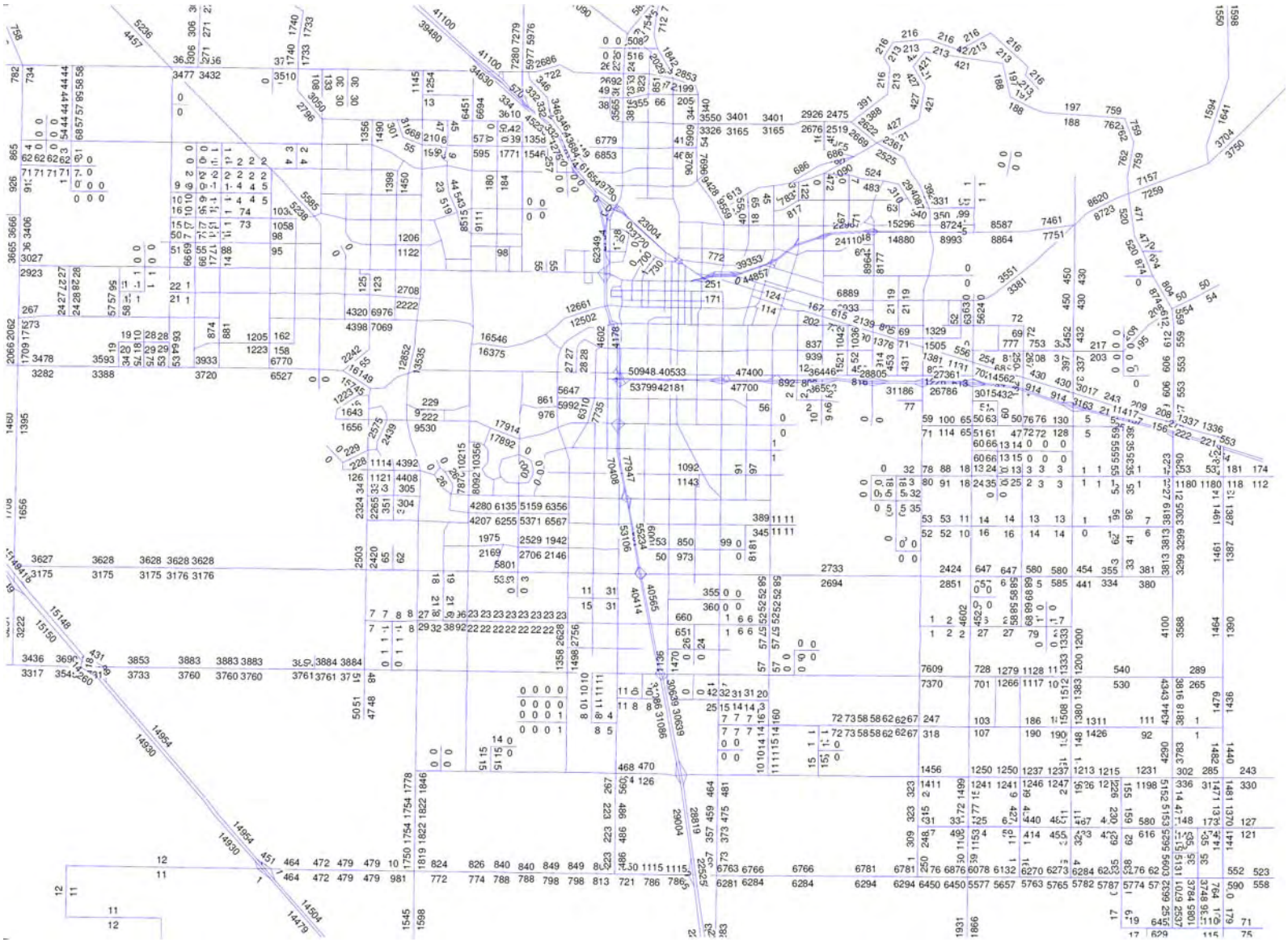


Figure 9-15. 2006 Daily Traffic Volumes Plot—Metro

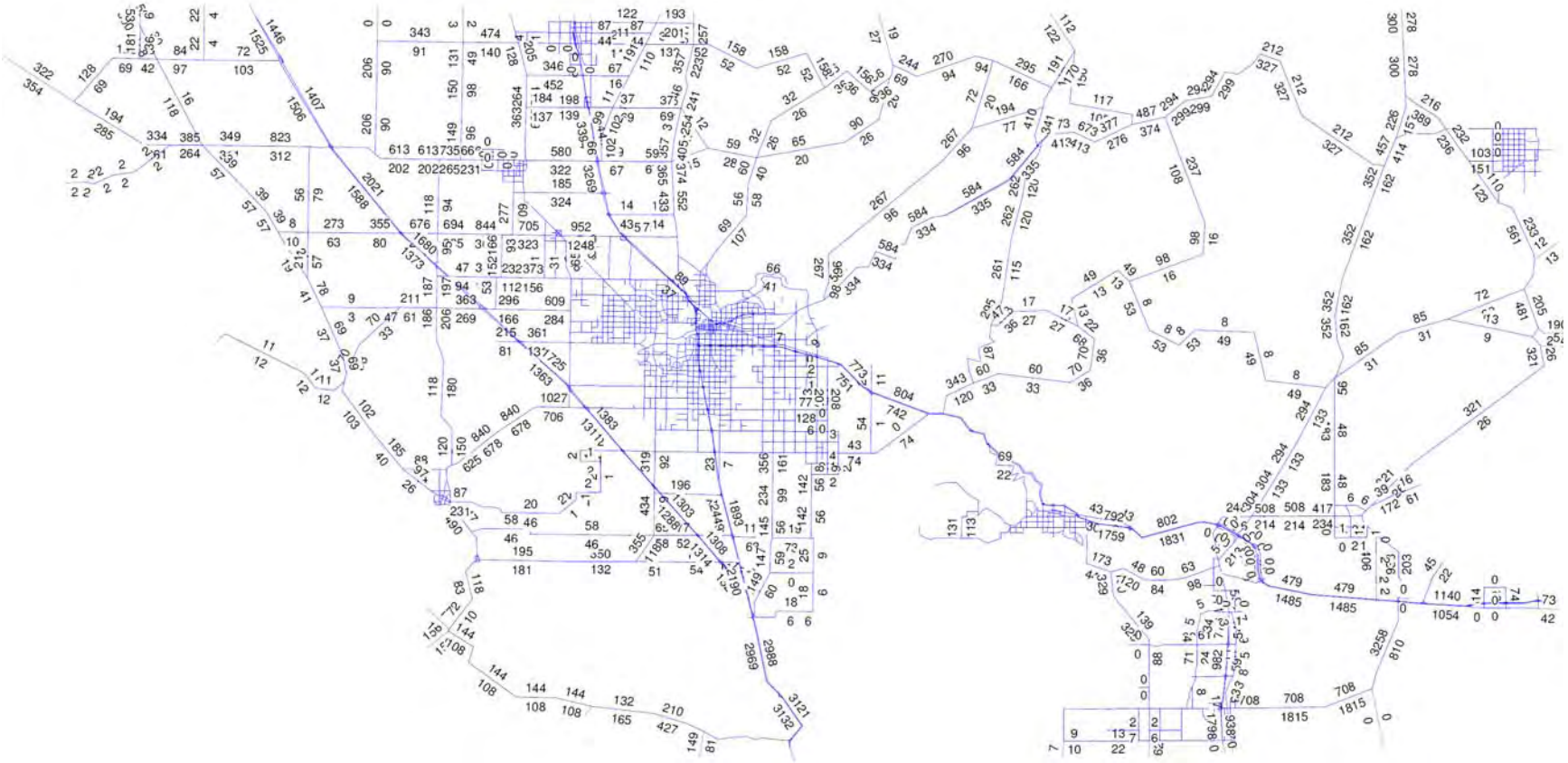


Figure 9-16. 2006 AM Peak Traffic Volumes Plot—County

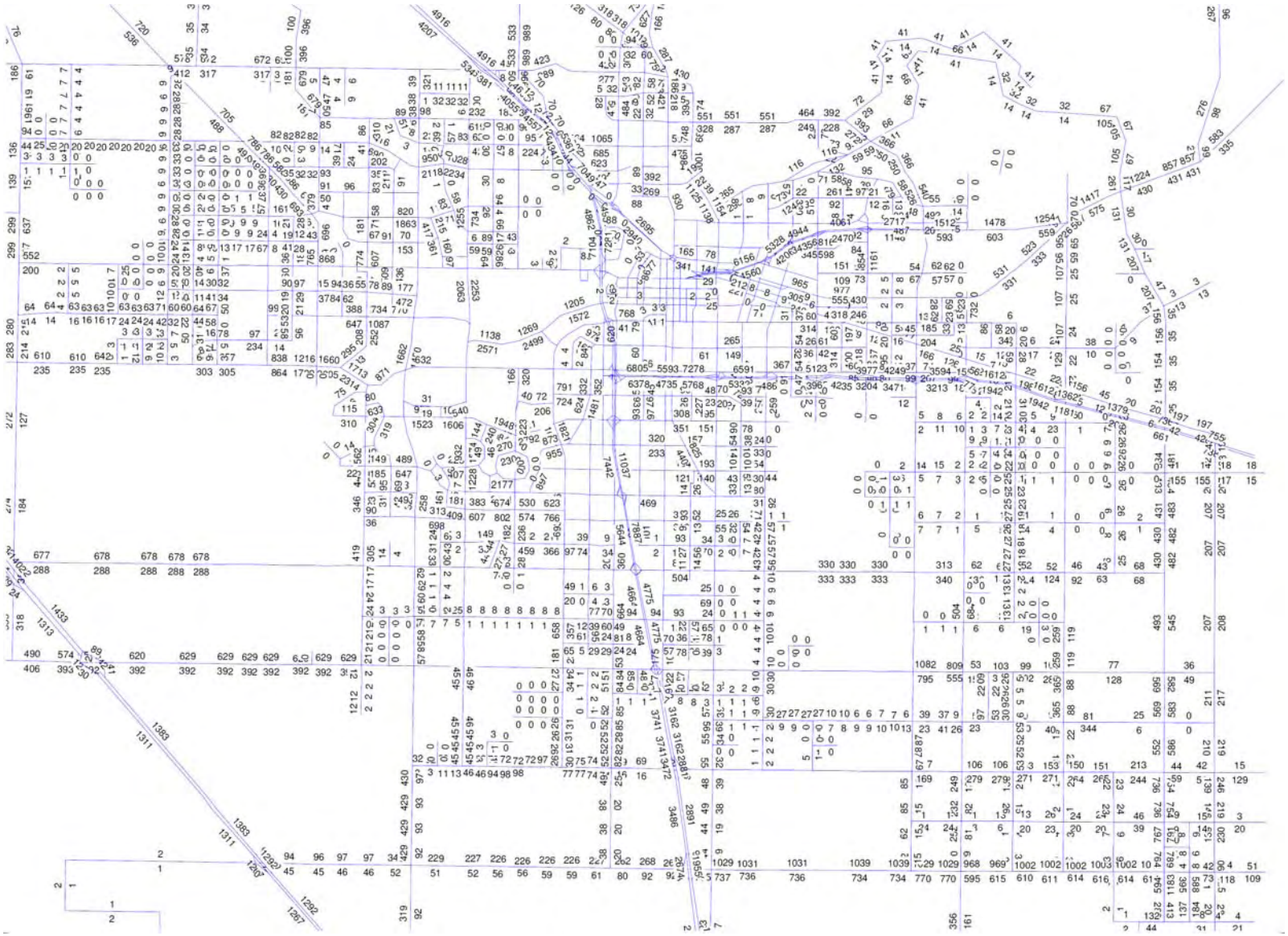


Figure 9-17. 2006 AM Peak Traffic Volumes Plot—Metro

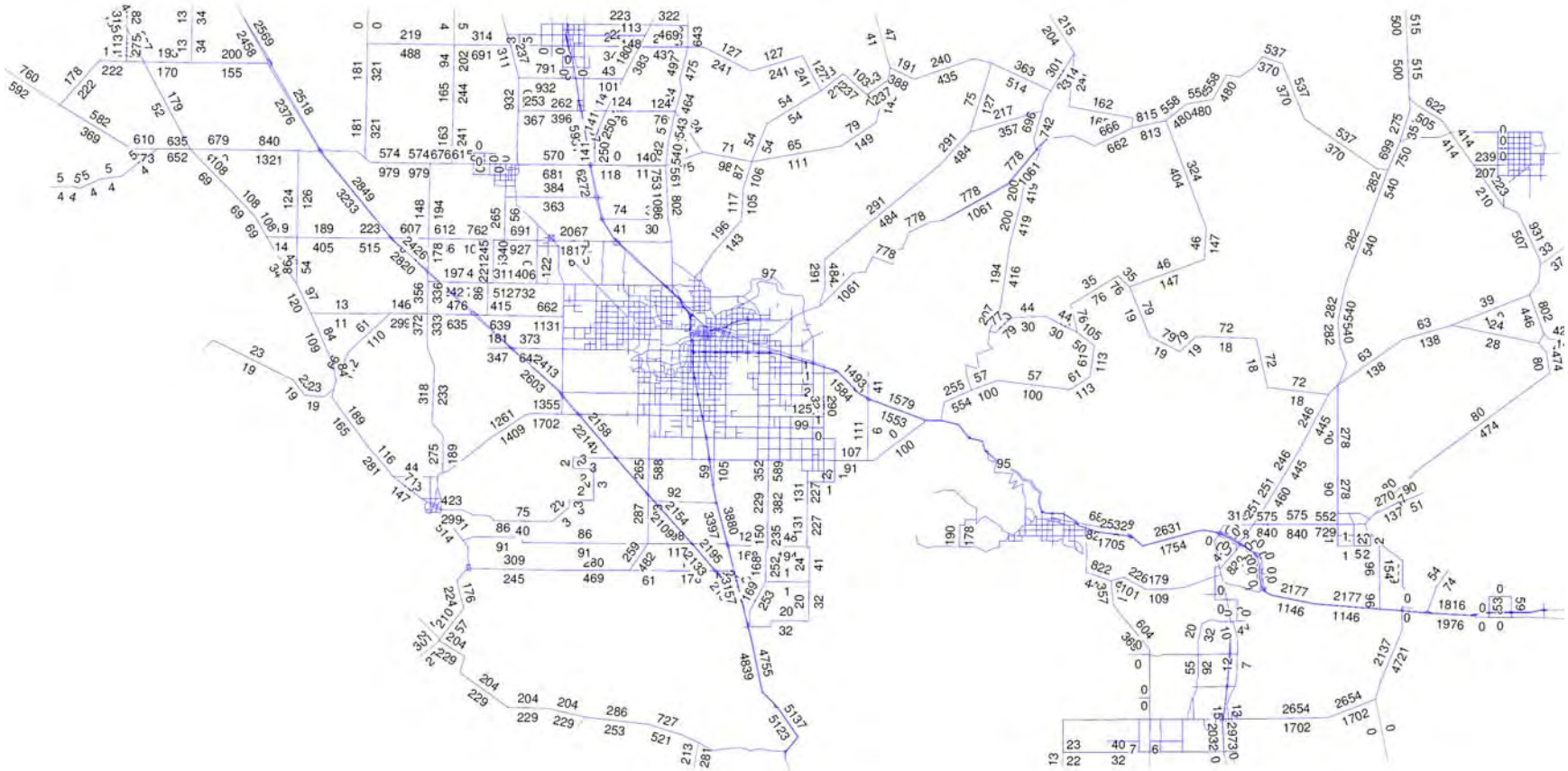


Figure 9-18. 2006 PM Peak Traffic Volumes Plot—County

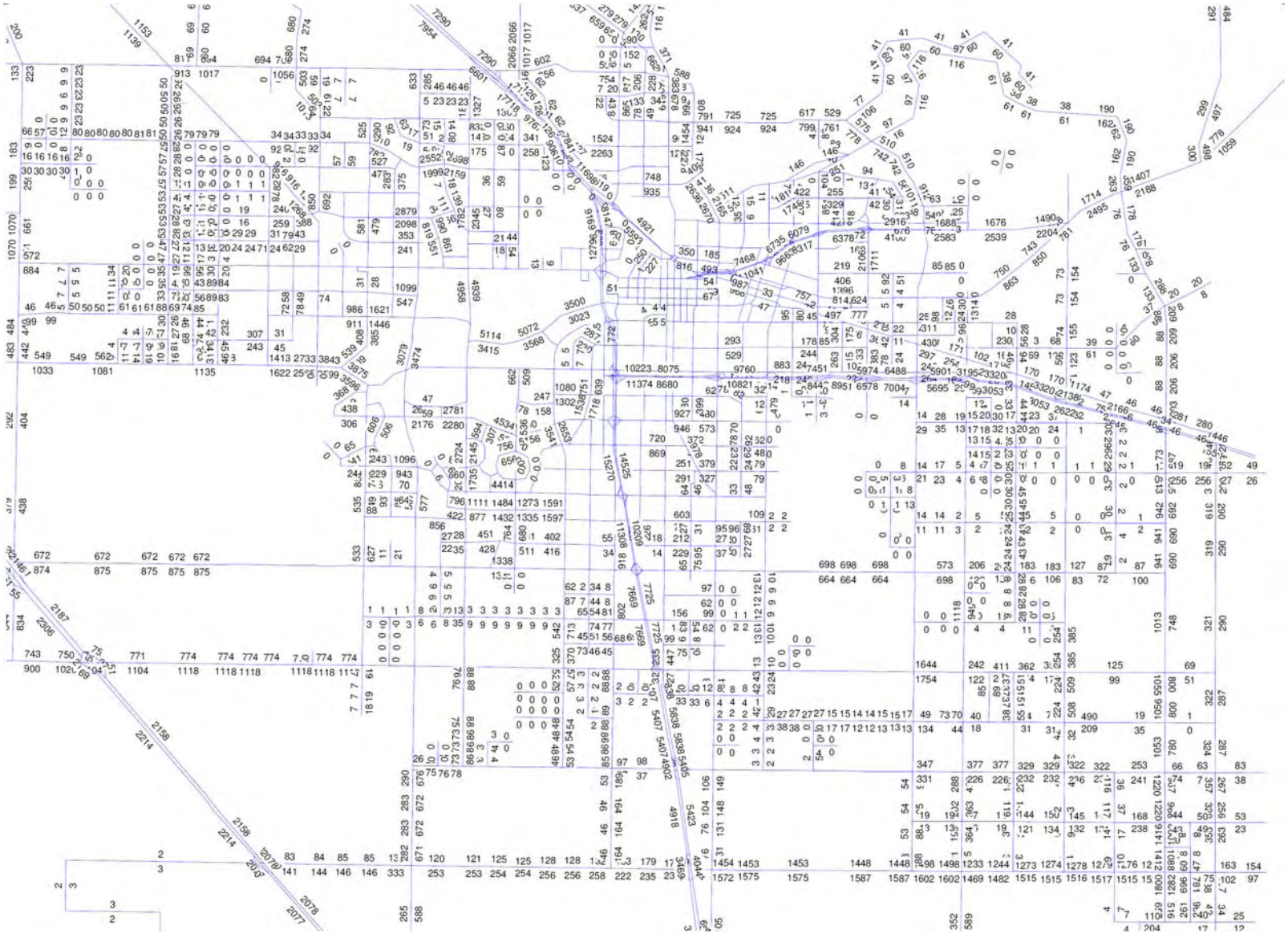


Figure 9-19. 2006 PM Peak Traffic Volumes Plot—Metro

Figure 9-20. 2006 Daily Traffic Volumes Bandwidth Plot—Metro

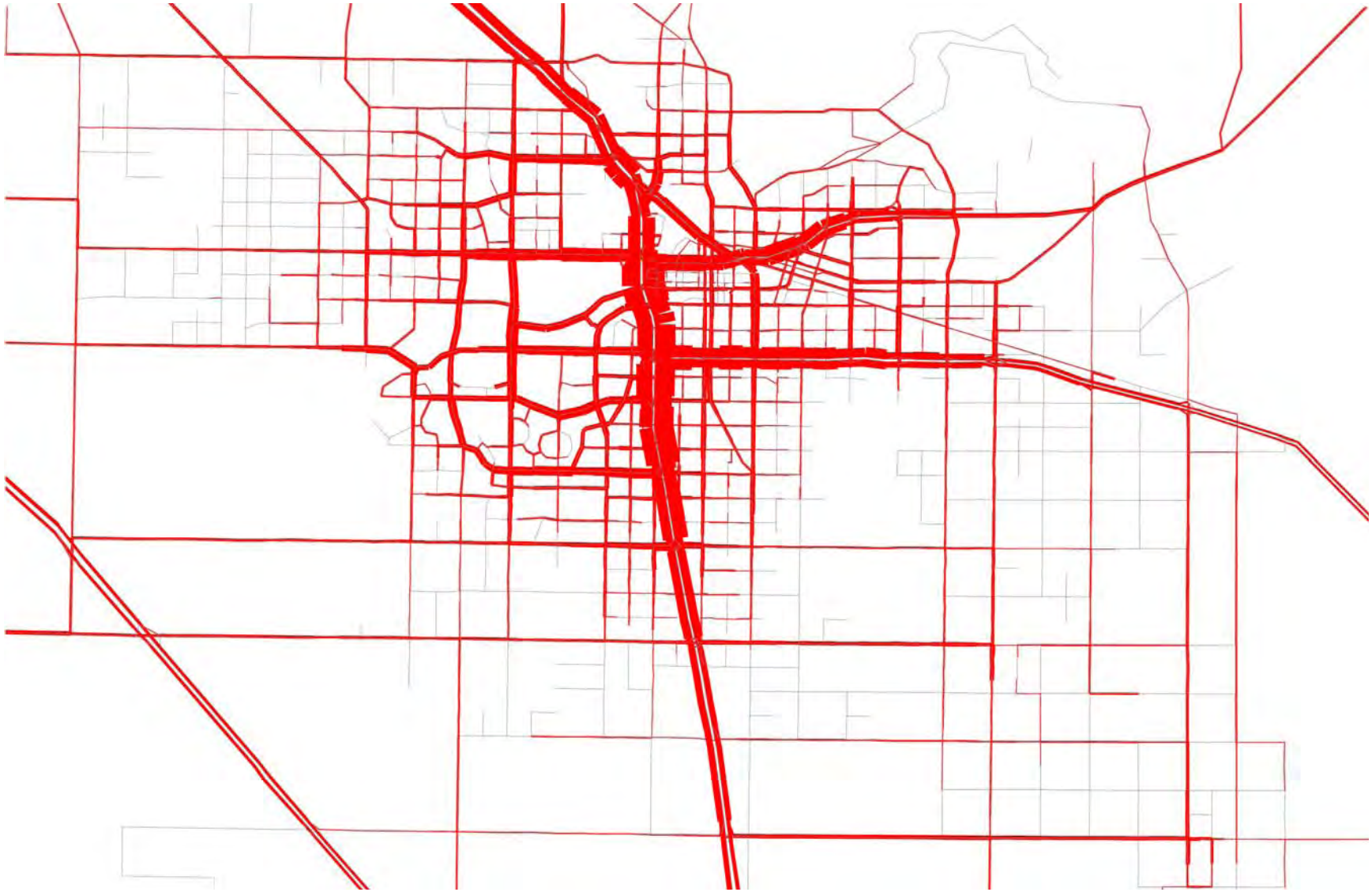


Figure 9-21. 2006 AM Peak Traffic Volumes Bandwidth Plot—Metro

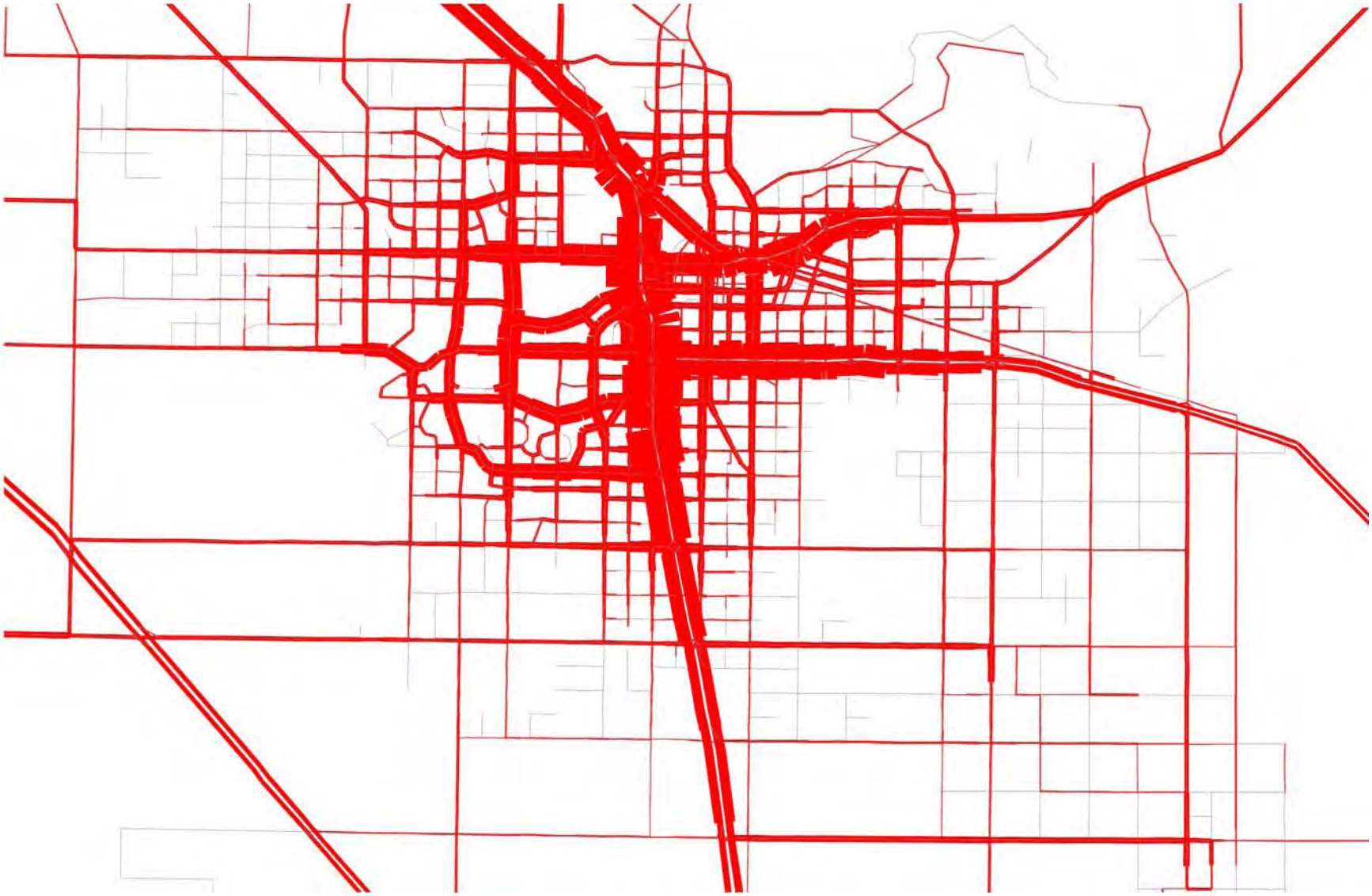


Figure 9-22. 2006 PM Peak Traffic Volumes Bandwidth Plot—Metro

10. FORECASTS

The traffic forecasts for 2020 and 2035 are shown in this section.

The 2020 socioeconomic data for households, household population and employment are shown in Figures 10-1 through 10-3, respectively. The daily level of service plot for metropolitan Bakersfield is shown in Figure 10-4. The daily, AM peak and PM peak traffic assignment results are shown in Figures 10-5 through 10-7, respectively.

The 2035 socioeconomic data for households, household population and employment are shown in Figures 10-8 through 10-10, respectively. The daily level of service plot for metropolitan Bakersfield is shown in Figure 10-11. The daily, AM peak and PM peak traffic assignment results are shown in Figures 10-12 through 10-14, respectively.

The 2020 and 2035 mode choice summaries by mode are shown in Table 10-1. Figure 10-2 presents AM peak hour, PM peak hour, and daily vehicle miles traveled, vehicle hours traveled and average speeds forecasted for the years 2020 and 2035.

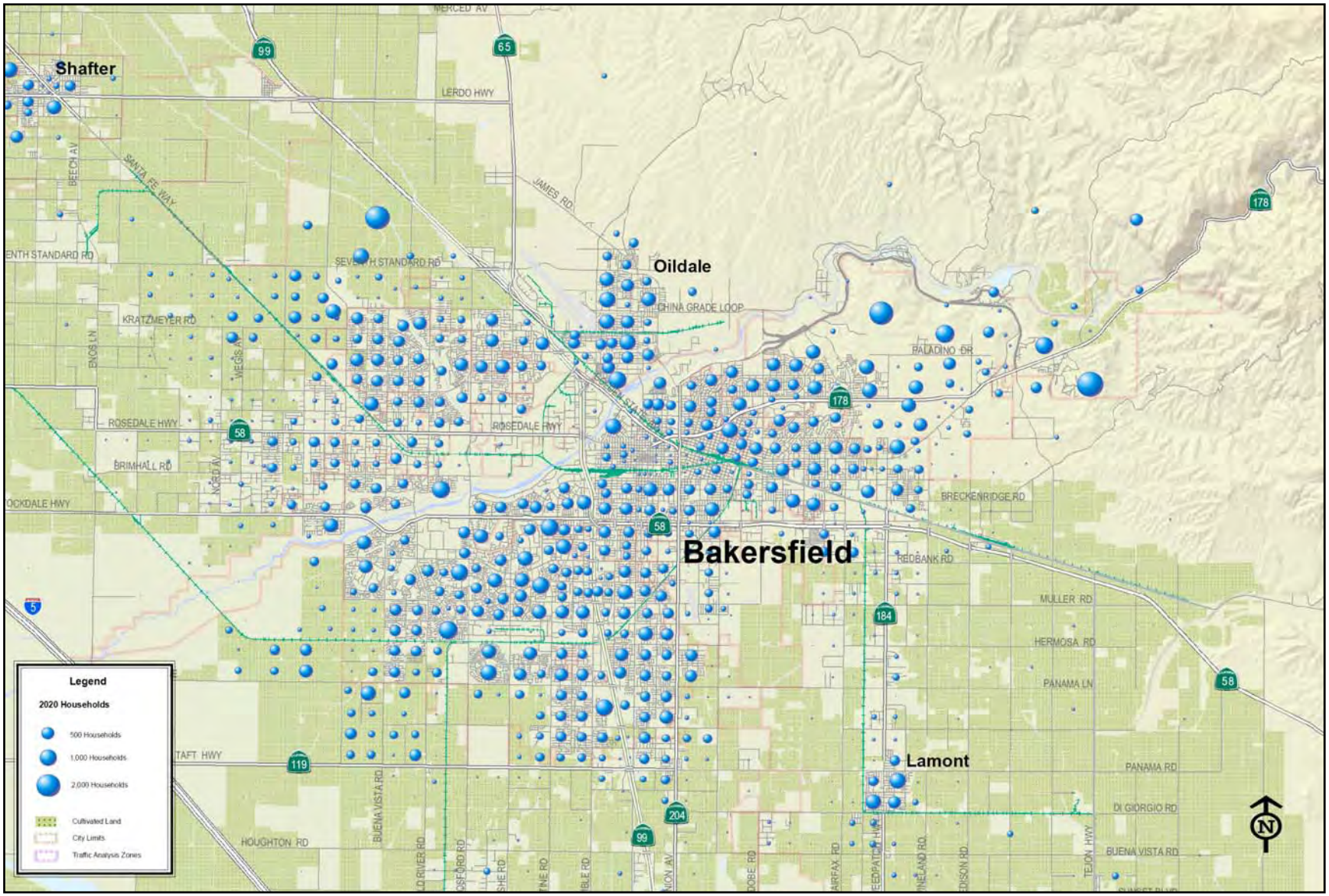


Figure 10-1. Bakersfield 2020 Households

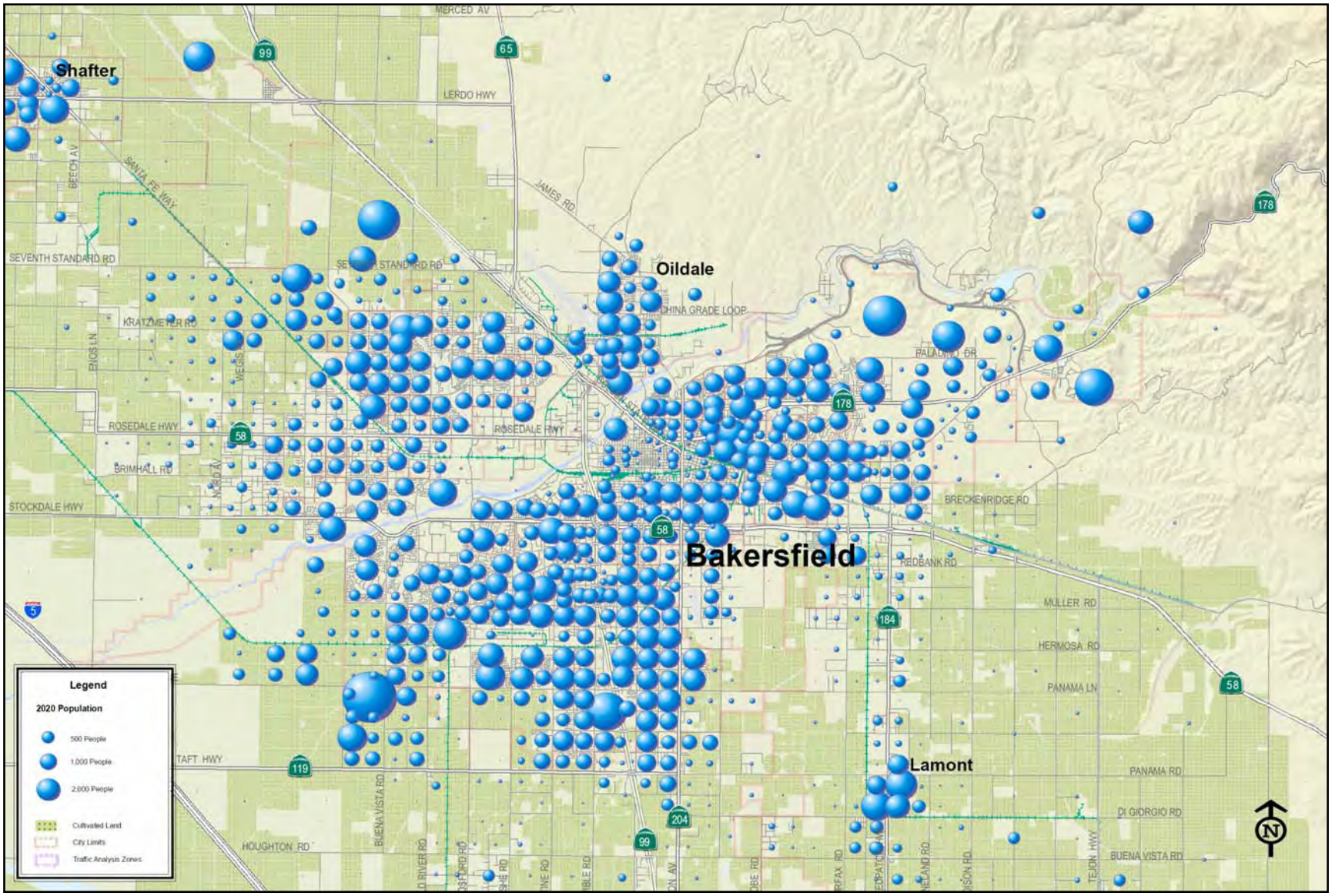


Figure 10-2. Bakersfield 2020 Household Population

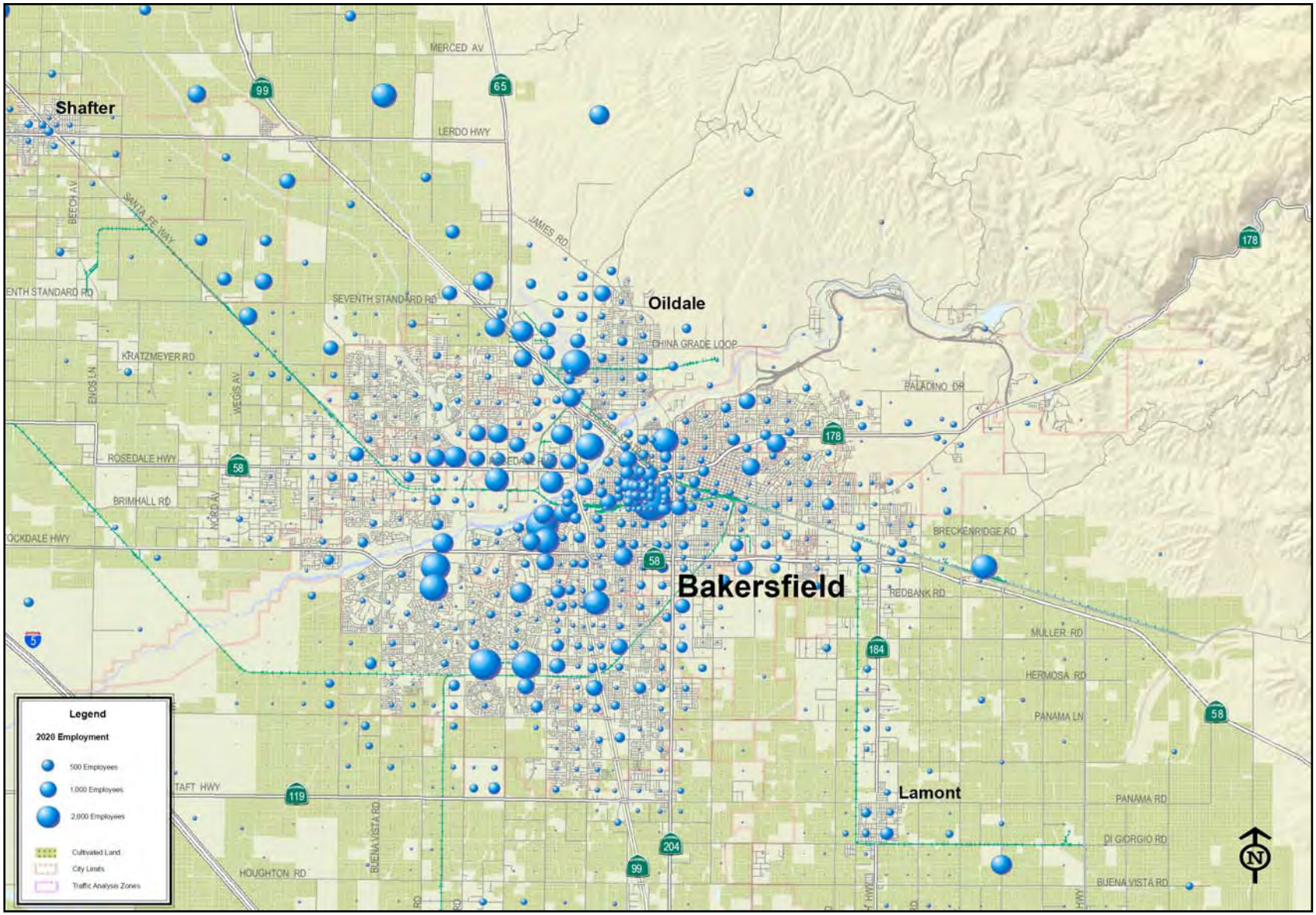


Figure 10-3. Bakersfield 2020 Employment

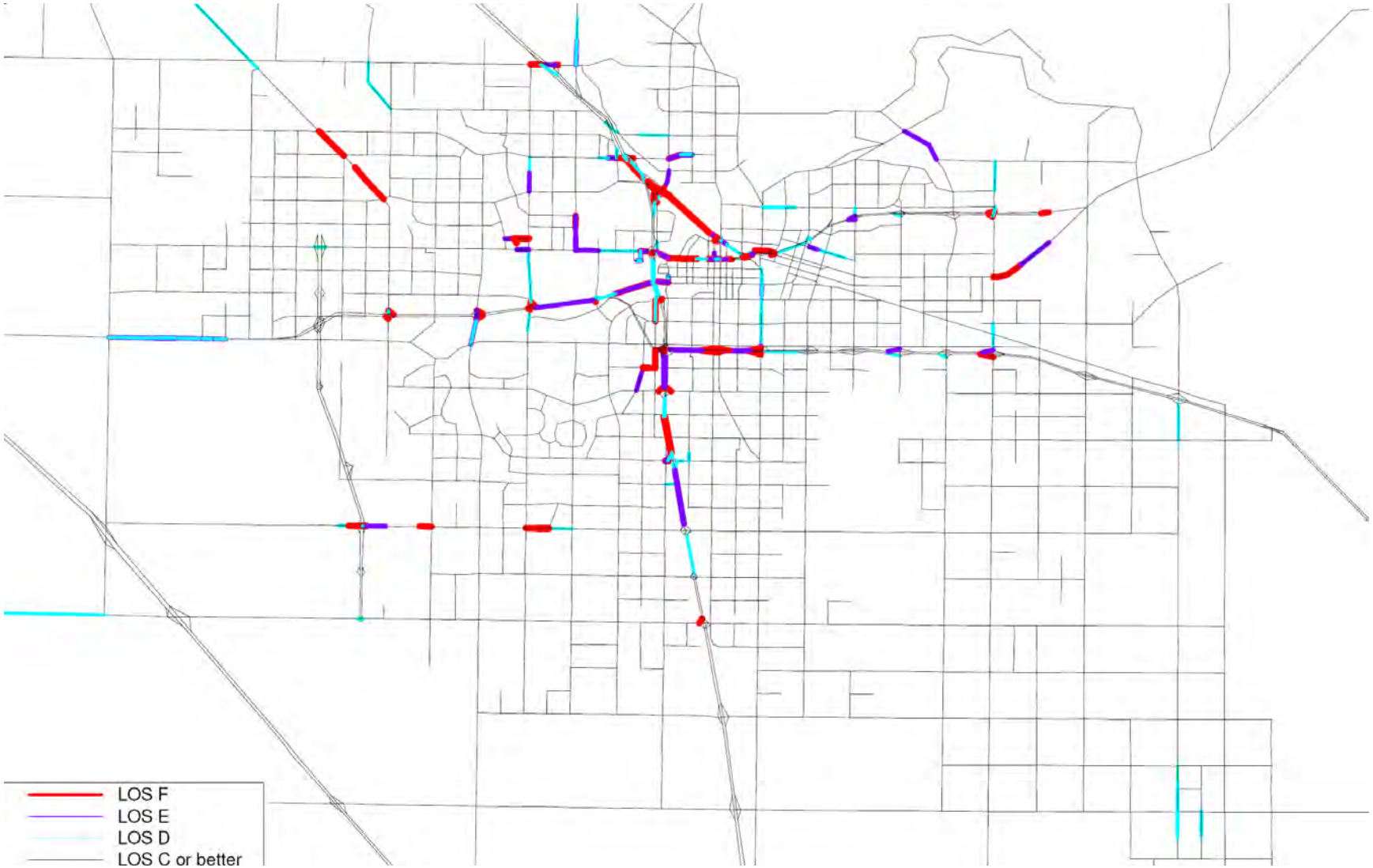


Figure 10-4. 2020 Daily LOS Plot—Metro

Figure 10-5. 2020 Daily Traffic Volumes Bandwidth Plot—Metro

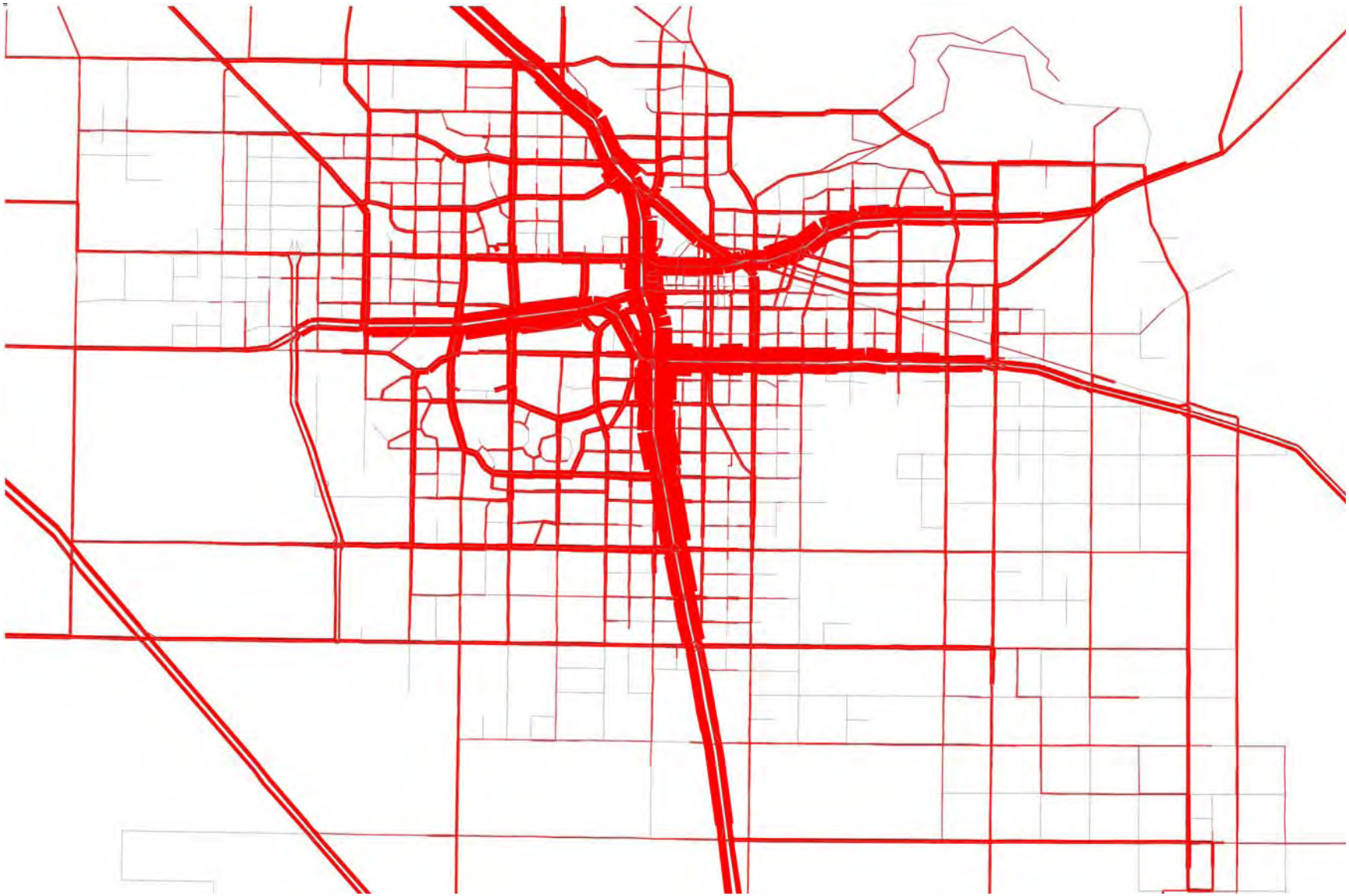


Figure 10-6. 2020 AM Peak Traffic Volumes Bandwidth Plot—Metro

Figure 10-7. 2020 PM Peak Traffic Volumes Bandwidth Plot—Metro

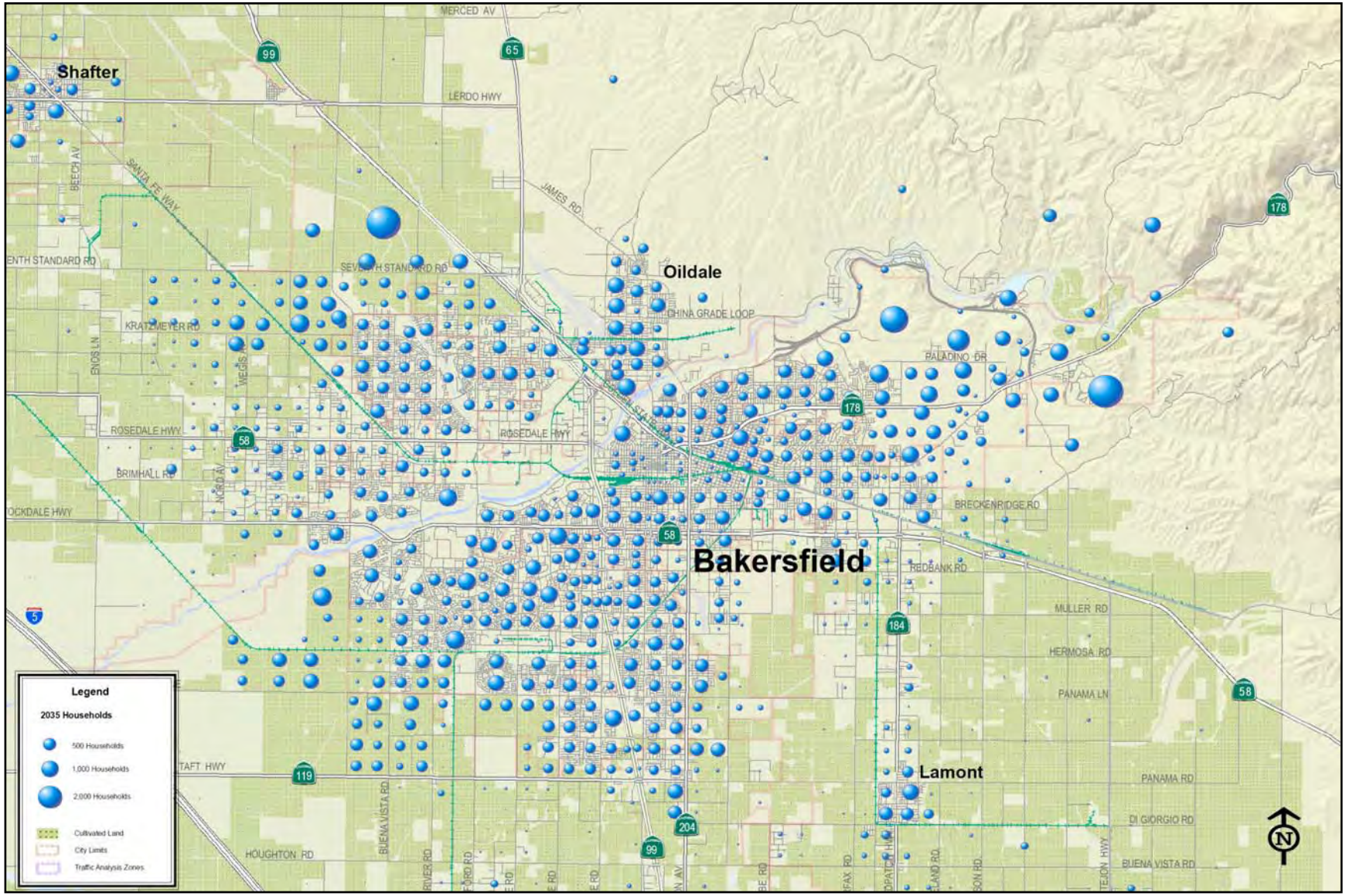


Figure 10-8. Bakersfield 2035 Households

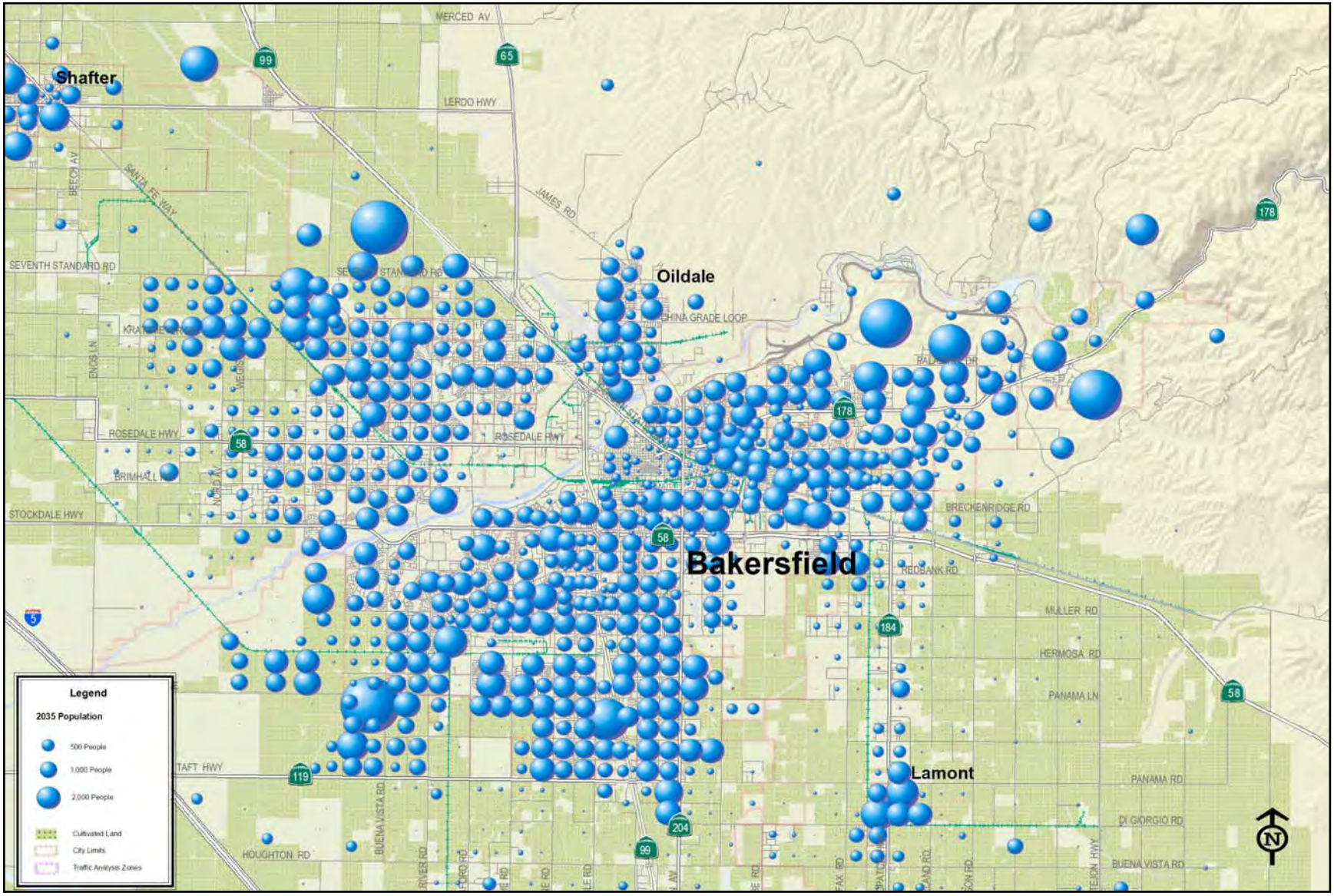


Figure 10-9. Bakersfield 2035 Population

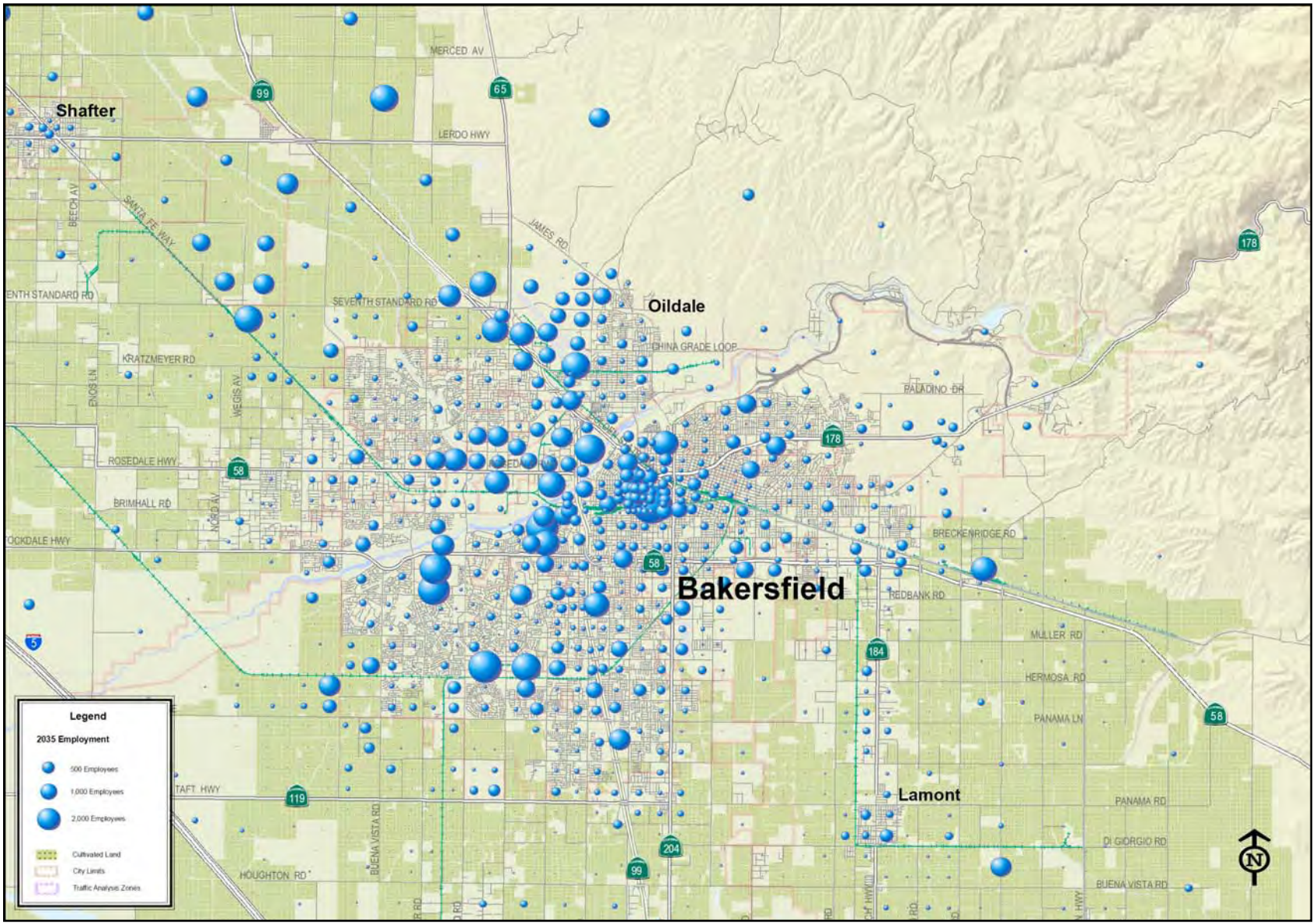


Figure 10-10. Bakersfield 2035 Employment

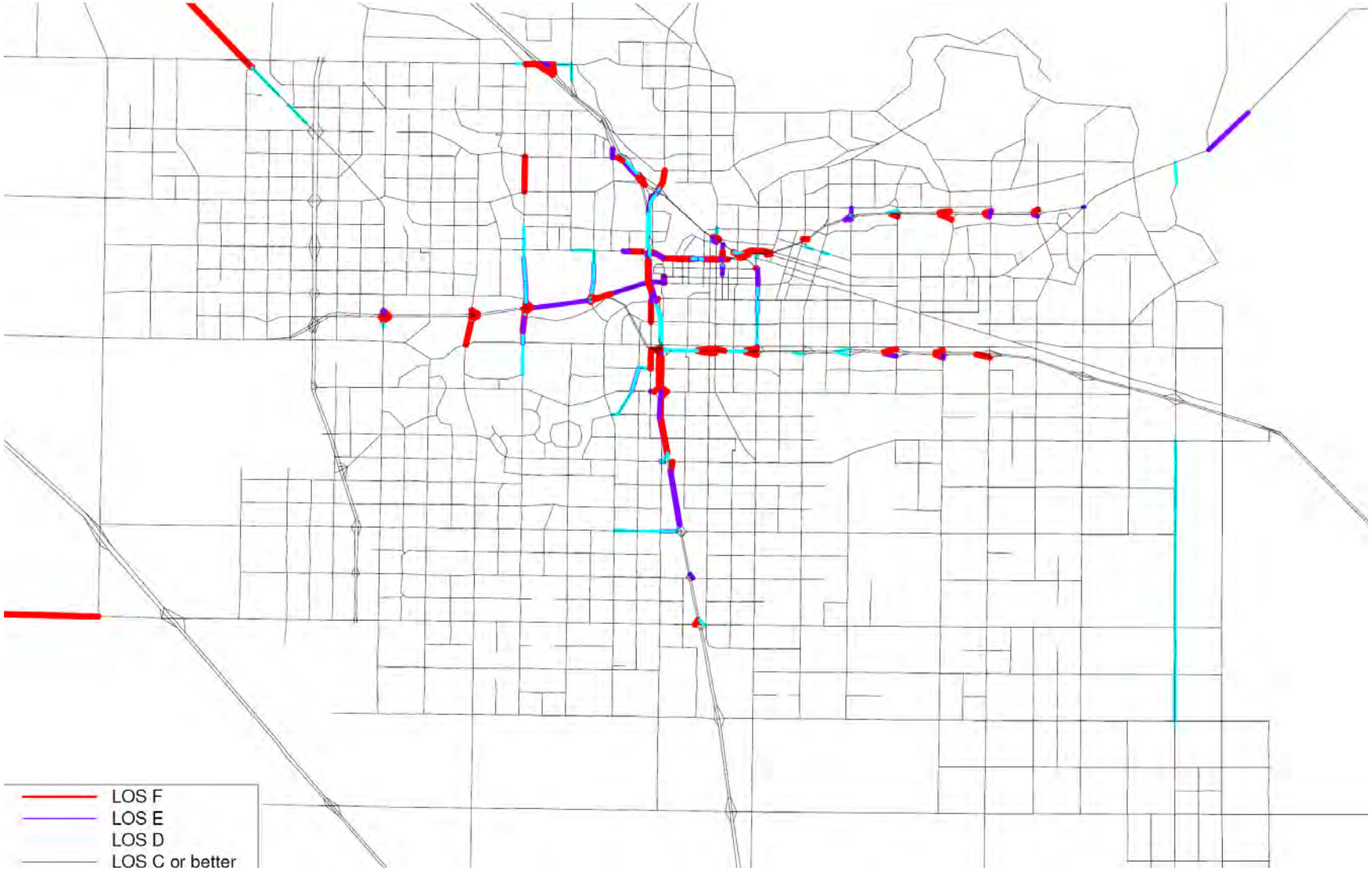


Figure 10-11. 2035 Daily LOS Plot—Metro

Figure 10-12. 2035 Daily Traffic Volumes Bandwidth Plot—Metro

Figure 10-13. 2035 AM Peak Traffic Volumes Bandwidth Plot—Metro

Figure 10-14. 2035 PM Peak Traffic Volumes Bandwidth Plot—Metro

Table 10-1: Year 2020 and 2035 Mode Choice Summaries

Purpose	2020					2035				
	Drive Alone	Shared Ride	Total Auto	Total Transit	Total	Drive Alone	Shared Ride	Total Auto	Total Transit	Total
Home-Based Work	4,200,516	758,502	4,959,018	69,334	5,028,352	5,285,677	967,056	6,252,733	70,855	6,323,588
Home-based School			1,521,110	85,252	1,606,362			2,019,194	85,021	2,104,215
Home-based University	144,542	216,718	361,260	13,934	375,194	182,371	276,270	458,641	14,277	472,918
Home-based Shop			4,072,317	6,568	4,078,885			5,049,197	6,867	5,056,064
Home-based Other			14,236,301	8,945	14,245,246			17,739,849	8,906	17,748,755
Non-home-based work-other			3,649,982	2,579	3,652,561			4,540,339	2,556	4,542,895
Non-home-based other-other			9,745,569	8,404	9,753,973			12,085,218	8,824	12,094,042
Total			**38,545,557**	**195,016**	**38,740,573**	**5,468,048**	**1,243,326**	**48,145,171**	**197,306**	**48,342,477**

Percent Shares

Purpose	2020					2035				
	Drive Alone	Shared Ride	Total Auto	Total Transit	Total	Drive Alone	Shared Ride	Total Auto	Total Transit	Total
Home-Based Work	83.5%	15.1%	98.6%	1.4%	100.0%	83.6%	15.3%	98.9%	1.1%	100.0%
Home-based School			94.7%	5.3%	100.0%			96.0%	4.0%	100.0%
Home-based University	38.5%	57.8%	96.3%	3.7%	100.0%	38.6%	58.4%	97.0%	3.0%	100.0%
Home-based Shop			99.8%	0.2%	100.0%			99.0%	0.1%	100.0%
Home-based Other			99.9%	0.1%	100.0%			99.9%	0.1%	100.0%
Non-home-based work-other			99.9%	0.1%	100.0%			99.9%	0.1%	100.0%
Non-home-based other-other			99.9%	0.1%	100.0%			99.9%	0.1%	100.0%
Total	**11.2%**	**2.5%**	**99.5%**	**0.5%**	**100.0%**	**11.3%**	**2.6%**	**99.6%**	**0.4%**	**100.0%**

Table 10-2: Year 2020 and 2035 VMT/VHT by Facility Type

	AM			PM			Daily		
	Vehicle Miles (VMT)	Vehicle Hours (VHT)	Average Speed	Vehicle Miles (VMT)	Vehicle Hours (VHT)	Average Speed	Vehicle Miles (VMT)	Vehicle Hours (VHT)	Average Speed
Year 2020									
Freeways	1,567,392	24,031	65.22	2,632,107	41,212	63.87	14,514,435	223,217	65.02
Expressways	91,008	1,946	46.77	155,556	3,333	46.67	765,964	16,240	47.16
Major arterials	1,423,895	41,266	34.51	2,610,293	77,173	33.82	11,396,453	326,807	34.87
Minor arterials	166,910	6,227	26.81	316,666	12,150	26.06	1,328,684	50,263	26.43
Collectors	72,473	4,535	15.98	139,479	10,108	13.80	580,675	37,669	15.42
Centroids	245,598	11,075	22.18	454,169	20,608	22.04	1,909,150	87,179	21.90
Diamond ramps	40,610	1,771	22.93	70,332	3,781	18.60	317,720	16,027	19.82
Loop ramps	3,748	185	20.23	6,127	314	19.48	28,751	1,428	20.14
Cordon	47,979	2,399	20.00	86,020	4,301	20.00	522,692	26,134	20.00
Total—All Roads	**3,659,614**	**93,435**	**39.17**	**6,470,748**	**172,979**	**37.41**	**31,364,524**	**784,963**	**39.96**
Year 2035									
Freeways	2,206,613	34,025	64.85	3,658,059	57,683	63.42	19,815,677	306,751	64.60
Expressways	117,284	2,610	44.93	195,816	4,338	45.14	962,732	21,155	45.51
Major arterials	1,945,094	55,557	35.01	3,508,881	103,167	34.01	15,383,898	436,249	35.26
Minor arterials	227,274	8,298	27.39	430,193	15,984	26.91	1,810,218	66,813	27.09
Collectors	95,012	6,596	14.40	184,235	15,549	11.85	779,078	58,287	13.37
Centroids	312,620	13,973	22.37	575,081	25,843	22.25	2,423,788	109,474	22.14
Diamond ramps	55,122	3,281	16.80	94,449	5,676	16.64	421,236	23,683	17.79
Loop ramps	4,589	239	19.23	7,564	414	18.26	35,487	1,965	18.06
Cordon	59,991	3,000	20.00	107,414	5,371	20.00	656,191	32,810	20.00
Total—All Roads	**5,023,599**	**127,579**	**39.38**	**8,761,692**	**234,025**	**37.44**	**42,288,305**	**1,057,187**	**40.00**

APPENDICES

Appendix A. 2006 Socioeconomic Data by TAZ

TAZ	TPGN DIST	HOUSEHOLDS	HHLD INCOME	HHLD POP	GRP QTRS	BASIC EMP	RHRET EMP	RMRET EMP	SCSER EMP	SOSER EMP	BWOTH EMP	ELEM SCHL	HIGH SCHL	COLLEGE	TOTAL EMP
1	1	4	62750	11	0	4	0	0	0	0	0	0	0	0	4
2	1	2	55940	10	0	3	0	0	0	0	0	0	0	0	3
3	1	0	82008	0	0	0	0	0	0	0	0	0	0	0	0
4	1	420	81095	1301	0	0	0	0	0	10	0	0	0	0	10
5	1	0	82008	0	0	0	0	0	0	0	0	0	0	0	0
6	1	42	52085	137	0	37	0	0	0	4	0	0	0	0	41
7	1	252	76340	955	0	0	0	0	0	57	0	475	0	0	57
8	1	586	35446	1612	0	7	0	0	0	1	0	0	0	0	8
9	1	820	71190	2784	6	45	55	0	107	50	43	463	0	0	300
10	1	1205	54200	3217	12	0	0	0	89	29	0	612	0	0	118
11	1	232	95905	769	0	59	0	0	3	7	13	0	0	0	82
12	1	328	98490	1143	0	41	0	0	0	2	0	0	0	0	43
13	1	430	56050	1388	0	3	0	0	2	7	0	0	0	0	12
14	1	356	53750	979	0	0	0	0	5	5	0	0	0	0	10
15	1	237	88280	827	0	12	0	0	6	0	13	0	0	0	31
16	1	535	72000	1471	0	0	0	0	0	0	2	0	0	0	2
17	1	408	52085	1229	0	68	442	446	2	133	62	0	0	0	1153
18	1	295	46300	886	0	9	104	11	7	18	20	0	0	0	169
19	1	395	39770	1059	0	15	0	3	33	10	0	0	0	0	61
20	1	782	39585	2303	0	0	0	0	32	4	0	0	0	0	36
21	1	1	47220	1	0	0	0	0	0	0	0	0	0	0	0
22	1	169	20940	373	0	129	7	4	108	13	40	772	0	0	301
23	1	0	51069	0	0	0	24	0	0	0	0	0	0	0	24
24	1	327	52085	1005	0	20	656	888	35	115	1	0	0	0	1715
25	1	684	61910	2144	0	16	0	0	93	17	1	412	0	0	127
26	1	2	77629	7	0	0	0	0	0	0	0	0	0	0	0
27	1	653	71980	2084	0	52	4	2	9	53	8	0	0	0	128
28	1	673	67375	2012	15	54	0	0	84	42	0	498	0	0	180
29	1	326	41705	1037	0	760	30	6	128	354	127	0	0	0	1405
30	1	764	77035	2170	9	29	0	0	36	43	9	0	0	0	117
31	1	9	11250	24	0	474	0	35	123	48	119	3	0	0	799
32	1	44	25075	88	0	1342	158	269	165	385	65	0	223	0	2384
33	1	0	56685	0	0	0	0	0	0	0	0	0	0	0	0
34	1	137	24570	367	0	376	4	0	653	1	56	0	0	0	1090

TAZ	TPGN DIST	HOUSEHOLDS	HHLD INCOME	HHLD POP	GRP QTRS	BASIC EMP	RHRET EMP	RMRET EMP	SCSER EMP	SOSER EMP	BWOTH EMP	ELEM SCHL	HIGH SCHL	COLLEGE	TOTAL EMP
35	1	368	56685	1647	0	762	0	0	49	74	3	0	0	0	888
36	1	19	43000	33	0	186	0	0	125	234	187	8	0	0	732
37	1	0	56685	0	0	34	6	0	1	6	7	0	0	0	54
38	1	9	85490	7	0	1128	45	51	73	216	303	0	0	0	1816
39	1	14	56685	25	0	202	99	272	150	168	133	0	0	0	1024
40	1	5	56685	6	0	367	349	47	152	305	209	0	0	0	1429
41	1	0	41917	0	0	8	0	0	0	0	0	0	0	0	8
42	1	0	35446	0	0	0	0	0	0	0	0	0	0	0	0
43	1	637	41917	1752	0	15	9	0	3	37	2	0	0	0	66
44	1	85	102455	276	0	3	0	0	0	6	0	0	0	0	9
45	1	91	95000	250	0	0	0	0	0	43	0	0	2632	0	43
46	1	495	63955	1673	19	1	0	34	76	12	0	983	0	0	123
47	1	0	58081	0	0	0	176	17	1	87	0	0	0	0	281
48	1	1	35446	3	0	385	0	0	39	90	41	0	0	0	555
49	1	58	35446	160	0	448	0	0	13	11	224	0	0	0	696
50	1	2	41917	9	0	0	0	0	82	0	0	537	0	0	82
51	1	0	85100	0	0	1	0	0	0	0	0	0	0	0	1
52	1	18	39285	44	0	22	0	0	0	3155	0	0	0	0	3177
53	1	1	52351	1	0	0	0	0	0	0	0	0	0	0	0
54	1	0	127310	0	0	25	0	0	0	0	0	0	0	0	25
55	1	165	58081	454	0	0	0	0	0	0	0	0	0	0	0
56	1	25	47000	86	0	19	18	0	0	0	0	0	0	0	37
57	1	357	62625	1056	10	0	35	0	38	16	17	0	0	0	106
58	1	1429	51465	4410	14	6	70	7	76	54	26	798	0	0	239
59	1	295	61805	848	0	3	0	0	2	0	0	0	0	0	5
60	1	94	63290	313	5	0	0	0	85	1	0	971	0	0	86
61	1	324	41665	942	0	5	2	0	70	18	0	48	0	0	95
62	1	360	78210	1254	5	6	2	2	86	11	32	578	0	0	139
63	1	540	78210	1662	0	0	0	0	0	0	0	0	0	0	0
64	1	227	78210	781	5	2	0	0	3	67	0	652	0	0	72
65	1	1031	152650	1869	0	2	0	0	0	29	5	0	0	0	36
66	1	0	33370	0	0	857	710	102	259	477	51	0	0	0	2456
67	1	492	46000	832	0	0	41	0	5	2	0	0	0	0	48
68	1	590	45595	985	0	0	17	0	0	2	0	0	0	0	19
69	1	1	46355	3	0	0	11	11	508	2142	0	0	0	8770	2672
70	1	703	46000	1951	160	47	2	0	88	114	0	572	0	0	251
71	1	257	92240	582	5	37	0	0	96	9	0	0	0	0	142

TAZ	TPGN DIST	HOUSEHOLDS	HHLD INCOME	HHLD POP	GRP QTRS	BASIC EMP	RHRET EMP	RMRET EMP	SCSER EMP	SOSER EMP	BWOTH EMP	ELEM SCHL	HIGH SCHL	COLLEGE	TOTAL EMP
72	1	557	133150	1682	0	18	0	0	115	16	0	0	0	0	149
73	1	460	63750	1301	12	6	0	0	98	17	9	577	0	0	130
74	1	514	61505	1453	21	14	4	0	0	0	1	0	0	0	19
75	1	512	54920	1218	0	3	0	0	0	4	0	0	0	0	7
76	1	832	47300	2639	0	0	0	0	2	14	6	0	0	0	22
77	1	981	54260	3321	7	6	0	0	1	33	1	631	0	0	41
78	1	0	66540	0	0	0	0	0	0	0	0	0	0	0	0
79	1	265	52351	985	0	0	1	0	0	0	0	0	0	0	1
80	1	694	55000	2068	0	480	0	137	48	183	87	0	0	0	935
81	1	7	38840	20	0	0	0	0	0	23	0	0	0	0	23
82	1	4	19165	13	0	0	0	0	6	2	0	0	0	0	8
83	1	11	30885	31	0	702	45	60	1054	548	777	0	0	0	3186
84	1	462	49425	1480	201	124	184	24	0	14	1	0	0	0	347
85	1	594	36580	1513	11	2	0	0	85	1	0	846	0	0	88
86	1	776	40945	2095	0	18	35	59	34	28	0	0	0	0	174
87	1	1078	33065	2977	0	17	0	1	18	64	0	680	0	0	100
88	1	773	42465	2544	43	4	0	0	0	5	0	0	0	0	9
89	1	904	41940	1715	22	161	129	2	708	831	0	0	391	0	1831
90	1	144	45720	215	69	0	0	34	0	4	0	0	0	0	38
91	1	570	24875	874	0	7	0	0	135	116	11	0	0	0	269
92	1	0	33370	0	0	49	246	47	547	597	8	0	0	0	1494
93	1	619	46000	1588	23	9	62	5	57	64	2	372	0	0	199
94	1	0	45365	0	0	0	0	0	215	18	0	0	0	0	233
95	1	461	56115	1298	0	1	0	0	8	47	1	0	0	0	57
96	1	0	59000	0	11	0	0	0	0	0	0	0	0	0	0
97	1	0	47272	0	0	153	10	10	834	479	92	0	0	0	1578
98	1	60	47272	101	0	833	43	5	174	3073	35	0	0	0	4163
99	1	586	38125	1143	0	58	327	82	200	649	9	705	0	0	1325
100	1	1	39740	2	6	43	123	183	802	535	10	0	0	0	1696
101	1	0	47272	0	0	0	0	0	0	394	0	0	0	0	394
102	1	0	47272	0	0	13	23	17	306	208	0	0	0	0	567
103	1	1	47272	1	0	202	99	33	224	371	143	0	0	0	1072
104	1	500	38125	1086	0	0	0	0	15	3	2	61	0	0	20
105	1	2	31390	3	19	4	345	117	36	7	0	0	0	0	509
106	1	315	33852	699	0	249	221	79	202	1968	21	0	0	0	2740
107	1	571	31415	1734	0	11	0	3	87	98	7	592	0	0	206
108	1	805	45820	2315	27	34	98	0	289	113	0	0	0	0	534

TAZ	TPGN DIST	HOUSEHOLDS	HHLD INCOME	HHLD POP	GRP QTRS	BASIC EMP	RHRET EMP	RMRET EMP	SCSER EMP	SOSER EMP	BWOTH EMP	ELEM SCHL	HIGH SCHL	COLLEGE	TOTAL EMP
109	1	1191	30455	2746	165	43	250	34	74	856	31	0	0	0	1288
110	1	553	17945	1506	0	0	0	0	36	21	2	0	0	0	59
111	1	263	33395	663	0	20	12	7	101	149	0	722	0	0	289
112	1	174	44885	434	0	0	0	0	252	114	0	0	0	0	366
113	1	420	16825	824	0	1	0	0	0	2	0	13	2432	530	3
114	1	959	24565	2091	0	8	0	4	3	63	0	0	0	0	78
115	1	266	24395	785	0	5	0	0	5	9	0	1055	0	0	19
116	1	0	38355	0	82	61	148	79	27	449	2	0	0	0	766
117	1	93	26957	253	0	0	125	96	121	82	4	0	0	0	428
118	1	44	47680	153	6	0	51	18	11	26	0	0	0	0	106
119	1	405	35940	1062	8	9	63	5	58	123	9	0	0	0	267
120	1	392	41665	1151	4	35	57	40	94	147	0	683	0	0	373
121	1	340	21250	846	15	0	129	10	16	7	18	6	2	0	180
122	1	347	24220	837	7	0	37	127	19	1	6	0	0	0	190
123	1	322	21655	937	19	4	44	17	10	29	0	77	0	0	104
124	1	369	59165	1024	0	0	28	0	102	21	0	789	0	0	151
125	1	352	32230	1020	7	5	6	0	39	1	4	0	0	0	55
126	1	370	44030	1011	0	1	0	0	35	6	7	81	0	0	49
127	1	724	31220	1930	4	11	179	84	122	234	29	768	0	0	659
128	1	753	38405	1932	0	14	71	0	37	78	3	0	0	0	203
129	1	105	41530	279	0	213	69	76	383	122	115	0	0	0	978
130	1	786	44075	2623	0	147	0	0	54	7	0	487	0	0	208
131	1	577	52455	1858	0	6	223	0	93	24	0	753	0	0	346
132	1	0	34210	0	8	0	0	0	1187	1	0	0	0	0	1188
133	1	382	36930	1551	0	0	0	0	91	19	1	724	0	0	111
134	1	557	50805	2200	0	0	29	0	33	6	12	0	0	0	80
135	1	342	67780	1158	0	38	0	0	1	17	0	0	0	0	56
136	1	437	78145	1515	6	0	7	0	0	32	0	0	0	0	39
137	1	186	39585	624	0	0	93	0	116	86	0	0	0	0	295
138	1	596	51000	2059	0	0	121	0	0	44	1	0	0	0	166
139	1	686	31655	2537	0	0	0	0	75	17	0	807	0	0	92
140	1	298	38265	1084	11	21	121	0	49	21	15	0	0	0	227
141	1	283	35780	859	0	19	46	0	6	95	0	0	0	0	166
142	1	468	23750	1104	0	0	38	4	19	13	0	0	0	0	74
143	1	64	10880	193	0	0	0	0	0	0	0	0	0	0	0
144	1	28	50155	80	0	0	944	1400	75	140	65	0	0	0	2624
145	1	363	26875	964	0	15	210	263	119	40	26	566	0	0	673

TAZ	TPGN DIST	HOUSEHOLDS	HHLD INCOME	HHLD POP	GRP QTRS	BASIC EMP	RHRET EMP	RMRET EMP	SCSER EMP	SOSER EMP	BWOTH EMP	ELEM SCHL	HIGH SCHL	COLLEGE	TOTAL EMP
146	1	597	30895	1611	14	16	0	0	4	3	0	0	0	0	23
147	1	500	31250	1298	29	0	3	0	5	1	0	0	0	0	9
148	1	280	35695	731	5	13	0	0	0	34	0	0	0	0	47
149	1	235	30190	764	0	0	39	0	5	3	7	0	0	0	54
150	1	601	37740	1784	0	0	13	0	69	0	0	661	0	0	82
151	1	865	33415	2208	6	8	31	17	144	17	0	785	0	0	217
152	1	209	32950	565	4	0	0	0	0	0	0	0	0	0	0
153	1	307	30085	934	0	0	0	0	91	2	0	742	0	0	93
154	1	594	45340	1875	0	15	720	112	141	59	102	0	0	0	1149
155	1	355	38605	1145	104	0	0	0	214	0	0	1034	0	0	214
156	1	248	20155	823	0	12	2	0	297	45	28	0	0	0	384
157	1	101	24910	423	0	0	0	0	227	2	0	0	0	0	229
158	1	481	35965	1416	8	7	76	0	17	7	41	0	0	0	148
159	1	337	16825	1208	0	8	0	28	30	0	16	74	0	0	82
160	1	528	28625	1754	7	8	14	0	0	4	0	0	0	0	26
161	1	549	31945	2015	0	0	0	0	0	5	1	0	0	0	6
162	1	451	30550	1521	24	11	0	0	73	11	0	691	2189	0	95
163	1	462	35090	1408	0	100	0	0	58	14	0	679	0	0	172
164	1	837	26650	2196	8	6	0	0	0	1	0	0	0	0	7
165	1	629	29165	2179	0	3	0	0	55	2	4	0	0	0	64
166	1	506	32330	1917	18	1	0	2	541	40	0	1011	0	0	584
167	1	433	37425	1570	6	5	23	0	14	106	101	968	0	0	249
168	1	534	27570	1914	0	0	0	0	2	0	0	0	0	0	2
169	1	349	40850	1384	0	0	0	0	93	2	1	0	0	0	96
170	1	524	45660	2385	0	0	0	0	87	16	0	805	0	0	103
171	1	626	34865	1318	0	10	0	0	85	0	0	1035	0	0	95
172	1	147	68395	441	0	4	0	0	0	0	59	0	1219	0	63
173	1	232	43375	861	0	28	0	0	4	1	0	1092	0	0	33
174	1	158	45780	474	0	112	0	0	21	5	55	0	0	0	193
175	1	201	23845	664	0	68	2	0	27	20	0	0	0	0	117
176	1	602	22375	2343	0	0	17	0	9	0	30	0	0	0	56
177	1	282	18850	614	0	4	1	0	19	25	3	0	0	0	52
178	1	175	21935	658	2	0	0	0	0	1	0	0	0	0	1
179	1	26	24285	112	0	0	0	0	501	13	0	0	0	0	514
180	1	0	30885	0	0	245	0	32	113	2	140	0	0	0	532
181	1	112	30885	308	0	168	0	0	12	47	8	0	139	0	235
182	1	1	30885	3	0	0	0	0	0	0	0	0	0	0	0

TAZ	TPGN DIST	HOUSEHOLDS	HHLD INCOME	HHLD POP	GRP QTRS	BASIC EMP	RHRET EMP	RMRET EMP	SCSER EMP	SOSER EMP	BWOTH EMP	ELEM SCHL	HIGH SCHL	COLLEGE	TOTAL EMP
183	1	8	22305	25	0	1	19	0	0	6	18	0	0	0	44
184	1	3	34585	9	0	18	0	0	0	0	0	0	0	0	18
185	1	8	41291	19	0	419	24	0	88	16	244	683	0	0	791
186	1	262	11250	990	0	0	1	0	0	0	0	0	0	0	1
187	1	5	15545	12	0	0	0	0	0	0	0	0	0	0	0
188	1	25	17441	64	0	1	0	0	8	18	56	0	0	0	83
189	1	68	41720	193	0	0	0	0	0	0	0	0	0	0	0
190	1	2	55805	6	0	0	0	0	0	0	0	0	0	0	0
191	1	101	6375	334	0	0	0	0	0	0	0	0	0	0	0
192	1	41	15810	130	0	11	0	0	0	6	0	0	0	0	17
193	1	1	70950	4	0	2	0	0	0	0	0	0	0	0	2
194	1	3	14645	9	0	9	0	0	0	0	0	0	0	0	9
195	1	4	26250	13	0	0	138	0	7	34	69	0	0	0	248
196	1	0	11145	0	0	3	0	0	0	0	0	0	0	0	3
197	1	4	2500	10	0	2	0	0	2	0	0	0	0	0	4
198	1	9	49750	34	0	1	0	0	0	0	0	0	0	0	1
199	1	0	12085	0	0	3	0	0	0	0	0	0	0	0	3
200	1	0	21205	0	0	3	0	0	0	0	0	0	0	0	3
201	1	88	31605	301	0	90	0	0	2	1	0	0	0	0	93
202	1	0	50000	0	0	3	0	0	0	0	0	0	0	0	3
203	1	9	14500	41	0	98	0	0	0	0	0	0	0	0	98
204	1	0	27190	0	0	1	0	0	0	0	0	0	0	0	1
205	1	0	30780	0	0	0	0	0	0	0	0	0	0	0	0
206	1	0	19585	0	0	0	0	0	0	0	0	0	0	0	0
207	1	9	25881	36	0	2	0	11	0	0	0	0	0	0	13
208	1	18	26155	51	0	3	18	7	61	5	0	0	0	0	94
209	1	19	23645	76	0	8	10	0	42	1336	11	0	0	0	1407
210	1	9	13940	30	21	0	12	0	17	13	0	0	0	0	42
211	1	624	18310	1635	14	77	153	36	137	84	8	0	0	0	495
212	1	649	46715	1632	0	4	94	8	165	54	3	560	0	0	328
213	1	130	28215	361	28	0	159	5	9	163	3	0	0	0	339
214	1	525	15805	1531	0	0	1	1	8	17	0	0	0	0	27
215	1	75	17190	248	4	0	0	0	217	1	99	1787	303	0	317
216	1	231	29465	669	0	0	2	0	18	30	96	0	0	0	146
217	1	353	18825	861	0	3	32	0	18	163	7	73	0	0	223
218	1	370	27750	849	0	0	104	48	183	55	0	0	0	0	390
219	1	492	39230	1138	0	8	73	9	150	58	6	300	0	0	304

TAZ	TPGN DIST	HOUSEHOLDS	HHLD INCOME	HHLD POP	GRP QTRS	BASIC EMP	RHRET EMP	RMRET EMP	SCSER EMP	SOSER EMP	BWOTH EMP	ELEM SCHL	HIGH SCHL	COLLEGE	TOTAL EMP
220	1	192	18980	476	0	2	56	1	13	24	0	0	0	0	96
221	1	730	10225	2220	2	0	14	68	110	66	3	5	0	0	261
222	1	584	15220	1931	87	11	80	0	36	43	0	42	0	0	170
223	1	1	21130	1	93	0	0	0	8	1	81	0	0	0	90
224	1	0	45290	0	0	0	0	0	0	0	0	0	0	0	0
225	1	24	17500	57	0	0	16	12	1	58	3	0	0	0	90
226	1	40	21250	96	0	0	7	12	42	6	0	0	0	0	67
227	1	10	22250	15	0	0	3	0	0	15	0	0	0	0	18
228	1	1	8905	2	0	108	28	265	72	6	42	0	0	0	521
229	1	0	17500	0	0	189	9	25	435	580	25	0	0	0	1263
230	1	292	45290	651	0	14	37	3	56	394	0	529	0	0	504
231	1	123	58750	291	19	1	53	8	8	25	26	0	0	0	121
232	1	137	62280	273	0	13	0	0	34	259	3	0	0	0	309
233	1	219	35625	379	0	0	36	0	137	122	1	0	0	0	296
234	1	62	23665	144	5	36	0	0	156	60	21	0	0	0	273
235	1	70	29905	137	46	18	24	31	68	556	21	0	0	0	718
236	1	18	9875	25	14	4	5	8	106	346	34	0	0	0	503
237	1	0	17500	0	0	35	80	13	61	82	1	0	0	0	272
238	1	0	17500	0	0	0	1	49	28	181	0	243	0	0	259
239	1	0	17500	0	0	0	67	0	365	345	3	0	0	0	780
240	1	403	17500	1322	0	9	0	0	121	10	0	836	0	0	140
241	1	32	60625	52	0	5	44	0	55	190	37	0	0	0	331
242	1	26	27780	24	0	7	48	24	113	76	262	0	0	0	530
243	1	30	15835	94	0	7	0	11	42	74	10	0	0	0	144
244	1	38	18540	59	0	45	37	0	88	110	6	0	0	0	286
245	1	9	9860	26	352	105	0	10	69	254	14	0	0	0	452
246	1	116	6250	274	69	0	48	18	18	48	0	0	0	0	132
247	1	64	28420	112	0	556	222	15	828	863	219	0	0	0	2703
248	1	3	20690	2	0	100	0	0	21	84	150	0	0	0	355
249	1	11	33750	24	0	9	143	36	321	639	13	0	0	0	1161
250	1	3	85140	5	0	15	115	38	364	199	73	0	0	0	804
251	1	7	4790	22	0	0	30	4	1161	71	6	0	0	0	1272
252	1	90	21250	192	0	24	86	8	72	133	56	0	0	0	379
253	1	26	12500	72	0	22	0	0	10	1015	15	0	0	0	1062
254	1	0	13395	0	0	0	0	0	0	0	0	0	0	0	0
255	1	1	35446	3	0	20	0	0	0	22	0	0	0	0	42
256	1	2	35446	8	0	0	0	0	0	0	0	0	0	0	0

TAZ	TPGN DIST	HOUSEHOLDS	HHLD INCOME	HHLD POP	GRP QTRS	BASIC EMP	RHRET EMP	RMRET EMP	SCSER EMP	SOSER EMP	BWOTH EMP	ELEM SCHL	HIGH SCHL	COLLEGE	TOTAL EMP
257	1	639	63750	540	0	2	0	0	9	9	11	0	0	0	31
258	1	307	35446	788	0	0	0	0	15	5	58	0	0	0	78
259	1	429	34630	1145	5	0	12	0	4	15	9	0	0	0	40
260	1	0	77240	0	0	8	0	0	0	13	0	0	0	0	21
261	1	84	41917	245	0	0	244	0	157	8	0	0	2400	0	409
262	1	744	29690	1810	0	0	69	0	78	23	2	683	0	0	172
263	1	0	36875	0	0	853	39	10	84	559	11	0	0	0	1556
264	1	949	35446	2217	0	143	80	0	98	5	14	770	0	0	340
265	1	751	29925	1879	5	3	48	1	1	14	0	0	0	0	67
266	1	222	30715	525	0	30	62	27	130	31	135	0	0	0	415
267	1	482	35855	1222	0	0	19	11	0	11	9	0	0	0	50
268	1	484	22950	1215	0	0	0	0	0	0	0	0	0	0	0
269	1	961	19590	2320	0	32	21	0	22	30	0	79	0	0	105
270	1	189	24045	502	0	146	27	0	229	17	0	1218	0	0	419
271	1	447	26720	1084	0	0	4	0	0	1	9	0	0	0	14
272	1	616	19545	1402	0	32	0	0	6	96	0	0	0	0	134
273	1	551	17475	1200	0	12	0	3	37	8	0	69	0	0	60
274	1	187	27320	444	0	1	86	25	5	2	40	0	0	0	159
275	1	133	37680	226	0	679	84	0	243	90	243	1070	0	0	1339
276	1	644	37085	1377	0	0	30	0	3	11	0	0	0	0	44
277	1	1200	17410	2592	0	2	45	0	104	9	0	0	0	0	160
278	1	80	17550	202	2	24	17	0	31	39	0	0	0	0	111
279	1	95	7500	51	40	0	0	0	122	12	244	0	0	0	378
280	1	1	16250	2	0	0	35	0	97	5	0	364	132	0	137
281	1	455	18777	1333	0	139	130	7	75	29	61	80	3	0	441
282	1	628	13820	1208	0	1	31	0	6	13	0	0	0	0	51
283	1	645	26090	1403	0	0	0	0	138	56	0	568	0	0	194
284	1	396	19690	1036	0	0	28	0	1941	704	62	0	0	0	2735
285	1	9	17405	19	229	321	0	0	30	28	56	0	0	0	435
286	1	243	75485	642	0	2	21	0	7	34	21	0	0	0	85
287	1	226	20835	633	0	188	74	0	253	14	15	0	0	0	544
288	1	65	19525	134	0	3	0	2	0	7	0	0	0	0	12
289	1	205	21430	512	0	49	15	0	78	11	18	0	0	0	171
290	1	0	19425	0	0	3	0	5	39	5	44	0	0	0	96
291	1	294	18777	749	0	27	0	0	4	250	28	0	0	0	309
292	1	75	45340	151	0	10	3	0	34	2	49	0	0	0	98
293	1	345	21770	887	0	1	4	0	31	2	10	0	965	0	48

TAZ	TPGN DIST	HOUSEHOLDS	HHLD INCOME	HHLD POP	GRP QTRS	BASIC EMP	RHRET EMP	RMRET EMP	SCSER EMP	SOSER EMP	BWOTH EMP	ELEM SCHL	HIGH SCHL	COLLEGE	TOTAL EMP
294	1	587	53335	1450	1	1	114	1	18	82	0	32	0	0	216
295	1	304	41440	738	8	6	0	0	76	13	0	827	0	0	95
296	1	114	38965	307	0	13	37	24	19	0	0	0	0	0	93
297	1	23	36945	62	5	15	8	6	82	39	71	0	0	0	221
298	1	37	8070	115	0	193	41	26	51	21	71	0	0	0	403
299	1	12	15895	38	0	125	19	0	18	15	0	0	0	0	177
300	1	63	9275	180	0	82	91	28	45	15	18	0	0	0	279
301	1	244	22290	703	196	67	15	35	18	179	43	0	0	0	357
302	1	204	14225	681	18	0	3	3	469	14	0	0	0	0	489
303	1	559	26750	1519	14	5	7	2	187	1	0	541	0	0	202
304	1	368	27565	1382	16	5	2	0	61	1	0	0	0	0	69
305	1	485	21105	1604	83	22	34	0	0	0	1	0	0	0	57
306	1	581	17075	1473	0	18	0	0	46	10	1	0	0	0	75
307	1	613	50085	1669	7	396	2	0	8	10	0	0	0	0	416
308	1	0	36630	0	6	0	0	0	912	5	0	0	0	13809	917
309	1	349	34055	1022	0	4	0	0	147	3	0	1420	0	0	154
310	1	712	37500	2089	0	7	0	0	0	7	0	0	0	0	14
311	1	743	31080	2566	0	0	273	5	230	43	5	935	0	0	556
312	1	157	18995	583	194	0	0	0	0	0	0	0	0	0	0
313	1	172	14315	613	45	14	42	0	67	193	0	63	0	0	316
314	1	256	30575	969	0	0	0	0	0	0	0	0	0	0	0
315	1	995	33750	3410	0	0	10	0	0	3	1	48	0	0	14
316	1	236	18335	869	0	9	0	0	0	0	0	0	0	0	9
317	1	120	14065	342	0	0	19	0	118	1215	0	0	0	0	1352
318	1	528	15335	1854	354	0	3	0	0	16	5	0	0	0	24
319	1	631	20875	1943	0	0	3	0	10	4	0	0	0	0	17
320	1	595	15060	2158	0	7	6	20	0	27	10	0	0	0	70
321	1	290	15955	1089	0	0	11	8	77	44	0	646	0	0	140
322	1	394	16820	1431	157	0	0	0	44	8	0	0	0	0	52
323	1	19	20690	69	0	60	12	60	27	1011	3	0	0	0	1173
324	1	164	23750	478	0	47	37	39	95	40	19	567	60	0	277
325	1	361	15670	1208	0	90	15	0	16	34	0	23	0	0	155
326	1	66	25315	218	5	100	0	0	0	11	25	0	0	0	136
327	1	124	24125	405	0	185	23	6	13	18	40	0	0	0	285
328	1	472	16965	1745	0	0	10	1	6	40	0	0	0	0	57
329	1	321	19335	1199	52	0	14	5	0	7	0	0	0	0	26
330	1	362	14645	1429	3	13	7	0	0	18	0	0	0	0	38

TAZ	TPGN DIST	HOUSEHOLDS	HHLD INCOME	HHLD POP	GRP QTRS	BASIC EMP	RHRET EMP	RMRET EMP	SCSER EMP	SOSER EMP	BWOTH EMP	ELEM SCHL	HIGH SCHL	COLLEGE	TOTAL EMP
331	1	488	21250	1990	0	24	73	0	117	38	10	922	0	0	262
332	1	766	22520	2758	171	0	8	0	37	1	1	0	0	0	47
333	1	338	20470	1405	18	0	7	0	115	0	0	927	0	0	122
334	1	16	19745	58	0	197	7	126	174	14	207	0	0	0	725
335	1	705	11250	1445	0	0	35	4	31	72	1	62	0	0	143
336	1	690	31530	1787	0	4	0	0	19	20	0	0	0	0	43
337	1	728	42370	2144	6	3	45	0	11	50	0	0	0	0	109
338	1	497	48250	1494	6	18	0	0	88	0	0	785	0	0	106
339	1	182	49565	662	22	0	200	232	11	0	4	0	0	0	447
340	1	158	13660	197	0	0	119	3	120	92	12	0	0	0	346
341	1	499	25820	1337	0	0	0	0	9	3	1	0	0	0	13
342	1	534	50390	1481	26	17	63	0	129	16	2	0	0	0	227
343	1	1	76000	2	88	0	0	0	0	0	0	0	0	0	0
344	1	99	41729	297	0	0	222	839	98	138	16	27	7	0	1313
345	1	607	26120	1546	82	0	0	1	198	53	0	81	0	0	252
346	1	258	17210	687	152	9	0	0	0	2	0	0	0	0	11
347	1	516	28070	1540	0	9	0	0	120	1	0	1117	0	0	130
348	1	497	50415	1417	0	11	0	0	6	6	0	891	2176	0	23
349	1	351	36155	919	0	5	30	0	6	53	2	77	0	0	96
350	1	638	41665	1879	0	0	55	18	32	66	23	0	0	0	194
351	1	442	36460	1144	0	35	140	42	4	52	0	0	0	0	273
352	1	485	79235	1383	0	50	0	0	73	24	0	0	0	0	147
353	1	663	95790	2198	0	1	0	0	49	12	7	0	0	0	69
354	1	741	47365	2769	7	0	30	0	22	160	0	1461	0	0	212
355	1	327	23105	1222	41	0	63	1	27	10	0	0	0	0	101
356	1	715	19955	2555	25	0	65	0	2	41	0	0	0	0	108
357	1	382	25100	1486	0	0	433	112	23	32	0	688	0	0	600
358	1	269	30065	967	56	0	0	0	0	0	0	0	0	0	0
359	1	383	21105	1399	0	32	0	0	0	0	0	0	0	0	32
360	1	563	29030	2272	0	28	15	1	11	3	0	6	2	0	58
361	1	810	27230	3086	0	30	0	4	1	28	1	0	0	0	64
362	1	150	26735	567	0	53	0	0	33	11	190	0	0	0	287
363	1	713	16290	2974	0	1	10	0	11	6	0	684	0	0	28
364	1	208	24960	515	0	14	0	0	0	0	0	0	0	0	14
365	1	1	24430	3	0	13	22	0	14	18	111	0	0	0	178
366	1	688	85490	1746	0	0	7	16	71	10	13	754	2227	0	117
367	1	193	21390	635	62	73	0	0	0	6	55	0	0	0	134

TAZ	TPGN DIST	HOUSEHOLDS	HHLD INCOME	HHLD POP	GRP QTRS	BASIC EMP	RHRET EMP	RMRET EMP	SCSER EMP	SOSER EMP	BWOTH EMP	ELEM SCHL	HIGH SCHL	COLLEGE	TOTAL EMP
368	1	553	50940	1917	0	10	6	0	4	21	6	0	0	0	47
369	1	440	48885	1709	0	2	13	0	4	2	0	0	0	0	21
370	1	69	34750	204	10	16	0	0	15	1	0	20	0	0	32
371	1	69	46965	131	9	0	0	0	19	30	0	0	0	0	49
372	1	517	29750	1742	0	3	0	0	8	0	0	0	0	0	11
373	1	224	37830	755	0	79	0	0	0	1	6	0	0	0	86
374	1	547	73655	915	12	0	0	0	116	0	0	1470	0	0	116
375	1	12	28455	33	0	0	0	0	0	0	0	0	0	0	0
376	1	920	39040	2307	0	61	0	0	32	69	0	0	0	0	162
377	1	493	34785	1604	0	5	0	0	107	37	0	830	0	0	149
378	1	42	62870	144	0	27	0	0	0	5	0	0	0	0	32
379	1	0	108230	0	0	0	0	0	0	0	0	0	0	0	0
380	1	0	41729	0	0	14	0	0	0	0	0	0	0	0	14
381	1	1	63915	5	0	0	0	0	0	0	0	0	0	0	0
382	1	2	14530	4	0	8	0	0	0	0	0	0	0	0	8
383	1	1	41291	3	0	12	0	0	0	0	10	0	0	0	22
384	3	487	125270	1152	0	2	0	0	7	12	0	0	0	0	21
385	1	2	74845	6	0	0	0	0	0	0	0	0	0	0	0
386	1	547	102265	1483	0	0	60	0	349	0	0	883	0	0	409
387	1	404	29625	977	0	1	0	0	0	6	87	0	0	0	94
388	1	386	28480	1062	0	0	0	0	0	5	0	0	0	0	5
389	1	360	75947	960	0	8	0	0	1	1	0	0	0	0	10
390	1	1045	78050	2236	0	47	0	0	262	64	11	0	0	0	384
391	1	0	50145	0	9	0	0	0	0	0	0	0	0	0	0
392	1	0	41917	0	0	0	0	0	0	0	0	0	0	0	0
393	1	0	41917	0	0	0	0	0	0	0	0	0	0	0	0
394	2	242	18250	802	0	1	8	0	18	3	52	0	0	0	82
395	1	0	17770	0	0	52	0	2	19	0	0	0	0	0	73
396	1	705	41917	1939	0	20	0	0	0	18	0	0	0	0	38
397	1	16	41917	30	0	17	0	0	0	0	0	0	0	0	17
398	1	7	31250	12	0	5	0	0	0	4	0	0	0	0	9
399	1	7	68750	27	0	1	0	0	0	0	0	0	0	0	1
400	1	3	52351	8	0	3	0	0	0	0	0	0	0	0	3
401	1	1	13750	3	0	7	0	0	0	0	0	0	0	0	7
402	1	1	52351	2	0	0	0	0	0	0	0	0	0	0	0
403	1	172	52351	600	0	0	0	0	0	1	0	0	0	0	1
404	1	108	63015	276	0	0	25	5	13	15	0	0	0	0	58

TAZ	TPGN DIST	HOUSEHOLDS	HHLD INCOME	HHLD POP	GRP QTRS	BASIC EMP	RHRET EMP	RMRET EMP	SCSER EMP	SOSER EMP	BWOTH EMP	ELEM SCHL	HIGH SCHL	COLLEGE	TOTAL EMP
405	1	0	24790	0	0	2	0	0	0	0	0	0	0	0	2
406	1	0	27465	0	0	3	0	0	0	0	0	0	0	0	3
407	1	17	13750	36	0	59	0	0	0	0	0	0	0	0	59
408	1	1	24480	4	0	2	0	0	0	0	0	0	0	0	2
409	1	0	27465	0	0	0	0	0	0	16	7	0	0	0	23
410	1	13	30885	46	0	14	0	0	0	2	0	0	0	0	16
411	1	313	63750	861	0	0	0	0	0	0	1	0	0	0	1
412	2	3	65355	6	0	184	5	0	0	0	0	67	0	0	189
413	1	296	27500	814	0	48	0	0	10	4	0	0	0	0	62
414	1	97	75947	112	0	5	0	0	0	0	0	0	0	0	5
415	1	300	36250	889	0	1	0	0	0	8	0	0	0	0	9
416	1	432	67030	1080	0	142	94	35	102	105	1	77	0	0	479
417	1	1	45100	1	0	0	0	0	0	0	6	0	0	0	6
418	1	0	45290	0	0	21	0	0	22	0	0	0	0	0	43
419	1	132	45290	358	0	27	65	2	919	60	0	0	0	0	1073
420	1	0	26875	0	35	0	1	0	213	175	0	0	0	0	389
421	1	0	17500	0	0	0	15	0	15	3	119	0	2902	0	152
422	1	0	17500	0	0	0	0	0	0	1061	0	0	0	0	1061
423	1	0	17500	0	0	0	3	0	0	0	0	0	0	0	3
424	1	55	17500	100	264	0	8	7	5	126	0	0	0	0	146
425	1	0	10470	0	0	0	5	0	3	77	34	0	0	0	119
426	1	0	17500	0	0	0	103	0	170	5372	0	0	0	0	5645
427	1	15	17500	19	0	0	0	0	5	73	13	0	0	0	91
428	1	0	21250	0	0	26	15	27	1	87	22	0	0	0	178
429	1	0	17500	0	0	0	9	0	683	178	0	784	1416	0	870
430	1	6	17500	19	0	2	38	11	0	458	2	0	0	0	511
431	2	311	8805	1140	12	0	0	0	0	0	0	0	0	0	0
432	2	357	27440	1296	0	0	17	0	251	0	0	863	0	0	268
433	2	522	26640	2025	0	0	54	0	0	54	0	0	0	0	108
434	2	550	21590	1939	19	4	0	0	0	0	2	728	0	0	6
435	2	660	9815	2796	12	7	50	154	0	21	0	0	0	0	232
436	2	620	31060	2714	0	5	0	0	0	0	0	0	0	0	5
437	2	594	29585	2872	6	23	0	0	0	21	0	0	213	1029	44
438	2	469	36010	1824	6	55	212	5	110	34	18	723	0	0	434
439	2	201	21250	627	5	4	44	0	88	694	0	845	2646	0	830
440	2	31	42760	101	0	43	0	0	64	224	0	0	0	0	331
441	2	72	18750	213	0	37	66	0	37	12	3	0	0	0	155

TAZ	TPGN DIST	HOUSEHOLDS	HHLD INCOME	HHLD POP	GRP QTRS	BASIC EMP	RHRET EMP	RMRET EMP	SCSER EMP	SOSER EMP	BWOTH EMP	ELEM SCHL	HIGH SCHL	COLLEGE	TOTAL EMP
442	2	5	25250	14	0	0	87	17	170	103	6	0	0	0	383
443	2	45	16250	165	0	0	0	0	15	386	4	0	0	0	405
444	2	573	10415	2007	0	182	0	50	190	13	0	1145	0	0	435
445	2	548	26390	1792	0	37	220	27	104	1073	51	0	0	0	1512
446	2	481	19895	1744	16	0	0	0	223	3	0	759	0	0	226
447	2	118	39560	355	136	1	9	0	596	650	9	0	0	0	1265
448	2	0	17770	0	0	21	0	0	0	0	866	0	0	0	887
449	2	242	28254	863	0	252	18	4	24	208	50	0	0	0	556
450	2	67	11540	253	0	37	62	1	2	12	21	0	0	0	135
451	2	463	15180	2231	0	91	95	0	1	16	2	0	0	0	205
452	2	2	31065	9	0	3	0	0	0	0	0	0	1161	0	3
453	2	1	31065	3	0	3	0	0	0	0	0	0	0	0	3
454	2	0	2500	0	0	3	0	0	0	0	0	0	0	0	3
455	2	0	31065	0	0	3	0	0	0	0	0	0	0	0	3
456	2	494	31065	1408	0	88	44	0	92	157	0	0	708	0	381
457	2	490	33940	2230	1089	44	0	0	0	14	0	0	0	0	58
458	2	108	26975	452	6	0	3	0	10	2	0	0	0	0	15
459	2	189	26250	891	6	54	33	0	116	17	0	684	0	0	220
460	2	755	23500	3286	0	50	5	0	8	2	0	73	0	0	65
461	2	13	18805	37	0	15	1	0	0	31	0	17	0	0	47
462	2	25	27680	89	226	164	0	0	0	0	0	0	0	0	164
463	4	57	33250	102	0	47	0	0	0	2	0	0	173	0	49
464	2	381	61250	1479	0	0	0	0	0	9	0	53	0	0	9
465	2	357	29295	1294	5	3	23	0	69	2	0	691	0	0	97
466	2	342	25080	1118	0	0	7	0	168	0	0	1043	0	0	175
467	2	255	48875	972	0	71	129	91	16	11	21	298	0	0	339
468	2	215	42815	705	0	15	0	0	176	1	0	0	1447	0	192
469	2	365	37030	1146	0	6	0	0	13	0	0	0	0	0	19
470	2	172	33990	755	0	0	0	0	0	10	0	0	0	0	10
471	2	156	27740	545	0	0	0	0	0	2	0	0	0	0	2
472	2	21	18160	72	0	0	0	0	245	17	0	652	0	0	262
473	2	78	14340	276	0	0	41	0	0	0	0	0	0	0	41
474	2	95	26875	298	0	78	0	0	0	0	13	0	0	0	91
475	2	255	22200	1088	0	94	6	6	30	47	12	0	0	0	195
476	2	3	22925	13	0	2	0	0	0	0	0	0	0	0	2
477	2	0	35536	0	0	0	0	0	0	1487	0	0	0	0	1487
478	2	1	35536	4	6389	0	0	0	31	0	0	0	0	0	31

TAZ	TPGN DIST	HOUSEHOLDS	HHLD INCOME	HHLD POP	GRP QTRS	BASIC EMP	RHRET EMP	RMRET EMP	SCSER EMP	SOSER EMP	BWOTH EMP	ELEM SCHL	HIGH SCHL	COLLEGE	TOTAL EMP
479	2	592	30547	1946	0	0	0	0	25	101	0	0	96	0	126
480	2	37	35000	144	5	56	28	0	82	146	0	0	0	0	312
481	2	289	18610	1247	0	0	0	0	0	1	0	0	0	0	1
482	2	473	25095	1757	0	0	56	0	83	6	0	1110	0	0	145
483	2	369	26140	1238	0	0	6	0	257	0	0	1732	0	0	263
484	2	38	26925	132	0	33	80	4	34	47	0	0	0	0	198
485	2	635	8750	2645	0	46	19	0	14	13	4	0	0	0	96
486	2	446	25045	1313	0	12	11	0	2	21	11	0	0	0	57
487	2	101	48900	308	0	0	0	0	43	30	2	0	0	0	75
488	2	303	30650	1059	18	33	0	0	0	30	0	0	1487	0	63
489	2	53	42405	187	111	15	0	0	0	2	0	0	0	0	17
490	2	154	26195	353	0	11	32	0	12	14	0	0	0	0	69
491	2	333	13750	1144	8	36	28	0	18	16	0	0	0	0	98
492	2	0	19835	0	0	1	0	0	0	0	50	0	0	0	51
493	2	0	28254	0	0	3	0	0	0	0	0	0	0	0	3
494	2	0	28254	0	0	3	0	0	0	0	0	0	0	0	3
495	4	725	31065	1466	0	35	0	0	127	91	0	0	0	0	253
496	5	189	47430	466	0	0	0	0	0	0	0	18	0	0	0
497	5	287	36750	721	0	0	3	0	47	1	0	0	0	0	51
498	5	85	40415	266	0	190	0	0	0	3	31	0	0	0	224
499	5	656	110330	1825	0	1	35	0	30	5	3	329	0	0	74
500	5	77	55125	157	0	6	16	6	73	215	27	0	0	0	343
501	5	114	25375	264	0	97	24	0	101	32	0	0	0	0	254
502	5	125	19205	350	30	0	0	0	0	0	30	0	0	0	30
503	5	324	19345	861	0	7	0	0	38	0	0	306	0	0	45
504	5	98	22230	252	0	0	0	0	0	0	0	0	0	0	0
505	5	310	40535	678	0	0	63	9	144	53	3	767	0	0	272
506	5	2	37890	6	0	29	0	0	526	5	0	482	1069	1172	560
507	5	82	32245	249	92	12	132	0	9	23	0	0	0	0	176
508	5	19	38750	39	0	0	0	0	9	0	0	0	0	0	9
509	5	907	10625	2223	0	0	9	4	38	6	4	180	0	0	61
510	5	539	24555	1408	0	2	0	0	0	12	19	0	0	0	33
511	5	64	27865	169	0	0	0	0	7	16	6	0	0	0	29
512	5	126	36000	243	0	41	7	3	17	37	0	0	0	0	105
513	5	142	9850	332	0	0	54	25	296	7	48	0	0	0	430
514	5	33	23420	76	0	0	0	2	8	59	0	0	0	0	69
515	5	356	11250	806	0	0	52	1	51	14	0	193	0	0	118

TAZ	TPGN DIST	HOUSEHOLDS	HHLD INCOME	HHLD POP	GRP QTRS	BASIC EMP	RHRET EMP	RMRET EMP	SCSER EMP	SOSER EMP	BWOTH EMP	ELEM SCHL	HIGH SCHL	COLLEGE	TOTAL EMP
516	5	215	19790	554	23	3	0	0	0	0	0	0	0	0	3
517	5	107	27250	252	0	21	13	0	0	3	0	707	0	0	37
518	5	168	22045	427	0	7	0	0	174	5	0	273	124	0	186
519	5	283	31875	687	0	0	0	0	0	0	0	0	0	0	0
520	4	404	36565	708	0	0	0	0	0	0	0	0	0	0	0
521	1	1334	55000	5701	0	320	3	0	109	43	15	1052	0	0	490
522	1	339	20405	1594	0	5	35	0	77	42	0	0	2581	0	159
523	1	12	24260	34	73	11	0	0	0	0	0	0	0	0	11
524	1	502	9375	2066	0	1	119	0	2	74	6	0	0	0	202
525	1	918	25920	3798	0	48	28	0	297	318	11	1750	0	0	702
526	1	21	26665	75	0	14	1	0	0	4	0	0	0	0	19
527	1	12	9820	38	0	10	0	0	8	47	0	0	0	0	65
528	1	85	19000	291	0	16	0	0	0	0	6	0	0	0	22
529	4	0	33750	0	0	1	0	0	0	0	0	0	0	0	1
530	4	89	29917	255	0	1	18	117	11	44	0	0	0	0	191
531	4	0	36875	0	0	0	0	0	0	0	0	0	0	0	0
532	4	66	49220	167	0	0	0	0	0	0	0	0	0	0	0
533	4	0	65835	0	0	14	6	0	44	16	35	0	0	0	115
534	4	357	29917	647	0	6	4	1	50	64	0	0	0	0	125
535	4	126	20835	283	0	5	83	38	162	125	4	0	0	0	417
536	4	216	21945	648	22	0	0	12	68	0	0	602	0	0	80
537	4	121	81630	337	11	0	0	0	14	10	0	0	0	0	24
538	4	7	52085	15	0	0	31	2	0	22	126	0	0	0	181
539	4	74	2500	294	0	100	0	6	0	68	0	0	0	0	174
540	4	267	46250	648	0	0	0	0	2	0	13	0	0	0	15
541	4	127	34275	189	0	0	27	0	6	11	0	0	0	0	44
542	4	82	10805	205	2	4	0	0	0	1	0	0	0	0	5
543	4	110	10695	246	0	0	27	0	25	5	2	0	0	0	59
544	4	84	31965	123	8	0	0	0	390	6	0	1209	0	0	396
545	4	88	14955	109	0	1	25	6	0	0	0	0	0	0	32
546	4	743	52815	2268	0	0	0	0	1	8	0	0	0	0	9
547	4	364	55315	1093	0	2	0	0	0	0	1	1513	0	0	3
548	4	298	46105	938	0	4	176	0	86	53	0	48	896	0	319
549	4	3	59965	7	0	1	36	0	0	0	0	0	0	0	37
550	4	1	63750	2	0	0	0	0	0	0	0	0	0	0	0
551	4	25	46321	69	0	5	0	0	4	4	13	0	0	0	26
552	4	854	23750	2140	0	1	52	0	39	83	29	0	0	0	204

TAZ	TPGN DIST	HOUSEHOLDS	HHLD INCOME	HHLD POP	GRP QTRS	BASIC EMP	RHRET EMP	RMRET EMP	SCSER EMP	SOSER EMP	BWOTH EMP	ELEM SCHL	HIGH SCHL	COLLEGE	TOTAL EMP
553	4	377	37520	841	0	0	0	0	172	2	16	53	169	0	190
554	4	1092	40180	3012	0	0	12	0	6	51	0	0	0	0	69
555	4	273	40445	438	0	4	0	0	0	1	11	0	0	0	16
556	4	1	19065	2	0	0	0	0	0	0	0	0	0	0	0
557	3	49	36250	131	0	16	0	0	0	0	0	0	0	0	16
558	4	0	9305	0	0	0	0	0	0	0	0	0	0	0	0
559	4	161	4500	527	0	0	0	0	0	0	3	0	0	0	3
560	4	1	55315	3	0	0	0	0	0	0	0	0	0	0	0
561	4	0	46321	0	0	0	0	0	0	0	0	0	0	0	0
562	4	323	41250	686	0	0	0	0	33	0	0	379	0	0	33
563	4	71	24270	202	0	16	0	0	7	0	0	39	211	0	23
564	4	1	43015	1	0	1	0	0	0	0	0	0	0	0	1
565	4	0	11250	0	0	0	0	0	0	0	12	0	0	0	12
566	4	0	22030	0	0	392	0	0	173	145	244	0	0	0	954
567	4	337	25415	856	0	9	0	0	30	3	0	0	0	0	42
568	4	0	16125	0	0	1	0	0	0	0	0	0	0	0	1
569	4	0	39297	0	0	0	0	0	0	0	0	0	0	0	0
570	4	0	39297	0	0	0	0	0	0	0	0	0	0	0	0
571	4	0	26250	0	0	1	0	0	0	0	1	0	0	0	2
572	4	74	39297	32	0	1	0	0	0	0	0	0	0	0	1
573	4	0	31250	0	0	0	0	0	0	0	0	0	0	0	0
574	4	0	39297	0	0	0	0	0	0	0	0	0	0	0	0
575	4	0	39297	0	0	0	0	0	0	0	0	0	0	0	0
576	4	412	39297	852	0	4	15	0	33	16	6	0	0	0	74
577	4	924	31025	2412	0	5	33	0	81	50	0	891	1	0	169
578	4	710	49455	1634	0	1	0	0	30	108	0	0	88	0	139
579	4	79	56055	197	0	0	43	0	3	22	13	0	0	0	81
580	4	420	54845	963	0	1	0	0	0	1	0	0	0	0	2
581	4	1	36250	2	0	1	0	0	0	0	0	0	0	0	1
582	3	0	85489	0	0	2	0	0	0	0	0	0	0	0	2
583	4	0	39297	0	0	349	15	0	0	0	0	0	0	0	364
584	4	1	85489	2	2438	8	0	0	120	0	0	0	0	0	128
585	2	224	85489	639	0	31	0	0	60	3	0	0	0	0	94
586	3	341	35880	614	0	41	7	0	43	37	14	0	0	0	142
587	3	553	41145	994	0	26	62	0	21	60	0	0	0	0	169
588	3	491	33815	819	0	28	83	0	10	174	0	20	0	0	295
589	3	610	28550	1232	0	0	194	5	268	350	32	472	1629	0	849

TAZ	TPGN DIST	HOUSEHOLDS	HHLD INCOME	HHLD POP	GRP QTRS	BASIC EMP	RHRET EMP	RMRET EMP	SCSER EMP	SOSER EMP	BWOTH EMP	ELEM SCHL	HIGH SCHL	COLLEGE	TOTAL EMP
590	3	447	16485	1305	2	0	2	10	3	13	0	0	0	0	28
591	3	617	80265	1243	0	7	0	0	6	34	0	0	0	0	47
592	3	358	48460	863	0	0	152	261	367	739	0	0	0	0	1519
593	3	674	70720	1862	90	3	9	0	66	45	0	0	0	0	123
594	3	474	72065	1185	0	0	0	0	38	5	0	465	0	0	43
595	3	233	75185	431	0	8	8	13	221	193	3	14	0	0	446
596	3	207	40000	491	0	0	0	0	0	0	0	0	0	0	0
597	3	300	39895	674	0	6	0	2	57	64	0	0	0	0	129
598	3	221	25365	481	0	0	36	14	30	170	6	0	0	0	256
599	3	0	31565	0	0	0	0	0	8	0	4	0	0	0	12
600	3	0	22625	0	0	1	0	0	269	9	19	820	0	0	298
601	3	99	22625	280	0	0	0	0	39	11	0	224	0	0	50
602	3	314	75585	664	0	3	0	0	0	22	11	0	0	0	36
603	3	95	21030	118	0	0	0	1	0	174	0	0	0	0	175
604	3	131	28440	234	0	0	139	44	30	91	4	0	0	0	308
605	3	935	25250	2438	6	5	21	0	46	10	0	539	0	0	82
606	3	1021	56900	2325	0	14	12	25	70	45	59	0	0	0	225
607	3	546	55180	1251	0	17	0	1	25	352	80	0	0	0	475
608	3	556	41700	1379	0	0	0	0	0	9	0	441	0	0	9
609	3	331	40145	861	0	0	0	0	0	7	0	0	0	0	7
610	3	509	46805	1091	0	0	0	0	0	5	0	0	0	0	5
611	3	576	35515	1309	0	18	5	0	5	9	0	0	0	0	37
612	3	268	46250	726	0	0	162	10	26	45	3	0	0	0	246
613	3	406	71445	748	6	0	0	0	14	91	0	0	0	0	105
614	3	387	32250	623	5	11	4	2	59	28	0	593	0	0	104
615	3	0	13395	0	16	0	212	178	127	206	0	0	148	0	723
616	2	18	22625	40	0	243	6	0	0	0	0	0	0	0	249
617	2	31	26565	128	0	2158	0	0	0	4	27	0	0	0	2189
618	2	146	39375	416	0	50	41	0	26	2	0	0	0	0	119
619	2	124	28125	436	14	1089	2	0	0	0	73	558	0	0	1164
620	2	70	24065	187	0	1110	4	0	21	2	26	31	0	0	1163
621	2	152	55210	429	0	769	0	0	54	0	4	247	0	0	827
622	1	311	28570	1157	0	282	2	0	28	132	148	0	0	0	592
623	2	34	28065	110	15	64	8	0	74	0	0	0	0	0	146
624	1	90	21720	264	0	750	0	0	28	2	32	0	0	0	812
625	2	109	27500	314	0	168	0	0	2	300	0	0	0	0	470
626	5	70	49585	226	0	83	0	0	19	0	0	90	0	0	102

TAZ	TPGN DIST	HOUSEHOLDS	HHLD INCOME	HHLD POP	GRP QTRS	BASIC EMP	RHRET EMP	RMRET EMP	SCSER EMP	SOSER EMP	BWOTH EMP	ELEM SCHL	HIGH SCHL	COLLEGE	TOTAL EMP
627	5	17	32500	51	33	276	0	0	0	71	0	0	0	0	347
628	2	59	73750	168	0	755	0	0	0	27	1	0	0	0	783
629	5	59	48750	255	0	77	0	0	0	0	47	12	0	0	124
630	5	27	26875	49	0	54	0	0	0	0	0	0	0	0	54
631	2	479	62085	2248	0	13	0	0	69	1	0	757	0	0	83
632	5	561	43000	539	15	13	0	0	0	82	0	0	0	0	95
633	4	1192	36250	1146	0	0	0	0	0	62	0	0	0	0	62
634	2	0	49855	0	0	3	0	0	0	0	0	0	0	0	3
635	2	373	31065	1652	0	199	34	3	43	113	0	0	0	0	392
636	1	13	49935	40	0	437	0	0	0	0	0	0	0	0	437
637	1	5	39375	10	0	3	0	0	0	0	0	0	0	0	3
638	2	406	52351	1554	0	88	0	0	106	32	0	0	0	0	226
639	3	1175	42915	1811	42	9	2	0	0	0	0	0	0	0	11
640	1	51	20955	181	0	0	0	0	2	5	0	0	0	0	7
641	5	42	26355	157	0	257	0	0	0	1	0	0	0	0	258
642	5	21	48655	69	0	201	0	0	5	0	0	0	0	0	206
643	2	32	37500	93	0	639	0	0	0	0	0	222	0	0	639
644	2	72	33440	205	0	259	0	0	0	3	0	23	0	0	262
645	2	19	27030	40	685	118	0	0	0	0	0	0	0	0	118
646	2	20	24305	52	0	65	0	0	3	0	0	0	0	0	68
647	2	12	26665	27	0	99	0	0	17	1	8	0	0	0	125
648	2	13	53750	45	0	307	0	0	0	0	5	0	0	0	312
649	2	37	19885	108	0	79	0	0	0	45	24	0	0	0	148
650	2	27	29750	73	0	177	0	0	6	0	0	0	0	0	183
651	2	137	9220	488	0	227	8	0	39	29	0	278	0	0	303
652	2	773	38750	2606	0	0	0	0	154	7	0	0	0	0	161
653	2	25	25940	88	55	32	0	0	5	0	65	0	0	0	102
654	2	14	48280	36	0	350	0	0	0	0	1250	0	0	0	1600
655	2	13	102265	46	0	106	0	0	0	0	0	0	0	0	106
656	2	70	45940	216	475	572	0	0	0	0	0	0	0	0	572
657	1	276	25210	921	0	580	0	0	3	5	0	440	0	0	588
658	1	2	37815	5	0	115	20	0	159	12	13	0	0	0	319
659	2	55	30372	218	0	880	1	0	2	6	58	0	0	0	947
660	2	23	53945	86	0	106	108	0	0	66	0	0	0	0	280
661	3	17	21250	41	0	106	0	0	0	0	0	0	0	0	106
662	1	27	38750	68	0	1515	0	0	4	1	0	0	0	0	1520
663	2	51	21040	145	0	1	0	0	24	0	0	0	0	0	25

TAZ	TPGN DIST	HOUSEHOLDS	HHLD INCOME	HHLD POP	GRP QTRS	BASIC EMP	RHRET EMP	RMRET EMP	SCSER EMP	SOSER EMP	BWOTH EMP	ELEM SCHL	HIGH SCHL	COLLEGE	TOTAL EMP
664	2	1	11590	5	0	1	0	0	0	0	0	0	0	0	1
665	1	25	31065	42	0	133	0	0	4	-2	46	0	0	0	181
666	1	47	116265	139	0	15	0	0	0	5	0	0	0	0	20
667	1	1	83380	2	0	3	0	0	0	0	4	0	0	0	7
668	1	150	160165	338	0	0	0	32	3	11	0	0	0	0	46
669	3	1	77425	2	0	7	0	0	0	0	0	0	0	0	7
670	3	19	200000	6	0	4	0	0	0	0	0	0	0	0	4
671	3	159	22368	149	0	2	0	0	0	0	0	0	0	0	2
672	3	802	24285	605	0	0	10	0	1	51	2	0	0	0	64
673	3	2133	25650	2913	0	3	28	5	175	41	81	226	0	0	333
674	3	100	27345	133	0	43	0	0	0	0	0	15	0	0	43
675	1	7	32710	24	0	27	0	0	0	0	0	0	0	0	27
676	1	8	38440	22	0	3	0	0	0	0	0	0	0	0	3
677	1	22	19105	88	0	0	0	0	0	0	0	0	0	0	0
678	1	729	23738	3382	0	135	64	0	2	25	7	0	0	0	233
679	1	900	25720	3782	0	13	86	0	96	16	3	523	0	0	214
680	1	628	25430	2409	0	3	29	7	660	18	19	1039	116	0	736
681	1	79	27565	317	0	2	0	0	0	0	0	0	0	0	2
682	1	44	22435	179	0	0	0	0	39	9	1	0	0	0	49
683	1	0	20380	0	0	3	0	0	0	0	0	0	0	0	3
684	1	4	13500	7	0	6	0	0	0	0	0	0	0	0	6
685	1	14	38750	50	0	14	0	0	0	0	0	0	0	0	14
686	1	1	35500	3	0	6	0	0	0	1	0	0	0	0	7
687	1	4	19350	11	0	119	0	0	0	1	10	0	0	0	130
688	1	5	25780	13	7	0	0	0	0	0	0	0	0	0	0
689	4	38	33395	151	0	172	0	0	0	0	0	0	0	0	172
690	1	31	36250	63	9	18	0	0	30	0	0	0	0	0	48
691	4	31	9375	121	0	436	32	0	0	9	4	0	0	0	481
692	4	33	26250	135	5	310	30	0	55	12	0	0	0	0	407
693	2	1	13750	4	0	3	0	0	0	103	0	0	0	0	106
694	4	5	21011	25	0	40	0	0	0	0	0	0	0	0	40
695	4	226	56250	501	0	0	0	0	0	0	0	0	0	0	0
696	2	0	30535	0	0	0	2	0	21	0	52	0	0	0	75
697	4	1	28254	3	0	11	25	7	28	70	12	0	0	0	153
698	4	167	61250	398	0	246	0	0	76	3	0	723	0	0	325
699	4	0	58055	0	0	0	0	0	0	1838	0	0	0	0	1838
700	4	0	58055	0	4489	6	0	0	0	0	0	0	0	0	6

TAZ	TPGN DIST	HOUSEHOLDS	HHLD INCOME	HHLD POP	GRP QTRS	BASIC EMP	RHRET EMP	RMRET EMP	SCSER EMP	SOSER EMP	BWOTH EMP	ELEM SCHL	HIGH SCHL	COLLEGE	TOTAL EMP
701	3	68	56188	114	0	1	0	0	0	841	0	0	0	0	842
702	4	438	9820	1330	0	4	0	0	16	9	0	0	0	0	29
703	4	19	45625	44	5	0	0	0	0	0	0	0	0	0	0
704	4	129	58750	277	0	0	137	0	12	11	1	0	0	0	161
705	3	580	24030	700	0	6	34	60	31	33	2	0	0	0	166
706	3	36	20575	68	0	0	0	0	9	0	0	0	0	0	9
707	3	101	10250	305	0	0	0	0	0	1	0	0	0	0	1
708	3	78	81905	147	0	2	4	7	79	28	5	0	0	0	125
709	3	307	14305	483	0	5	0	3	2	12	8	0	0	0	30
710	3	1148	18930	1906	0	7	175	67	177	29	10	809	736	812	465
711	3	1441	19285	2550	0	16	44	0	247	24	0	0	0	0	331
712	3	299	28905	369	72	15	0	0	0	0	0	0	0	0	15
713	3	35	41250	60	0	63	0	0	0	0	0	0	0	0	63
714	3	0	29165	0	9	17	2	0	23	3	0	0	0	0	45
715	3	259	36750	350	0	50	36	0	22	12	10	34	0	0	130
716	3	2	39430	6	167	0	0	0	0	0	0	0	0	0	0
717	3	77	11250	131	0	61	0	0	65	5	0	250	0	0	131
718	3	905	70250	1554	0	38	3	0	7	4	9	160	0	0	61
719	3	16	22500	23	0	37	0	0	0	0	0	0	0	0	37
720	3	147	14585	223	0	39	0	0	20	7	0	107	0	0	66
721	4	32	29585	55	0	0	0	0	0	0	0	0	0	0	0
722	3	91	26500	212	0	0	0	0	0	0	0	0	0	0	0
723	4	22	52710	57	0	6	0	0	0	0	0	0	0	0	6
724	4	13	46250	33	0	1	0	0	0	0	0	0	0	0	1
725	4	31	63750	95	0	2	0	0	0	0	0	0	0	0	2
726	4	14	55500	36	0	0	0	0	0	0	0	0	0	0	0
727	3	547	52915	1249	0	38	0	0	0	0	0	32	0	0	38
728	3	202	38750	702	0	5001	0	0	220	79	0	468	0	0	5300
729	3	138	38395	188	193	0	0	7	17	3	3	0	0	0	30
730	3	157	19430	303	0	1	0	0	0	0	0	0	0	0	1
731	3	592	33230	1247	0	0	0	0	0	24	0	0	0	0	24
732	3	11	32210	15	0	33	0	0	0	0	0	0	0	0	33
733	3	304	51700	589	0	0	3	0	33	0	6	206	0	0	42
734	3	95	35470	179	0	0	0	0	0	0	0	0	0	0	0
735	3	2	80195	6	0	0	0	0	0	0	0	0	0	0	0
736	3	15	70355	26	0	0	0	0	0	0	0	0	0	0	0
737	3	20	2500	35	0	0	0	0	0	0	0	0	0	0	0

TAZ	TPGN DIST	HOUSEHOLDS	HHLD INCOME	HHLD POP	GRP QTRS	BASIC EMP	RHRET EMP	RMRET EMP	SCSER EMP	SOSER EMP	BWOTH EMP	ELEM SCHL	HIGH SCHL	COLLEGE	TOTAL EMP
738	3	20	44915	57	0	0	0	0	0	0	0	0	0	0	0
739	3	197	54375	505	0	0	0	0	3	8	0	0	0	0	11
740	3	128	101040	212	0	56	0	0	0	0	0	0	0	0	56
741	3	59	27420	69	0	114	0	0	0	0	0	0	0	0	114
742	4	0	75045	0	0	1	0	0	0	0	0	0	0	0	1
743	3	480	39297	1150	0	24	7	0	9	53	0	0	0	0	93
744	3	8	29890	19	5	0	0	0	0	0	0	0	0	0	0
745	4	110	85490	280	0	14	0	25	1	2	13	0	0	0	55
746	4	6	67760	15	0	0	0	0	0	0	0	0	0	0	0
747	4	1958	26040	6791	0	11517	0	0	0	4000	0	1290	453	1506	15517
748	4	207	36825	319	573	0	0	0	0	0	1	0	0	0	1
749	4	297	24285	797	0	0	0	0	0	0	2	54	35	0	2
750	4	93	41785	165	0	29	0	0	0	4	0	0	0	0	33
751	4	0	42500	0	0	757	0	0	0	0	9	0	0	0	766
752	4	76	40625	185	0	7	0	0	0	0	0	0	0	0	7
753	4	293	65180	692	0	0	0	0	60	10	3	316	0	0	73
754	4	737	47965	1219	0	1	13	0	99	1	5	99	217	0	119
755	4	0	28285	0	0	194	0	0	0	0	69	0	0	0	263
756	2	26	42840	100	0	237	0	0	0	0	0	0	0	0	237
757	2	94	35535	288	0	42	1	0	4	9	37	0	0	0	93
758	3	106	37405	286	0	0	0	0	0	0	0	0	0	0	0
759	4	3	48825	4	0	0	0	0	0	0	0	0	0	0	0
760	4	40	46321	95	0	0	0	0	0	0	0	411	0	0	0
761	4	4	43440	5	0	0	0	0	0	0	0	0	0	0	0
762	4	16	46250	46	0	6	0	0	0	0	0	0	0	0	6
763	4	4	36250	11	0	2	0	0	0	0	0	0	0	0	2
764	1	17	70155	42	0	3	0	0	0	0	0	0	0	0	3
765	1	2	78055	4	0	0	0	0	0	0	0	0	0	0	0
766	3	6	100585	9	0	0	0	0	262	0	0	0	0	0	262
767	2	0	28750	0	0	3	0	0	0	0	0	0	0	0	3
768	2	2	28254	5	0	3	0	0	0	8	0	0	0	0	11
769	2	0	31065	0	0	0	0	0	0	0	0	0	0	0	0
770	4	1	28254	2	0	46	0	0	0	0	0	0	0	0	46
771	4	30	56188	60	0	0	0	0	0	0	0	0	0	0	0
772	4	1031	59585	2547	0	35	0	0	6	17	13	0	0	0	71
773	3	396	50960	684	0	23	0	0	0	0	0	0	0	0	23
774	3	6	16940	5	0	3	0	0	0	0	0	0	0	0	3

TAZ	TPGN DIST	HOUSEHOLDS	HHLD INCOME	HHLD POP	GRP QTRS	BASIC EMP	RHRET EMP	RMRET EMP	SCSER EMP	SOSER EMP	BWOTH EMP	ELEM SCHL	HIGH SCHL	COLLEGE	TOTAL EMP
775	2	106	25063	246	0	212	0	0	2	0	0	19	0	0	214
776	3	153	47500	253	0	29	14	0	30	0	0	41	0	0	73
777	4	84	35140	214	0	4	0	0	2	1	24	0	0	0	31
778	4	255	23875	629	0	13	0	0	17	0	0	0	0	0	30
779	4	5	63750	12	0	0	0	0	0	0	0	0	0	0	0
780	4	19	61250	46	0	17	0	0	0	0	0	0	0	0	17
781	4	52	48395	123	0	23	0	0	0	0	0	0	0	0	23
782	4	0	49000	0	0	3	0	0	0	0	0	0	0	0	3
783	4	25	39297	59	0	0	0	0	0	0	0	0	0	0	0
784	4	5	16250	14	0	0	0	0	0	0	0	0	0	0	0
785	3	32	39297	66	0	0	0	0	0	0	0	0	0	0	0
786	3	261	57855	294	0	25	0	0	0	0	20	9	0	0	45
787	2	156	48000	588	0	0	15	0	0	0	0	0	0	0	15
788	2	136	47500	471	0	1	30	4	0	19	3	88	0	0	57
789	2	297	25695	1075	0	0	3	0	1	3	0	0	0	0	7
790	2	490	20700	1873	3	20	0	0	2	4	0	0	0	0	26
791	3	1	21250	3	5	49	0	0	0	0	0	0	0	0	49
792	1	9	56188	38	0	11	0	0	0	0	0	0	0	0	11
793	1	0	27780	0	0	0	0	0	0	0	0	0	0	0	0
794	2	0	48160	0	0	32	9	0	10	5	20	0	0	0	76
795	1	121	25625	348	0	2267	317	235	357	505	182	0	0	0	3863
796	5	3	58081	7	0	0	0	0	0	0	0	0	0	0	0
797	4	21	43750	69	0	0	0	0	13	0	0	0	0	0	13
798	4	655	57250	1656	0	0	0	0	0	15	0	0	0	0	15
799	4	8	27440	22	0	6	0	0	0	0	0	0	0	0	6
800	2	0	56188	0	0	2	0	0	0	0	0	0	0	0	2
801	4	31	28254	96	0	0	0	0	1	0	0	0	0	0	1
802	4	25	52915	84	0	0	0	0	0	0	0	0	0	0	0
803	4	88	88515	148	0	2	0	0	0	0	0	0	0	0	2
804	4	29	31415	99	0	0	0	0	0	0	0	0	0	0	0
805	4	0	65155	0	0	0	0	0	0	0	0	0	0	0	0
806	4	1	46321	3	0	0	0	0	0	0	0	0	0	0	0
807	2	0	65835	0	0	2	0	0	0	0	609	0	0	0	611
808	4	314	28254	768	0	2	12	0	12	9	1	0	0	0	36
809	4	27	50050	82	0	23	0	0	0	1	0	0	0	0	24
810	1	0	11250	0	0	7	0	0	0	0	0	0	0	0	7
811	1	4	41917	4	0	4	0	0	0	0	0	0	0	0	4

TAZ	TPGN DIST	HOUSEHOLDS	HHLD INCOME	HHLD POP	GRP QTRS	BASIC EMP	RHRET EMP	RMRET EMP	SCSER EMP	SOSER EMP	BWOTH EMP	ELEM SCHL	HIGH SCHL	COLLEGE	TOTAL EMP
812	1	2	31250	8	0	3	0	0	0	0	0	0	0	0	3
813	5	2	8750	9	0	60	0	0	0	0	0	0	0	0	60
814	1	1	41917	5	0	3	0	0	0	0	14	0	0	0	17
815	1	0	41917	0	0	13	0	0	0	0	0	0	0	0	13
816	5	1	41917	3	0	12	0	0	164	0	0	682	0	0	176
817	1	55	41917	183	0	15	0	0	34	4	21	243	0	0	74
818	5	22	77405	66	0	29	0	0	0	1	4	0	0	0	34
819	4	8	100000	19	0	9	0	0	2	0	0	0	0	0	11
820	4	5	17000	6	0	34	0	0	0	0	0	0	0	0	34
821	4	151	46250	392	0	2	0	0	65	0	0	843	0	0	67
822	4	51	51250	151	0	0	0	0	0	0	0	0	0	0	0
823	4	3	28750	3	0	0	0	0	0	0	0	0	0	0	0
824	4	26	32345	71	0	6	3	5	72	6	0	0	0	0	92
825	4	5	35000	10	0	16	0	0	0	0	0	0	0	0	16
826	4	115	29720	274	0	4	0	0	0	0	0	0	0	0	4
827	4	17	54585	39	0	31	0	0	0	0	0	0	0	0	31
828	4	11	46250	26	0	0	0	0	0	0	0	0	0	0	0
829	4	15	56250	36	0	0	0	0	0	0	0	0	0	0	0
830	4	0	48440	0	0	0	0	0	0	0	0	0	0	0	0
831	4	0	46321	0	0	0	0	0	0	0	0	0	0	0	0
832	4	38	46321	39	0	42	0	0	0	0	18	0	0	0	60
833	4	25	8750	60	3	0	36	18	0	0	0	0	0	0	18
834	4	114	8750	161	0	17	0	0	1	1	0	0	0	0	19
835	4	30	28970	86	0	177	0	0	0	0	0	0	0	0	177
836	4	32	34465	44	0	101	0	0	0	0	0	0	0	0	101
837	1	15	8500	66	0	54	0	0	25	1	52	274	0	0	132
838	1	12	90955	35	11	147	0	0	28	44	0	255	1	0	219
839	1	0	34165	0	0	23	0	0	0	0	0	0	0	0	23
840	3	8	30078	25	0	104	0	0	0	0	0	0	0	0	104
841	3	213	30000	585	0	0	0	0	0	3	0	0	0	0	3
842	3	124	109060	293	0	0	0	0	0	0	0	0	0	0	0
843	2	0	65875	0	0	3	0	0	0	0	0	0	0	0	3
844	2	1	28254	2	0	2471	0	0	0	0	2	0	0	0	2473
845	1	786	31065	3439	0	33	0	0	6	3	20	1013	0	0	62
846	1	10	33570	22	6	8	0	0	0	5	0	0	0	0	13
847	1	13	28750	42	0	19	0	0	64	0	0	488	0	0	83
848	4	14	26430	51	0	14	0	0	0	0	0	0	0	0	14

TAZ	TPGN DIST	HOUSEHOLDS	HHLD INCOME	HHLD POP	GRP QTRS	BASIC EMP	RHRET EMP	RMRET EMP	SCSER EMP	SOSER EMP	BWOTH EMP	ELEM SCHL	HIGH SCHL	COLLEGE	TOTAL EMP
849	4	9	71040	25	0	29	0	0	0	0	0	0	0	0	29
850	4	163	65210	228	0	10	1	0	192	21	0	411	0	0	224
851	4	4	20835	14	0	11	0	0	0	0	0	0	0	0	11
852	4	20	63750	63	0	102	0	0	0	0	5	0	0	0	107
853	1	0	51250	0	0	7	0	0	0	0	0	0	0	0	7
854	1	8	31250	21	0	4	54	0	0	4	0	0	0	0	62
855	5	43	11945	107	0	6	0	0	0	0	16	0	0	0	22
856	1	0	30625	0	0	3	0	0	0	0	0	0	0	0	3
857	1	6	18140	25	0	42	0	0	4	0	0	0	0	0	46
858	5	8	31250	25	0	12	0	0	0	0	0	0	0	0	12
859	5	5	200000	17	0	12	0	0	0	0	0	0	0	0	12
860	3	545	41917	912	0	20	0	15	5	4	25	0	0	0	69
861	1	12	21605	27	0	144	0	0	0	0	0	0	0	0	144
862	1	7	21250	14	0	3	0	0	0	0	0	0	0	0	3
863	1	8	53960	25	0	3	0	0	0	1	0	0	0	0	4
864	1	153	22085	492	0	173	0	0	4	16	29	0	0	0	222
865	5	16	41615	45	0	11	0	0	0	2	0	0	0	0	13
866	5	7	41917	31	0	6	0	0	0	0	0	0	0	0	6
867	1	21	2500	69	0	4	0	0	0	0	0	0	0	0	4
868	1	6	41917	24	0	3	0	0	0	0	0	0	0	0	3
869	1	4	52351	5	0	1	0	0	0	0	0	0	0	0	1
870	1	41	52351	121	0	6	0	0	0	0	0	0	0	0	6
871	1	14	26000	44	0	4	0	0	0	0	0	0	0	0	4
872	5	8	19660	11	0	6	0	0	0	0	0	0	0	0	6
873	5	3	41917	13	0	10	0	0	0	0	0	0	0	0	10
874	5	0	8750	0	0	13	0	0	0	0	0	0	0	0	13
875	5	0	41917	0	0	20	0	0	0	0	0	0	0	0	20
876	5	0	41917	0	0	14	0	0	0	0	0	0	0	0	14
877	5	1	41917	3	0	23	0	0	0	0	0	0	0	0	23
878	5	2	41917	3	0	70	0	0	0	22	0	0	0	0	92
879	1	3	41917	11	0	26	0	0	0	27	0	0	0	0	53
880	1	0	41917	0	0	6	0	0	0	0	0	0	0	0	6
881	5	8	41917	9	0	136	0	0	4	0	20	0	0	0	160
882	5	304	43369	825	0	61	0	0	41	3	0	0	0	0	105
883	5	12	42640	44	0	114	0	0	0	38	0	0	0	0	152
884	5	45	90955	146	0	755	0	0	0	0	1	0	0	0	756
885	5	38	43840	177	0	184	0	0	0	0	0	0	0	0	184

TAZ	TPGN DIST	HOUSEHOLDS	HHLD INCOME	HHLD POP	GRP QTRS	BASIC EMP	RHRET EMP	RMRET EMP	SCSER EMP	SOSER EMP	BWOTH EMP	ELEM SCHL	HIGH SCHL	COLLEGE	TOTAL EMP
886	5	4	65470	10	27	403	0	0	0	0	0	0	0	0	403
887	4	101	41917	104	0	264	0	0	0	0	0	0	0	0	264
888	4	46	24000	151	0	139	0	0	0	0	0	0	0	0	139
889	4	5	29875	14	0	49	0	0	0	26	0	0	0	0	75
890	4	24	26605	68	0	220	0	0	0	8	3	0	0	0	231
891	5	23	35315	83	0	315	0	0	0	0	0	0	0	0	315
892	5	0	26980	0	0	0	0	0	0	0	0	0	0	0	0
893	5	3	39890	6	0	27	0	0	0	0	0	0	0	0	27
894	4	1	39890	3	0	403	116	0	0	0	1000	0	0	0	1519
895	4	8	39890	11	0	3	0	0	0	0	0	0	0	0	3
896	4	5	44885	9	0	5	0	0	0	0	0	0	0	0	5
897	4	2	39890	8	0	0	0	0	57	0	0	0	584	0	57
898	4	319	39890	762	0	33	0	0	1	8	3	0	0	0	45
899	1	44	35535	135	0	54	0	0	0	17	0	815	0	0	71
900	3	10	21875	28	0	58	0	0	0	0	0	0	0	0	58
901	1	362	31250	682	0	5	0	0	0	2	0	0	0	0	7
902	1	71	26720	212	0	21	0	0	3	5	0	0	0	0	29
903	2	2	67750	3	0	29	29	3	102	120	195	0	0	0	478
904	1	1	25585	3	0	0	0	0	0	0	0	18	205	0	0
905	2	3	125000	11	0	0	0	0	0	0	0	0	0	0	0
906	2	0	34345	0	0	100	0	0	0	0	650	0	0	0	750
907	2	6	34345	21	0	0	0	0	0	0	109	0	0	0	109
908	2	1	26875	2	0	0	0	0	0	0	0	0	0	0	0
909	2	21	34345	61	0	118	0	0	0	118	0	0	0	0	236
910	2	10	92500	23	0	34	0	0	0	25	153	0	0	0	212
911	2	0	34345	0	0	10	0	0	0	0	0	11	0	0	10
912	2	148	18750	487	0	225	2	0	0	41	16	0	0	0	284
913	2	11	24730	31	0	1969	47	0	23	15	0	0	0	0	2054
914	2	1	22190	3	2489	132	0	0	30	745	116	0	0	0	1023
915	2	11	34345	24	0	20	0	0	0	3	0	0	0	0	23
916	2	52	23750	159	0	548	54	0	26	0	0	0	0	0	628
917	2	38	23125	85	0	138	0	0	2	25	0	0	0	0	165
918	2	8	47750	30	0	38	0	0	0	0	0	0	0	0	38
919	2	281	45355	1275	0	171	27	0	22	92	0	34	0	0	312
920	2	11	36760	27	0	45	0	0	0	0	0	0	0	0	45
921	2	28	13750	88	0	32	0	0	0	0	27	0	0	0	59
922	2	17	42280	74	0	175	0	0	0	16	0	0	0	0	191

TAZ	TPGN DIST	HOUSEHOLDS	HHLD INCOME	HHLD POP	GRP QTRS	BASIC EMP	RHRET EMP	RMRET EMP	SCSER EMP	SOSER EMP	BWOTH EMP	ELEM SCHL	HIGH SCHL	COLLEGE	TOTAL EMP
923	2	4	35535	11	0	12	0	0	0	2	16	0	0	0	30
924	2	46	31065	129	0	436	0	0	0	0	0	9	0	0	436
925	2	3	44375	9	0	528	0	0	0	0	150	0	0	0	678
926	2	26	31065	92	0	418	0	0	0	0	0	0	0	0	418
927	2	244	25000	696	0	132	128	0	44	75	7	0	0	0	386
928	2	36	32625	64	0	1245	0	0	0	0	0	0	0	0	1245
929	2	1	21250	2	3	3	0	0	0	0	0	0	0	0	3
930	2	25	31065	70	0	4	43	0	6	0	30	0	0	0	83
931	2	13	16500	53	0	45	0	0	76	0	0	0	0	0	121
932	2	1147	41785	3270	0	29	56	0	123	29	1	1027	0	0	238
933	2	65	32405	234	0	2	0	0	0	0	0	0	0	0	2
934	2	11	14500	43	0	9	0	0	0	0	0	0	0	0	9
935	2	1	35415	2	0	708	0	0	0	1500	0	0	0	0	2208
936	2	276	31065	995	405	8	2	1	5	8	0	587	205	0	24
937	2	2	15625	7	1	11	0	0	0	0	0	0	0	0	11
938	2	17	38750	48	0	6	0	0	0	0	0	0	0	0	6
939	2	14	16825	40	0	12	0	0	0	0	0	0	0	0	12
940	2	8	11250	24	4541	23	0	0	0	1	0	0	0	0	24
941	2	1	11250	3	0	1	0	0	0	0	0	0	0	0	1
942	2	0	34345	0	0	119	0	0	0	0	0	0	0	0	119
943	3	45	34345	100	0	34	0	0	0	0	0	0	0	0	34
944	3	0	17500	0	0	8	0	0	0	0	0	0	0	0	8
945	3	1	8750	5	0	11	0	0	0	0	0	0	0	0	11
946	4	0	30078	0	0	0	0	0	0	0	0	0	0	0	0
947	4	0	39297	0	0	0	0	0	0	0	0	0	0	0	0
948	4	7	39297	15	0	0	0	0	0	0	0	0	0	0	0
949	4	33	34885	90	0	0	0	0	0	0	0	0	0	0	0
950	3	26	43960	40	0	5	0	0	0	0	0	0	0	0	5
951	3	116	11250	255	0	3	0	0	1	4	0	0	0	0	8
952	4	124	66460	307	0	0	0	0	68	0	0	0	0	0	68
953	4	80	41405	282	0	0	0	0	0	1	0	0	0	0	1
954	4	211	60535	416	0	15	0	0	4	0	0	0	0	0	19
955	4	12	38750	24	0	10	0	0	0	0	0	0	0	0	10
956	5	0	6965	0	0	0	0	0	0	0	0	0	0	0	0
957	5	0	39890	0	0	0	0	0	0	0	0	0	0	0	0
958	5	0	39890	0	0	0	0	0	0	0	0	0	0	0	0
959	5	15	39890	70	0	268	0	0	0	0	39	0	0	0	307

TAZ	TPGN DIST	HOUSEHOLDS	HHLD INCOME	HHLD POP	GRP QTRS	BASIC EMP	RHRET EMP	RMRET EMP	SCSER EMP	SOSER EMP	BWOTH EMP	ELEM SCHL	HIGH SCHL	COLLEGE	TOTAL EMP
960	4	779	38750	1459	0	29	16	0	14	7	12	0	0	0	78
961	4	515	37975	1334	0	2	12	0	41	76	6	0	0	0	137
962	4	1013	40905	2070	0	13	44	31	88	89	13	383	0	0	278
963	4	2	46250	6	0	42	18	0	0	0	0	0	0	0	60
964	4	15	56188	49	0	90	0	0	0	22	156	0	0	0	268
965	4	16	31250	18	0	88	0	0	69	10	0	590	0	0	167
966	1	1	26250	1	0	0	0	0	0	0	0	0	0	0	0
967	1	4	63750	7	0	0	0	0	0	0	0	0	0	0	0
968	4	0	37584	0	0	12	0	0	0	0	0	29	0	0	12
969	4	2	23218	2	0	0	0	0	15	0	3	0	0	0	18
970	4	75	23218	169	0	50	0	0	0	17	56	0	0	0	123
971	4	0	23218	0	0	0	0	0	0	0	0	0	0	0	0
972	4	474	23218	926	0	14	169	0	112	135	77	305	667	0	507
973	1	1	23218	3	25	12	0	0	0	0	0	0	0	0	12
974	1	0	23218	0	0	12	0	0	0	0	0	0	0	0	12
975	1	102	23218	454	0	1538	0	0	0	144	0	0	0	0	1682
976	1	5	25780	15	0	11	0	0	0	0	0	0	0	0	11
977	1	0	25780	0	0	3	0	0	0	0	0	0	0	0	3
978	1	4	28750	20	0	6	0	0	0	0	0	0	0	0	6
979	1	4	26430	11	0	3	0	0	0	2	0	0	0	0	5
980	1	1	26430	3	0	3	0	0	0	0	0	0	0	0	3
981	3	50	26430	131	0	0	0	0	20	0	0	70	0	0	20
982	3	0	51750	0	0	0	0	0	0	0	0	0	0	0	0
983	1	0	51700	0	0	3	0	0	0	0	0	0	0	0	3
984	1	1	26430	1	0	3	0	0	0	0	0	0	0	0	3
985	1	0	26430	0	0	3	0	0	0	0	0	0	0	0	3
986	1	0	28750	0	0	224	0	0	0	0	0	0	0	0	224
987	1	1	28750	3	0	12	0	0	0	0	0	0	0	0	12
988	1	0	13500	0	0	3	0	0	0	0	0	0	0	0	3
989	1	61	13500	218	0	2	0	0	0	0	0	0	0	0	2
990	1	106	13500	463	0	73	0	0	24	1	0	0	0	0	98
991	1	2	19350	6	0	2	0	0	0	0	0	0	0	0	2
992	1	27	27565	120	0	23	0	0	0	0	0	0	0	0	23
993	1	1	27565	2	0	3	0	0	0	0	0	0	0	0	3
994	1	1	13750	1	0	1	0	0	0	0	0	0	0	0	1
995	1	4	51700	17	0	3	0	0	0	0	0	0	0	0	3
996	1	310	26155	1304	0	1	4	0	132	0	2	0	0	0	139

TAZ	TPGN DIST	HOUSEHOLDS	HHLD INCOME	HHLD POP	GRP QTRS	BASIC EMP	RHRET EMP	RMRET EMP	SCSER EMP	SOSER EMP	BWOTH EMP	ELEM SCHL	HIGH SCHL	COLLEGE	TOTAL EMP
997	1	0	26155	0	0	2	0	0	0	0	0	0	0	0	2
998	1	0	26155	0	0	2	0	0	3	0	0	0	0	0	5
999	1	389	51700	1504	0	10	148	3	197	12	9	523	0	0	379
1000	1	0	25720	0	1	0	94	33	114	265	0	0	0	0	506
1001	1	0	17500	0	0	0	0	7	0	17	2	0	0	0	26
1002	1	0	18777	0	0	9	0	0	36	0	58	0	0	0	103
1003	1	335	18777	1108	0	7	0	0	0	16	0	59	0	0	23
1004	1	244	50215	791	0	91	339	4	256	129	59	633	0	0	878
1005	1	619	66580	1918	0	91	12	7	4	20	1	0	0	0	135
1006	1	30	80375	92	0	0	0	0	0	0	0	0	0	0	0
1007	1	0	65750	0	0	3	0	0	0	0	0	0	0	0	3
1008	1	0	82008	0	0	0	0	0	0	0	0	0	0	0	0
1009	1	59	82008	185	0	0	0	0	1	0	0	0	0	0	1
1010	1	109	66665	403	0	699	0	0	14	0	300	0	0	0	1013
1011	1	0	37190	0	0	0	0	0	0	0	0	0	0	0	0
1012	1	5	26250	17	0	254	0	0	0	0	6	0	0	0	260
1013	1	0	34690	0	0	0	0	0	0	0	0	0	0	0	0
1014	1	265	82008	804	0	1019	0	0	7	20	14	0	0	0	1060
1015	1	0	48750	0	0	1	0	0	0	0	0	0	0	0	1
1016	1	744	35446	2046	0	4	0	0	0	9	1	0	0	0	14
1017	1	198	77629	848	0	2	0	0	0	0	0	0	0	0	2
1018	1	18	20380	72	0	69	0	0	0	0	0	0	0	0	69
1019	1	30	86550	97	0	9	0	0	0	1	0	0	0	0	10
1020	1	252	185830	693	0	2	0	0	0	5	51	0	0	0	58
1021	1	0	82008	0	0	0	0	0	0	0	0	0	0	0	0
1022	1	216	82008	645	0	328	18	0	11	193	263	0	0	0	813
1023	1	387	51835	1439	0	12	9	1	0	27	6	0	0	0	55
1024	1	102	47940	322	94	209	128	2	91	82	49	0	0	0	561
1025	1	0	32500	0	0	0	0	11	42	23	14	0	0	0	90
1026	1	0	56685	0	0	0	169	4	0	32	19	0	0	0	224
1027	1	0	17500	0	0	0	0	0	0	0	0	0	0	0	0
1028	1	0	82008	0	0	0	0	0	0	0	0	0	0	0	0
1029	1	0	82008	0	0	0	0	0	0	0	0	0	0	0	0
1030	1	11	82008	37	0	17	0	0	0	0	0	0	0	0	17
1031	1	197	82008	746	0	2	0	0	0	1	0	0	0	0	3
1032	1	0	102170	0	0	7	0	0	0	0	0	0	0	0	7
1033	1	0	41917	0	0	4	0	0	0	0	0	0	0	0	4

TAZ	TPGN DIST	HOUSEHOLDS	HHLD INCOME	HHLD POP	GRP QTRS	BASIC EMP	RHRET EMP	RMRET EMP	SCSER EMP	SOSER EMP	BWOTH EMP	ELEM SCHL	HIGH SCHL	COLLEGE	TOTAL EMP
1034	1	0	41917	0	0	0	0	0	0	0	0	0	0	0	0
1035	1	3	41917	4	0	2	0	0	0	0	0	0	0	0	2
1036	1	2	21250	6	0	10	0	0	0	0	0	0	0	0	10
1037	1	0	30210	0	0	0	0	0	0	0	0	0	0	0	0
1038	1	0	41917	0	0	21	0	0	0	0	0	0	0	0	21
1039	1	0	41917	0	0	0	0	0	0	0	0	0	0	0	0
1040	1	0	41917	0	0	3	0	0	0	0	0	0	0	0	3
1041	1	461	41917	1268	0	0	0	0	0	0	0	0	0	0	0
1042	1	487	58081	1339	0	0	0	0	0	2	0	0	0	0	2
1043	1	498	58081	1780	0	0	0	0	0	7	4	0	0	0	11
1044	1	304	61300	1038	0	17	0	220	75	147	2	746	0	1270	461
1045	1	577	61985	1992	0	20	10	0	9	46	25	0	0	0	110
1046	1	1	27405	3	7	0	0	0	0	0	0	0	0	0	0
1047	5	1	24750	3	0	33	17	100	10	25	0	0	0	0	185
1048	5	2	43369	3	432	0	0	0	0	351	0	0	0	0	351
1049	4	2299	11250	4679	2484	47	0	24	134	129	3	0	0	0	337
1050	4	145	61170	338	0	1	0	0	0	9	4	0	0	0	14
1051	1	132	56405	551	0	3	0	0	0	0	0	0	0	0	3
1052	1	0	22435	0	0	2	0	0	0	0	0	0	0	0	2
1053	1	0	24480	0	0	3	0	0	0	0	0	0	0	0	3
1054	1	0	24480	0	0	3	0	0	0	0	0	0	0	0	3
1055	1	0	56188	0	0	3	0	0	0	0	0	0	0	0	3
1056	1	0	24480	0	0	122	0	0	0	0	0	0	0	0	122
1057	1	13	24480	43	0	3	0	0	0	0	0	0	0	0	3
1058	1	0	24480	0	0	2	0	0	0	0	0	0	0	0	2
1059	1	1	24480	3	0	2	0	0	0	0	0	0	0	0	2
1060	1	0	14500	0	0	14	0	0	0	0	0	0	0	0	14
1061	1	43	14500	150	0	1	0	0	0	1	0	757	0	0	2
1062	1	0	14500	0	0	129	0	0	0	0	0	0	0	0	129
1063	1	1	50000	4	0	3	0	0	0	0	0	0	0	0	3
1064	1	172	56188	558	0	0	0	0	0	0	1	0	0	0	1
1065	1	65	21205	211	0	2	0	0	0	0	0	0	0	0	2
1066	1	5	21205	15	0	2	0	0	0	0	0	0	0	0	2
1067	1	0	21205	0	0	3	0	0	0	0	0	0	0	0	3
1068	1	0	56188	0	0	3	0	0	0	0	0	0	0	0	3
1069	1	0	56188	0	0	3	0	0	0	0	0	0	0	0	3
1070	1	5	56188	12	0	21	0	0	0	0	0	0	0	0	21

TAZ	TPGN DIST	HOUSEHOLDS	HHLD INCOME	HHLD POP	GRP QTRS	BASIC EMP	RHRET EMP	RMRET EMP	SCSER EMP	SOSER EMP	BWOTH EMP	ELEM SCHL	HIGH SCHL	COLLEGE	TOTAL EMP
1071	1	4	38440	7	0	10	0	0	0	0	0	0	0	0	10
1072	1	12	30210	39	0	158	0	0	0	0	31	0	0	0	189
1073	3	3	26250	15	0	8	0	0	0	0	0	0	0	0	8
1074	3	0	8750	0	0	9	0	0	0	0	0	0	0	0	9
1075	3	0	8750	0	0	4	0	0	0	0	0	0	0	0	4
1076	1	11	8750	31	0	4	0	0	0	0	0	0	0	0	4
1077	1	3	19585	12	26	0	0	0	0	0	0	0	0	0	0
1078	1	0	19585	0	0	3	0	0	0	0	0	0	0	0	3
1079	1	0	19585	0	0	3	0	0	0	0	0	0	0	0	3
1080	1	0	19585	0	0	2	0	0	0	0	0	0	0	0	2
1081	1	0	19585	0	0	0	0	0	0	0	0	0	0	0	0
1082	1	16	56188	67	0	3	0	0	0	0	0	0	0	0	3
1083	1	0	19585	0	0	3	0	0	0	0	0	0	0	0	3
1084	1	0	19585	0	0	3	0	0	0	0	0	0	0	0	3
1085	1	0	19585	0	0	0	0	0	0	0	0	0	0	0	0
1086	1	0	19585	0	0	3	0	0	0	0	0	0	0	0	3
1087	1	0	19585	0	0	3	0	0	0	0	0	0	0	0	3
1088	1	0	19585	0	0	3	0	0	0	0	0	0	0	0	3
1089	1	0	19585	0	0	17	0	0	0	0	0	0	0	0	17
1090	1	0	19585	0	0	3	0	0	0	0	0	0	0	0	3
1091	1	19	19585	63	0	5	0	0	0	3	0	0	0	0	8
1092	1	0	19585	0	0	3	0	0	0	0	0	0	0	0	3
1093	1	0	19585	0	0	3	0	0	0	0	0	0	0	0	3
1094	1	0	19585	0	0	3	0	0	0	0	0	0	0	0	3
1095	1	0	19585	0	0	16	0	0	0	0	0	0	0	0	16
1096	1	0	19585	0	0	2	0	0	0	0	0	0	0	0	2
1097	1	0	33395	0	0	6	0	0	0	0	0	0	0	0	6
1098	1	8	33395	34	0	3	0	0	0	0	0	0	0	0	3
1099	1	0	33395	0	0	1	0	0	0	0	0	0	0	0	1
1100	1	0	33395	0	0	0	0	0	0	0	0	0	0	0	0
1101	1	40	33395	126	0	3	0	0	0	9	0	0	0	0	12
1102	1	32	33395	103	0	9	0	0	0	0	0	0	0	0	9
1103	1	15	33395	51	0	2	0	0	0	0	0	0	0	0	2
1104	1	13	33395	41	0	3	0	0	0	0	0	0	0	0	3
1105	1	4	33395	13	0	3	0	0	0	0	0	0	0	0	3
1106	1	0	33395	0	0	3	0	0	0	0	0	0	0	0	3
1107	1	0	33395	0	0	29	0	0	0	0	0	0	0	0	29

TAZ	TPGN DIST	HOUSEHOLDS	HHLD INCOME	HHLD POP	GRP QTRS	BASIC EMP	RHRET EMP	RMRET EMP	SCSER EMP	SOSER EMP	BWOTH EMP	ELEM SCHL	HIGH SCHL	COLLEGE	TOTAL EMP
1108	1	0	33395	0	0	3	0	0	0	0	0	0	0	0	3
1109	1	0	33395	0	0	15	0	0	0	0	0	0	0	0	15
1110	1	13	33395	41	0	3	0	0	0	0	0	0	0	0	3
1111	1	0	56188	0	0	3	0	0	0	0	0	0	0	0	3
1112	1	0	33395	0	0	2	0	0	0	0	0	0	0	0	2
1113	1	0	33395	0	0	1	0	0	12	0	15	0	0	0	28
1114	1	2	19105	6	0	1	0	0	0	0	0	0	0	0	1
1115	1	9	19105	26	0	3	0	0	0	0	0	0	0	0	3
1116	1	5	19105	13	0	3	0	0	0	0	0	0	0	0	3
1117	1	0	19105	0	0	3	0	0	0	0	0	0	0	0	3
1118	1	10	19105	40	0	8	0	0	0	0	0	0	0	0	8
1119	1	0	19105	0	0	3	0	0	0	0	0	0	0	0	3
1120	1	0	19105	0	0	0	0	0	0	0	0	0	0	0	0
1121	1	53	30780	138	0	2	5	0	122	13	0	0	0	0	142
1122	1	52	30780	169	0	3	0	0	0	0	0	0	0	0	3
1123	1	16	30780	31	0	21	0	0	21	0	0	0	0	0	42
1124	1	51	31605	105	0	1	0	0	0	0	0	0	0	0	1
1125	1	19	31605	68	0	3	0	0	0	0	0	0	0	0	3
1126	1	122	31605	421	0	1	1	0	6	3	42	0	0	0	53
1127	1	0	26355	0	0	2	0	0	0	0	0	0	0	0	2
1128	1	175	26355	398	0	1	0	10	0	0	0	0	0	0	11
1129	1	16	26355	38	0	3	0	0	0	0	0	0	0	0	3
1130	1	9	18140	30	0	4	0	0	0	0	14	0	0	0	18
1131	1	377	18140	1413	0	2	0	0	1	26	0	0	0	0	29
1132	1	474	34865	1887	0	0	0	0	3	0	10	0	0	0	13
1133	1	407	68395	1340	0	5	0	0	6	8	0	0	0	0	19
1134	1	245	43375	793	0	30	0	0	3	0	0	0	0	0	33
1135	1	89	45780	398	0	0	0	0	0	0	0	0	0	0	0
1136	1	4	39585	14	0	6	3	0	0	0	0	0	0	0	9
1137	1	77	24790	227	0	1	0	0	0	8	0	0	0	0	9
1138	1	1	11945	3	0	3	0	0	0	4	0	0	0	0	7
1139	1	0	11945	0	0	3	0	0	0	0	0	0	0	0	3
1140	1	0	11945	0	0	16	0	0	0	0	0	0	0	0	16
1141	1	10	11945	13	0	8	0	0	0	0	0	0	0	0	8
1142	1	329	11945	1061	0	19	0	0	35	17	9	0	0	0	80
1143	1	0	44075	0	6	0	11	134	211	5	81	0	0	0	442
1144	1	346	44075	1254	0	11	0	0	8	18	0	0	0	0	37

TAZ	TPGN DIST	HOUSEHOLDS	HHLD INCOME	HHLD POP	GRP QTRS	BASIC EMP	RHRET EMP	RMRET EMP	SCSER EMP	SOSER EMP	BWOTH EMP	ELEM SCHL	HIGH SCHL	COLLEGE	TOTAL EMP
1145	1	725	47940	2199	20	0	19	0	4	7	0	0	0	0	30
1146	1	479	34210	1667	6	2	0	0	0	6	0	0	0	0	8
1147	1	361	50805	538	8	51	0	0	0	3	0	0	0	0	54
1148	1	381	50805	1284	0	24	0	0	8	50	0	0	0	0	82
1149	1	444	50805	1669	0	26	0	0	10	7	0	0	0	0	43
1150	1	156	78145	483	0	3	0	0	97	2	0	653	0	0	102
1151	1	0	63015	0	0	2	0	0	0	0	0	0	0	0	2
1152	1	0	31250	0	0	14	0	0	0	0	0	0	0	0	14
1153	1	0	31250	0	0	3	0	0	0	0	0	0	0	0	3
1154	1	0	31250	0	0	3	0	0	0	0	0	0	0	0	3
1155	1	0	31250	0	0	3	0	0	0	0	0	0	0	0	3
1156	1	13	31250	34	0	3	0	0	0	0	0	0	0	0	3
1157	1	4	31250	14	0	3	0	0	0	0	0	0	0	0	3
1158	1	2	31250	3	0	104	0	0	0	0	5	0	0	0	109
1159	1	0	56188	0	0	1	0	0	0	0	0	0	0	0	1
1160	1	49	56188	135	0	0	0	0	0	0	0	0	0	0	0
1161	1	2	56188	6	0	0	0	0	0	47	0	0	0	0	47
1162	1	0	56188	0	0	0	0	0	0	0	0	0	0	0	0
1163	1	2	56188	7	0	0	0	0	0	0	0	0	0	0	0
1164	1	0	56188	0	0	0	0	0	0	0	0	0	0	0	0
1165	1	4	56188	15	0	84	0	0	0	32	0	0	0	0	116
1166	1	47	127310	138	0	0	0	0	0	0	0	0	0	0	0
1167	1	1	55000	3	0	1	0	0	0	0	0	0	0	0	1
1168	1	155	55000	663	0	22	0	0	0	1	0	0	2344	0	23
1169	1	0	55000	0	0	0	0	0	0	0	0	0	0	0	0
1170	1	0	56188	0	0	0	0	0	0	0	0	0	0	0	0
1171	1	0	56188	0	0	0	0	0	0	0	0	0	0	0	0
1172	1	0	56188	0	0	3	0	0	0	0	0	0	0	0	3
1173	1	0	56188	0	0	1	0	0	0	0	0	0	0	0	1
1174	1	1	56188	2	0	3	0	0	0	0	0	0	0	0	3
1175	1	11	22085	26	0	0	0	0	5	0	0	0	0	0	5
1176	1	4	22085	11	0	0	0	0	7	0	0	0	0	0	7
1177	1	0	22085	0	0	9	0	0	0	0	0	0	0	0	9
1178	1	0	100585	0	0	1	0	0	0	0	0	0	0	0	1
1179	1	16	100585	39	0	0	0	0	0	0	0	0	0	0	0
1180	1	0	100585	0	0	3	0	0	0	0	0	0	0	0	3
1181	1	7	56188	23	0	2	0	0	0	0	0	0	0	0	2

TAZ	TPGN DIST	HOUSEHOLDS	HHLD INCOME	HHLD POP	GRP QTRS	BASIC EMP	RHRET EMP	RMRET EMP	SCSER EMP	SOSER EMP	BWOTH EMP	ELEM SCHL	HIGH SCHL	COLLEGE	TOTAL EMP
1182	1	19	56188	63	0	1	0	0	0	0	0	0	0	0	1
1183	1	0	53960	0	0	2	0	0	0	0	0	0	0	0	2
1184	1	0	53960	0	0	3	0	0	0	0	0	0	0	0	3
1185	1	6	53960	15	0	4	0	0	0	0	0	0	0	0	4
1186	1	0	100585	0	0	1	0	0	0	0	0	0	0	0	1
1187	1	2	26000	6	0	0	0	0	0	0	0	0	205	0	0
1188	1	3	56188	8	0	1	0	0	0	0	0	0	0	0	1
1189	1	3	31250	8	0	3	0	0	0	0	0	0	0	0	3
1190	1	0	13750	0	0	38	0	0	0	0	0	0	0	0	38
1191	1	3	56188	4	0	1	0	0	0	0	0	0	0	0	1
1192	1	0	68750	0	0	1	0	0	0	0	0	0	0	0	1
1193	1	0	68750	0	0	1	0	0	0	0	0	0	0	0	1
1194	1	0	68750	0	0	3	0	0	0	0	0	0	0	0	3
1195	1	12	8750	39	0	3	0	0	0	0	0	0	0	0	3
1196	1	0	8750	0	0	2	0	0	0	0	0	0	0	0	2
1197	1	0	8750	0	0	3	0	0	0	0	0	0	0	0	3
1198	1	0	56188	0	0	3	0	0	0	0	0	0	0	0	3
1199	1	0	56188	0	0	35	0	0	0	0	0	0	0	0	35
1200	5	0	56188	0	0	4	0	0	0	0	0	0	0	0	4
1201	1	0	56188	0	0	0	0	0	0	0	0	0	0	0	0
1202	1	1	56188	3	0	0	0	0	0	0	0	0	0	0	0
1203	1	0	56188	0	0	0	0	0	0	0	0	0	0	0	0
1204	1	0	56188	0	0	0	0	0	0	0	0	0	0	0	0
1205	1	0	56188	0	0	0	0	0	0	0	0	0	0	0	0
1206	1	1	56188	3	0	0	0	0	0	0	0	0	0	0	0
1207	1	0	56188	0	0	2	0	0	0	0	0	0	0	0	2
1208	1	0	56188	0	0	3	0	0	0	0	0	0	0	0	3
1209	1	0	56188	0	0	3	0	0	0	0	0	0	0	0	3
1210	1	0	56188	0	0	1	0	0	0	0	0	0	0	0	1
1211	1	0	56188	0	0	4	0	0	0	0	0	0	0	0	4
1212	1	0	31250	0	0	3	0	0	0	0	0	0	0	0	3
1213	1	1	31250	3	0	3	0	0	0	0	0	0	0	0	3
1214	1	0	31250	0	0	3	0	0	0	0	0	0	0	0	3
1215	1	0	56188	0	0	3	0	0	0	0	0	0	0	0	3
1216	1	0	56188	0	0	3	0	0	0	0	0	0	0	0	3
1217	1	0	56188	0	0	3	0	0	0	0	0	0	0	0	3
1218	1	0	56188	0	0	3	0	0	0	0	0	0	0	0	3

TAZ	TPGN DIST	HOUSEHOLDS	HHLD INCOME	HHLD POP	GRP QTRS	BASIC EMP	RHRET EMP	RMRET EMP	SCSER EMP	SOSER EMP	BWOTH EMP	ELEM SCHL	HIGH SCHL	COLLEGE	TOTAL EMP
1219	1	0	56188	0	0	3	0	0	0	0	0	0	0	0	3
1220	1	0	56188	0	0	3	0	0	0	0	0	0	0	0	3
1221	1	1	56188	3	0	3	0	0	0	0	0	0	0	0	3
1222	1	0	56188	0	0	2	0	0	0	0	0	0	0	0	2
1223	1	0	56188	0	0	3	0	0	0	0	0	0	0	0	3
1224	1	0	56188	0	0	1	0	0	0	0	0	0	0	0	1
1225	1	0	56188	0	0	3	0	0	0	0	0	0	0	0	3
1226	1	0	56188	0	0	1	0	0	0	0	0	0	0	0	1
1227	1	0	56188	0	0	0	0	0	0	0	0	0	0	0	0
1228	1	0	56188	0	0	10	0	0	0	0	0	0	0	0	10
1229	1	0	56188	0	0	10	0	0	0	0	0	0	0	0	10
1230	1	0	56188	0	0	3	0	0	0	0	0	0	0	0	3
1231	1	1	56188	3	0	4	0	0	0	0	0	0	0	0	4
1232	1	0	56188	0	0	6	0	0	0	0	0	0	0	0	6
1233	5	0	56188	0	0	6	0	0	0	0	0	0	0	0	6
1234	1	0	56188	0	0	12	0	0	0	0	0	0	0	0	12
1235	1	0	56188	0	0	16	0	0	0	0	0	0	0	0	16
1236	1	0	56188	0	0	4	0	0	0	0	0	0	0	0	4
1237	1	0	56188	0	0	3	0	0	0	0	0	0	0	0	3
1238	1	0	56188	0	0	1	0	0	0	0	0	0	0	0	1
1239	1	0	56188	0	0	1	0	0	0	0	0	0	0	0	1
1240	1	30	56188	85	0	0	0	0	0	0	0	0	0	0	0
1241	1	8	70950	28	0	5	0	0	0	6	0	0	0	0	11
1242	1	38	70950	114	0	9	0	0	0	0	266	0	0	0	275
1243	1	0	70950	0	0	0	0	0	0	0	0	0	0	0	0
1244	1	3	70950	9	0	2	0	0	0	0	0	0	0	0	2
1245	1	26	70950	88	0	3	0	0	0	0	0	0	0	0	3
1246	1	0	70950	0	0	4	0	0	0	0	0	0	0	0	4
1247	1	0	70950	0	0	61	0	0	0	0	0	0	0	0	61
1248	1	8	70950	23	0	1	0	0	0	0	0	0	0	0	1
1249	1	14	70950	36	0	7	0	0	0	0	2	0	0	0	9
1250	1	0	14645	0	0	3	0	0	0	0	0	0	0	0	3
1251	1	17	14645	53	0	2	0	0	0	0	0	0	0	0	2
1252	1	0	14645	0	0	2	0	0	0	0	0	0	0	0	2
1253	1	0	21250	0	0	2	0	0	0	0	0	0	0	0	2
1254	1	1	21250	2	0	2	0	0	0	0	0	0	0	0	2
1255	1	96	21250	253	0	0	0	0	0	0	25	0	0	0	25

TAZ	TPGN DIST	HOUSEHOLDS	HHLD INCOME	HHLD POP	GRP QTRS	BASIC EMP	RHRET EMP	RMRET EMP	SCSER EMP	SOSER EMP	BWOTH EMP	ELEM SCHL	HIGH SCHL	COLLEGE	TOTAL EMP
1256	1	3	34585	10	0	0	0	0	0	0	0	0	0	0	0
1257	1	3	34585	2	0	2	0	0	0	0	0	0	0	0	2
1258	1	0	56188	0	0	3	0	0	0	0	0	0	0	0	3
1259	1	0	56188	0	0	2	0	0	0	0	0	0	0	0	2
1260	1	0	56188	0	0	3	0	0	0	0	0	0	0	0	3
1261	1	0	56188	0	0	2	0	0	0	0	0	0	0	0	2
1262	1	0	56188	0	0	3	0	0	0	0	0	0	0	0	3
1263	1	0	56188	0	0	1	0	0	0	0	0	0	0	0	1
1264	1	77	56188	230	0	1	0	0	0	0	0	0	0	0	1
1265	1	26	55805	83	0	2	0	0	0	0	0	0	0	0	2
1266	1	20	55805	61	0	5	0	0	0	27	0	0	0	0	32
1267	1	1	55805	4	0	3	0	0	0	0	0	0	0	0	3
1268	1	1	36250	3	0	2	0	0	0	0	0	0	0	0	2
1269	1	1	36250	5	0	2	0	0	0	0	0	0	0	0	2
1270	1	0	36250	0	0	2	0	0	0	0	0	0	0	0	2
1271	1	32	36250	91	0	3	0	0	0	3	0	0	0	0	6
1272	1	1	41720	3	0	3	0	0	0	0	0	0	0	0	3
1273	1	46	41720	142	0	1	0	0	3	0	0	0	0	0	4
1274	1	5	41720	14	0	3	0	0	0	0	0	0	0	0	3
1275	1	0	41720	0	0	30	0	0	0	0	43	0	0	0	73
1276	1	381	41720	1349	0	70	0	1	2	42	0	0	0	0	115
1277	1	322	22305	937	0	0	0	0	240	0	0	920	0	0	240
1278	1	41	22305	125	7	0	0	0	0	0	0	0	0	0	0
1279	1	326	22305	1114	0	1	6	0	0	0	0	0	0	0	7
1280	1	3	22305	11	0	0	0	0	0	0	0	0	0	0	0
1281	1	27	22305	90	0	0	13	17	2	5	3	0	0	0	40
1282	1	87	24430	130	0	53	32	0	14	0	241	0	0	0	340
1283	1	6	24430	17	0	39	0	0	0	0	121	0	0	0	160
1284	1	2	24430	4	0	0	0	0	0	0	0	0	0	0	0
1285	1	21	24960	11	0	0	90	0	18	0	1	0	0	0	109
1286	1	1	85490	5	0	2	0	0	0	0	0	0	0	0	2
1287	1	0	56188	0	0	0	0	0	0	0	0	0	0	0	0
1288	1	4	14530	15	0	145	0	0	0	3	0	0	0	0	148
1289	1	3	14530	11	0	0	0	0	0	0	0	0	0	0	0
1290	1	5	14530	18	0	2613	0	0	0	0	1	0	0	0	2614
1291	1	103	14530	272	0	0	0	0	28	1	2	442	0	0	31
1292	3	1	14530	3	0	0	0	0	0	0	0	0	0	0	0

TAZ	TPGN DIST	HOUSEHOLDS	HHLD INCOME	HHLD POP	GRP QTRS	BASIC EMP	RHRET EMP	RMRET EMP	SCSER EMP	SOSER EMP	BWOTH EMP	ELEM SCHL	HIGH SCHL	COLLEGE	TOTAL EMP
1293	3	0	31250	0	0	9	0	0	0	0	0	0	0	0	9
1294	3	2	31250	3	0	12	0	0	0	0	0	0	0	0	12
1295	3	0	31250	0	0	2	0	0	0	0	0	0	0	0	2
1296	3	361	31250	993	0	3	0	0	0	0	0	41	0	0	3
1297	3	0	74845	0	0	3	0	0	0	0	0	0	0	0	3
1298	3	2	74845	5	0	0	0	0	0	0	0	0	0	0	0
1299	1	0	74845	0	0	0	0	0	0	0	0	0	0	0	0
1300	1	211	77425	580	0	0	0	0	0	0	0	35	0	0	0
1301	1	0	77425	0	0	1	0	0	0	0	0	0	0	0	1
1302	1	11	56188	33	0	3	0	0	0	0	0	0	0	0	3
1303	1	17	56188	76	0	0	0	0	0	0	0	0	0	0	0
1304	1	7	56188	8	0	0	0	0	0	0	0	0	0	0	0
1305	1	191	56188	600	0	0	0	0	0	7	0	0	0	0	7
1306	1	213	56188	712	0	0	0	0	0	1	0	0	0	0	1
1307	1	1	56188	4	10	5	0	0	45	21	0	0	0	0	71
1308	1	110	56188	132	0	175	0	0	0	256	7	0	0	0	438
1309	1	14	56188	36	0	3	4	0	0	24	1	0	0	0	32
1310	1	368	56188	1473	0	13	0	0	0	0	34	540	0	0	47
1311	1	237	56188	401	0	0	91	0	13	9	0	0	0	0	113
1312	1	182	35780	494	0	0	46	9	38	67	9	0	0	0	169
1313	1	3	36930	4	0	0	44	0	87	31	6	0	0	0	168
1314	1	540	41530	1485	0	2	242	12	91	80	1	0	0	0	428
1315	1	149	47300	404	5	0	0	1	0	22	0	0	0	0	23
1316	1	333	54920	1063	0	9	19	15	212	45	0	704	0	0	300
1317	1	293	35965	963	12	1	0	0	4	12	28	0	0	0	45
1318	1	764	61505	1917	6	18	64	3	152	41	1	0	0	0	279
1319	1	0	61505	0	11	0	0	0	136	25	45	0	0	0	206
1320	1	55	11250	171	0	33	0	6	20	6	0	0	39	0	65
1321	1	43	22520	121	11	0	1	0	0	0	0	0	0	0	1
1322	1	0	20470	0	0	104	7	0	0	0	57	0	0	0	168
1323	1	561	16290	1946	0	32	0	0	81	0	0	762	0	0	113
1324	1	320	14645	1084	0	6	16	0	14	0	1	0	0	0	37
1325	1	301	29750	1100	0	0	0	0	0	0	0	0	0	0	0
1326	1	260	29750	920	0	2	0	0	151	0	5	501	0	0	158
1327	1	98	48885	369	0	0	0	0	0	0	0	0	0	0	0
1328	1	49	46965	160	0	1	0	0	0	7	0	0	0	0	8
1329	1	165	46965	551	0	0	18	0	0	3	0	648	0	0	21

TAZ	TPGN DIST	HOUSEHOLDS	HHLD INCOME	HHLD POP	GRP QTRS	BASIC EMP	RHRET EMP	RMRET EMP	SCSER EMP	SOSER EMP	BWOTH EMP	ELEM SCHL	HIGH SCHL	COLLEGE	TOTAL EMP
1330	1	0	48160	0	0	0	0	0	0	0	0	0	0	0	0
1331	1	1	28455	3	0	0	0	0	0	0	0	0	0	0	0
1332	1	0	39040	0	0	0	0	0	0	0	0	0	0	0	0
1333	1	0	39040	0	0	0	0	0	0	0	0	0	0	0	0
1334	1	0	39040	0	0	0	0	0	0	0	0	0	0	0	0
1335	1	435	39040	992	0	0	0	0	0	0	0	0	0	0	0
1336	1	0	39040	0	0	0	0	0	10	0	0	0	0	0	10
1337	1	0	39040	0	0	0	0	0	0	0	0	0	0	0	0
1338	1	0	39040	0	0	0	0	0	0	0	0	0	205	0	0
1339	1	0	39040	0	0	0	0	0	0	0	0	0	0	0	0
1340	1	0	63915	0	0	0	0	0	0	0	0	0	0	0	0
1341	1	30	63915	78	0	0	0	0	0	0	0	0	0	0	0
1342	1	0	63915	0	0	6	0	0	0	0	0	0	0	0	6
1343	1	141	63915	404	0	0	0	0	96	0	0	432	0	0	96
1344	1	47	63915	133	0	1	33	0	0	0	0	0	0	0	34
1345	1	104	63915	286	0	0	0	0	0	3	0	0	0	0	3
1346	1	1	63915	3	0	1	0	0	0	0	0	0	0	0	1
1347	1	19	63915	39	0	1	0	0	153	0	1	0	0	0	155
1348	1	6	63915	12	0	4	0	0	0	0	0	0	0	0	4
1349	1	0	63915	0	0	0	0	0	0	0	0	0	0	0	0
1350	1	0	56188	0	0	0	0	0	0	0	0	0	0	0	0
1351	1	190	56188	523	0	0	0	0	0	0	0	0	0	0	0
1352	1	96	56188	264	0	0	0	0	0	0	0	0	0	0	0
1353	1	46	56188	127	0	0	0	0	0	0	0	0	0	0	0
1354	1	0	56188	0	0	0	0	0	0	0	0	0	0	0	0
1355	1	40	108230	139	0	0	0	0	10	0	0	0	0	0	10
1356	1	0	108230	0	0	0	0	0	0	2	0	0	0	0	2
1357	1	0	108230	0	0	0	0	0	0	0	0	0	0	0	0
1358	1	9	108230	25	0	0	0	0	0	0	0	0	0	0	0
1359	1	2	108230	7	0	2	0	0	0	0	0	0	0	0	2
1360	1	31	56188	100	0	0	0	0	0	0	0	0	0	0	0
1361	1	0	56188	0	0	14	0	0	0	0	0	0	0	0	14
1362	3	0	83380	0	0	0	0	0	0	0	2	0	0	0	2
1363	3	11	200000	48	26	1	0	0	0	0	0	0	0	0	1
1364	1	39	200000	138	0	102	0	0	0	6	0	0	0	0	108
1365	1	12	160165	23	0	199	0	0	3	3	0	0	0	0	205
1366	1	0	21770	0	0	1	0	0	0	0	0	0	0	0	1

TAZ	TPGN DIST	HOUSEHOLDS	HHLD INCOME	HHLD POP	GRP QTRS	BASIC EMP	RHRET EMP	RMRET EMP	SCSER EMP	SOSER EMP	BWOTH EMP	ELEM SCHL	HIGH SCHL	COLLEGE	TOTAL EMP
1367	1	820	21770	2390	0	29	89	0	5	22	5	0	0	0	150
1368	1	485	50390	1560	6	0	18	10	173	45	0	1402	2028	0	246
1369	1	0	50390	0	0	13	0	0	0	0	6	0	0	0	19
1370	1	34	116265	114	0	31	0	0	0	2	0	0	0	0	33
1371	1	0	116265	0	0	0	0	0	0	0	0	0	0	0	0
1372	1	551	56188	1519	0	14	0	0	13	26	0	0	0	0	53
1373	1	0	56115	0	6	20	3	0	124	255	0	0	0	0	402
1374	1	3	59000	9	0	14	220	60	98	137	58	0	0	0	587
1375	1	10	20690	29	29	215	0	60	249	123	383	0	0	0	1030
1376	1	0	85490	0	0	0	0	0	0	0	0	0	0	0	0
1377	1	0	62625	0	0	0	0	0	0	0	0	0	0	0	0
1378	1	0	62625	0	0	0	0	0	0	0	10	0	0	0	10
1379	1	307	62625	781	0	23	0	0	2	35	0	0	0	0	60
1380	1	675	24570	1377	9	0	263	10	222	34	18	0	21	0	547
1381	1	368	24570	979	0	0	0	0	79	3	0	0	0	0	82
1382	1	144	48750	275	0	77	19	0	0	4	76	0	0	0	176
1383	1	0	21040	0	0	3	0	0	0	0	0	0	0	0	3
1384	1	0	56188	0	0	0	0	0	0	0	0	0	0	0	0
1385	1	0	56188	0	0	0	0	0	0	0	0	0	0	0	0
1386	1	0	56188	0	0	6	0	0	0	0	0	0	0	0	6
1387	1	0	56188	0	0	0	0	0	59	0	0	0	0	0	59
1388	1	0	56188	0	76	21	0	0	187	690	1	0	0	0	899
1389	1	2	63750	4	0	2	0	0	0	0	0	0	0	0	2
1390	1	0	56188	0	0	359	0	0	97	130	74	0	0	0	660
1391	2	1	56188	4	0	744	0	0	0	0	12	0	0	0	756
1392	1	216	25585	223	0	10	0	0	0	65	2	0	0	0	77
1393	1	1	56188	4	0	0	0	0	0	0	0	0	0	0	0
1394	1	384	56188	1056	0	0	0	0	0	0	0	0	0	0	0
1395	1	23	56188	63	0	0	0	0	0	0	0	0	0	0	0
1396	1	8	56188	22	0	1	0	0	0	1	0	0	0	0	2
1397	1	303	85100	313	0	0	0	0	0	0	0	0	0	0	0
1398	1	12	85100	26	0	3	0	0	0	0	0	0	0	0	3
1399	1	0	85100	0	0	0	0	0	0	0	0	0	0	0	0
1400	1	0	56188	0	0	0	0	0	0	0	0	0	0	0	0
1401	1	0	32405	0	0	9	0	0	0	0	0	0	0	0	9
1402	1	0	56188	0	0	0	0	0	0	0	0	0	0	0	0
1403	1	1	56188	3	0	0	0	0	0	0	0	0	0	0	0

TAZ	TPGN DIST	HOUSEHOLDS	HHLD INCOME	HHLD POP	GRP QTRS	BASIC EMP	RHRET EMP	RMRET EMP	SCSER EMP	SOSER EMP	BWOTH EMP	ELEM SCHL	HIGH SCHL	COLLEGE	TOTAL EMP
1404	1	0	56188	0	0	0	0	0	0	0	0	0	0	0	0
1405	1	0	56188	0	0	0	0	0	0	0	0	0	0	0	0
1406	1	329	56188	996	0	3	10	0	1	6	5	0	0	0	25
1407	1	0	63290	0	0	0	0	0	0	0	0	0	0	0	0
1408	1	0	56188	0	0	0	0	0	0	0	0	0	0	0	0
1409	1	0	56188	0	0	0	0	0	0	0	0	0	0	0	0
1410	1	95	56188	261	0	0	0	0	0	0	0	0	0	0	0
1411	1	310	56188	853	0	54	0	0	6	0	0	0	0	0	60
1412	1	572	56188	1710	0	78	57	0	33	0	1	0	0	0	169
1413	1	424	63955	1310	0	0	17	0	0	1	0	0	0	0	18
1414	1	426	63955	1172	0	12	0	0	0	0	0	0	0	0	12
1415	1	163	63955	466	0	89	0	0	4	0	0	0	0	0	93
1416	1	450	95000	971	0	2	0	0	145	4	1	0	0	0	152
1417	1	346	95000	1059	0	5	0	0	135	62	2	765	0	0	204
1418	1	0	102455	0	0	2	0	0	0	0	0	0	0	0	2
1419	1	0	56188	0	0	0	0	0	0	0	0	0	0	0	0
1420	1	0	56188	0	0	5	0	0	0	0	0	0	0	0	5
1421	1	0	56188	0	0	3	0	0	0	0	0	0	0	0	3
1422	1	0	56188	0	0	3	0	0	0	0	0	0	0	0	3
1423	1	0	56188	0	0	5	0	0	0	0	0	0	0	0	5
1424	1	0	56188	0	0	3	0	0	0	0	0	0	0	0	3
1425	1	0	56188	0	0	3	0	0	0	0	0	0	0	0	3
1426	1	0	56188	0	0	0	0	0	0	0	0	0	0	0	0
1427	1	0	56188	0	0	3	0	0	0	0	0	0	0	0	3
1428	1	0	56188	0	0	3	0	0	0	0	0	0	0	0	3
1429	1	0	56188	0	0	2	0	0	0	0	0	0	0	0	2
1430	1	0	56188	0	0	2	0	0	0	0	0	0	0	0	2
1431	1	0	56188	0	0	1	0	0	0	0	0	0	0	0	1
1432	1	0	56188	0	0	0	0	0	0	0	0	0	0	0	0
1433	1	46	56188	127	0	0	0	0	0	0	0	0	0	0	0
1434	1	381	56188	1307	0	50	0	0	27	21	0	0	0	0	98
1435	1	446	78050	1227	0	13	0	0	2	32	0	0	2621	0	47
1436	1	365	78050	1153	0	23	20	0	41	13	11	0	0	0	108
1437	1	101	73655	346	3	112	0	0	0	0	0	0	0	0	112
1438	1	38	65355	92	0	48	0	0	0	2	0	0	0	0	50
1439	1	22	65355	74	0	11	0	0	0	0	0	0	0	0	11
1440	1	76	65355	269	0	81	0	0	4	52	8	0	0	0	145

TAZ	TPGN DIST	HOUSEHOLDS	HHLD INCOME	HHLD POP	GRP QTRS	BASIC EMP	RHRET EMP	RMRET EMP	SCSER EMP	SOSER EMP	BWOTH EMP	ELEM SCHL	HIGH SCHL	COLLEGE	TOTAL EMP
1441	1	53	65355	220	0	2	0	0	4	1	0	0	0	0	7
1442	1	30	65355	78	0	22	0	0	0	0	0	0	0	0	22
1443	1	0	65355	0	0	120	0	0	0	0	28	0	0	0	148
1444	1	0	56188	0	0	1	0	0	0	0	0	0	0	0	1
1445	1	0	56188	0	0	0	0	0	0	0	0	0	0	0	0
1446	1	119	56188	343	0	312	0	0	32	97	2	0	0	0	443
1447	1	167	47220	485	0	11	0	0	33	5	26	0	0	0	75
1448	1	466	39770	926	0	6	0	0	0	0	0	0	0	0	6
1449	1	290	76340	926	0	19	235	0	16	51	0	0	0	0	321
1450	1	181	67030	614	0	88	0	0	247	12	6	1258	0	0	353
1451	1	236	95905	676	0	0	0	0	13	24	0	0	0	0	37
1452	1	173	95905	623	0	41	0	0	25	0	2	0	0	0	68
1453	1	480	95905	991	0	0	0	0	0	0	0	0	0	0	0
1454	1	392	53750	1078	0	0	0	0	1	0	0	0	0	0	1
1455	1	459	53750	1262	0	0	0	0	0	139	0	0	0	0	139
1456	1	1	53750	4	0	2	0	0	0	0	0	0	0	0	2
1457	1	447	56188	1692	0	0	0	5	243	0	22	0	0	0	270
1458	1	446	56050	921	0	0	0	0	1	1	0	0	0	0	2
1459	1	575	56050	2082	0	5	0	0	99	20	22	1164	0	0	146
1460	1	155	56050	500	0	0	9	0	49	10	0	0	0	0	68
1461	1	62	52085	192	13	51	0	0	1	0	0	0	0	0	52
1462	1	157	98490	530	0	0	0	8	0	16	0	0	0	0	24
1463	1	523	98490	1636	0	11	0	4	0	1	0	0	0	0	16
1464	1	414	50215	1139	5	0	0	0	0	18	0	0	0	0	18
1465	1	430	72000	1443	0	5	0	0	44	4	1	495	0	0	54
1466	1	500	72000	1684	0	68	0	0	4	23	3	0	0	0	98
1467	1	460	72000	1319	3	2	0	0	3	18	0	0	0	0	23
1468	1	475	72000	1517	0	6	0	0	3	13	4	0	0	0	26
1469	1	1	72000	2	0	0	0	0	0	0	0	0	0	0	0
1470	1	1	56188	3	0	0	0	0	0	0	0	0	0	0	0
1471	1	0	56188	0	0	61	0	0	0	0	0	0	205	0	61
1472	1	0	56188	0	0	0	0	0	0	0	0	0	0	0	0
1473	1	0	56188	0	0	0	0	0	0	0	0	0	0	0	0
1474	1	9	56188	22	0	56	0	0	4	8	35	0	0	0	103
1475	1	73	185830	201	0	8	0	0	0	1	0	0	0	0	9
1476	1	0	185830	0	0	0	0	0	0	0	0	0	0	0	0
1477	1	0	185830	0	0	0	0	0	0	0	0	0	0	0	0

TAZ	TPGN DIST	HOUSEHOLDS	HHLD INCOME	HHLD POP	GRP QTRS	BASIC EMP	RHRET EMP	RMRET EMP	SCSER EMP	SOSER EMP	BWOTH EMP	ELEM SCHL	HIGH SCHL	COLLEGE	TOTAL EMP
1478	1	6	185830	17	0	0	0	0	0	0	0	0	0	0	0
1479	1	0	86550	0	0	0	0	0	0	0	0	0	0	0	0
1480	1	26	86550	73	0	0	0	0	0	0	0	0	0	0	0
1481	1	9	86550	26	0	1	0	0	0	0	0	0	0	0	1
1482	1	13	86550	36	0	0	0	0	0	0	0	0	0	0	0
1483	1	1	86550	3	0	34	0	0	0	0	0	0	0	0	34
1484	1	0	56188	0	0	0	0	0	0	0	0	0	0	0	0
1485	1	0	56188	0	0	0	0	0	0	0	0	0	0	0	0
1486	1	158	56188	535	0	15	0	0	197	3	0	1111	0	0	215
1487	1	197	88280	552	0	0	31	0	39	57	1	0	0	0	128
1488	1	243	61910	736	0	0	0	0	0	0	0	0	0	0	0
1489	1	420	61910	1155	0	17	130	3	0	152	27	0	0	0	329
1490	1	464	61910	1110	0	14	0	0	2	2	0	0	2433	0	18
1491	1	0	60625	0	0	0	0	0	0	0	0	0	0	0	0
1492	1	0	56188	0	0	0	0	0	0	0	0	0	0	0	0
1493	1	0	56188	0	0	0	0	0	0	0	0	0	0	0	0
1494	1	2	56188	7	0	0	0	0	0	0	0	0	0	0	0
1495	1	0	56188	0	0	0	0	0	0	0	0	0	0	0	0
1496	1	0	56188	0	0	0	0	0	0	0	0	0	0	0	0
1497	1	0	56188	0	0	3	0	0	0	0	0	0	0	0	3
1498	1	2	56188	6	0	3	0	0	0	0	0	0	0	0	3
1499	1	1	56188	3	0	3	0	0	0	0	0	0	0	0	3
1500	1	2	56188	9	0	3	0	0	0	0	0	0	0	0	3
1501	1	1	56188	2	0	3	0	0	0	0	0	0	0	0	3
1502	1	51	56188	188	0	0	0	0	0	4	0	0	0	0	4
1503	1	46	81095	151	0	0	0	0	0	14	0	0	205	0	14
1504	1	410	81095	1413	0	18	0	0	0	25	3	0	0	0	46
1505	1	117	81095	404	0	0	0	0	1	0	0	0	0	0	1
1506	1	62	81095	202	0	0	0	0	0	4	0	0	0	0	4
1507	1	53	81095	173	0	26	0	0	0	0	0	0	0	0	26
1508	1	26	81095	75	0	0	0	0	0	0	0	0	0	0	0
1509	1	10	81095	23	0	0	0	0	0	0	0	0	0	0	0
1510	1	15	102170	49	0	2	0	0	0	18	0	0	0	0	20
1511	1	16	65750	33	0	0	0	0	0	0	0	0	0	0	0
1512	1	13	65750	52	0	0	0	0	0	0	0	0	0	0	0
1513	1	19	65750	57	0	0	0	0	0	0	0	0	0	0	0
1514	1	12	65750	29	0	0	0	0	0	2	4	0	0	0	6

TAZ	TPGN DIST	HOUSEHOLDS	HHLD INCOME	HHLD POP	GRP QTRS	BASIC EMP	RHRET EMP	RMRET EMP	SCSER EMP	SOSER EMP	BWOTH EMP	ELEM SCHL	HIGH SCHL	COLLEGE	TOTAL EMP
1515	1	2	65750	6	0	3	0	0	0	0	0	0	0	427	3
1516	1	1	34690	2	0	3	0	0	0	0	0	0	0	0	3
1517	1	0	34690	0	0	2	0	0	0	0	0	0	0	0	2
1518	1	0	34690	0	0	0	0	0	0	0	0	0	0	0	0
1519	1	0	34690	0	0	22	0	0	0	0	0	0	0	0	22
1520	1	0	34690	0	0	0	0	0	0	0	0	0	0	0	0
1521	1	0	34690	0	0	2	0	0	0	0	0	0	0	0	2
1522	1	0	34690	0	0	0	0	0	0	0	0	0	0	0	0
1523	1	0	34690	0	0	0	0	0	0	0	0	0	0	0	0
1524	1	1	26250	3	0	0	0	0	0	0	0	0	0	0	0
1525	1	0	26250	0	0	3	0	0	0	0	0	0	0	0	3
1526	1	0	26250	0	0	29	0	0	0	0	0	0	0	0	29
1527	1	0	26250	0	0	0	0	0	0	0	0	0	0	0	0
1528	1	0	26250	0	0	0	0	0	0	0	0	0	0	0	0
1529	1	0	26250	0	0	0	0	0	0	0	0	0	0	0	0
1530	1	0	26250	0	0	0	0	0	0	0	0	0	0	0	0
1531	1	0	26250	0	0	0	0	0	0	0	0	0	0	0	0
1532	1	0	56188	0	0	0	0	0	0	0	0	0	0	0	0
1533	1	0	56188	0	0	0	0	0	0	0	0	0	0	0	0
1534	1	0	56188	0	0	0	0	0	0	0	0	0	0	0	0
1535	1	0	56188	0	0	3	0	0	0	0	0	0	0	0	3
1536	1	0	56188	0	0	0	0	0	0	0	0	0	0	0	0
1537	1	1	56188	3	0	3	0	0	0	0	0	0	0	0	3
1538	1	0	62750	0	0	0	0	0	0	0	0	0	0	0	0
1539	1	0	62750	0	0	0	0	0	0	0	0	0	0	0	0
1540	1	0	62750	0	0	3	0	0	0	0	0	0	0	0	3
1541	1	0	62750	0	0	22	0	0	0	0	0	0	0	0	22
1542	1	6	62750	25	0	4	0	0	0	0	0	0	0	0	4
1543	1	5	62750	14	0	4	0	0	18	0	0	0	0	0	22
1544	1	1	62750	3	0	0	0	0	0	0	0	0	0	0	0
1545	1	0	62750	0	0	3	0	0	0	0	0	0	0	0	3
1546	1	1	66665	3	0	3	0	0	0	0	0	0	0	0	3
1547	1	0	66665	0	0	1	0	0	0	0	0	0	0	0	1
1548	1	0	66665	0	0	5	0	0	0	0	0	0	0	0	5
1549	1	7	66665	18	0	3	0	0	0	0	0	0	0	0	3
1550	1	0	66665	0	0	3	0	0	0	0	0	0	0	0	3
1551	1	1	66665	3	0	3	0	0	0	0	0	0	0	0	3

TAZ	TPGN DIST	HOUSEHOLDS	HHLD INCOME	HHLD POP	GRP QTRS	BASIC EMP	RHRET EMP	RMRET EMP	SCSER EMP	SOSER EMP	BWOTH EMP	ELEM SCHL	HIGH SCHL	COLLEGE	TOTAL EMP
1552	1	0	66665	0	0	3	0	0	0	0	0	0	0	0	3
1553	1	0	66665	0	0	3	0	0	0	0	0	0	0	0	3
1554	1	0	66665	0	0	3	0	0	0	0	0	0	0	0	3
1555	1	0	66665	0	0	3	0	0	0	0	0	0	0	0	3
1556	1	0	66665	0	0	3	0	0	0	0	0	0	0	0	3
1557	1	15	66665	53	0	2	0	0	0	0	0	0	0	0	2
1558	1	0	66665	0	0	3	0	0	0	0	0	0	0	0	3
1559	1	0	55940	0	0	3	0	0	0	0	0	0	0	0	3
1560	1	0	55940	0	0	3	0	0	0	0	0	0	0	0	3
1561	1	1	55940	5	0	3	0	0	0	0	0	0	0	0	3
1562	1	41	55940	147	0	2	0	0	0	4	0	0	0	0	6
1563	1	10	55940	34	0	3	0	0	0	0	0	0	0	0	3
1564	1	3	55940	4	0	3	0	0	0	0	0	0	0	0	3
1565	1	6	55940	17	0	2	0	0	0	6	0	0	0	0	8
1566	1	19	55940	48	0	3	0	0	0	0	0	0	0	0	3
1567	1	0	55940	0	0	4	0	0	0	0	0	0	0	0	4
1568	1	0	55940	0	0	3	0	0	0	0	0	0	0	0	3
1569	1	0	63750	0	0	3	0	0	0	0	0	0	0	0	3
1570	1	1	63750	4	0	3	0	0	0	0	0	0	0	0	3
1571	1	31	63750	97	0	1	0	0	0	25	0	0	0	0	26
1572	1	27	63750	59	0	0	0	0	0	0	22	19	0	0	22
1573	1	8	63750	26	0	3	0	0	0	0	0	0	0	0	3
1574	1	3	63750	8	0	6	0	0	0	0	0	0	0	0	6
1575	3	99	63750	243	0	0	0	0	0	0	0	0	0	0	0
1576	3	48	56188	87	0	0	0	0	1	0	0	0	0	0	1
1577	3	11	56188	21	0	0	0	0	0	0	0	0	0	1349	0
1578	3	0	56188	0	0	0	0	0	0	0	0	0	0	0	0
1579	3	60	56188	125	0	0	0	0	2	0	0	0	0	0	2
1580	5	0	56188	0	0	0	0	0	0	0	50	0	0	0	50
1581	5	444	56188	1113	0	69	0	0	0	1	0	0	0	0	70
1582	5	174	56188	456	0	0	0	0	0	1	0	0	0	0	1
1583	5	102	56188	295	0	0	0	0	0	0	0	0	0	0	0
1584	4	6	56188	12	0	2	36	18	0	0	0	0	0	0	20
1585	4	0	70155	0	0	3	0	0	0	0	0	0	0	0	3
1586	4	1	70155	3	0	0	0	0	0	0	0	0	0	0	0
1587	4	2	70155	1	0	0	0	0	0	0	0	0	0	0	0
1588	4	0	56188	0	0	0	0	0	0	0	0	0	0	0	0

TAZ	TPGN DIST	HOUSEHOLDS	HHLD INCOME	HHLD POP	GRP QTRS	BASIC EMP	RHRET EMP	RMRET EMP	SCSER EMP	SOSER EMP	BWOTH EMP	ELEM SCHL	HIGH SCHL	COLLEGE	TOTAL EMP
1589	4	0	56188	0	0	0	0	0	0	0	0	0	0	0	0
1590	4	1	56188	3	0	0	0	0	0	0	0	0	0	0	0
1591	4	0	56188	0	0	0	0	0	0	0	0	0	0	0	0
1592	4	0	56188	0	0	0	0	0	0	0	0	0	0	0	0
1593	4	0	56188	0	0	0	0	0	0	0	0	0	0	0	0
1594	4	4	48440	10	0	0	0	0	0	1	0	0	0	0	1
1595	4	6	48440	14	0	10	0	0	0	0	2	0	0	0	12
1596	4	0	48440	0	0	0	0	0	0	0	0	0	0	0	0
1597	4	4	48440	10	0	0	0	0	0	0	0	0	0	0	0
1598	4	12	46250	19	0	0	0	0	0	0	0	0	0	0	0
1599	4	0	46250	0	0	0	0	0	0	0	0	0	0	0	0
1600	4	2	46250	7	0	0	0	0	0	0	0	0	0	0	0
1601	4	0	56188	0	0	0	0	0	0	0	0	0	0	0	0
1602	4	9	56188	26	0	0	0	0	0	0	0	0	0	0	0
1603	4	3	26500	3	0	12	0	0	0	0	0	0	0	0	12
1604	4	7	26040	18	0	4	0	0	0	0	0	0	0	0	4
1605	4	15	26040	37	0	0	0	0	0	0	0	0	0	0	0
1606	4	0	26040	0	0	0	0	0	0	0	0	0	0	0	0
1607	4	9	56188	25	0	0	0	0	0	0	0	0	0	0	0
1608	4	4	32345	1	0	0	0	0	0	0	0	0	0	0	0
1609	4	4	65155	4	0	0	0	0	0	0	0	0	0	0	0
1610	4	80	65155	213	0	0	0	0	0	0	0	0	0	0	0
1611	4	152	65155	453	0	0	0	0	0	17	0	0	0	0	17
1612	4	15	28750	33	0	0	0	0	0	0	0	0	0	0	0
1613	4	58	4500	136	0	0	0	0	135	1	0	0	0	0	136
1614	4	46	6965	98	0	0	0	0	0	0	0	0	0	0	0
1615	4	93	65835	230	0	3	0	0	0	0	0	0	0	0	3
1616	4	45	29720	95	0	6	0	0	0	0	0	0	0	0	6
1617	4	83	48395	245	0	192	0	0	1	15	0	0	0	0	208
1618	4	0	34885	0	0	0	0	0	0	0	0	0	0	0	0
1619	4	0	34885	0	0	0	0	0	0	0	0	0	0	0	0
1620	4	266	16125	747	0	0	0	0	0	0	0	0	0	0	0
1621	4	0	43440	0	0	0	0	0	0	0	0	0	0	0	0
1622	4	110	56188	83	0	0	83	4	56	4	0	0	0	0	147
1623	4	87	22030	231	0	18	0	0	0	6	0	0	0	0	24
1624	4	117	43015	296	0	0	0	0	0	0	0	0	0	0	0
1625	4	0	41250	0	0	1	0	0	0	0	0	0	0	0	1

TAZ	TPGN DIST	HOUSEHOLDS	HHLD INCOME	HHLD POP	GRP QTRS	BASIC EMP	RHRET EMP	RMRET EMP	SCSER EMP	SOSER EMP	BWOTH EMP	ELEM SCHL	HIGH SCHL	COLLEGE	TOTAL EMP
1626	4	31	56188	56	0	185	0	0	12	1	10	0	0	0	208
1627	4	59	42840	88	0	26	0	0	0	2	0	0	0	0	28
1628	4	37	42840	94	1	0	0	0	0	0	4	0	0	0	4
1629	4	10	63750	37	0	31	0	0	63	0	0	0	0	0	94
1630	4	21	63750	64	0	0	0	0	0	0	0	0	0	0	0
1631	4	11	63750	28	0	0	0	0	0	0	0	0	0	0	0
1632	4	11	63750	24	0	0	0	0	0	6	0	0	0	0	6
1633	4	16	61250	34	0	0	0	0	17	0	0	0	0	0	17
1634	4	1	24030	2	0	0	0	0	0	0	0	0	0	0	0
1635	4	0	24030	0	0	0	0	0	0	0	0	0	0	0	0
1636	4	103	24030	328	0	0	0	0	0	0	0	0	0	0	0
1637	4	112	49220	304	0	0	8	0	0	6	0	0	0	0	14
1638	4	7	27440	19	0	0	0	0	0	0	0	0	0	0	0
1639	4	2	55000	4	0	0	0	0	0	0	0	1	1505	0	0
1640	4	7	81630	20	0	0	0	0	0	0	0	0	0	0	0
1641	4	3	28970	10	0	9	0	0	0	0	0	0	0	0	9
1642	4	4	28970	9	0	3	0	0	0	0	0	0	0	0	3
1643	4	0	56188	0	0	3	0	0	0	0	0	0	0	0	3
1644	4	1	52815	3	0	9	0	0	3	0	6	0	0	0	18
1645	4	0	61250	0	0	0	0	0	0	0	0	0	0	0	0
1646	4	59	63750	146	0	0	159	0	12	139	0	0	0	0	310
1647	4	629	58750	1867	0	14	0	0	2	19	0	0	111	0	35
1648	4	587	45625	1454	0	15	12	17	123	49	0	764	0	0	216
1649	4	78	45625	219	0	19	4	79	10	4	0	0	0	0	116
1650	4	92	45625	300	0	0	4	0	2	5	2	0	0	0	13
1651	2	58	50960	183	0	12	0	0	1	11	0	0	0	0	24
1652	2	0	45940	0	0	91	7	0	0	11	0	0	0	0	109
1653	2	7	45940	22	0	21	0	0	0	0	0	0	0	0	21
1654	2	248	18750	841	0	0	0	0	0	0	0	0	0	0	0
1655	2	455	26195	2040	0	0	2	0	1	11	0	0	0	0	14
1656	2	14	26195	49	21	157	0	0	0	0	0	0	0	0	157
1657	2	81	25940	256	0	2	0	0	41	0	0	0	0	0	43
1658	2	91	48280	304	0	227	0	0	0	6	64	0	0	0	297
1659	2	6	24305	16	0	6	0	0	0	0	0	0	0	0	6
1660	2	139	29750	335	0	6	0	0	0	0	0	0	0	0	6
1661	2	2	42280	9	0	3	0	0	0	0	0	0	0	0	3
1662	2	8	42280	22	0	8	70	0	11	0	0	0	0	0	89

TAZ	TPGN DIST	HOUSEHOLDS	HHLD INCOME	HHLD POP	GRP QTRS	BASIC EMP	RHRET EMP	RMRET EMP	SCSER EMP	SOSER EMP	BWOTH EMP	ELEM SCHL	HIGH SCHL	COLLEGE	TOTAL EMP
1663	2	16	26665	63	0	1	0	0	75	0	41	669	0	0	117
1664	2	357	13750	1494	0	51	58	1	288	136	18	1393	177	0	552
1665	2	61	26250	161	0	613	0	0	0	75	77	0	0	0	765
1666	2	155	49585	417	0	1009	14	12	0	15	3	0	0	0	1053
1667	2	77	49585	240	0	207	0	0	0	0	0	52	0	0	207
1668	1	6	27500	15	0	297	428	0	66	14	38	0	0	0	843
1669	2	19	37815	51	0	74	0	0	0	0	4	0	0	0	78
1670	2	0	24730	0	0	5	0	0	0	0	0	0	0	0	5
1671	2	0	56188	0	0	11	0	0	0	0	0	0	0	0	11
1672	2	24	56188	91	0	246	0	0	0	0	0	0	0	0	246
1673	2	81	44375	235	0	555	0	0	0	29	0	0	0	0	584
1674	2	21	33440	69	0	184	0	0	0	0	10	0	0	0	194
1675	2	39	56188	133	0	1210	0	0	0	0	72	0	0	0	1282
1676	2	21	56188	61	0	127	0	0	0	0	0	0	0	0	127
1677	3	118	56188	188	0	26	0	0	23	0	0	0	0	0	49
1678	3	5	29165	13	4	27	0	0	0	0	0	0	0	0	27
1679	1	0	29165	0	0	0	0	0	0	0	0	0	0	0	0
1680	1	18	102265	53	0	0	0	0	0	5	0	0	0	0	5
1681	2	0	102265	0	0	6	0	0	0	0	0	0	0	0	6
1682	2	8	56188	23	0	3	0	0	0	0	0	0	0	0	3
1683	2	0	56188	0	0	3	0	0	0	1	0	0	0	0	4
1684	1	0	56188	0	0	0	0	0	0	0	0	0	0	0	0
1685	1	34	125000	95	0	322	0	0	2	0	0	0	0	0	324
1686	1	0	125000	0	0	3	0	0	0	0	0	0	0	0	3
1687	2	7	125000	21	0	102	0	0	0	0	0	0	0	0	102
1688	4	0	102265	0	0	3	0	0	0	0	0	0	0	0	3
1689	1	3	42840	9	0	1	0	0	0	0	0	0	0	0	1
1690	1	5	100585	14	0	2	0	0	0	0	9	0	0	0	11
1691	1	0	12085	0	0	9	0	0	0	0	0	0	0	0	9
1692	1	0	49750	0	0	0	0	0	0	16	0	0	0	0	16
1951	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1952	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1953	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1954	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1955	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1956	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1957	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0

TAZ	TPGN DIST	HOUSEHOLDS	HHLD INCOME	HHLD POP	GRP QTRS	BASIC EMP	RHRET EMP	RMRET EMP	SCSER EMP	SOSER EMP	BWOTH EMP	ELEM SCHL	HIGH SCHL	COLLEGE	TOTAL EMP
1958	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1959	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1960	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1961	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1962	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1963	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1964	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1965	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1966	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1967	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1968	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1969	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1970	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1971	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1972	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1973	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1974	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1975	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1976	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1977	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1978	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1979	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1980	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1981	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1982	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1983	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1984	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		262136	**73571956**	**745954**	**33248**	**98896**	**25218**	**10727**	**56223**	**75540**	**19792**	**118576**	**51985**	**30674**	**286396**

Appendix B. Comparison of Observed Speeds vs Modeled Speeds

PRIMARY	STREET	LIMITS	LOCATION	LINK_TSVA	OBS			MODEL			
					AMPK	PMPK	DY	AM	PM	OF	DY
ARTICLE II. 25M											
res	A Street (Taft)	Arroyo Way to 10th Street	between				25.00				
res	Ash Street (Taft)	Lincoln Street to SR 119	between				25.00				
collector	Asher Avenue/4th Street	Wood Street to 450' n/o Pico	s/o Pico, n/o P				25.00				
res	Bonita Road (Lamont)	Main Street to Habecker Road	between				25.00				
collector	Butte Avenue (Randsb	Lexington Street to Burma Road	w/o Lexington				25.00				
res	Carnation Avenue (La	Panama Road to Collision S	s/o Collision S				25.00				
res	Cedar Street (Taft)	Lincoln Street to SR 119	w/o Tyler St				25.00				
res	Collision Street (La	Buttonwillow Street to Carna	between				25.00				
res	Edwards Avenue	Mt. Vernon to Pico Street	s/o Locust Ravi				25.00				
res	Elm Street (Taft)	Lincoln Street to Harrison S	Between				25.00				
res	Feliz Drive	Washington Street to the end	e/o Simpson Road				25.00				
collector	Habecker Road (Lamont)	Segrue Road to Panama Road	n/o Segrue s/o				25.00				
res	Hall Road (Lamont)	San Emidio Street to Habecke	Santa Barbara				25.00				
res	Inyo Street (Mojave)	SR 58 to Roper Street	w/o Roper Street				25.00				
res	Lierly Avenue (Taft)	Wood Street to n/o Oak Street	n/o Crystal Avenue				25.00				
collector	Lilly Street (Lamont	Collision Street to McKee Road	s/o McKee Road				25.00				
res	Main Street Extension	SR 33 to w/o SR 33	w/o SR 33				25.00				
res	McKee Road	Main Street to Lilly Street	e/o SR 184				25.00				
res	Mount Pinos Way	Monterey Trail					25.00				
res	Myrtle Avenue	Panama Road to DiGiorgio R	n/o Gregory Avenue				25.00				
res	Olive Avenue (Taft)	Wood Street to n/o Oak Street	n/o Crystal Avenue				25.00				
res	Orange Street (Rosam	20th Street W. to Sierra Highway	Between				25.00				
res	Pico Avenue	Edwards Avenue to Oswell Street	w/o Oswell Street				25.00				
collector	San Diego Street (La	Hall Road to DiGiorgio Road	s/o Kearney Avenue				25.00				
collector	Segrue Road (Lamont)	SR 184 to Habecker Road	between				25.00				
collector	25th Street	Rosamond Boulevard.to Starbrite	n/o Rosamond Blvd				25.00				
collector	Verdugo Lane	SR 58 to southern end	s/o SR 58				25.00				
res	Wharton Avenue (Lamo	San Diego Street to Myrtle S	w/o Myrtle Street				25.00				
ARTICLE III. 30											
10.04.050	Center Street	Center Street to Oswell Street	w/o Descanso Street				30.00				
10.04.051	Deacon Road	Sterling Road to Fairfax R	e/o Sterling Road				30.00				
10.04.060	Sierra Way	Kernville Road to Buena Vi	between				30.00				

PRIMARY	STREET	LIMITS	LOCATION	LINK_TSVA	OBS			MODEL			
					AMPK	PMPK	DY	AM	PM	OF	DY
10.04.065	South 10th Street	A Street to 200' s/o Buena V	Buena Vista Pl.				30.00				
10.04.067	Tracy Avenue	I-5 NB on-ramp to Willow Dr	between				30.00				
10.04.070	Virginia Avenue	Sunset RxR xing to Washin	Monticello St.				30.00				
	Buttonwillow Drive	SR 58 to Canal	n/o of 3rd St.				30.00				
ARTICLE IV. 35M											
10.04.080	Alta Vista Drive	Bernard to Panorama Drive	n/o Irene St.	35.00			35.00	28.78	28.78	28.78	28.78
10.04.090	Belle Terrace	Stine Road to So. H Street	Piute St.	40.00			35.00	29.74	29.3	29.64	29.58
10.04.095	E Belle Terrace	Union Avenue to Cottonwood R	Jastro Av.	35.00			35.00	26.18	26.22	26.21	26.21
10.04.100	Boron Avenue	Mule Team Road to SR 58 EB	Prospect St.	50.00			35.00	40.28	40.26	40.22	40.22
10.04.105	Brae Burn Drive	Sterling Road to Counrtry	Skokie Rd.				35.00				
10.04.115	Kernville Road	Tobias Street to Sierra Way	Buena Vista Dr.				35.00				
10.04.130	Columbus Street	100' w/o Loma Linda Dr to	at N. Kern	40.00			35.00	30.55	30.17	30.57	30.48
10.04.135	Decatur Street	Airport to North Chester	e/o Wells Av.	40.00			35.00	29.36	27.4	28.32	28.24
10.04.345	Fairview Road	So Union Avenue to Sparks S	e/o So Union Av	45.00			35.00	25.05	24.95	25.01	24.99
10.04.145	Flower Street	Owens Street to Mt. Vernon	Robinson St.	40.00			35.00	28	27.8	28.31	28.12
10.04.150	Fresno Avenue	In City of Shafter	w/o Park Ln.				35.00				
10.04.155	Gibson Street	Rosedale Highway.to Gilmore A	s/o East Dr.	35.00			35.00	19.95	19.37	20.63	19.88
10.04.160	Gilmore Avenue	Pierce Road to Gibson St.	e/o Standard St	35.00			35.00	21.97	16.47	19.99	18.74
10.04.163	Grapevine Road West	I-5 S ramps to I-5 N ramp	Edmonston Pump P				35.00				
10.04.163	Grapevine Road East	I-5 S ramps to I-5 N ramp	D St.				35.00				
10.04.165	Harrison Street	Ash to Grevillea 600' nor	Fir St.				35.00				
10.04.167	Hughes Lane	Terrace Way to Terrace Wy	n/o Terrace Wy				35.00				
10.04.170	Kentucky Street	Williams St. 600' east to	w/o Center Plac	40.00			35.00	31.84	30.98	31.49	31.38
10.04.175	Madison Street	Casa Loma to Belle Terrac	s/o Del Mar St.	35.00			35.00	21.99	21.67	21.85	21.81
10.04.177	Mariposa Road	White Pine Drive to Old Tow	at Valley Vista				35.00				
10.04.180	McCray Street	Day Avenue to Norris Road	Ray St.	35.00			35.00	25.57	25.31	25.42	25.42
10.04.181	McCray Street.	MacBracy to Seventh Stand	n/o MacBrady	45.00			35.00	35.08	34.88	34.98	34.96
10.04.185	Mil Potrero Highway	Woodland Dr. 250' w to Ce	between				35.00				
	Mt. Pinos Way	San Carlos Tr. to Frazier	at Johnson Road				35.00				
	Mt. Pinos Way	Walnut Tr. to Frazier Mtn	at West End Drive				35.00				
10.04.187	Monica Street.	Breckenridge Road to Pione	Lanora				35.00				
10.04.188	Morning Drive	Niles Street to Willis Ave	Marie Avenue	35.00			35.00	24.53	24.53	24.53	24.53
10.04.190	North Chester Avenue	Kern River Bridge-Bedford Way1	at Linda Vista	40.00			35.00	29.27	29.35	29.34	29.34
10.04.195	Oildale Drive	Roberts Lane to Norris Road	n/o Woodrow Av.	35.00			35.00	26.42	25.89	26.13	26.08
10.04.200	Panama Road	SR184 to Habacker Road .25	w/o Carnation R	50.00			35.00	38.12	38.31	38.3	38.27

PRIMARY	STREET	LIMITS	LOCATION	LINK_TSVA	OBS			MODEL			
					AMPK	PMPK	DY	AM	PM	OF	DY
10.04.204	Pinto Street	SR 178 to Ward Avenue	Between				35.00				
10.04.205	Pioneer Drive	Oswell to Monica Street	Meadow Street	35.00			35.00	24.52	24.27	24.47	24.43
10.04.215	Quantico Avenue	Brundage Lane to Edison H	n/o Potomac Avenue	35.00			35.00	26.56	26.16	26.36	26.32
10.04.220	S Real Road	Madrid Avenue to Elcia Drive	s/o Elcia Drive	35.00			35.00	25.66	25.3	25.47	25.44
10.04.225	Rosamond Boulevard	SR14 to Sierra Highway	e/o Desert Street	50.00			35.00	27.2	25.79	26.26	26.16
10.04.230	Sierra Highway	Elm Street to Rosamond Blvd	n/o Rosamond Blvd	35.00			35.00	30.38	30.31	30.35	30.34
10.04.233	Sparks Street	Fairview Road to Pacheco	Price Street	35.00			35.00	22.29	22.13	22.21	22.19
10.04.235	Sterling Road	Edison Highway to Brae Burn D	s/o Gardinia Avenue				35.00				
10.04.240	Stine Road	Belle Terrace to Stockdal	at Fishering Drive	45.00			35.00	26.52	25.35	25.85	25.78
10.04.255	Tupman Road	Grace Avenue to SR 119	s/o Grace Avenue				35.00				
10.04.259	20th Street West	Orange Street to Rosamond Bl	Between				35.00				
10.04.260	Twenty Mule Team Road	Kern Avenue to James Street	Between				35.00				
10.04.263	Virginia Avenue	Mt Vernon Avenue to Oswell S	Easter Street				35.00				
10.04.263	Virginia Avenue	Washington Street to Mt. Ver	w/o Mt Vernon				35.00				
10.04.265	Washington Street	Virginia Avenue to E.Califor	Cole Street				35.00				
10.04.265	Washington Street	E. California Avenue to Edis	Cotton Way				35.00				
10.04.267	Wear Street	Rosedale Highway to .25 Mi. n	Claude Avenue				35.00				
10.04.269	Wood Street	10th Street to Taft City lim	e/o 10th Street				35.00				
10.04.262	Verdugo Lane	SR 58 to Meacham Road	s/o Dee Dee Avenue	45.00			35.00	31.08	29.83	30.8	30.53
10.04.120	Cedar Street	SR 119 to 3800 f	w/of crosswalk				35.00				
	Zephyr Lane	Fairfax to Whitendale	Midway				35.00				
ARTICLE V. 40MP											
10.04.270	Airport Drive	Brdsley Canal to Meadows	n/o Norris Road	45.00			40.00	31.88	31.61	31.9	31.83
10.04.280	Bernard Street	River Blvd to Mt. Vernon	Robinson Street	40.00			40.00	26.74	26.19	26.5	26.43
10.04.280	Bernard Street	150' e/o Magnolia to River	N Kern	40.00			40.00	31.56	31.4	31.52	31.49
10.04.295	Burbank Street	Mannel Avenue to SR 43	1000' w/o Manne				40.00				
10.04.297	Burlando Road	Evens Road to 650' n/o Nel	Panorama Road				40.00				
10.04.305	Casa Loma Drive	Union to Cottonwood Road	e/o S Union Avenue	40.00			40.00	32.17	31.92	32.06	32.03
10.04.303	Calvert Boulevard	SR 178 to Drummond Avenue	n/o Ward Avenue				40.00				
10.04.320	College Avenue	Mt Vernon Avenue to 100' w/o	Camino Primaver	35.00			40.00	26.88	26.45	26.71	26.65
10.04.323	Country Club Drive	Woodford Teh Road to Maripo	at Hill Street/Ova				40.00				
10.04.322	Day Avenue	N. Chester Avenue to Manor S	@ Barnett	35.00			40.00	26.72	26.68	26.7	26.7
10.04.327	Downing Avenue.	Coffee Road to Fruitvale A	e/o Alken Street	30.00			40.00	19.89	19.9	19.86	19.87
10.04.330	Erskine Creek Road	Lake Isabella Blvd to 8800'	1000' e/o Lk Isb				40.00				
10.04.335	Eucalyptus Drive	Fairfax Road to Park Drive	Ansol Lane				40.00				

PRIMARY	STREET	LIMITS	LOCATION	LINK_TSVA	OBS			MODEL			
					AMPK	PMPK	DY	AM	PM	OF	DY
10.04.340	Fairfax Road.	Edison Highway to College Avenue	at Pictoria	45.00			40.00	31.79	31.46	31.83	31.76
10.04.347	Fifteenth Street Wes	Rosmond Boulevard to 0.5 miles n	n/o Rosamond Blvd	50.00			40.00	43.35	43.34	43.35	43.35
10.04.355	Haley Street.	100' n/o Quincy to Knotts	s/o Grace Street	35.00			40.00	15.98	15.74	15.89	15.87
10.04.357	Jewetta Avenue.	Rosedale Highway to Hageman Road	Aimee Street	45.00			40.00	25.33	25.17	25.15	25.23
10.04.365	Knudsen Drive.	Olive Drive to Golden State	Olive Tree Court	35.00			40.00	17.75	16.75	17.36	17.19
10.04.370	Lake Isabella Boulevard	Caliente Bodfish Road to SR	n/o Nugget Avenue				40.00				
10.04.375	Lebec Road	950' south of Lebec OC no	Between				40.00				
10.04.384	McCray Road	Park Avenue to Lynch Canyon	s/o SR 178				40.00				
10.04.387	Meacham Road	Meacham Road to 1800' w/o	w/o Verdugo Lane	40.00			40.00	33.39	33.12	33.27	33.23
10.04.390	Ming Avenue	South P Street to South Unio	e/o South P Street	40.00			40.00	33.1	33.03	33.14	33.1
10.04.395	Mocal Road	5500' w/o F St. to 700' e	Between	45.00			40.00	28.59	27.74	28.22	28.18
10.04.400	Mt. Vernon Avenue	Del Amo Way to California	Oregon Street				40.00				
10.04.405	Niles Street	Virginia Avenue to Fairfax	at El Serento D	40.00			40.00	28.48	27.71	28.19	28.08
10.04.410	Norris Road	Coffee Road to Knudsen Dr.	w/o Almond Drive	40.00			40.00	29.01	28.4	28.69	28.65
10.04.420	Old Farm Rd	300' s/o Old Town Road to	s/o Christy Avenue				40.00				
10.04.422	Old Town Road	Woodford Teh Road to Maripo	at 22008 Old To				40.00				
10.04.435	P Street	Ming Avenue to Belle Terrac	s/o Belle Terra	35.00			40.00	28.57	28.41	28.53	28.49
10.04.440	Palm Avenue	Allen Road to Calloway D	Morning Rose Drive	40.00			40.00	28.87	28.88	28.98	28.93
10.04.445	Panama Road	SR 99 to 500' e/o Marvin	Aim Street	50.00			40.00	22.23	23.62	24.19	23.88
10.04.450	Panama Road	SR 184 to 3900' w/o SR184	w/o Gilbert Street	50.00			40.00	30.92	31.22	31.59	31.47
10.04.455	Patton Way	Weldon Avenue to Snow Road	Penny Marie Avenue	30.00			40.00	20.75	20.75	20.75	20.75
10.04.465	River Boulevard	100' s/o Pearl Street to Skyl	University				40.00				
10.04.470	Roberts Lane	700' w/o Sanford Lane to N	e/o Oildale Drive	35.00			40.00	28	27.7	27.92	27.86
10.04.472	Shafter Avenue	Orange Street to Riverside S	Richland Avenue				40.00				
10.04.475	S Chester Avenue	Ming Ave to S M Street	South K Sreet	0.49			40.00	30	30	30	30
10.04.475	S Chester Avenue	S M Street to city limits	s/o Dorian	40.00			40.00	32.07	31.76	31.92	31.89
10.04.477	Sterling Road	Brundage Lane to Edison Highway	Texas Street				40.00				
10.04.480	Strecker Street	SR 178 to Drummond Avenue	n/o Ward Avenue				40.00				
10.04.479	30th Street West	Rosamond Bl to Felsite A	n/o Rosamond Blvd				40.00				
10.04.485	Universe Avenue	McCray to N. Chester Avenue	Stockton Avenue				40.00				
10.04.505	White Lane	Kenny St. to Union Avenue	e/o Kenny Street	40.00			40.00	31.21	31.18	31.22	31.21
10.04.507	White Pine Drive	Woodford Teh Road to Maripo	e/o Mariposa Road				40.00				
10.04.511	Wilson Road	Chester Avenue to Union Avenue	w/o Donna Street	40.00			40.00	31.84	31.66	31.79	31.77
10.04.441	Palm Avenue	Renfro Rd to Benson Street	Between				40.00				
10.04.321	Curnow Road	S Union Avenue to 2000' west	Morning Rose Drive				40.00				

PRIMARY	STREET	LIMITS	LOCATION	LINK_TSVA	OBS			MODEL			
					AMPK	PMPK	DY	AM	PM	OF	DY
10.04.386	Meany Avenue	Fruitvale Avenue to Patton	e/of Alken St	30.00			40.00	19.25	18.9	19.35	19.14
	Woodward Avenue	Scribner Street to 46 Highway	at Tulare St.				40.00				
	Orange Street	35th Street West to 40th	midway				40.00				
ARTICLE VI. 45M											
10.04.515	Airport Drive	State Road to Roberts Lane	at Bearsley Av	40.00			45.00	26.34	26.08	26.67	26.44
10.04.517	Alfred Harrel Highway	1000' east and west of Ha	e/o and w/o Har	50.00			45.00	36.13	36.15	36.16	36.16
10.04.521	Brady Street	RT 178 to Las Flores Avenue	at Ward Ave.				45.00				
10.04.520	Breckenridge Road	Morning Drive to Vineland R	w/o Royal Way	45.00			45.00	36.52	36.31	36.41	36.38
10.04.525	Brown Road	SR 178 2300's/o and 2100'	n/o Orchard Ave				45.00				
10.04.530	Brundage Lane	Oswell Street to Edison Highway	e/o Sterling Rd	45.00			45.00	34	33.95	33.98	33.98
10.04.532	California Avenue	Washington Street 600' w to E	w/o Chamberlain	40.00			45.00	33.61	33.67	33.67	33.66
10.04.534	Calloway Drive	SR 58 to city boundary	s/o Greenacres	45.00			45.00	34.95	34.76	34.8	34.83
10.04.542	China Grade Loop	Airport Drive to Manor Street 10	Charlston Dr	35.00			45.00	27.03	27.09	27.13	27.1
10.04.545	Comanche Drive	Sycamore Drive to Varsity Drive	s/o Varsity Rd.	50.00			45.00	35.94	36.04	36.24	36.22
10.04.546	Tejon Highway	SR 223 to Windmere Road 700	n/o SR 223	50.00			45.00	37.68	37.81	37.77	37.77
10.04.550	Cottonwood Road	Padre St 228' n/o to Casa	n/o Cheatham Rd	45.00			45.00	25.88	25.61	25.85	25.8
10.04.553	Cuddy Valley Road	Lockwood Valley Road to 156	Lakewood Pl				45.00				
10.04.560	DiGiorgio Road	200' w/o Pierce Drive to SR	e/o Pierce Dr	40.00			45.00	23.18	23.04	23.18	23.13
10.04.565	Edison Highway	Edison Rd 200' W to Malaga	e/o Edison Rd				45.00				
10.04.570	Fairfax Road	E Brundage Lane to Edison H	n/o E Brundage	45.00			45.00	34.6	34.08	34.44	34.37
10.04.575	Fairfax Road	Redbank Road 200' S to E Bru	.25 mi s/o SR 5	50.00			45.00	23.36	23.53	23.74	23.67
10.04.583	Frazier Mtn Prk Rd	Lockwood Valley Road to 490	1 Mi. w/o I-5				45.00				
10.04.585	Fruitvale Avenue	Olive Drive to Snow Road	Cherrywood Ave.	45.00			45.00	32.03	32.15	32.54	32.34
10.04.590	Fruitvale Avenue	Rosedale Highway to Krebs Road 1	Price way	45.00			45.00	29.51	26.39	29.46	28.38
10.04.595	Golden Hills Blvd	SR 202 to Woodford Thpi B	Rod Ct.				45.00				
10.04.600	Golden State Hy	Knudsen Drive to Pegasus Drive	s/o Knudsen Dr.				45.00				
10.04.605	Harris Road.	Akers Road 800' w to 700' e/	w/o Akers Rd.				45.00				
10.04.602	Jenkins Road	Appaloosa Avenue to Cascade C	n/o Brimhall Rd				45.00				
10.04.603	Lerdo Highway	Shafter city limit to SR 99	w/o SR 99	50.00			45.00	44.32	43.91	44.08	44.08
10.04.610	Manor Street	China Grade loop to Day A	s/o Devore Ave.	45.00			45.00	31.81	31.38	31.77	31.66
10.04.610	Manor Street	Day Avenue to N. Chester Avenue	s/o Felton St.	45.00			45.00	38.73	38.75	38.77	38.76
10.04.615	McKee Road	S H Street to S Union Avenue	e/o South H St				45.00				
10.04.625	Mt. Vernon Avenue	Texas Street to E California	n/o Virginia				45.00				
10.04.630	Niles Street	Fairfax Road to Morning Drive	e/o Greenwood A	40.00			45.00	23.18	23.12	23.24	23.22
10.04.635	Norris Road	Pegasus Dive to Airport Drive	e/o Roberts Ln	45.00			45.00	37.21	33.1	37.38	35.86

PRIMARY	STREET	LIMITS	LOCATION	LINK_TSVA	OBS			MODEL			
					AMPK	PMPK	DY	AM	PM	OF	DY
10.04.635	Norris Road	Airport Drive to N Chester	Ray Street	45.00			45.00	30.1	29.71	30.07	29.97
10.04.635	Norris Road	N Chester Avenue to Manor Street	w/o Manor Street	45.00			45.00	34.41	33.29	34.25	33.97
10.04.640	North Chester Ave	Bedford Way 110' n to Day	s/o Day Avenue	45.00			45.00	29.67	29.55	29.68	29.63
10.04.645	North Chester Ave	Day Avenue to McKelvey Avenue	n/o Day Avenue	45.00			45.00	35.77	35.68	35.78	35.75
10.04.647	North Lincoln Street	Ash Street to Midway Road	Between				45.00				
10.04.650	Olive Drive	Coffee Road to Fruitvale Avenue	Keith Street	45.00			45.00	32.62	30.69	30.3	30.77
10.04.650	Olive Drive	Fruitvale Avenue to SR 99	Sandalwood Street	45.00			45.00	25.99	25.12	16.93	21.14
10.04.650	Olive Drive	SR 99 to Airport Drive	Teakwood Drive	40.00			45.00	32.32	32.1	32.07	32.12
10.04.655	Oswell Street	Brundage Lane to Edison Highway	n/o Oswell Park	45.00			45.00	33.89	33.49	33.71	33.69
10.04.656	Oswell Street	Edison Highway to Bernard Street 3	n/o Pioneer Drive	45.00			45.00	33.25	32.97	33.19	33.15
10.04.660	Pacheco Road	S Union 1300' w to S Union	Pamela Street	40.00			45.00	28.81	28.78	28.8	28.79
10.04.660	Pacheco Road	S Union to Cottonwood Road	Garber Street	40.00			45.00	23.94	23.64	23.77	23.74
10.04.670	Roberts Lane	N Chester Avenue to Angus L	Frontier Drive	35.00			45.00	25.12	25	25.07	25.06
10.04.675	Roberts Lane	Sanford Drive 700' w to Norr	e/o Olive Drive	35.00			45.00	22.69	22.08	22.56	22.43
10.04.676	Rosamond Boulevard	Melvin Street to SR 14 SB off	w/o Melvin Street	50.00			45.00	33.93	34.53	34.46	34.41
	Rosamond Boulevard	Sierra Highway to United St/1	e/o 15th St. We	50.00			45.00	43.28	43.25	43.27	43.27
10.04.680	Sierra Way	Kernville Road to Kernville	s/o Kernville R				45.00				
10.04.685	South Chester Avenue	s/o Planz Road to S Union A	n/o S Union Avenue	40.00			45.00	31.95	31.51	31.76	31.7
10.04.690	Stine Road (South)	160' n/o Cork Lane to Bell	Reno Street	40.00			45.00	29.62	29.58	29.73	29.68
10.04.693	South Union Avenue	1000's/o Taft Highway to Hudso	s/o Barton Street	50.00			45.00	36.59	36.48	36.58	36.56
10.04.730	S Union Avenue	Planz Road to Ming Avenue	n/o Planz Road	45.00			45.00	32.83	32.1	32.62	32.52
10.04.730	S Union Avenue	Ming Avenue to 157' s/o Bel	Amador Avenue	45.00			45.00	31.89	31.98	32.2	32.13
10.04.730	S Union Avenue	Fairview Road 1000' s to S	Garden Drive	50.00			45.00	36.37	35.31	35.94	35.83
10.04.695	Standard Street	Gilmore Avenue to 3700' n/o	Getty Street				45.00				
10.04.717	20th Street West	Orange Street to 2600' s/o Ma	s/o Marie Street				45.00				
10.04.720	Twenty-MuleTeam Road	Boron Road to Kostopoulos A	Between				45.00				
10.04.725	Twenty-MuleTeam Road	Wesley Street 1480' w to Kern	Wesley Street				45.00				
10.04.732	Verdugo Road	Meacham Road to Hageman Road	Between	45.00			45.00	28.87	27.74	28.62	28.36
10.04.734	Washington Street	Brundage Lane to Virginia A	s/o Virginia Avenue				45.00				
	Westwood Boulevard	Woodford Thp Road to Golden	at Shirley Drive				45.00				
10.04.740	Wible Road	Belle Terrace 1400' south	Wood Lane	40.00			45.00	30.14	28.89	29.15	29.12
10.04.710	Sunset Boulevard	Comanche Drive to 0.5 miles W	1000' w/of Coma	50.00			45.00	40.34	40.11	40.31	40.23
10.04.639	North Chester Avenue	James Road to 673' south	Between McCray				45.00				
10.04.602	James Road	Petrol Road to North Cheste	Between Cheste				45.00				
10.04.518	Allen Road	Hageman Road to Noriega Road	1000 Ft n/of Ha	45.00			45.00	36.47	36.42	36.58	36.54

PRIMARY	STREET	LIMITS	LOCATION	LINK_TSVA	OBS			MODEL			
					AMPK	PMPK	DY	AM	PM	OF	DY
10.04.665	Red Apple Ave	State Route 202 to Westwo	between				45.00				
10.04.546	Tejon Highway	Bear Mountain Blvd to 700	Between				45.00				
10.04.678	7th Standard	Airport to North Chester	Between	45.00			45.00	35.74	35.06	35.55	35.45
10.04.634	Coffee Road			45.00			45.00	36.78	37.47	37.64	37.49
10.04.729	Woodford Tehachapi B	Sr 202 to White Pine Dr	Between				45.00				
10.04.726	Unicorn Road	Entire Length of Roadway					45.00				
10.04.716	30th Street West	Rosamond Boulevard and Pa					45.00				
10-04-531	Buena Vista Boulevard	May Street and Weedpatch					45.00				
	State Road	Olive Drive to Airport Drive	midway	35.00			45.00	29.55	29.31	29.44	29.4
	Lost Hills Road	46 Hwy to 750' North	500' north of 4				45.00				
ARTICLE VII. 50											
10.04.745	Burlando Road.	Bristlecone Drive to Kern River	K V Cemetary				50.00				
10.04.750	Edison Highway	Mt. Vernon Avenue to Washington	w/o Ogden	25.00			50.00	22.75	22.73	22.74	22.74
10.04.750	Edison Highway	Oswell Street to Mt. Vernon	e/o Quantico Av	30.00			50.00	25.8	25.58	25.71	25.68
10.04.750	Edison Highway	Sterling Road to Oswell Street	e/o Oswell St	30.00			50.00	26.35	26.29	26.33	26.32
10.04.750	Edison Highway	Sterling Road to Fairfax Road	e/o Sterling Rd	30.00			50.00	24.49	24.43	24.47	24.46
	Houghton Road	Gosford Road to Ashe Road	e/o Robertson				50.00				
10.04.750	Merle Haggard Drive	Highway 65 and Wings Way					50.00				
ARTICLE VIII. 5											
10.04.780	Alfred Harrell Highway	Panorama Drive to 1,000' w/o	e/o Bridge	50.00			55.00	44.62	44.62	44.63	44.63
10.04.790	Edison Highway	500' e/o Fairfax Road to Mo	e/o Railroad	30.00			55.00	26.43	26.39	26.41	26.4
10.04.800	Manor Street	Kern River to China Grade	s/o Beardsley C	40.00			55.00	35.59	35.18	35.53	35.43
10.04.810	South Union Avenue	Houghton Road to SR 119	@ DiGiorgio Road	50.00			55.00	33.71	33.61	33.69	33.66
10.04.810	South Union Avenue	SR 99 to Houghton Road	s/o 223				55.00				
10.04.810	South Union Avenue	Hudson Drive to Fairview Road	n/o Hosking Road	50.00			55.00	37.32	37.21	37.32	37.3
10.04.803	Merle Haggard Drive	Wings Way to Airport Drive					55.00				
CALTRANS SPEED											
	SR 58 EB										
	Hughes Ln OC			65.00	58.87	64.18	65.00	64.82	63.67	64.46	64.35
	Chester Ave OC			65.00	59.52	62.08	65.00	64.47	60.11	62.09	62.06
	Union Ave OC			65.00	61.78	61.6	65.00	64.8	61.22	63.58	63.12
	Cottonwood Rd			65.00	61.83	61.47	65.00	65	64.74	64.96	64.91
	Mt Vernon Ave				61.84	64.32	65.00				
	Oswell St UC			65.00	61.16	64.27	65.00	65	64.99	65	65
	Fairfax Rd OC			65.00	66.1	64.55	65.00	65	65	65	65

PRIMARY	STREET	LIMITS	LOCATION	LINK_TSVA	OBS			MODEL			
					AMPK	PMPK	DY	AM	PM	OF	DY
	Vineland Rd OC			65.00		64.47	65.00	65	65	65	65
	SR 58 WB										
	Vineland Rd OC			65.00		65.49	65.00	65	65	65	65
	Fairfax Rd OC			65.00	64	64.42	65.00	65	65	65	65
	Oswell St UC			65.00	63.79	64.57	65.00	65	65	65	65
	Mt Vernon Ave			65.00	62.94	64.49	65.00	64.98	64.98	64.99	64.99
	Cottonwood Rd			65.00	65.36	64.75	65.00	64.91	64.92	64.94	64.94
	Union Ave OC			65.00	66.72	64.56	65.00	58.74	57.69	59.52	59.35
	Chester Ave OC			65.00	50.74	64.46	65.00	62.88	62.32	62.55	62.72
	Hughes Ln OC			65.00	54.35	63.16	65.00	52.42	45.29	46.51	47.97
	SR 99 NB										
	Hoskings Rd OC			65.00			65.00	64.99	64.97	64.95	64.95
	Panama Ln OC			65.00	66.99	64.71	65.00	65	64.99	64.97	64.98
	Pacheco Rd UC			65.00	65.71	64.21	65.00	63.72	64.56	64.04	64.11
	White Ln OC			65.00	65.45	65.1	65.00	64.64	64.92	64.77	64.78
	Wilson Rd OC			65.00	55.45	65.93	65.00	62.73	64.15	63.44	63.45
	Belle Terrace OC			65.00	61.45	62.15	65.00	59.78	61.98	59.87	60.47
	California Ave UC			65.00	66.4	65.25	65.00	59.94	61.48	59.47	59.36
	Airport Dr UC			65.00	67.62	64.25	65.00	65	65	64.99	64.99
	Olive Dr OC			65.00	69.94	66.77	65.00	64.62	63.22	60.08	61.53
	Seventh Std OC						65.00				
	SR 99 SB										
	Seventh Std OC										
	Olive Dr OC			65.00	65.18	63.38	65.00	64.98	63.83	64.74	64.52
	Airport Dr UC			65.00	59.26	60.66	65.00	65	64.99	64.99	64.99
	California Ave UC			65.00	67.36	63.26	65.00	64.79	57.4	63.38	61.57
	Belle Terrace OC			65.00	66.12	64.78	65.00	64.66	60.45	64.03	62.7
	Wilson Rd OC			65.00	67.08	64.59	65.00	64.96	63.71	64.34	64.26
	White Ln OC			65.00	64.67	65.19	65.00	64.99	64.69	64.83	64.8
	Pacheco Rd UC			65.00	60.4	63.64	65.00	64.96	63.7	64.33	64.23
	Panama Ln OC			65.00	60	65.01	65.00	65	64.99	64.98	64.98
	Hoskings Rd OC			65.00	63.44	65.73	65.00	64.99	64.97	64.95	64.95
	Meacham Road	Main Plaza Drive to Calloway		40.00			33.54	25.59	25.02	25.55	25.36
	Columbus Street	Oswell Street to University A		45.00			41.69	32.58	32.65	32.65	32.65
	Columbus Street	University Avenue to Panoram		45.00			40.99	29.26	29.05	29.15	29.14

PRIMARY	STREET	LIMITS	LOCATION	LINK_TSVA	OBS			MODEL			
					AMPK	PMPK	DY	AM	PM	OF	DY
	Columbus Street	Wenatchee Avenue to Oswell S		45.00			42.58	25.86	25.35	25.63	25.58
	Columbus Street	Mt. Vernon Ave to Wenatchee Ave		45.00			43.70	26.83	25.66	26.38	26.19
	Columbus Street	Union Avenue to Loma Linda D		40.00			36.74	29.36	26.21	28.68	28.05
	Columbus Street	Haley Street to Mt. Vernon Avenue		45.00			40.12	32.72	32.07	32.56	32.44
	Chester Avenue	Golden State Highway to 34th Street		40.00			34.19	24.79	23.72	24.45	24.25
	Columbus Street	River Boulevard to Haley Street		40.00			38.44	31.83	31.39	31.74	31.65
	California Avenue	Chester Lane to Real Road		35.00			37.71	30.82	30.68	30.85	30.8
	California Avenue	Marella Way to Chester Lane		40.00			37.74	35.54	35.52	35.62	35.58
	California Avenue	Haley Street to ECL		40.00			38.23	27.35	27.48	27.52	27.5
	Berkshire Road	Stine Road to Wible Road		45.00			39.94	25.02	25.01	25.02	25.02
	Wible Road	Hosking Road to Berkshire Road		45.00			44.06	29.56	27.4	28.59	28.35
	Brundage Lane	Union Avenue to Lakeview Avenue		45.00			38.43	32.42	32.16	32.27	32.25
	Stockdale Highway	Buena Vista Road to Old Riv		40.00			50.27	31.6	30.89	31.27	31.19
	Hosking Avenue	Stine Road to Wible Road		40.00			40.62	28.81	28.89	28.9	28.88
	Stine Road	Hosking Avenue to Berkshire Road		45.00			48.67	32.55	32.93	33.26	33.07
	Stine Road	Panama Lane to Berkshire Road		45.00			47.06	33.91	34.12	34.49	34.32
	California Avenue	Real Road to Oak Street		35.00			36.75	12.17	11.22	12.05	11.76
	34th Street	Chester Avenue to Q Street		40.00			36.55	23.29	23.03	23.2	23.14
	Chester Avenue	California Avenue to Truxtun Ave		30.00			36.96	24.92	24.46	24.73	24.67
	Chester Avenue	Loustalot Lane to California Avenue		40.00			36.17	30.58	29.23	30.12	29.85
	Chester Avenue	Ming Avenue to Loustalot Lane		45.00			41.13	32.66	32.34	32.56	32.54
	Chester Avenue	Union Avenue to SPRR (asphal		40.00			41.65	33.14	32.53	32.84	32.78
	Chester Avenue	24th Street to Golden State Hwy		35.00			33.19	30.3	30.24	30.34	30.31
	District Boulevard	Pin Oak Park Boulevard to Gosf					40.00				
	Flower Street	Alta Vista Drive to Beale Avenue		35.00			28.21	23.3	22.92	23.29	23.2
	Fruitvale Avenue	Hageman Road to Olive Drive		45.00			42.77	31.73	30.93	31.16	31.2
	Hageman Road	Calloway Drive to Coffee Road		45.00			43.86	36.53	36.55	36.64	36.62
	District Boulevard	Gosford Road to Ashe Road					46.84				
	F Street	24th Street to Golden State Hwy		35.00			30.39	30.68	30.59	30.72	30.66
	Fairview Road	Monitor Street to Union Avenue		45.00			40.18	26.78	26.73	26.78	26.77
	Fairview Road	So. H Street to Monitor Street		45.00			38.43	28.63	28.47	28.58	28.57
	Fairview Road	Hughes Lane to So. H Street		40.00			37.02	25.13	25.09	25.12	25.11
	College Avenue	Fairfax Road to ECL		40.00			35.72	30.35	30.5	30.5	30.48
	Fairfax Road	College Avenue to Highway 178		45.00			44.36	32.77	32.86	32.97	32.92
	Fairfax Road	Highway 178 to Panorama Drive		45.00			42.55	17.93	17.88	18.05	18.01

PRIMARY	STREET	LIMITS	LOCATION	LINK_TSVA	OBS			MODEL			
					AMPK	PMPK	DY	AM	PM	OF	DY
	Fairfax Road	Panorama Drive to Paladino D		45.00			46.07	28.85	28.72	28.86	28.83
	H Street	Fairview Road to Pacheco Road		45.00			41.92	33.56	33.51	33.6	33.59
	H Street	Pacheco Road to White Lane		45.00			41.00	29.47	29.54	29.64	29.62
	H Street	Panama Lane to Fairview Road		45.00			43.29	33.04	32.44	32.74	32.7
	H Street	White Lane to Planz Road		45.00			41.27	34.05	34.06	34.12	34.11
	Chester Avenue	Truxtun Avenue to 24th Street		25.00			24.54	16.61	16.48	16.64	16.58
	F Street	14th Street to 24th Street		25.00			24.20	15.98	15.94	15.96	15.96
	H Street	Brundage Lane to 4th Street		40.00			37.23	31.07	30.82	31.1	31.04
	H Street	Truxtun Avenue to 24th Street		25.00			22.38	16.71	16.64	16.71	16.69
	H Street	Ming Avenue to Belle Terrace		45.00			42.04	29.82	29.64	30.16	29.96
	H Street	Planz Road to Wilson Road		45.00			42.83	31.51	30.09	30.94	30.79
	H Street	Wilson Road to Ming Avenue		45.00			42.67	32.13	32.05	32.19	32.17
	Wible Road	Pacheco Road to White Lane		40.00			40.26	29.75	29.79	29.64	29.75
	H Street	24th Street to 30th Street		30.00			29.82	26.06	26.3	26.36	26.28
	Height Street	Haley Street to Sunny Lane					33.22				
	Granite Falls Drive	Main Plaza to Coffee Road					44.83				

Appendix C. 2006, 2020 and 2035 Link Volumes for Selected Facilities

NO.	LOCATION	2006			2020			2035		
		AMPEAK	PMPEAK	DAILY	AMPEAK	PMPEAK	DAILY	AMPEAK	PMPEAK	DAILY
1	SR 99 Airport NB Off	2,350	4,051	18,516	2,835	4,404	21,245	2,974	4,905	22,169
2	SR-99 mainline NB (between Rosedale and Airport)	7,281	12,198	63,071	8,462	13,813	71,124	9,790	16,444	83,078
3	SR 99 Buck Owens NB on	349	1,247	4,944	732	2,117	8,551	854	1,943	8,277
4	SR 99 Buck Owens NB off	1,633	1,974	9,838	1,148	1,159	6,583	1,142	1,185	6,560
5	SR 99 Rosedale NB off	4,118	5,290	25,289	2,835	3,885	19,121	3,177	3,463	19,306
6	SR-99 Mainline NB (between California and Rosedale)	12,682	18,215	93,255	11,713	16,740	88,277	13,255	19,149	100,666
7	SR 99 California NB on (diagonal)	640	1,403	5,118	965	2,227	10,720	674	1,512	6,146
8	SR 99 California NB on (loop)	1,420	3,065	13,524	2,009	3,072	14,582	1,759	3,103	13,765
9	SR 99 California NB off	1,412	1,540	8,142	1,063	1,564	6,437	1,101	1,378	6,492
10	SR-99 mainline NB (between SR 58 and California)	12,035	15,287	82,754	9,803	13,005	69,413	11,923	15,912	87,248
11	SR 99 NB on from SR 58 EB				28	-	28	-	-	-
12	SR 99 NB on from SR 58 WB	2,277	2,559	13,908	2,197	2,374	13,263	2,083	3,014	16,000
13	SR 99 NB off to SR 58 WB				2,657	4,514	20,630	3,365	5,755	26,767
14	SR 99 NB off to SR 58 EB	2,546	4,555	22,395	2,292	3,966	18,649	2,772	4,859	20,388
15	SR 99 NB on from Wible Road	2,040	2,687	12,288						
16	SR 99 NB off to Wible Road	1,211	1,982	9,705						
17	SR-99 mainline NB (between Ming and SR-58)	11,474	16,577	88,660	12,526	19,110	95,400	15,976	23,513	118,403
18	SR 99 Ming NB on (diagonal)	1,516	3,727	18,326	1,715	3,698	16,082	3,162	5,563	25,877
19	SR 99 Ming NB off	1,079	1,674	7,614	1,271	1,905	9,107	1,904	2,799	12,618
20	SR-99 mainline NB (between White and Ming)	11,037	14,525	77,947	12,081	17,317	88,425	14,718	20,748	105,144
21	SR 99 White NB on (diagonal)	1,289	1,749	8,641	1,175	1,735	7,959	1,052	1,869	8,245
22	SR 99 White NB on (loop)	2,830	4,226	21,545	2,905	4,682	21,226	2,610	4,363	18,864
23	SR 99 White NB off	969	1,660	7,473	1,538	2,525	10,803	1,792	2,868	13,582
24	SR-99 mainline NB (South of White)	7,887	10,209	55,234	9,540	13,424	70,043	12,848	17,385	91,618
25	SR 99 Airport SB on	2,242	3,627	17,332	1	173	319	2,837	5,423	23,820
26	SR-99 mainline SB (between Airport and Rosedale)	7,104	12,796	62,349	6,876	13,113	61,057	9,673	17,489	84,258
27	SR 99 Rosedale SB off	524	705	3,801	740	1,344	4,869	1,308	1,760	9,323
28	SR 99 Rosedale SB on (loop)	2,256	4,069	19,189	2,450	3,673	18,148	2,716	4,162	18,841
29	SR 99 Rosedale SB on (diagonal)	1,948	3,466	14,342	712	2,679	9,785	696	2,233	8,647
30	SR-99 mainline SB (between Rosedale and California)	10,784	19,626	92,079	9,298	18,121	84,121	11,776	22,124	102,423
31	SR 99 California SB off	2,362	3,998	17,729	2,772	5,353	21,854	2,969	5,169	22,323

2006 Regional Travel Demand Model

NO.	LOCATION	2006			2020			2035		
		AMPEAK	PMPEAK	DAILY	AMPEAK	PMPEAK	DAILY	AMPEAK	PMPEAK	DAILY
32	SR 99 California SB on (loop)	442	2,436	7,662	378	1,806	6,258	393	1,404	5,586
33	SR-99 mainline SB (between California and SR 58)	8,865	18,064	82,013	6,904	14,574	68,525	9,201	18,359	85,685
34	SR 99 SB off to SR 58 EB	1,730	3,611	15,800	1,223	3,163	12,724	1,612	3,549	15,432
35	SR 99 SB off to SR 58 WB				-	-	-	-	-	-
36	SR 99 SB on from SR 58 WB	2,259	3,107	15,485	1,869	2,994	14,926	1,968	3,255	15,844
37	SR 99 SB on from SR 58 EB				2,304	4,195	19,006	3,550	5,791	26,058
38	SR 99 SB off to Stockdale Highway	744	1,875	9,112						
39	SR 99 SB on from Real Road	662	1,247	6,371	450	791	3,996	539	544	3,473
40	SR-99 mainline SB (between SR 58 and Ming)	9,312	16,932	78,957	10,304	19,390	93,730	13,645	24,401	115,629
41	SR 99 Ming SB off to WB and EB	2,478	3,455	15,376	2,015	3,134	16,735	3,426	5,642	26,516
44	SR 99 Ming SB on (diagonal)	608	1,793	6,827	618	1,109	5,234	756	2,113	8,277
45	SR 99 mainline SB (between Ming and White)	7,442	15,270	70,408	8,906	17,364	82,229	10,975	20,871	97,390
46	SR 99 White SB off	2,800	5,485	24,347	2,909	5,255	24,414	2,751	4,915	21,756
47	SR 99 White SB on (loop)	331	586	2,431	378	1,135	4,815	456	1,590	6,532
48	SR 99 White SB on (diagonal)	671	938	4,613	796	1,527	6,302	1,070	1,876	8,364
49	SR 99 mainline SB (south of White)	5,644	11,308	53,106	7,171	14,771	68,932	9,750	19,423	90,530
50	SR 58 mainline EB (between SR 99 and H Street)	6,378	11,374	53,799	8,009	15,844	70,189	9,871	18,399	81,282
51	SR 58 H Street EB off	1,643	2,695	11,618	1,937	2,960	14,181	2,016	3,045	15,485
52	SR 58 Chester EB on	1,033	2,291	10,001	1,027	2,679	11,694	873	2,725	10,608
53	SR 58 mainline EB (between H Street and Union)	5,768	10,970	52,182	7,099	15,563	67,702	8,728	18,079	76,405
54	SR 58 Union EB off-ramp	1,393	2,530	12,781	1,598	2,738	14,277	1,799	2,926	13,273
55	SR 58 Union EB on-ramp (loop)	432	1,472	4,734	437	1,287	4,786	430	1,641	6,185
56	SR 58 Union EB on-ramp (diagonal)	525	908	3,565	648	1,115	4,558	599	978	4,376
57	SR 58 mainline EB (between Union and Cottonwood)	5,332	10,821	47,700	6,585	15,227	62,769	7,958	17,772	73,693
58	SR-58 mainline WB (between H Street and SR 99)	6,805	10,223	50,948	9,874	14,528	71,487	10,341	15,959	80,357
59	SR 58 Chester WB off	1,685	2,658	13,048	2,026	2,725	14,016	1,929	2,855	14,524
60	SR 58 H Street WB on	1,212	2,148	10,415	1,793	2,839	14,035	1,785	2,854	14,322
61	SR 58 Mainline WB (between Union and H Street)	7,278	10,733	53,581	10,106	14,413	71,468	10,486	15,959	80,560
62	SR 58 Brundage WB off-ramp	1,041	1,523	7,004	1,116	1,619	7,425	1,383	1,812	8,024
63	SR 58 Brundage WB on-ramp	741	797	4,416	847	1,136	5,808	816	1,288	6,218
64	SR 58 Union WB on-ramp	987	1,700	8,769	1,729	2,726	13,689	1,425	2,262	13,375
65	SR 58 Mainline WB (between Cottonwood and Union)	6,591	9,760	47,400	8,647	12,171	59,397	9,628	14,221	68,990
66	WSP Calloway EB off				970	1,303	6,191	1,467	1,531	8,687

NO.	LOCATION	2006			2020			2035		
		AMPEAK	PMPEAK	DAILY	AMPEAK	PMPEAK	DAILY	AMPEAK	PMPEAK	DAILY
67	WSP Calloway EB On (loop)				870	1,382	5,499	936	996	5,118
68	WSP Calloway EB On (diagonal)				2,393	3,141	16,075	2,454	3,437	17,339
69	WSP Mainline EB (between Calloway and Coffee)				8,276	11,060	53,173	11,548	14,141	71,051
70	WSP Coffee EB Off				1,267	1,800	7,959	1,718	2,079	9,630
71	WSP Coffee EB On (loop)				1,615	3,172	14,066	1,688	3,286	14,963
72	WSP Coffee EB On (diagonal)				1,069	2,207	9,888	1,381	2,859	12,834
73	WSP Mainline EB (between Coffee and Mohawk)				9,694	14,640	69,168	12,900	18,207	89,218
74	WSP Mohawk EB Off				2,080	3,467	17,562	2,424	3,803	18,279
75	WSP Mohawk EB On (loop)				568	1,747	6,892	748	2,507	8,480
76	WSP Mohawk EB On (diagonal)				85	663	1,875	91	623	1,868
77	WSP Mainline EB (Bet Mohawk and SR 99)				4,781	9,075	39,631	6,955	11,932	53,275
78	WSP Mainline WB (between SR 99 and Mohawk)				5,456	8,425	39,854	6,645	10,766	51,773
79	WSP Mohawk WB Off				1,494	2,456	10,287	1,887	2,791	13,056
80	WSP Mohawk WB On (loop)				882	2,484	10,318	879	2,705	10,520
81	WSP Mohawk WB On (diagonal)				810	1,302	6,437	1,226	2,299	10,129
82	WSP Mainline WB (between Mohawk and Coffee)				6,911	13,438	61,347	8,534	17,096	77,051
83	WSP Calloway WB Off				2,391	3,141	19,141	2,476	4,407	21,301
84	WSP Coffee WB On (loop)				246	391	1,716	256	531	2,243
85	WSP Coffee WB On (diagonal)				368	889	3,235	345	545	2,828
86	WSP Mainline WB (between Coffee and Calloway)				5,133	11,577	47,157	6,660	13,765	60,821
87	WSP Calloway WB Off				2,005	4,490	16,703	2,217	3,284	16,839
88	WSP Calloway WB On (loop)				324	478	2,296	233	841	3,431
89	WSP Calloway WB On (diagonal)				224	428	2,035	285	554	2,396
90	Rosedale Highway EB (between SR 43 (Enos Lane) and Greeley Road)	203	884	2,931	310	1,184	4,090	212	871	3,034
91	Rosedale Highway EB (between Greeley Road and Nord Avenue)	259	917	3,174	459	1,294	4,783	479	1,079	4,302
92	Rosedale Highway EB (between Nord Avenue and Wegis Avenue)	289	950	3,347	578	1,395	5,359	611	1,153	4,849
93	Rosedale Highway EB (between Wegis Avenue and Heath Road)	350	990	3,610	710	1,569	6,098	777	1,407	5,951
94	Rosedale Highway EB (between Heath Road and Rudd Road)	573	1,112	4,495	1,085	1,897	7,871	1,250	1,799	8,226
95	Rosedale Highway EB (between Rudd Road and Sugar Street)	573	1,112	4,495	753	1,328	5,750	512	898	3,742
96	Rosedale Highway EB (between Sugar Street and Renfro Road)	751	1,222	5,281	858	1,273	5,897	578	790	3,572
97	Rosedale Highway EB (between Renfro Road and Jenkins Road)	743	1,140	5,089	651	919	4,341	649	816	3,929
98	Rosedale Highway EB (between Jenkins Road and Allen Road)	936	1,251	5,905	817	1,089	5,308	848	1,127	5,389
99	Rosedale Highway EB (between Allen Road and Mather Way)	1,455	1,962	9,316	1,105	1,548	7,410	1,272	1,691	8,092

NO.	LOCATION	2006			2020			2035		
		AMPEAK	PMPEAK	DAILY	AMPEAK	PMPEAK	DAILY	AMPEAK	PMPEAK	DAILY
100	Rosedale Highway EB (between Mather Way and Old Farm Road)	1,546	2,126	9,980	1,168	1,674	7,918	1,334	1,797	8,562
101	Rosedale Highway EB (between Old Farm Road and Jewetta West (Lone Oak Drive)	1,760	2,475	11,566	1,363	1,972	9,287	1,527	2,134	9,925
102	Rosedale Highway EB (between Jewetta West (Lone Oak Drive) and Enger Lane (Jewetta East)	1,873	2,600	12,201	1,456	2,096	9,875	1,622	2,310	10,614
103	Rosedale Highway EB (between Enger Lane (Jewetta East) and Verdugo Lane)	2,028	2,647	12,313	1,817	2,271	11,364	2,031	2,415	11,966
104	Rosedale Highway EB (between Verdugo Lane and Dean Avenue)	1,848	2,192	10,788	1,589	1,729	8,965	1,616	1,841	9,475
105	Rosedale Highway EB (between Dean Avenue and Calloway Drive)	1,954	2,487	11,987	1,716	2,080	10,406	1,786	2,198	11,042
106	Rosedale Highway EB (between Calloway Drive and Commercial Way)	3,229	3,546	18,138	2,558	2,776	15,506	2,720	2,923	16,091
107	Rosedale Highway EB (between Commercial Way and El Toro Viejo Rd (Main Plaza Drive)	3,616	4,215	21,572	2,910	3,686	19,407	3,077	3,765	20,042
108	Rosedale Highway EB (between El Toro Viejo Road (Main Plaza Drive) and NW Promenade II)	3,764	4,484	22,964	2,754	3,812	19,311	2,932	3,985	19,728
109	Rosedale Highway EB (between NW Promenade II and Coffee Road)	3,936	5,450	26,767	3,344	5,924	28,416	3,576	6,462	30,232
110	Rosedale Highway EB (between Coffee Road and Henry Lane)	3,709	4,591	22,375	3,157	4,434	22,473	3,282	4,796	23,058
111	Rosedale Highway EB (between Henry Lane and Patton Way)	3,732	4,692	22,709	3,196	4,643	23,219	3,330	5,045	23,950
112	Rosedale Highway EB (between Patton Way and Wear Street)	3,135	4,066	19,361	2,625	4,009	19,815	2,697	4,460	20,754
113	Rosedale Highway EB (between Wear Street and Fruitvale Avenue)	3,153	4,171	19,684	2,671	4,301	20,660	2,705	4,626	21,272
114	Rosedale Highway EB (between Fruitvale Avenue and Kilmer Way)	3,952	5,685	25,557	3,570	6,577	29,721	3,114	6,079	26,777
115	Rosedale Highway EB (between Kilmer Way and Mohawk Street)	3,948	5,681	25,540	3,532	6,559	29,598	3,030	6,053	26,493
116	Rosedale Highway EB (between Mohawk Street and Landco Road)	3,952	5,695	25,595	3,114	5,345	26,189	3,129	5,377	25,075
117	Rosedale Highway EB (between Landco Road and Fairhaven Drive)	3,812	5,473	24,382	2,950	5,196	25,314	3,028	5,335	24,602
118	Rosedale Highway EB (between Fairhaven Drive and Gibson Street)	3,812	5,473	24,382	2,950	5,196	25,314	3,028	5,335	24,602
119	Rosedale Highway EB (between Gibson Street and SR 99 SB ramps)	3,911	7,179	29,490	2,847	7,448	32,356	2,847	7,694	31,662
120	Rosedale Highway EB (between SR 99 SB ramps and SB 99 NB ramp (Buck Owens))	2,248	3,968	16,789	2,404	5,555	24,794	2,573	5,923	25,443
121	Rosedale Highway WB (between Greeley Road and SR 43 (Enos Lane)	552	572	3,027	713	742	3,928	596	611	3,249
122	Rosedale Highway WB (between Nord Avenue and Greeley Road)	550	595	3,101	716	813	4,180	626	764	3,774
123	Rosedale Highway WB (between Wegis Avenue and Nord Avenue)	563	661	3,358	763	1,029	4,950	655	1,048	4,752
124	Rosedale Highway WB (between Heath Road and Wegis Avenue)	574	719	3,577	765	1,222	5,579	674	1,307	5,604
125	Rosedale Highway WB (between Rudd Road and Heath Road)	567	741	3,629	921	1,360	6,148	959	1,533	6,680
126	Rosedale Highway WB (between Sugar Street and Rudd Road)	605	993	4,494	568	920	4,256	469	988	3,970
127	Rosedale Highway WB (between Renfro Road and Sugar Street)	637	1,220	5,283	516	1,023	4,477	370	1,036	3,893
128	Rosedale Highway WB (between Jenkins Road and Renfro Road)	494	1,254	5,033	394	992	4,085	309	1,067	3,830
129	Rosedale Highway WB (between Allen Road and Jenkins Road)	503	1,351	5,353	443	1,146	4,693	413	1,282	4,778

NO.	LOCATION	2006			2020			2035		
		AMPEAK	PMPEAK	DAILY	AMPEAK	PMPEAK	DAILY	AMPEAK	PMPEAK	DAILY
130	Rosedale Highway WB (between Mather Way and Allen Road)	868	2,186	9,070	692	1,936	7,571	735	2,231	8,706
131	Rosedale Highway WB (between Old Farm Road and Mather Way)	996	2,318	9,726	779	2,042	8,066	811	2,345	9,187
132	Rosedale Highway WB (between Jewetta West (Lone Oak Drive) and Old Farm Road)	1,187	2,624	11,278	906	2,399	9,497	946	2,759	10,548
133	Rosedale Highway WB (between Enger Lane (Jewetta East) and Jewetta West (Lone Oak Drive))	1,242	2,775	11,878	955	2,553	10,066	1,012	2,941	11,235
134	Rosedale Highway WB (between Verdugo Lane and Enger Lane (Jewetta East)	1,259	3,015	12,531	934	3,003	11,544	931	3,451	12,881
135	Rosedale Highway WB (between Dean Avenue and Verdugo Lane)	977	2,586	10,582	600	2,348	8,755	634	2,859	10,305
136	Rosedale Highway WB (between Calloway Drive and Dean Avenue)	1,153	2,848	11,895	784	2,650	10,213	816	3,203	11,888
137	Rosedale Highway WB (between Commercial Way and Calloway Drive)	1,596	4,284	17,726	885	4,107	14,910	978	5,042	17,549
138	Rosedale Highway WB (between El Toro Viejo Road (Main Plaza Drive) and Commercial Way))	2,240	4,729	21,177	1,366	4,937	18,645	1,472	5,822	21,446
139	Rosedale Highway WB (between NW Promenade II and El Toro Viejo Road (Main Plaza Drive))	2,324	5,193	22,431	1,689	5,841	22,165	1,952	6,757	27,283
140	Rosedale Highway WB (between Coffee Road and NW Promenade II)	3,074	5,954	26,558	1,503	5,073	19,009	1,739	5,822	23,459
141	Rosedale Highway WB (between Henry Lane and Coffee Road)	2,412	5,581	21,877	1,516	5,754	20,213	1,799	5,836	22,202
142	Rosedale Highway WB (between Patton Way and Henry Lane)	2,507	5,629	22,264	1,668	5,880	20,999	1,982	5,994	23,169
143	Rosedale Highway WB (between Wear Street and Patton Way)	2,311	4,740	19,076	1,491	4,854	17,554	1,914	4,990	20,156
144	Rosedale Highway WB (between Fruitvale Avenue and Wear Street)	2,403	4,782	19,431	1,632	5,137	18,524	2,038	5,080	20,737
145	Rosedale Highway WB (between Kilmer Way and Fruitvale Avenue)	3,389	6,272	25,839	2,896	7,128	28,108	2,929	6,300	26,856
146	Rosedale Highway WB (between Mohawk Street and Kilmer Way)	3,388	6,267	25,822	2,890	7,065	27,949	2,917	6,191	26,557
147	Rosedale Highway WB (between Landco Road and Mohawk Street)	3,397	6,276	25,877	2,453	5,706	23,696	2,911	6,280	26,738
148	Rosedale Highway WB (between Fairhaven Drive and Landco Road)	3,365	5,945	24,637	2,413	5,381	22,815	2,902	6,101	26,283
149	Rosedale Highway WB (between Gibson Street and Fairhaven Drive)	3,365	5,945	24,637	2,413	5,381	22,815	2,902	6,101	26,283
150	Rosedale Highway WB (between SR 99 SB ramps and Gibson Street)	4,225	6,779	29,648	3,899	6,231	29,803	4,503	6,853	33,405
151	Rosedale Highway WB (between SB 99 NB ramp (Buck Owens) and SR 99 SB ramps)	3,986	6,330	27,488	3,428	5,672	27,158	3,617	5,555	26,510
152	24th Street (SR 178) EB (between SR 99 NB ramp (Buck Owens) and Oak Street)	3,990	6,249	29,058	3,611	7,022	31,659	4,378	7,718	35,872
153	24th Street (SR 178) EB (between Oak Street and Beech Street)	4,423	6,853	33,280	5,351	8,900	41,409	6,184	10,798	49,259
154	24th Street (SR 178) EB (between Beech Street and Myrtle Street)	4,184	6,451	31,318	5,051	9,150	41,175	5,900	10,105	46,428
155	24th Street (SR 178) EB (between Spruce Street and Pine Street)	4,151	6,431	31,188	5,035	9,172	41,175	5,867	10,065	46,240
156	24th Street (SR 178) EB (between Pine Street and A Street)	4,365	6,675	32,487	5,221	9,505	42,581	6,020	10,364	47,484
157	24th Street (SR 178) EB (between A Street and B Street)	4,339	6,590	32,134	5,158	9,412	42,119	5,970	10,274	47,094
158	24th Street (SR 178) EB (between B Street and D Street)	4,302	6,590	32,017	5,134	9,418	42,047	5,940	10,269	46,985
159	24th Street (SR 178) EB (between D Street and F Street)	4,302	6,590	32,017	5,134	9,418	42,047	5,940	10,269	46,985

NO.	LOCATION	2006			2020			2035		
		AMPEAK	PMPEAK	DAILY	AMPEAK	PMPEAK	DAILY	AMPEAK	PMPEAK	DAILY
160	24th Street (SR 178) EB (between F Street and G Street)	4,379	6,984	32,434	5,219	8,898	41,820	5,975	9,738	46,149
161	24th Street (SR 178) EB (between G Street and H Street)	4,135	6,857	31,467	4,997	8,768	40,780	5,742	9,634	45,114
162	24th Street (SR 178) EB (between H Street and Eye Street)	3,742	7,026	31,177	4,596	8,858	39,926	5,398	9,738	44,970
163	24th Street (SR 178) EB (between Eye Street and Chester Avenue)	3,725	7,068	31,368	4,594	8,937	40,355	5,411	9,882	45,542
164	24th Street (SR 178) EB (between Chester Avenue and L Street)	3,679	7,148	31,668	4,388	8,244	36,578	5,446	10,629	47,458
165	24th Street (SR 178) EB (between L Street and M Street)	3,628	7,226	31,859	4,331	8,305	36,628	5,381	10,707	47,565
166	24th Street (SR 178) EB (between M Street and SR 178)	3,514	7,375	32,	4,217	8,421	36,703	5,757	11,912	51,910
167	24th Street (SR 178) WB (between Oak Street and SR 99 NB ramp (Buck Owens))	4,300	5,324	28,404	4,474	5,570	29,453	6,036	7,643	38,387
168	24th Street (SR 178) WB (between Beech Street and Oak Street)	4,887	6,784	34,353	5,450	8,160	38,915	6,839	9,817	46,510
169	24th Street (SR 178) WB (between Myrtle Street and Beech Street)	4,498	6,401	32,214	5,032	8,305	38,270	6,468	10,024	46,354
170	24th Street (SR 178) WB (between Pine Street and Spruce Street)	4,476	6,425	32,145	5,034	8,340	38,324	6,453	9,990	46,196
171	24th Street (SR 178) WB (between A Street and Pine Street)	4,628	6,654	33,390	5,196	8,652	39,527	6,618	10,239	47,281
172	24th Street (SR 178) WB (between B Street and A Street)	4,610	6,530	33,013	5,166	8,532	39,081	6,578	10,073	46,729
173	24th Street (SR 178) WB (between D Street and B Street)	4,608	6,496	32,931	5,169	8,503	39,021	6,577	10,026	46,620
174	24th Street (SR 178) WB (between F Street and D Street)	4,608	6,496	32,931	5,169	8,503	39,021	6,577	10,026	46,620
175	24th Street (SR 178) WB (between G Street and F Street)	4,542	6,573	32,655	5,046	8,300	37,976	6,079	9,142	42,159
176	24th Street (SR 178) WB (between H Street and G Street)	4,529	6,247	31,671	5,043	8,007	37,058	6,075	8,859	41,221
177	24th Street (SR 178) WB (between Eye Street and H Street)	4,133	5,706	28,438	4,613	7,070	33,244	6,060	8,418	40,463
178	24th Street (SR 178) WB (between Chester Avenue and Eye Street)	4,232	5,709	28,782	4,739	7,095	33,754	6,221	8,459	41,309
179	24th Street (SR 178) WB (between K Street and Chester Avenue)	4,864	6,943	33,746	5,235	7,804	36,019	7,130	9,702	45,770
180	24th Street (SR 178) WB (between M Street and K Street)	4,907	6,930	33,872	5,281	7,787	36,061	7,171	9,667	45,734
181	24th Street (SR 178) WB (between SR 178 and M Street)	5,293	6,907	34,648	5,611	7,619	37,015	7,710	9,873	47,944
182	Olive Dr EB (between Patton Way and Fruitvale Avenue)	2,909	3,425	19,415	2,721	2,933	15,354	3,063	3,474	17,535
183	Olive Dr EB (between Fruitvale Avenue and Oakhaven Street)	3,155	4,386	23,616	2,657	2,864	14,877	2,837	3,387	16,811
184	Olive Dr EB (between Oakhaven Street and Mohawk Street)	3,416	4,579	24,866	2,846	3,046	15,895	2,986	3,510	17,566
185	Olive Dr EB (between Mohawk Street and Victor Street)	3,462	4,739	25,335	2,932	3,371	17,126	3,187	4,135	19,586
186	Olive Dr EB (between Victor Street and Knudson Drive)	3,639	4,853	26,113	3,085	3,561	18,090	3,241	4,247	20,164
187	Olive Dr EB (between Knudson Drive and SR 99 SB ramps)	4,114	5,850	30,756	3,850	5,333	25,734	3,759	5,873	28,732
188	Olive Dr EB (between SR 99 SB ramps and State Road)	739	1,501	6,996	1,209	2,343	9,208	1,732	2,814	12,925
189	Olive Dr EB (between State Road and Roberts Lane)	804	2,096	8,069	1,325	2,746	9,935	1,818	3,358	12,931
190	Olive Dr EB (between Roberts Lane and Airport Drive)	329	741	3,753	581	1,177	4,832	840	1,479	6,362
191	Olive Dr EB (between Airport Drive and Oildale Drive)	952	1,981	8,915	1,134	2,235	9,675	1,321	2,489	10,520

2006 Regional Travel Demand Model

NO.	LOCATION	2006			2020			2035		
		AMPEAK	PMPEAK	DAILY	AMPEAK	PMPEAK	DAILY	AMPEAK	PMPEAK	DAILY
192	Olive Dr WB (between Fruitvale Avenue and Patton Way)	1,744	3,725	17,958	1,024	3,346	12,624	1,005	4,800	14,916
193	Olive Dr WB (between Oakhaven Street and Fruitvale Avenue)	2,068	4,201	21,329	970	2,991	11,640	956	3,949	13,058
194	Olive Dr WB (between Mohawk Street and Oakhaven Street)	2,140	4,465	22,404	1,007	3,191	12,365	930	4,140	13,593
195	Olive Drive WB (between Victor Street and Mohawk Street)	2,299	4,321	22,414	1,104	3,319	12,733	1,125	4,501	14,564
196	Olive Drive WB (between Knudson Drive and Victor Street)	2,321	4,431	22,909	1,154	3,502	13,477	1,134	4,479	14,528
197	Olive Drive WB (between SR 99 SB ramps and Knudson Drive)	2,738	5,166	26,389	1,845	3,977	17,481	1,851	5,712	20,368
198	Olive Drive WB (between State Road and SR 99 SB ramps)	2,856	6,027	27,823	3,191	6,193	27,315	1,811	5,538	20,091
199	Olive Drive WB (between Roberts Lane and State Road)	1,187	2,144	8,947	2,209	4,065	17,986	905	2,209	8,284
200	Olive Drive WB (between Oildale Drive and Airport Drive)	623	1,127	4,628	1,471	2,173	10,565	416	1,024	4,010
201	Olive Drive WB (between Airport Drive and Roberts Lane)	1,357	1,814	9,468	1,327	1,983	9,596	1,393	2,285	10,586