Trinity County

TRAVEL DEMAND FORECASTING MODEL DEVELOPMENT REPORT

Prepared for:

County of Trinity
California

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1. INTRODUCTION

BACKGROUND

Past transportation planning efforts in Trinity County have relied on the Weaverville Traffic Model developed by LSC, Incorporated in 2004. Since the release of this model, uncertainties have developed with respect to its inputs, base year model calibration, and overall ability to accurately predict future travel demand. As part of the Trinity County 2010 Regional Transportation Plan (RTP), Fehr & Peers developed a County-wide Travel Demand Model (TDM).

PURPOSE

This report documents the process of developing the base year Trinity County TDM and presents the model calibration and validation results. Once the base year model is adequately calibrated, it can be used to predict future travel demand based on various land use and roadway assumptions. This new TDM can be used for a variety of purposes such as:

- Generating traffic forecasts and other travel data (e.g., vehicle miles of travel per capita) to assist in developing an appropriate roadway network for the RTP.
- Developing a County-wide traffic impact fee program.
- Evaluating changes in travel patterns resulting from a proposed roadway improvement.
- Determining trip distribution patterns and potential impacts of land development proposals.
- Supporting the preparation of project development reports for the California Department of Transportation (Caltrans).

MODEL AREA AND MODEL YEARS

The TDM encompasses all of Trinity County. Although there are no incorporated cities in Trinity County, the model includes significant detail in the communities of Weaverville, Hayfork, and Trinity Center. The roadway network includes all state highways (State Routes 299, 3, and 36) and several major County roadways.

The model produces traffic estimates of daily, AM peak hour, and PM peak hour conditions. The model is calibrated to traffic counts for what is conventionally termed a “typical weekday”, which is defined as a Tuesday, Wednesday, or Thursday during a week with no holidays when local schools are in session. Because little growth has occurred in the County since 2004, the model was developed based on the same land use as the previous 2004 model. However, land use in several areas has been updated based on aerial surveys. The model’s roadway network represents Trinity County’s 2009 roadways. Traffic counts were provided by the County and were collected in 2007, 2008, and 2009.

Two model years were developed:

- 2009
- 2040

ORGANIZATION OF REPORT

This report is organized into six chapters:

1. Introduction
2. Discussion of Travel Demand Models
3. Summary of the Input Data
4. Description of the Model Calibration
5. Summary of the Model Validation Results
6. Future Year (2040) Model Development

A technical appendix is also attached, which contains model development information that is referenced throughout the report.

2. DISCUSSION OF TRAVEL DEMAND MODELS

This section summarizes the answers to commonly asked questions related to travel demand models.

WHAT IS A TDM?

A travel demand model (TDM) is a computer based tool that estimates traffic levels and patterns for a specific geographic area. TDM's are compiled using a computer program consisting of input files that summarize the area's land uses, street network, travel characteristics, and other key factors. Using this data, the model performs a series of calculations to determine the amount of trips generated by land uses, where each trip begins and ends, and the route taken by the trip. The model's output includes estimates of traffic on major roadways.

WHY DO WE NEED A TDM?

The Trinity County TDM will be a valuable tool for the preparation of the Trinity County 2010 Regional Transportation Plan and other long-range transportation planning studies. The model will be used to estimate the average daily and peak hour traffic volumes on major roadways in the future under certain growth assumptions. Using these traffic projections, transportation improvements can be identified to accommodate traffic growth.

HOW DO WE KNOW IF THE TDM IS ACCURATE?

To be deemed accurate for projecting traffic volumes in the future, a model must first be calibrated to a year in which actual land use data and traffic volumes are available and well documented. A model is accurately calibrated when it replicates the actual traffic counts on the major roads within certain ranges of error set by Caltrans. The Trinity County TDM has been calibrated to 2009 (base year) conditions using the existing roadway system and 2004 land use data provided by the County. A thorough review of the 2004 land use revealed that it accurately represents 2009 land use (little growth has occurred in Trinity County since 2004), although some modifications were made to the land use to improve its accuracy.

The ability of a traffic model to replicate traffic counts is known as model validation. For the model validation, 65 roadway segments within the County were included as daily study locations and 37 roadway segments were included as peak hour study locations. Traffic counts at these locations were compared with the base year model's estimates of daily, AM peak hour, and PM peak hour volume to determine the model's accuracy.

IS THE TRINITY COUNTY TDM CONSISTENT WITH STANDARD PRACTICES?

The Trinity County TDM is consistent in form and function with the standard travel demand models used in the transportation planning profession. The model includes a land use/trip generation module, a gravity-based trip distribution model, and a capacity-restrained equilibrium traffic assignment process. The traffic model uses the Voyager software platform, which is consistent with many of the models used by local jurisdictions in California and Caltrans.

3. SUMMARY OF THE INPUT DATA

The Trinity County TDM incorporates many types of input data, which are further described in this chapter.

TRAFFIC ANALYSIS ZONE (TAZ) SYSTEM

The County is divided into geographic sub-areas called traffic analysis zones (TAZs). TAZs represent physical areas containing land uses that produce or attract vehicle-trip ends. A TAZ system must provide sufficient detail to accurately represent the way that trips enter and exit the roadway network. With only a few exceptions, the 2004 model's TAZ system within Weaverville was acceptable for use in the development of the 2009 model. Outside of Weaverville, extensive detail was added in Trinity Center, Lewiston, Hayfork, and the remaining rural areas of Trinity County. The following factors were considered when defining zone boundaries: access to the street system, type of land use, streets, and natural boundaries such as rivers and mountains.

The model is divided into 140 TAZs. A total of 81 TAZs represent Weaverville, 18 TAZs represent Hayfork, and the remaining 41 represent the rural areas of the County, including the communities of Lewiston and Trinity Center. Figures 1A-1E include maps of the model's TAZ system.

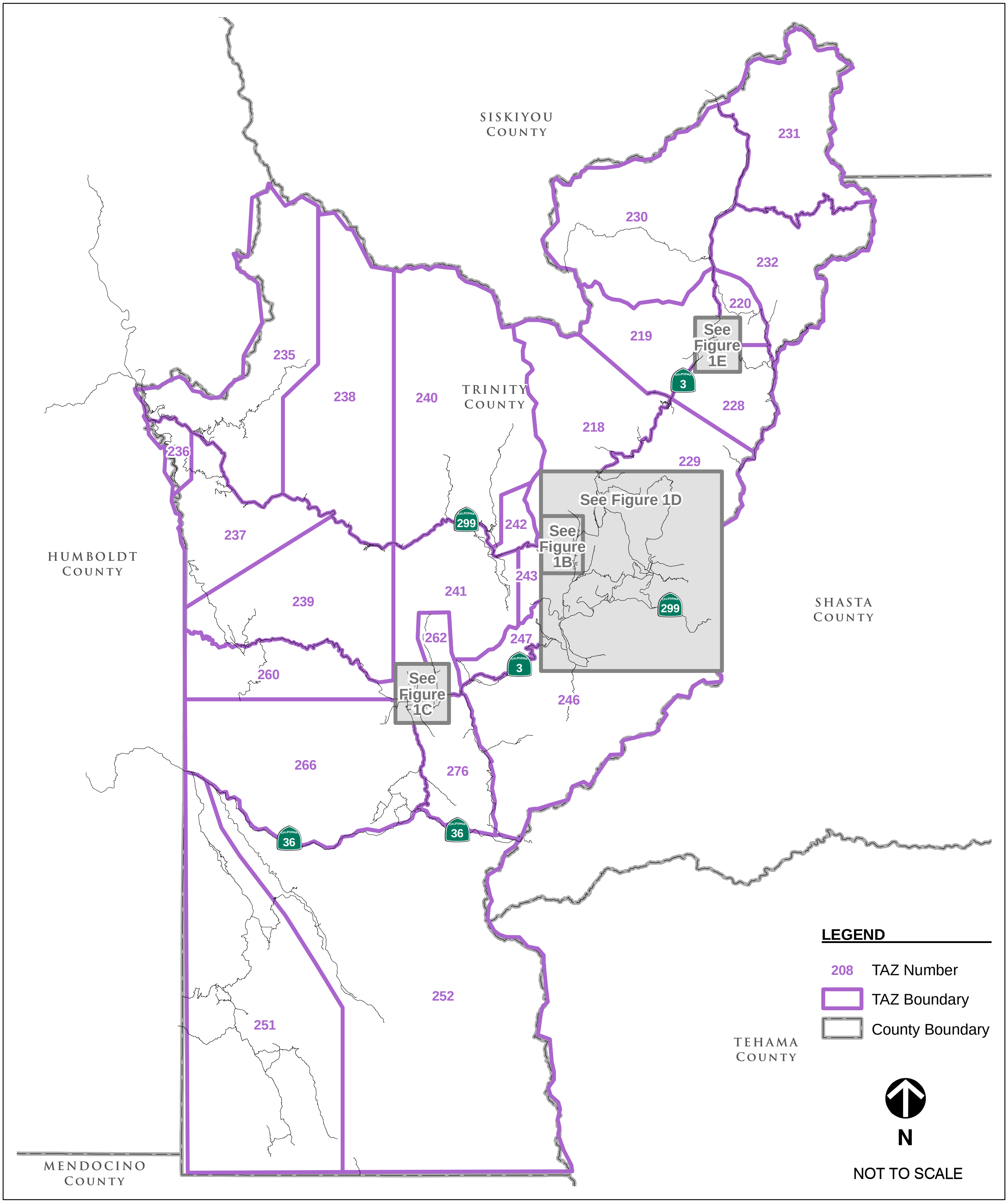
Also included in the zone structure are the external stations: gateways at points where major roadways provide access into the County. These stations model the traffic entering, exiting, or passing through the County. A total of six external gateways were established for this model:

1. SR 3 in northern Trinity County
2. Ramshorn Road in northern Trinity County
3. SR 299 in eastern Trinity County
4. SR 36 in eastern Trinity County
5. SR 36 in western Trinity County
6. SR 299 in western Trinity County

LAND USE DATA

One of the primary inputs to the TDF model is the land use data, which is instrumental in estimating trip generation. Table 1 presents the land use data categories for each TAZ including measurement units (e.g., dwelling units, square feet, etc.). In addition to specific land use categories, the model includes a "special generator" land use category meant to accommodate land uses with unusual trip generation characteristics.

The land use used in the 2004 model was provided for use in the development of the 2009 model. A thorough review of the 2004 land use revealed that it accurately represents 2009 land use (little growth has occurred in Trinity County since 2004), although aerial and street-view surveys were completed by Fehr & Peers to improve the inventory of land use in Hayfork. Where TAZs from the 2004 model were disaggregated into smaller TAZs (notably in Trinity Center, Lewiston, and rural Trinity County), Fehr & Peers used aerial imagery and utility meter information provided by the Trinity Public Utilities District to allocate land use to the 2009 model's TAZs. Additionally, the land use from the 2004 model did not include any estimates of school enrollment. The number of students in each TAZ was developed based on any schools located in a TAZ and the enrollment data provided in each school's *Accountability Report Card.*



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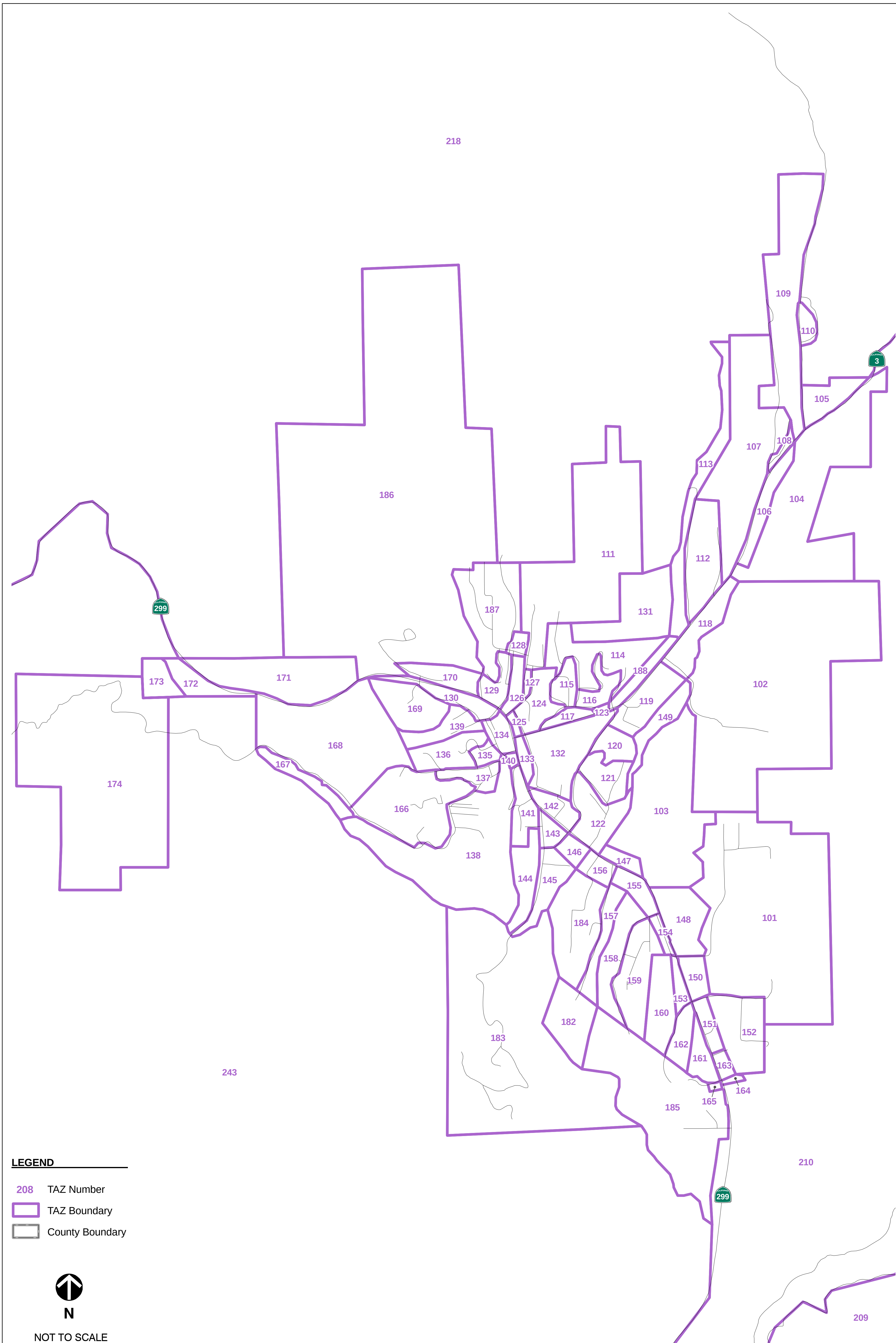
TRINITY COUNTY TAZS

FIGURE 1A



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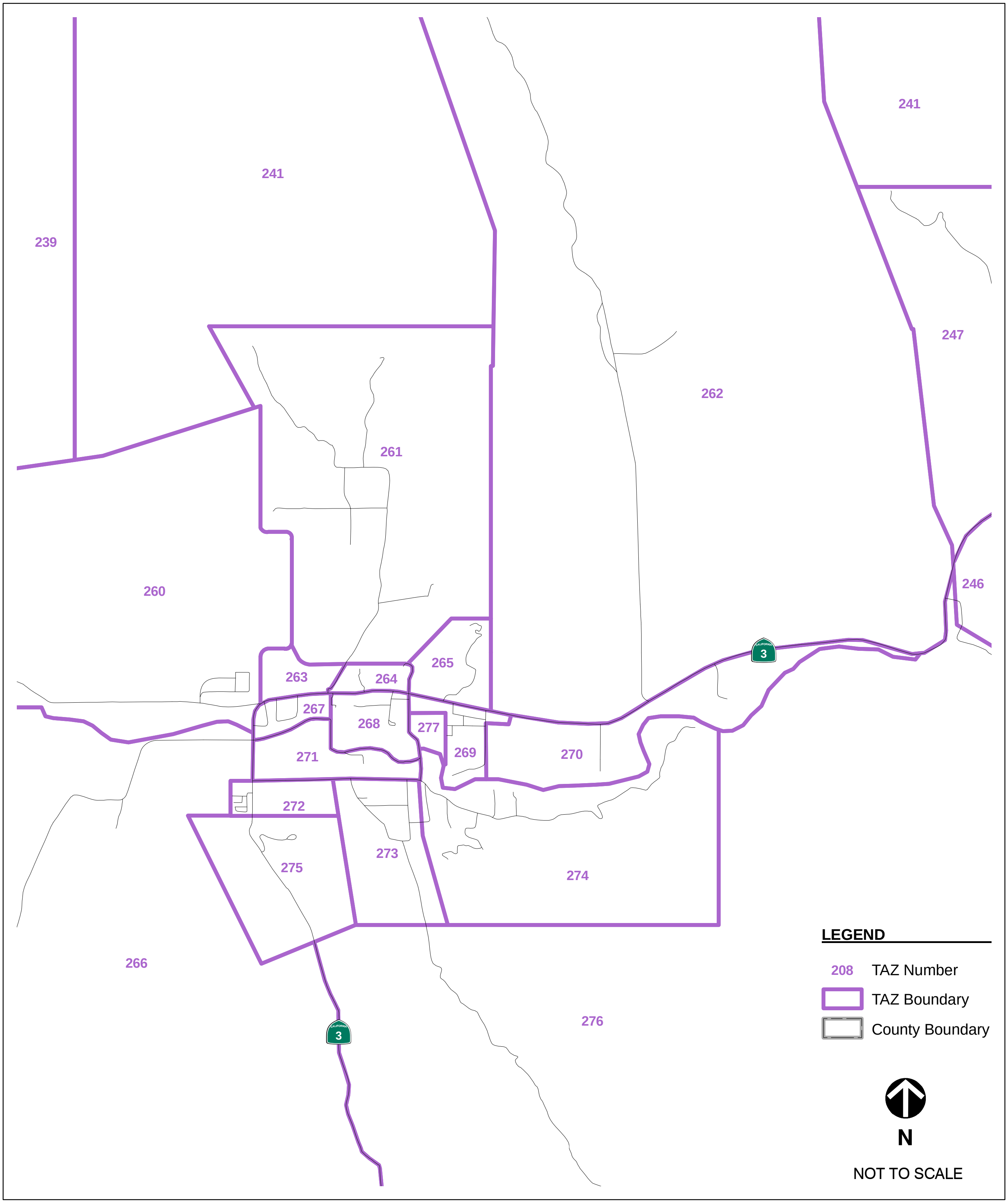
WEAVERVILLE TAZS
FIGURE 1B



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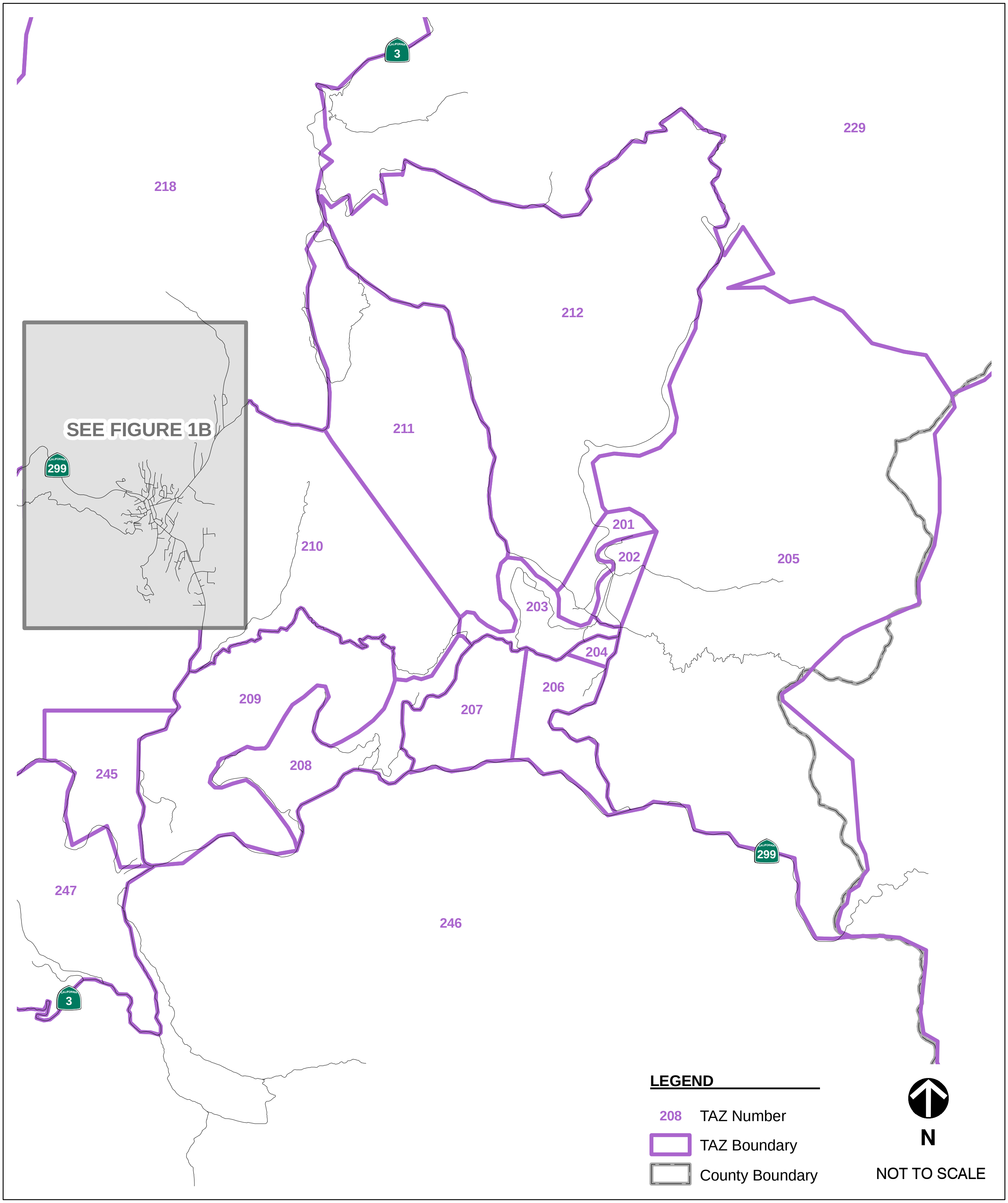
HAYFORK TAZS

FIGURE 1C



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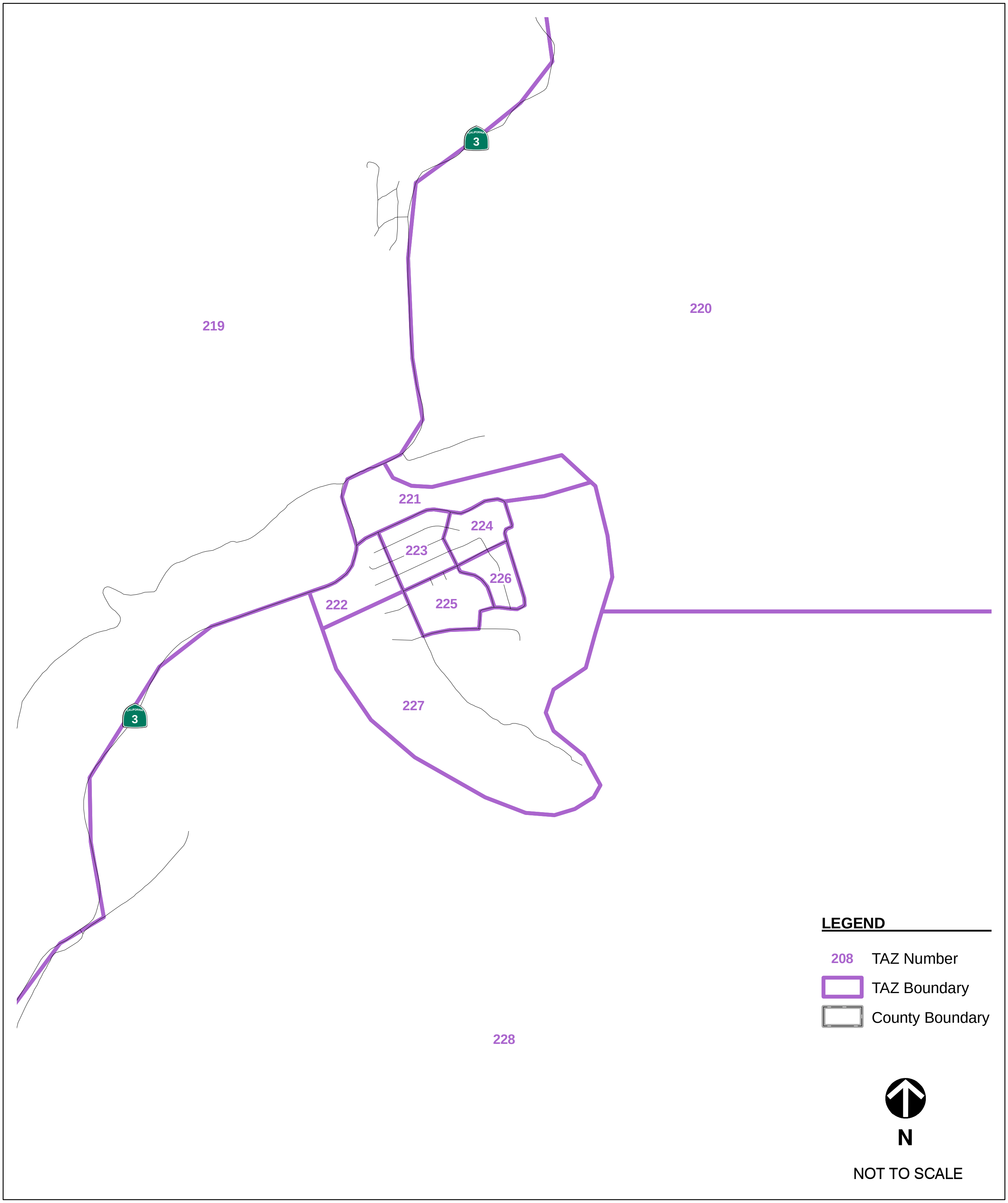
LEWISTON TAZS
FIGURE 1D



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TRINITY CENTER TAZS

FIGURE 1E

TABLE 1 – LAND USE CATEGORIES IN TRINITY COUNTY TDM	
Land Use	**Measurement Units**
Single-Family Residential	Dwelling Units
Multi-Family Residential	Dwelling Units
Office Commercial	KSF
Retail Commercial	KSF
Grocery	KSF
Restaurant	KSF
Convenience Store	KSF
Entertainment	KSF
Medical Office	KSF
Light Industrial	KSF
Hotel / Motel	Rooms
Storage	Units
Schools (Elementary/Middle, High)	Students
Special Generators	Number of Daily Trips

Notes: KSF = thousand square feet
Source: Fehr & Peers, 2010

Appendix A displays the base year land use data file.

TRIP GENERATION RATES

Trinity County's rural character contributes to a varying level of trip generation depending on the location of land use within the County. Because residential and commercial land uses in Weaverville are located closely to one another, they are likely to generate trips at a higher rate than land uses in rural parts of the County where residential and commercial land uses are separated by long distances. Since trip generate rate varies depending on location within the county, it was necessary to classify the County into four different areas so that different trip generation rates could be applied to each area. These geographic areas are as follows:

1. Weaverville
2. Rural Trinity County (includes communities of Lewiston and Trinity Center)
3. Western Trinity County (areas within Trinity County whose primary trip destinations are outside of Trinity County)
4. Hayfork

The trip generation rates for Area 2 (Rural Trinity County) and Area 3 (Western Trinity County) are the same; however, Census 2000 Journey to Work Data revealed significant differences between the behaviors of the two areas. Among Area 2 TAZs, very few trips (less than 15%) go external to the County on a daily basis; however, the number of external trips for Area 3 is much higher (approximately 70%) since most attractive destinations are outside of Trinity County.

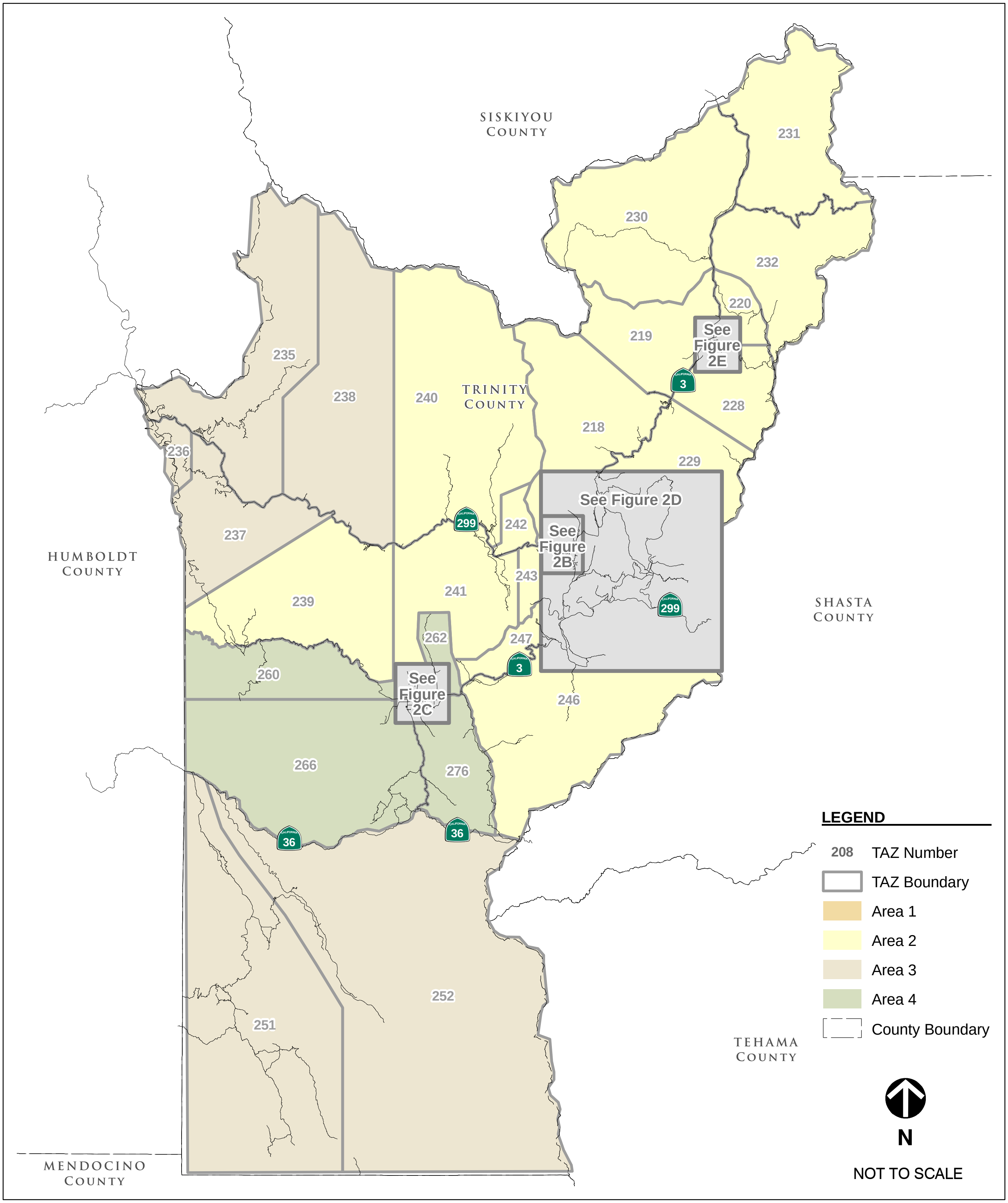
The principal source of data for single-family residential trip generation rates was counts conducted at locations throughout Trinity County:

- Area 1 – Weaverville
  - A trip generation survey of 49 single-family residences on Easter Avenue in Weaverville (Area 1) revealed a daily rate of 8.53 trips per unit.
  - A trip generation survey of 15 single-family residences on Hawthorne Street in Weaverville (Area 1) revealed a daily rate of 8.60 trips per unit.
  - The weighted average of these two daily rates is 8.55 trips per unit.
- Area 2 / Area 3 – Rural Trinity County / Western Trinity County
  - A trip generation survey of 40 single-family residences on B Bar K Road near Douglas City (Area 2) revealed a daily rate of 4.3 trips per unit.
  - A trip generation survey of 63 single-family residences on Steel Bridge Road near Douglas City (Area 2) revealed a daily rate of 2.4 trips per unit.
  - The weighted average of these two daily rates is 3.13 trips per unit.
- Area 4 – Hayfork
  - A trip generation survey of 52 single-family residences on Highland Drive in Hayfork (Area 4) revealed a daily rate of 7.21 trips per unit.

Trip generation rates for other land uses were developed based on *Trip Generation, 8th Edition* (Institute of Transportation Engineers, 2008) and adjusted based on the ratio of an area's single-family residential rate to *Trip Generation* 's single-family residential rate. For example:

- Weaverville's observed daily rate for single-family residences is 8.55 trips/day
- *Trip Generation*'s daily rate for single-family residences is 9.57 trips/day
- 8.55 / 9.57 = 0.893
- *Trip Generation*'s daily rate for multi-family residences is 6.59 trips/day
- Weaverville's assumed daily rate for multi-family residences is 5.89 trips/day = 6.59 trips/day x 0.893

Table 2 summarizes the trip generation rates for all areas of the Trinity County TDM; Figures 2A-2E show the area types assigned to each TAZ in the model.



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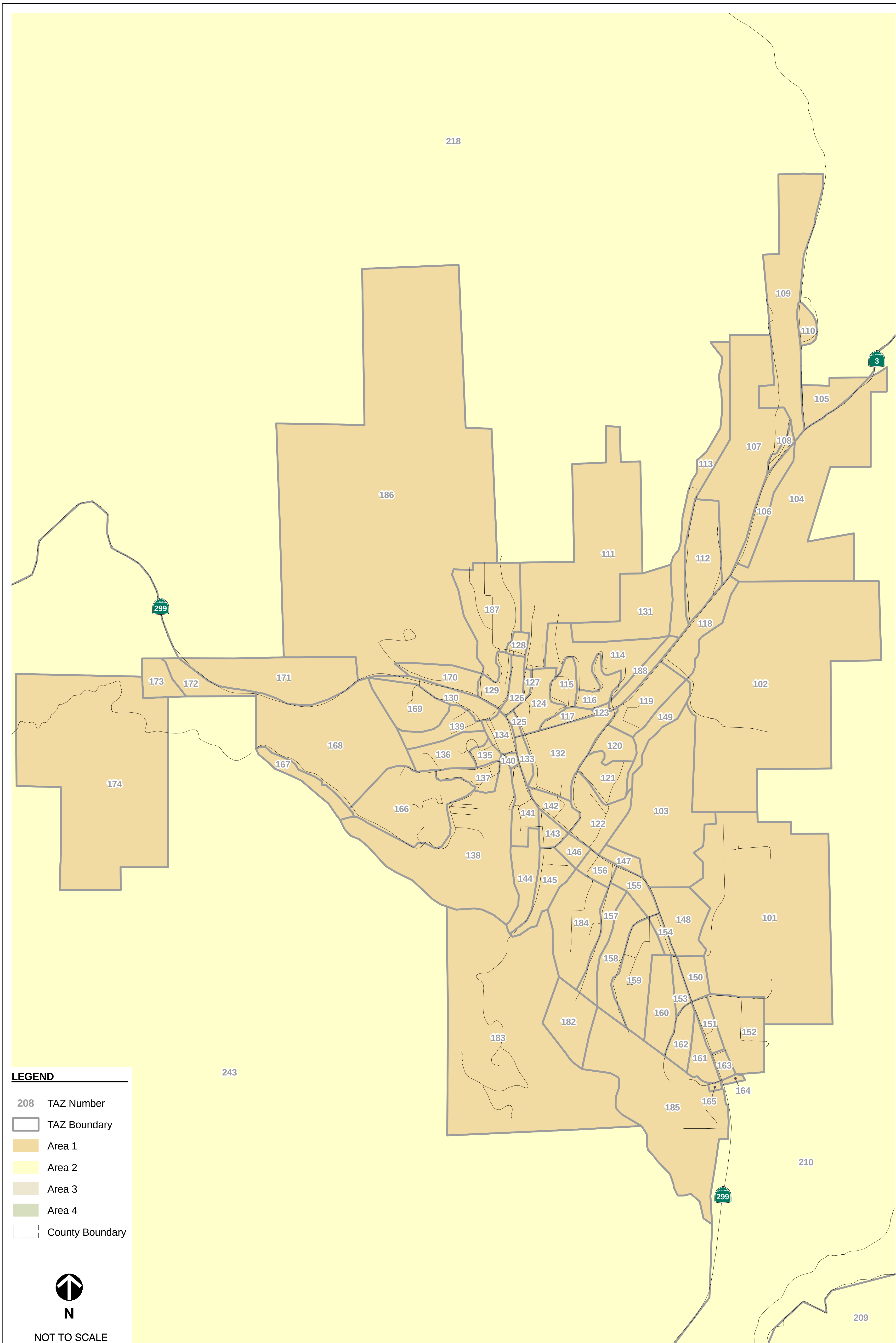
TRINITY COUNTY TAZ AREA TYPES

FIGURE 2A



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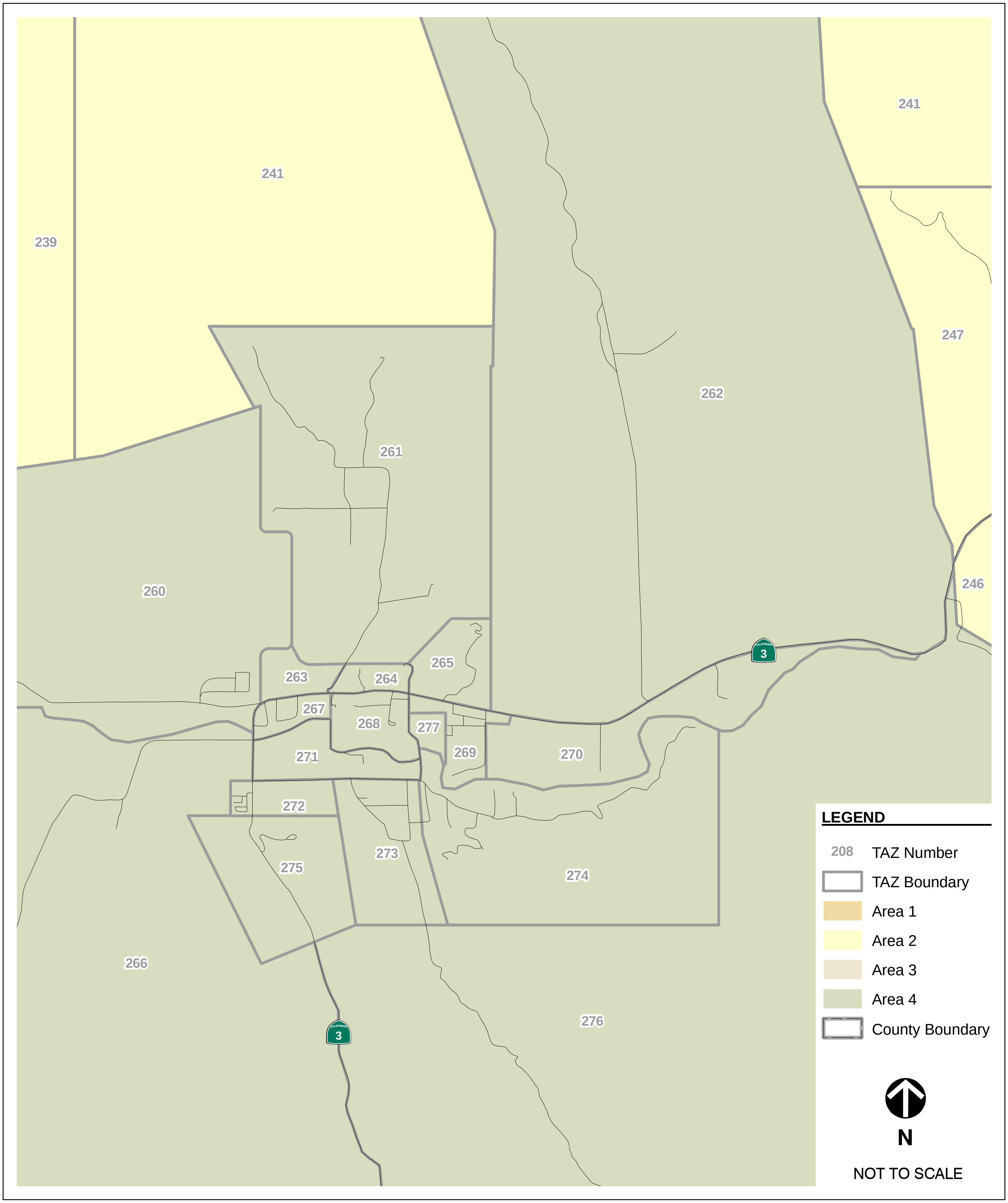
WEAVERVILLE TAZ AREA TYPES
FIGURE 2B



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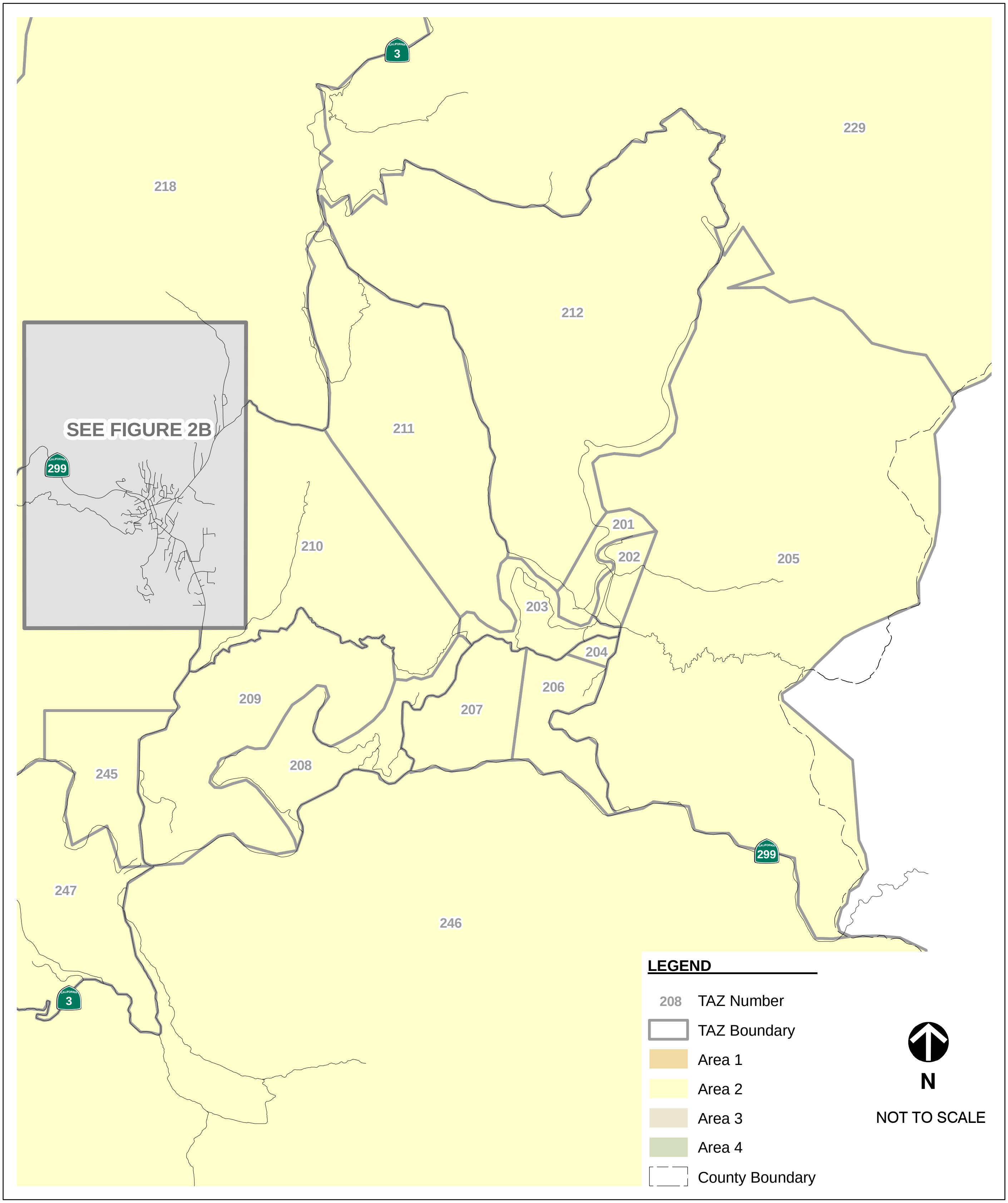
HAYFORK TAZ AREA TYPES

FIGURE 2C



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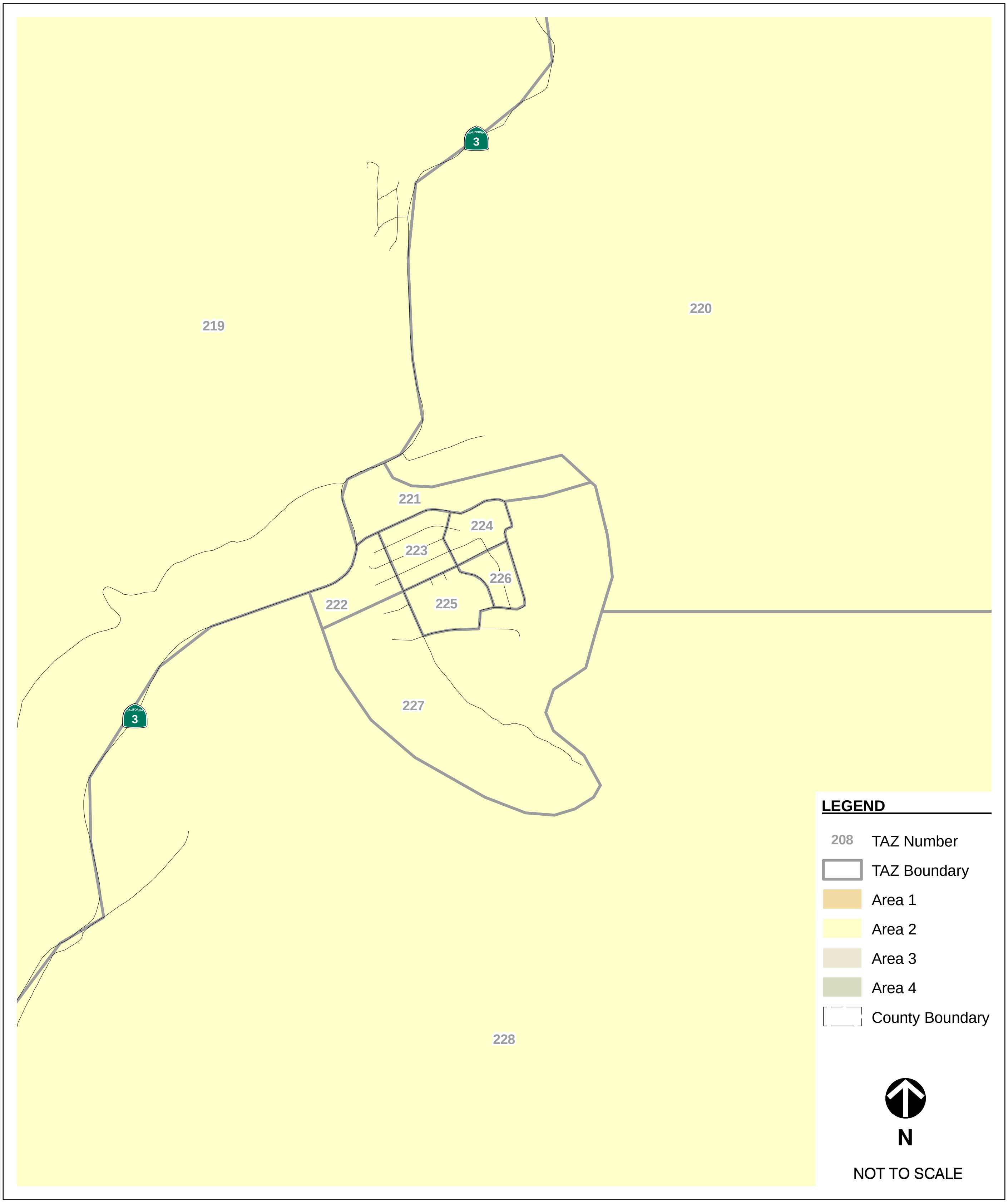
LEWISTON TAZ AREA TYPES

FIGURE 2D



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TRINITY CENTER TAZ AREA TYPES

FIGURE 2E

TABLE 2–
TRIP GENERATION RATES IN TRINITY COUNTY TDM

Land Use	Units	Area 1	Area 2	Area 3	Area 4
Single-Family Residential	Dwelling Units	8.55	3.13	3.13	7.21
Multi-Family Residential	Dwelling Units	5.89	2.16	2.16	4.96
Office Commercial	KSF	9.84	3.60	3.60	8.29
Retail Commercial	KSF	38.36	14.04	14.04	32.35
Grocery	KSF	91.34	33.44	33.44	77.03
Restaurant	KSF	113.60	41.59	41.59	95.79
Convenience Store	KSF	690.00	255.00	255.00	637.07
Entertainment	KSF	69.74	25.53	25.53	58.81
Medical Office	KSF	32.28	11.82	11.82	27.22
Light Industrial	KSF	6.23	2.28	2.28	5.25
Hotel / Motel	Rooms	7.30	2.67	2.67	6.16
Storage	Units	0.25	0.09	0.09	0.21
Elementary/Middle School	Students	1.15	1.15	1.15	1.15
High School	Students	2.20	2.20	2.20	2.20
Special Generators	Daily Trips	1.00	1.00	1.00	1.00

Notes: KSF = thousand square feet
Source: Fehr & Peers, 2010

In addition to specific land use categories, the model includes a "special generator" land use category meant to accommodate land uses with unusual trip generation characteristics. Table 3 summarizes the base year model's special generators. Daily trip estimates were developed as follows:

- Airports – Trinity County staff provided Fehr & Peers with estimates of the number of aircraft based at each airport in Trinity County. Daily trip estimates were developed using the ITE rate for general aviation airports (ITE 022).

- Post Offices – counts conducted at the commercial complex containing the post office in Weaverville revealed daily trip estimates of 3,100 trips per day. The number of post office trips was developed by subtracting the estimated number of trips to/from the commercial uses in the complex from the total trips accessing the complex. Estimates of the other post offices were developed based on the number of households that each post office serves as well as the area's single-family trip generation rate relative to that of Weaverville.

TABLE 3 –
TRINITY COUNTY TDM SPECIAL GENERATORS

Land Use	Daily Trip Estimate
Airports	
Weaverville Airport	75
Trinity Center Airport	110
`Ruth Airport	15
Hyampom Airport	10
Hayfork Airport	30
Post Offices	
Weaverville Post Office	2,600
Lewiston Post Office	370
Trinity Center Post Office	220
Hayfork Post Office	1,140
Other Land Uses	
Trinity River Lumber Company (Weaverville)	400 (120 employees & 160 trucks per day)
Trinity Hospital	1,590 (assumes ITE rate for 200 employees)
Trinity Alps Golf Course	320

Source: Fehr & Peers, 2010

ROADWAY NETWORK

The roadway network for the TDM is based on the County's Geographic Information System (GIS) roadway centerline file. The TDM roadway network includes all major highways and many County roadways. The network database includes distance, street name, number of lanes, posted speed limit, and capacity. Roadways are classified as either highways or County roadways.

TABLE 4 –
LAND USE CATEGORIES IN TRINITY COUNTY TDM

Roadway Classification	Capacity (vehicles per hour per lane)
Highway	1,400
County Roadway	600

Source: Fehr & Peers, 2010

4. DESCRIPTION OF THE MODEL CALIBRATION

Model calibration is the process by which parameters are set based on a comparison of travel estimates computed by the model with actual travel data from the area being studied. This section provides a general description of the calibration steps and the adjustments made during the process to achieve accuracy levels that are within Caltrans' standards. For detailed information regarding the specified modeling steps, refer to the Voyager model control file that is included in Appendix B.

TRIP GENERATION

The first step in the model is the estimation of trips that originate and terminate in each TAZ. This is completed using the trip generation rates for each land use category for each area of the model. Trips are then classified either as "productions" or "attractions", and trip purpose data is tabulated.

TRIP DISTRIBUTION

The trip distribution process determines the specific destination of each originating trip. The destination may be within the zone itself, which results in an intra-zonal trip. If the destination is outside of the zone of origin, it is an inter-zonal trip. Internal-internal (II) trips originate and terminate within the County. Trips that originate within but terminate outside of the County are internal-external (IX), and trips that originate outside and terminate inside the County are external-internal (XI). Trips passing completely through the County are external-external (XX).

The trip distribution model uses the gravity equation to distribute trips to all zones. This equation estimates an accessibility index for each zone based on the number of attractions in each zone and a friction factor, which is a function of time between zones. Each attraction zone is given its pro-rata share of productions based on its share of the accessibility index. This process applies to the II, IX, and XI trips. The XX trips are added to the trip table prior to final assignment. Friction factors, or travel time factors, are used in the trip distribution stage of the model in execution of the gravity model. Iterative runs of the model were conducted with the various sets of friction factors to identify an appropriate set of curves that improved trip distribution and corresponding validation.

MODE CHOICE

A separate mode-choice model was not developed given the purpose of this model and the limited transit use in the County.

TRIP ASSIGNMENT

The trip assignment process determines the route that each vehicle-trip follows to travel from origin to destination. The model selects these routes in a manner that is sensitive to congestion and the desire to minimize overall travel time. It uses an iterative, capacity-restrained assignment and equilibrium volume adjustments. This technique finds a travel path for each trip that minimizes the travel time, with recognition of the congestion caused by all other trips.

The general assignment process includes the following steps.

- Assign all trips to the links along their selected paths
- After all assignments, examine the volume on each link and adjust its impedance based on the volume-to-capacity ratio

- Repeat the assignment process for a set number of iterations or until specified criteria are satisfied

As part of the assignment process, an equilibrium volume adjustment is also applied. This adjustment is used to weight the results of each assignment iteration for incorporation into a final total volume for each link.

Attached to the last page of this report is an envelope containing a CD of the base year model. The CD contains all files necessary to run the model, including the output files (i.e., loaded model networks). To properly run this model, users must have a recent version of Citlabs' Cube & TP+ software (version 4.1.1 or later).

5. SUMMARY OF MODEL VALIDATION RESULTS

This chapter presents a summary of the base year Trinity County Travel Demand Model's validation to existing conditions.

The term "static validation" refers to the model's performance as it relates to how well its estimate of base year traffic volumes matches existing traffic counts. Caltrans has identified certain guidelines regarding acceptability for forecasting future year traffic. This chapter describes the model's performance in comparison to the Caltrans Travel Forecasting Guidelines, November 1992, Travel Model Improvement Program (TMIP) Model Validation and Reasonableness Checking Manual, February 1997, and Fehr & Peers' internal standards. In addition, dynamic validation was performed to test the sensitivity and reasonableness of the TDF model in responding to land use and roadway network changes.

VALIDATION COMPARISON TECHNIQUES

Travel model accuracy is tested using these comparison techniques:

- The volume-to-count ratio is computed by dividing the volume assigned by the model and the actual traffic count for individual roadways model-wide.
- The deviation is the difference between the model volume and the actual count divided by the actual count.
- The correlation coefficient estimates the correlation between the actual traffic counts and the estimated traffic volumes from the model.
- The coefficient of determination (R^2) is the proportion of variability between the actual traffic counts and the estimated traffic volumes from the model.
- The Percent Root Mean Square Error (PRMSE) is the square root of the model volume minus the actual count squared divided by the number of counts. It is a measure similar to standard deviation in that it assesses the accuracy of the entire model.

STATIC VALIDATION STANDARDS

For a model to be considered accurate and appropriate for use in traffic forecasting, it must replicate actual conditions within a certain level of accuracy and demonstrate sufficient sensitivity to changes in the model's input variables. Since it is extremely unlikely that any model will precisely replicate all counts, validation guidelines have been established. The following summarizes key validation targets for daily conditions based on the Caltrans guidelines, TMIP guidelines, and Fehr & Peers' internal standards for the Trinity County TDM.

- All screenlines should be within their maximum desirable deviation, which ranges from approximately 5 to 60 percent, depending on total volume.
- A minimum of 75 percent of the roadway links should be within their maximum desirable deviation, which ranges from approximately 5 to 60 percent, depending on total volume.
- The model-wide correlation coefficient is suggested to be greater than 0.88.
- The model-wide coefficient of determination (R2) is suggested to be greater than 0.77.

- Less than 30 percent is suggested for an appropriate aggregate PRMSE for all links with counts or by facility type and area type.

STATIC VALIDATION RESULTS

The base year Trinity County TDM was run once all of the input data described in Chapter 3 was collected and formatted for Voyager use. The model results were examined and checked for reasonableness. Link volumes that did not conform with traffic counts were investigated further, which led to some modifications of the model parameters.

Table 5 summarizes the aggregate static validation results for all validation links.

TABLE 5 –
LINK LEVEL STATIC VALIDATION RESULTS

Land Use	Caltrans and TMIP Guidelines	Daily	AM Peak Hour	PM Peak Hour
Percent of screenlines within allowed maximum deviation	100%			
Percent of roadway links within allowed maximum deviation	> 75%	88% ✓	73%	84% ✓
Correlation Coefficient	> 0.88	0.97 ✓	0.90 ✓	0.92 ✓
Coefficient of Determination (R^2)	> 0.77	0.93 ✓	0.80 ✓	0.84 ✓
Overall Percent RMSE at Link Level	< 30%	24% ✓	45%	0.37

Source: Fehr & Peers, 2010

All aggregate static validation results exceed the validation guidelines established in the Caltrans guidelines and the TMIP guidelines for daily conditions. However, certain static validation results for the AM and PM peak hours do not exceed the validation guidelines. It is important to note that the Caltrans, TMIP, and Fehr & Peers guidelines for static validation were developed for daily, not peak hour, conditions. Generally, roadway links with small volumes are more difficult to validate than those with large volumes. Appendix C contains detailed static validation summary reports.

Figure 3 illustrates the model's daily validation by showing a graph of the daily traffic counts used in the model validation and their corresponding volumes in order from the smallest count to the largest count. As shown in the graph, the model volumes follow the pattern exhibited by the daily counts: as the daily count increases, the model volumes generally increase.

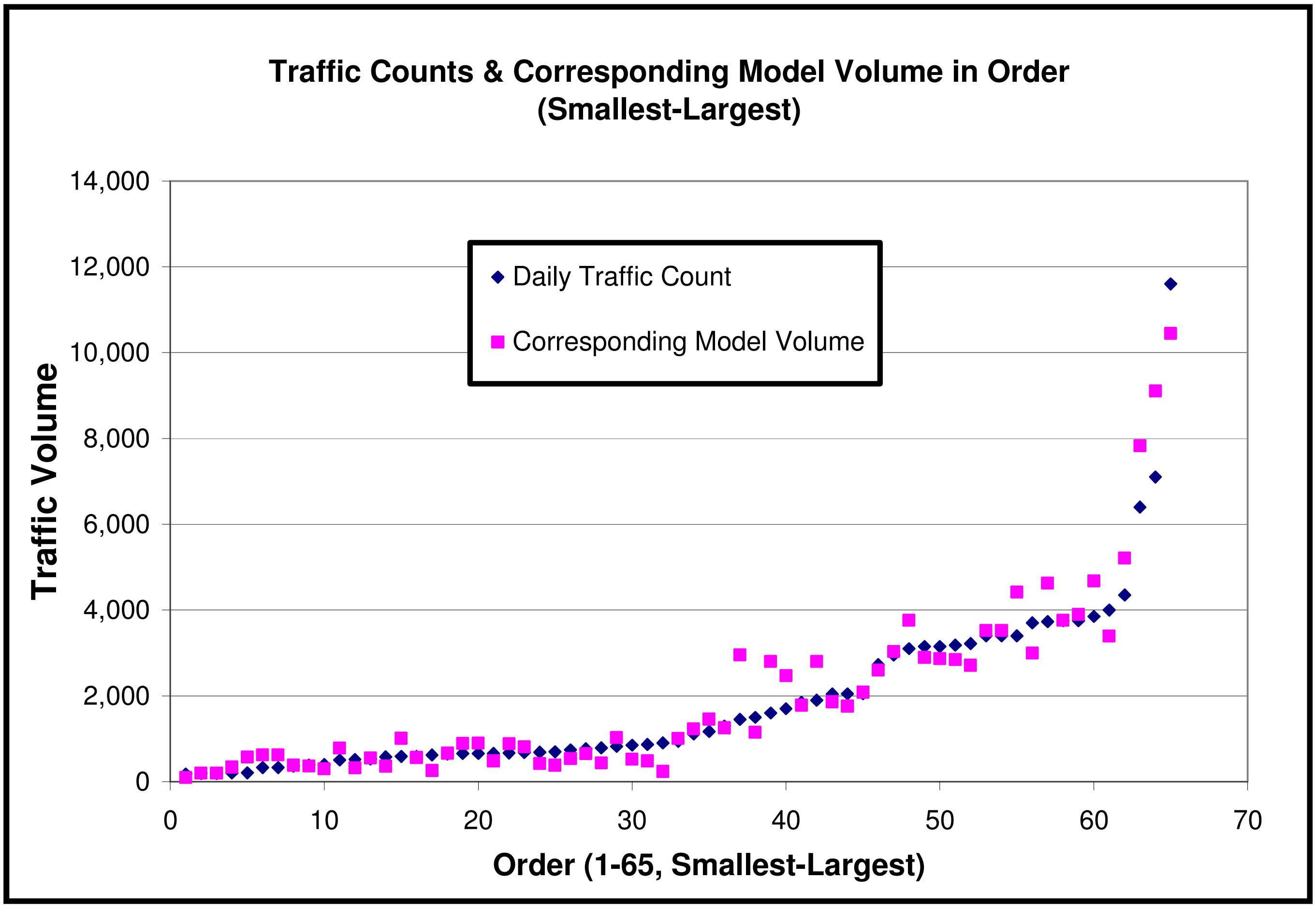

Figure 3 – Daily Traffic Counts and Corresponding Model Volume

DYNAMIC VALIDATION RESULTS

The previous section described a validation process that consisted of comparing the model's traffic volume forecasts for the base year to traffic counts taken for the same year. This is "static" validation in that it judges the model's ability to replicate a static set of conditions (the traffic counts). While this provides some useful information, its usefulness is limited by the fact that models are seldom, if ever, used for static applications; by far the most common use of models is to forecast how a change in inputs would result in a change in traffic conditions. The most valid tests of a model's accuracy must, therefore, focus on the model's ability to predict realistic differences in outputs as inputs are changed; in other words, dynamic validation rather than static validation. This section describes the results of the dynamic validation tests that were performed on the base year Trinity County TDM.

Residential land use modification, commercial land use modification, and roadway network modification tests were conducted as a part of this dynamic validation.

Residential Land Use Tests

Single-family residences were added to TAZs in varying quantities to observe the model's response to the change in input. Single-family residences were added to two different TAZs to observe the difference in behavior when adding dwellings units to different area types:

- TAZ 109 in north Weaverville - trip generation Area 1
- TAZ 204 in Lewiston - trip generation Area 2

The results of these tests are summarized in Tables 6 and 7.

TABLE 6 –
DYNAMIC VALIDATION RESULTS FOR HOUSEHOLD ADDITION – TAZ 109

TAZ	Scenario	TAZ Vehicle Trips	Δ TAZ Vehicle Trips	Average VT/Unit for Increment	Vehicle Miles of Travel (VMT)	Δ VMT	Average VMT/Unit for Increment
109	Base Scenario	912	--	--	432,959	--	--
	Add 10 Single-Family Residences	998	86	8.6	433,282	323	32.3
	Add 100 Single-Family Residences	1,762	850	8.5	436,273	3,314	33.1
	Subtract 10 Single-Family Residences	827	-85	8.5	432,672	-287	28.7
	Subtract 100 Single-Family Residences	58	-854	8.5	430,247	-2,712	27.1

Source: Fehr & Peers, 2010

TABLE 7 –
DYNAMIC VALIDATION RESULTS FOR HOUSEHOLD ADDITION – TAZ 204

TAZ	Scenario	TAZ Vehicle Trips	Δ TAZ Vehicle Trips	Average VT/Unit for Increment	Vehicle Miles of Travel (VMT)	Δ VMT	Average VMT/Unit for Increment
204	Base Scenario	1,080	--	--	432,959	--	--
	Add 10 Single-Family Residences	1,111	31	3.1	433,398	439	43.9
	Add 100 Single-Family Residences	1,392	312	3.1	437,416	4,457	44.6
	Subtract 10 Single-Family Residences	1,049	-31	3.1	432,533	-426	42.6
	Subtract 100 Single-Family Residences	766	-314	3.1	428,641	-4,318	43.2

Source: Fehr & Peers, 2010

The model performed predictably when adding and subtracting single-family dwelling units to the land use. For each test, the number of vehicle trips (VT) and vehicle miles traveled (VMT) responded in the right direction and to a reasonable order of magnitude.

Table 6 shows that the average number of vehicle trips per unit for TAZ 109 was almost identical for the addition of 10 and 100 units. The VT/unit ratios of 8.6 and 8.5 were nearly identical to the trip generation rate for single-family dwelling units in Area 1 of 8.55.

Table 7 shows that the average number of vehicle trips per unit for TAZ 204 was identical for the addition of 10 and 100 units. The VT/unit ratio of 3.1 was nearly identical to the trip generation rate for single-family dwelling units in Area 2 of 3.13.

The average VT/unit for each TAZ test corresponded accurately to the magnitudes of the trip generation rates for single-family dwelling units in each area. That is, single-family dwelling units in Area 1 produce more trips than in Area 3 who produce more trips than in Area 2.

The model also performed predictably in calculating vehicle miles of travel (VMT) for the added single-family dwelling units. The average VMT/unit for the added dwelling units was larger for TAZ 204 in Lewiston versus TAZ 109 in Weaverville because homes in Lewiston are a much greater distance away from supporting commercial land uses. Conversely, TAZ 109 is located near Downtown Weaverville near numerous non-residential land use types.

Commercial Land Use Tests

Retail square footage was added to TAZ 155, which represents the area along SR 299 in Weaverville on which the Plotzke ACE Hardware is located. This TAZ was modified to include an additionally 10,000 square feet (10 KSF) and 20,000 square feet (20 KSF) of retail space. Subsequently, the TAZ was also modified to remove 10 and 20 KSF of retail space. The number of inbound and outbound trips generated by this TAZ was monitored. The results of this test are shown in Table 8.

**TABLE 8 –
DYNAMIC VALIDATION RESULTS FOR RETAIL ADDITION – TAZ 155**

TAZ	Scenario	TAZ Vehicle Trips	Δ TAZ Vehicle Trips	Average VT/Unit for Increment	Vehicle Miles of Travel (VMT)	Δ VMT	Average VMT/Unit for Increment
155	Base Scenario	2,572	--	--	432,959	--	--
	Add 10 KSF Retail	2,929	357	35.7	435,415	2,456	245.6
	Add 20 KSF Retail	3,282	710	35.5	437,883	4,924	246.2
	Subtract 10 KSF Retail	2,210	-362	36.2	430,563	-2,396	239.6
	Subtract 20 KSF Retail	1,843	-729	36.5	428,200	-4,759	238.0

Source: Fehr & Peers, 2010

Table 8 shows that the model performed predictably when adding retail square footage to the land use. For each scenario, the number of daily trips responded in the correct direction and to the expected order of magnitude. The number of daily vehicle trips increase proportionally to the amount of land use added. As expected, the increase in vehicle trips for the addition of 20 KSF of retail space was approximately two times that of the increase in vehicle trips for the addition of 10 KSF of retail space.

The daily trip rate per each unit added, however, is slightly less than the expected trip generation rate of 38.36 daily trips per KSF. Because the model is designed to balance the number of attractions to the number of productions, the additional attractions by the addition of more retail space are truncated when the model balanced attractions to productions. Users of the model should exhibit caution when adding any new single type of land use to the model. To generate a number of trips closer to the expected number when adding commercial land use, users should add a commensurate number of households to the model of exclude the TAZ to which the land use is added from production-attraction balancing.

Roadway Network Tests

Two different tests were conducted by making modifications to the model network:

- Adding a link
- Removing a link

In both cases, the network modifications were made and the model was completely re-run.

<u>Adding a Link</u>

The proposed East Connector, a County roadway from SR 299 near the Glen Road intersection, east of downtown Weaverville, and to SR 3 north of the Browns Ranch Road intersection, was added to the model network. The road was coded as a two-lane County roadway with a speed limit of 35 miles per hour and capacity characteristics similar to those of other County roadways. Only the assignment module of the TDM was run; the origin-destination matrices remained the same, isolating the difference in the roadway network as the only difference. Trips with an origin south of Weaverville and a destination north of Weaverville were monitored by tabulating the volumes on roadways that go through Weaverville:

- SR 299 east of Glen Road
- SR 3 east of SR 299
- Washington Street between SR 299 and SR 3
- Levee Road between SR 299 and SR 3

The results of this test are summarized in Table 9.

TABLE 9 –
DYNAMIC VALIDATION RESULTS FOR ADDITION OF EAST CONNECTOR

Roadway Segment	Without East Connector	With East Connector
SR 299 East of Glen Road	9,102	9,131
SR 3 East of SR 299	3,421	3,421
Washington Street between SR 299 and SR 3	3,012	1,261
Levee Road between SR 299 and SR 3	76	6
East Connector	--	1,870
Total	15,611	15,689

Source: Fehr & Peers, 2010

Table 9 shows that the addition of the East Connector to the roadway network results in comparable amounts of traffic going from south of Weaverville to north of Weaverville. The addition of the East Connector diverts trips traffic from Washington Street and Levee Road, indicating that the model is performing properly.

Removing a Link

Washington Street north of Lowden Lane was removed from the model network. Only the assignment module of the model was run; the origin-destination matrices remained the same, isolating the difference in the roadway network as the only difference. Trips with an origin south of Weaverville and a destination north of Weaverville were monitored by tabulating the volumes on roadways that go through Weaverville:

- SR 299 east of Glen Road
- SR 3 east of SR 299
- Washington Street between SR 299 and SR 3
- Levee Road between SR 299 and SR 3

The results of this test are summarized in Table 10.

TABLE 10 –
DYNAMIC VALIDATION RESULTS FOR REMOVAL OF WASHINGTON STREET

Roadway Segment	With Washington Street	Without Washington Street
SR 299 East of Glen Road	9,102	9,102
SR 3 East of SR 299	3,421	4,524
Washington Street between SR 299 and SR 3	3,012	--
Levee Road between SR 299 and SR 3	76	1,985
Total	15,611	15,611

Source: Fehr & Peers, 2010

Table 10 shows that the removal of Washington Street from the roadway network results in the exact same amount of traffic going from south of Weaverville to north of Weaverville. The removal of Washington Street diverts trips onto SR 3 and Levee Road, indicating that the model is performing properly.

6. FUTURE YEAR (2040 MODEL DEVELOPMENT)

As part of the Trinity County 2010 RTP, Fehr & Peers developed a 2040 version of the Trinity County TDM. The 2040 model was developed by incorporating the growth in land use likely to occur by 2040 into the 2009 model's platform.

LAND USE PROJECTIONS

Based on coordination with the RTP Steering Committee, growth of 0.8% per year was assumed between 2009 and 2040. Table 11 shows the 2009 land use totals and the 2040 land use totals after incorporating the growth of 0.8% per year.

TABLE 11 –
TRINITY COUNTY GROWTH: 2009 TO 2040

	Single-Family Residential (Dwelling Units)	Multi-Family Residential (Dwelling Units)
2009	4,838	809
0.8% Growth per year between 2009 & 2040		
2040	6,194	1,036
Difference	**1,356**	**227**

Note: Compounding of 0.8% growth assumed between 2009 & 2040
Source: Fehr & Peers, 2010

Members of the Steering Committee also indicated the areas of Trinity County in which this growth was likely to occur. Table 12 shows the assumed allocation of residential growth to different areas of the County. Non-residential land uses were increased at a rate proportional to the residential growth.

TABLE 12 –
ALLOCATION OF TRINITY COUNTY GROWTH

Community	Percent of Growth Allocated	Single-Family Residential (Dwelling Units)	Multi-Family Residential (Dwelling Units)
		1,356	**227**
Hawkins Bar	10%	136	23
Trinity Center	12%	163	27
Lewiston	14%	190	32
Burnt Ranch / Cedar Flat	2%	27	5
Covington Mill	2%	27	5
Junction City	1%	14	2
Douglas City	2%	27	5
Post Mountain	1%	14	2
Ruth / Mad River	2%	27	5
Weaverville	42%	569	95

Hayfork	12%	163	27
Total	**100%**	**1,356**	**227**
Source: Fehr & Peers, 2010			

The total amount of growth allocated to each community was distributed among several TAZs. In small communities such as Hawkins Bar and Douglas City, the allocated growth was distributed to all TAZs that represented the community since all TAZs within the small communities could accommodate the additional growth. However, in Trinity County's denser communities of Trinity Center, Weaverville, and Hayfork, growth could only be distributed to certain TAZs that were not already built out with land use. A complete summary of TAZs to which growth was distributed within each community is included in Appendix D. Appendix E contains the 2040 model's land use.

SPECIAL GENERATORS

Growth of special generators was developed independently of the land use projections discussed above. Table 13 summarizes the assumptions used for the 2040 model's special generators. Daily trip estimates were developed as follows:

- Airports – Trinity County staff provided Fehr & Peers with the estimated the number of aircraft that will be based at each Trinity County airport in 2026; Fehr & Peers linearly extrapolated this data to develop 2040 projections. Daily trip estimates were developed using the ITE rate for general aviation airports (ITE 022).
- Post Offices – Daily trip estimates at the post offices were increased proportional to the amount of residential land use growth in each community.
- Other land uses:
  - Trinity River Lumber Company – no growth was assumed
  - Trinity Hospital – total daily trips increased proportionally to the residential growth that occurs in Weaverville
  - Trinity Alps Golf Course – no growth was assumed

TABLE 13 –
TRINITY COUNTY TDM SPECIAL GENERATORS

Land Use	2009 Daily Trip Estimate	2040 Daily Trip Estimate
Airports		
Weaverville Airport	75	145
Trinity Center Airport	110	205
Ruth Airport	15	50
Hyampom Airport	10	35
Hayfork Airport	30	75
Post Offices		
Weaverville Post Office	2,600	3,650

TABLE 13 –
TRINITY COUNTY TDM SPECIAL GENERATORS

Land Use	2009 Daily Trip Estimate	2040 Daily Trip Estimate
Lewiston Post Office	370	445
Trinity Center Post Office	220	265
Hayfork Post Office	1,140	1,430
Other Land Uses		
Trinity River Lumber Company (Weaverville)	400	400
Trinity Hospital	1,590	2,230
Trinity Alps Golf Course	320	320

Source: Fehr & Peers, 2010

Appendix A

2009 Land Use

Trinity County 2009 Land Use

TAZ	ATYPE	ATYPE_STR	IX_A	XI_P	ELEM_BNDI	MID_BNDR'	HIGH_BNDI	TERMINAL_	TERMINAL_	SFDU	MFDU	OFF_KSF	RET_KSF	GROC_KSF	REST_KSF	CONV_KSF	ENT_KSF	MED_KSF	LI_KSF	HOT_RM	STOR_UN	ELEM_SCH	HIGH_SCH	SPECIAL	S7	S6	S5	S4	S3	S2	S1	SPECIALSTR
1	1	External	186	186	1	1	1	0	0	0	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
2	1	External	50	50	1	1	1	0	0	0	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
3	1	External	3742	3742	1	1	1	0	0	0	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
4	1	External	354	354	1	1	1	0	0	0	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
5	1	External	936	936	1	1	1	0	0	0	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
6	1	External	3394	3394	1	1	1	0	0	0	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
7	1	External	0	0	1	1	1	0	0	0	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
8	1	External	0	0	1	1	1	0	0	0	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
9	1	External	0	0	1	1	1	0	0	0	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
10	1	External	0	0	1	1	1	0	0	0	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
11	1	External	0	0	1	1	1	0	0	0	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
12	1	External	0	0	1	1	1	0	0	0	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
13	1	External	0	0	1	1	1	0	0	0	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
14	1	External	0	0	1	1	1	0	0	0	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
15	1	External	0	0	1	1	1	0	0	0	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
16	1	External	0	0	1	1	1	0	0	0	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
17	1	External	0	0	1	1	1	0	0	0	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
18	1	External	0	0	1	1	1	0	0	0	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
19	1	External	0	0	1	1	1	0	0	0	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
20	1	External	0	0	1	1	1	0	0	0	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
21	1	External	0	0	1	1	1	0	0	0	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
22	1	External	0	0	1	1	1	0	0	0	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
23	1	External	0	0	1	1	1	0	0	0	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
24	1	External	0	0	1	1	1	0	0	0	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
101	1	Weavervil	0	0	1	1	1	1	1	52	1	12.8	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
102	1	Weavervil	0	0	1	1	1	1	1	18	1	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
103	1	Weavervil	0	0	1	1	1	1	1	0	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	400.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Mill - 12
104	1	Weavervil	0	0	1	1	1	1	1	39	1	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
105	1	Weavervil	0	0	1	1	1	1	1	0	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
106	1	Weavervil	0	0	1	1	1	1	1	0	0	0.0	0.0	0.0	0.0	0	0	0.0	16.5	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
107	1	Weavervil	0	0	1	1	1	1	1	26	1	0.0	0.0	0.0	0.0	0	0	0.0	5.9	0.0	0	0.0	0.0	75.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Weavervil
108	1	Weavervil	0	0	1	1	1	1	1	0	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
109	1	Weavervil	0	0	1	1	1	1	1	106	1	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
110	1	Weavervil	0	0	1	1	1	1	1	0	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
111	1	Weavervil	0	0	1	1	1	1	1	23	1	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
112	1	Weavervil	0	0	1	1	1	1	1	0	0	0.0	0.0	0.0	0.0	0	0	0.0	34.3	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
113	1	Weavervil	0	0	1	1	1	1	1	25	1	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
114	1	Weavervil	0	0	1	1	1	1	1	23	1	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
115	1	Weavervil	0	0	1	1	1	1	1	17	1	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
116	1	Weavervil	0	0	1	1	1	1	1	18	1	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
117	1	Weavervil	0	0	1	1	1	1	1	21	0	4.3	1.1	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
118	1	Weavervil	0	0	1	1	1	1	1	30	1	0.0	1.9	0.0	1.0	3	0	5.3	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
119	1	Weavervil	0	0	1	1	1	1	1	10	74	6.2	2.4	0.0	0.0	0	0	2.2	0.0	0.0	30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
120	1	Weavervil	0	0	1	1	1	1	1	0	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
121	1	Weavervil	0	0	1	1	1	1	1	16	1	0.0	2.0	0.0	0.0	0	1	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
122	1	Weavervil	0	0	1	1	1	1	1	28	4	0.0	11.9	0.0	1.1	0	0	0.0	1.6	0.0	104	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
123	1	Weavervil	0	0	1	1	1	1	1	3	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
124	1	Weavervil	0	0	1	1	1	1	1	27	1	0.0	0.0	0.0	0.0	0	0	0.0	2.0	0.0	36	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
125	1	Weavervil	0	0	1	1	1	1	1	2	2	9.4	9.6	0.0	4.9	0	6	0.0	0.0	7.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
126	1	Weavervil	0	0	1	1	1	1	1	22	0	20.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
127	1	Weavervil	0	0	1	1	1	1	1	5	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
128	1	Weavervil	0	0	1	1	1	1	1	0	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	1590.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Hospital
129	1	Weavervil	0	0	1	1	1	1	1	18	1	0.0	0.0	0.0	0.0	0	0	0.0	0.0	12.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
130	1	Weavervil	0	0	1	1	1	1	1	8	0	10.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
131	1	Weavervil	0	0	1	1	1	1	1	0	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
132	1	Weavervil	0	0	1	1	1	1	1	26	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	400.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
133	1	Weavervil	0	0	1	1	1	1	1	4	2	4.0	12.6	0.0	1.5	0	0	1.1	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
134	1	Weavervil	0	0	1	1	1	1	1	0	0	6.6	18.9	1.9	1.8	0	10	1.9	7.1	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
135	1	Weavervil	0	0	1	1	1	1	1	16	1	1.2	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
136	1	Weavervil	0	0	1	1	1	1	1	26	1	0.0	10.7	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	2600.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Post offi
137	1	Weavervil	0	0	1	1	1	1	1	23	1	6.3	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
138	1	Weavervil	0	0	1	1	1	1	1	57	1	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
139	1	Weavervil	0	0	1	1	1	1	1	18	39	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
140	1	Weavervil	0	0	1	1	1	1	1	0	0	0.0	0.0	0.0	0.0	0	1	0.7	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
141	1	Weavervil	0	0	1	1	1	1	1	2	0	15.3	2.0	0.0	1.6	0	0	0.0	24.5	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
142	1	Weavervil	0	0	1	1	1	1	1	6	56	1.1	4.3	0.0	0.0	0	0	0.0	8.6	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
143	1	Weavervil	0	0	1	1	1	1	1	13	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	13.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
144	1	Weavervil	0	0	1	1	1	1	1	27	1	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
145	1	Weavervil	0	0	1	1	1	1	1	32	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
146	1	Weavervil	0	0	1	1	1	1	1	11	0	2.0	10.1	0.0	0.0	1	0	0.0	0.0	0.0	13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
147	1	Weavervil	0	0	1	1	1	1	1	0	0	1.3	0.0	0.0	0.0	0	0	0.0	0.7	11.0	17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
148	1	Weavervil	0	0	1	1	1	1	1	1	0	1.2	28.3	40.6	2.8	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
149	1	Weavervil	0	0	1	1	1	1	1	0	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
150	1	Weavervil	0	0	1	1	1	1	1	3	0	2.2	1.0	0.0	5.6	0	0	0.0	1.2	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	

151	1	Weavervil	0	0	1	1	1	1	1	4	0	1.3	2.3	0.0	4.9	0	0	0.0	6.5	67.0	112	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
152	1	Weavervil	0	0	1	1	1	1	1	24	1	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
153	1	Weavervil	0	0	1	1	1	1	1	1	0	3.1	2.3	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
154	1	Weavervil	0	0	1	1	1	1	1	0	0	0.0	10.8	0.0	11.0	0	14	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
155	1	Weavervil	0	0	1	1	1	1	1	21	0	1.1	34.6	3.0	0.0	1	0	0.0	0.0	20.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
156	1	Weavervil	0	0	1	1	1	1	1	3	0	3.6	0.0	0.0	0.0	0	0	0.0	10.3	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
157	1	Weavervil	0	0	1	1	1	1	1	53	1	5.6	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
158	1	Weavervil	0	0	1	1	1	1	1	42	1	3.8	3.9	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
159	1	Weavervil	0	0	1	1	1	1	1	38	1	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
160	1	Weavervil	0	0	1	1	1	1	1	0	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	320.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Golf Cour
161	1	Weavervil	0	0	1	1	1	1	1	8	1	8.1	2.4	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
162	1	Weavervil	0	0	1	1	1	1	1	25	1	0.0	0.9	0.0	0.0	0	0	0.0	1.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
163	1	Weavervil	0	0	1	1	1	1	1	5	0	0.0	2.4	0.0	0.0	0	0	0.0	4.8	0.0	50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
164	1	Weavervil	0	0	1	1	1	1	1	1	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
165	1	Weavervil	0	0	1	1	1	1	1	1	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
166	1	Weavervil	0	0	1	1	1	1	1	29	1	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
167	1	Weavervil	0	0	1	1	1	1	1	0	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
168	1	Weavervil	0	0	1	1	1	1	1	22	1	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
169	1	Weavervil	0	0	1	1	1	1	1	16	1	0.0	0.0	0.0	0.0	0	0	0.0	0.0	20.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
170	1	Weavervil	0	0	1	1	1	1	1	13	0	2.6	2.3	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
171	1	Weavervil	0	0	1	1	1	1	1	8	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
172	1	Weavervil	0	0	1	1	1	1	1	1	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
173	1	Weavervil	0	0	1	1	1	1	1	0	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
174	1	Weavervil	0	0	1	1	1	1	1	0	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
182	1	Weavervil	0	0	1	1	1	1	1	0	0	0.0	0.0	0.0	0.0	0	0	0.0	5.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
183	1	Weavervil	0	0	1	1	1	1	1	31	1	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
184	1	Weavervil	0	0	1	1	1	1	1	58	2	0.0	0.0	0.0	0.0	0	0	0.0	4.9	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
185	1	Weavervil	0	0	1	1	1	1	1	8	1	2.4	29.7	0.8	0.0	0	0	0.0	0.0	0.0	135	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
186	1	Weavervil	0	0	1	1	1	1	1	5	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	400.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
187	1	Weavervil	0	0	1	1	1	1	1	87	1	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
188	1	Weavervil	0	0	1	1	1	1	1	0	0	5.0	1.1	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
201	2	Rural Tri	0	0	1	1	1	1	1	10	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
202	2	Rural Tri	0	0	1	1	1	1	1	65	24	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
203	2	Rural Tri	0	0	1	1	1	1	1	60	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
204	2	Rural Tri	0	0	1	1	1	1	1	150	60	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	99.0	0.0	370.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Lewiston
205	2	Rural Tri	0	0	1	1	1	1	1	25	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
206	2	Rural Tri	0	0	1	1	1	1	1	10	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
207	2	Rural Tri	0	0	1	1	1	1	1	45	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
208	2	Rural Tri	0	0	1	1	1	1	1	104	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
209	2	Rural Tri	0	0	1	1	1	1	1	15	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
210	2	Rural Tri	0	0	1	1	1	1	1	10	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
211	2	Rural Tri	0	0	1	1	1	1	1	10	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
212	2	Rural Tri	0	0	1	1	1	1	1	10	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
218	2	Rural Tri	0	0	1	1	1	1	1	10	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
219	2	Rural Tri	0	0	1	1	1	1	1	10	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
220	2	Rural Tri	0	0	1	1	1	1	1	12	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
221	2	Rural Tri	0	0	1	1	1	1	1	5	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
222	2	Rural Tri	0	0	1	1	1	1	1	15	12	1.3	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	46.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
223	2	Rural Tri	0	0	1	1	1	1	1	65	13	2.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
224	2	Rural Tri	0	0	1	1	1	1	1	25	12	1.3	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
225	2	Rural Tri	0	0	1	1	1	1	1	20	0	0.0	0.0	0.0	0.0	0	0	0.0	5.8	0.0	0	0.0	0.0	220.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Trinity C
226	2	Rural Tri	0	0	1	1	1	1	1	40	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
227	2	Rural Tri	0	0	1	1	1	1	1	10	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	12	0.0	0.0	110.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Trinity C
228	2	Rural Tri	0	0	1	1	1	1	1	12	0	0.0	0.0	0.0	0.0	0	0	0.0	5.2	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
229	2	Rural Tri	0	0	1	1	1	1	1	12	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
230	2	Rural Tri	0	0	1	1	1	1	1	51	14	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
231	2	Rural Tri	0	0	1	1	1	1	1	10	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
232	2	Rural Tri	0	0	1	1	1	1	1	20	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
235	3	Western T	0	0	1	1	1	1	1	241	41	0.0	1.0	0.0	0.0	0	0	0.0	5.0	3.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
236	3	Western T	0	0	1	1	1	1	1	54	9	0.0	1.0	0.0	0.0	0	0	0.0	5.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
237	3	Western T	0	0	1	1	1	1	1	100	17	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	100.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	
238	3	Western T	0	0	1	1	1	1	1	100	17	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
239	2	Rural Tri	0	0	1	1	1	1	1	86	15	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	14.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	
240	2	Rural Tri	0	0	1	1	1	1	1	146	25	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
241	2	Rural Tri	0	0	1	1	1	1	1	206	36	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	68.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	
242	2	Rural Tri	0	0	1	1	1	1	1	165	28	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
243	2	Rural Tri	0	0	1	1	1	1	1	74	13	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
245	2	Rural Tri	0	0	1	1	1	1	1	170	29	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	138.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	
246	2	Rural Tri	0	0	1	1	1	1	1	157	27	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
247	2	Rural Tri	0	0	1	1	1	1	1	204	35	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
251	3	Western T	0	0	1	1	1	1	1	163	28	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	85.0	50.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	
252	3	Western T	0	0	1	1	1	1	1	162	28	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	15.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Ruth Airp
260	4	Hayfork	0	0	1	1	1	1	1	154	28	8.9	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	15.0	8.0	10.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Hyampom A
261	4	Hayfork	0	0	1	1	1	1	1	33	5	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
262	4	Hayfork	0	0	1	1	1	1	1	21	3	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
263	4	Hayfork	0	0	1	1	1	1	1	12	2	0.0	7.0	5.8	0.0	0	0	2.3	0.9	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	

264	4	Hayfork	0	0	1	1	1	1	1	13	2	3.7	9.3	0.0	0.0	2	0	0.0	0.0	0.0	36	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
265	4	Hayfork	0	0	1	1	1	1	1	16	3	11.8	0.0	0.0	0.0	0	0	0.0	2.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
266	4	Hayfork	0	0	1	1	1	1	1	48	10	6.0	3.0	0.0	0.0	0	0	0.0	0.0	0.0	30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
267	4	Hayfork	0	0	1	1	1	1	1	33	5	6.7	9.7	0.0	6.1	0	0	0.0	10.3	0.0	0	246.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
268	4	Hayfork	0	0	1	1	1	1	1	60	10	5.0	8.1	8.9	3.0	0	0	0.0	2.8	6.0	30	0.0	0.0	1140.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Hayfork P
269	4	Hayfork	0	0	1	1	1	1	1	64	11	10.9	5.2	0.0	0.0	0	0	0.0	5.7	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
270	4	Hayfork	0	0	1	1	1	1	1	13	2	18.1	6.0	9.3	0.0	0	0	0.0	11.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
271	4	Hayfork	0	0	1	1	1	1	1	0	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	30.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Hayfork A
272	4	Hayfork	0	0	1	1	1	1	1	35	6	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
273	4	Hayfork	0	0	1	1	1	1	1	81	14	0.0	0.0	0.0	0.0	0	0	0.0	13.3	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
274	4	Hayfork	0	0	1	1	1	1	1	86	14	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
275	4	Hayfork	0	0	1	1	1	1	1	4	1	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
276	4	Hayfork	0	0	1	1	1	1	1	0	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
277	4	Hayfork	0	0	1	1	1	1	1	0	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	174.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	

Appendix B

Voyager Model Script

```
;***********************************************************************
*********
;
;                      TRINITY COUNTY TRAVEL DEMAND FORECASTING MODEL
;
;                       PROGRAM:  TP+ 4.1.1 Engine in VOYAGER 4.1.1
;                       PREFIX :  DO NOT NEED TO BE CODED
;
;***********************************************************************
*********
;
YEAR='2009'         ; MODEL YEAR
;
; Keyword:  ZONES=188, ZONES=24,
;           NUM_OF_SCREENLINES = 8,
;           INDV_NUM_OF_SCREENLINES = 22
;
;====================
;  TRIP GENERATION
;====================
;
; STEP 1
;
RUN PGM=TRIPGEN

    ; *** FILE I/O ***
    ZDATI = "@YEAR@\LU_@YEAR@.DBF", Z=TAZ        ; LU, IX, XI, TERM TIME
    PAO   = "PA_Balanced.DBF", DBF=YES,    ; P/A TRIP ENDS
            LIST=Z(4),P[1],P[2],P[3],P[4],P[5],P[6],P[7],P[8],
                    A[1],A[2],A[3],A[4],A[5],A[6],A[7],A[8]

    ; *** PARAMETERS ***
    ZONES=999                                  ; SET NO. OF ZONES

    ; *** LOOKUP FUNCTIONS***
    LOOKUP, NAME=TR,                           ; LU TRIP RATES
            LOOKUP[1] =1, RESULT= 4,               ; DAILY TRIP RATE
        INTERPOLATE=FALSE,
        FILE="@YEAR@\TRIPGENRATES_@YEAR@.CSV"

    LOOKUP, NAME=PF,                           ; PRODUCTION FRACTIONS
        LOOKUP[1]=1, RESULT=  5,               ; HBW
        LOOKUP[2]=1, RESULT=  6,               ; HBO
        LOOKUP[3]=1, RESULT=  7,               ; NHB
        LOOKUP[4]=1, RESULT=  8,               ; REGION
        LOOKUP[5]=1, RESULT=  9,               ; ELEM
        LOOKUP[6]=1, RESULT= 10,               ; HIGH
        INTERPOLATE=FALSE,
        FILE="@YEAR@\TRIPGENRATES_@YEAR@.CSV"

    LOOKUP, NAME=AF,                           ; ATTRACTION FRACTIONS
        LOOKUP[1]=1, RESULT= 11,               ; HBW
        LOOKUP[2]=1, RESULT= 12,               ; HBO
        LOOKUP[3]=1, RESULT= 13,               ; NHB
        LOOKUP[4]=1, RESULT= 14,               ; REGION
        LOOKUP[5]=1, RESULT= 15,               ; ELEM
        LOOKUP[6]=1, RESULT= 16,               ; HIGH
```

```
        INTERPOLATE=FALSE,
        FILE="@YEAR@\TRIPGENRATES_@YEAR@.CSV"

    LOOKUP, NAME=IX,                        ; IX FRACTIONS
            LOOKUP[1]=1, RESULT=  5,            ; HBW
        LOOKUP[2]=1, RESULT=  6,            ; HBO
        LOOKUP[3]=1, RESULT=  7,            ; NHB
        LOOKUP[4]=1, RESULT=  8,            ; REGION
        LOOKUP[5]=1, RESULT=  9,            ; ELEM
        LOOKUP[6]=1, RESULT= 10,            ; HIGH
        INTERPOLATE=FALSE,
        FILE="@YEAR@\TRIPGENRATES_@YEAR@.CSV"

    LOOKUP, NAME=XI,                        ; XI FRACTIONS
            LOOKUP[1]=1, RESULT= 11,            ; HBW
        LOOKUP[2]=1, RESULT= 12,            ; HBO
        LOOKUP[3]=1, RESULT= 13,            ; NHB
        LOOKUP[4]=1, RESULT= 14,            ; REGION
        LOOKUP[5]=1, RESULT= 15,            ; ELEM
        LOOKUP[6]=1, RESULT= 16,            ; HIGH
        INTERPOLATE=FALSE,
        FILE="@YEAR@\TRIPGENRATES_@YEAR@.CSV"

    ; *** PRODUCTION ATTRACTION EQUATIONS ***
    TR_ID = ATYPE*100

    LOOP PURP=1,6
        P[PURP] = SFDU       * TR(1,TR_ID+ 1) * PF(PURP,TR_ID+ 1) * (1 -
        IX(PURP,TR_ID)) +
                  MFDU       * TR(1,TR_ID+ 2) * PF(PURP,TR_ID+ 2) * (1 -
                  IX(PURP,TR_ID)) +
                  OFF_KSF    * TR(1,TR_ID+ 3) * PF(PURP,TR_ID+ 3) * (1 -
                  IX(PURP,TR_ID)) +
                  RET_KSF    * TR(1,TR_ID+ 4) * PF(PURP,TR_ID+ 4) * (1 -
                  IX(PURP,TR_ID)) +
                  GROC_KSF   * TR(1,TR_ID+ 5) * PF(PURP,TR_ID+ 5) * (1 -
                  IX(PURP,TR_ID)) +
                  REST_KSF   * TR(1,TR_ID+ 6) * PF(PURP,TR_ID+ 6) * (1 -
                  IX(PURP,TR_ID)) +
                  CONV_KSF   * TR(1,TR_ID+ 7) * PF(PURP,TR_ID+ 7) * (1 -
                  IX(PURP,TR_ID)) +
                  ENT_KSF    * TR(1,TR_ID+ 8) * PF(PURP,TR_ID+ 8) * (1 -
                  IX(PURP,TR_ID)) +
                  MED_KSF    * TR(1,TR_ID+ 9) * PF(PURP,TR_ID+ 9) * (1 -
                  IX(PURP,TR_ID)) +
                  LI_KSF     * TR(1,TR_ID+10) * PF(PURP,TR_ID+10) * (1 -
                  IX(PURP,TR_ID)) +
                  HOT_RM     * TR(1,TR_ID+11) * PF(PURP,TR_ID+11) * (1 -
                  IX(PURP,TR_ID)) +
                  STOR_UN    * TR(1,TR_ID+12) * PF(PURP,TR_ID+12) * (1 -
                  IX(PURP,TR_ID)) +
                  ELEM_SCH   * TR(1,TR_ID+13) * PF(PURP,TR_ID+13) * (1 -
                  IX(PURP,TR_ID)) +
                  HIGH_SCH   * TR(1,TR_ID+14) * PF(PURP,TR_ID+14) * (1 -
                  IX(PURP,TR_ID)) +
                  SPECIAL    * TR(1,TR_ID+15) * PF(PURP,TR_ID+15) * (1 -
                  IX(PURP,TR_ID)) +
```

```
                  S7          * TR(1,TR_ID+16) * PF(PURP,TR_ID+16) * (1 -
                  IX(PURP,TR_ID)) +
                  S6          * TR(1,TR_ID+17) * PF(PURP,TR_ID+17) * (1 -
                  IX(PURP,TR_ID)) +
                  S5          * TR(1,TR_ID+18) * PF(PURP,TR_ID+18) * (1 -
                  IX(PURP,TR_ID)) +
                  S4          * TR(1,TR_ID+19) * PF(PURP,TR_ID+19) * (1 -
                  IX(PURP,TR_ID)) +
                  S3          * TR(1,TR_ID+20) * PF(PURP,TR_ID+20) * (1 -
                  IX(PURP,TR_ID)) +
                  S2          * TR(1,TR_ID+21) * PF(PURP,TR_ID+21) * (1 -
                  IX(PURP,TR_ID)) +
                  S1          * TR(1,TR_ID+22) * PF(PURP,TR_ID+22) * (1 -
                  IX(PURP,TR_ID))

        A[PURP] = SFDU        * TR(1,TR_ID+ 1) * AF(PURP,TR_ID+ 1) * (1 -
        XI(PURP,TR_ID)) +
                  MFDU        * TR(1,TR_ID+ 2) * AF(PURP,TR_ID+ 2) * (1 -
                  XI(PURP,TR_ID)) +
                  OFF_KSF     * TR(1,TR_ID+ 3) * AF(PURP,TR_ID+ 3) * (1 -
                  XI(PURP,TR_ID)) +
                  RET_KSF     * TR(1,TR_ID+ 4) * AF(PURP,TR_ID+ 4) * (1 -
                  XI(PURP,TR_ID)) +
                  GROC_KSF    * TR(1,TR_ID+ 5) * AF(PURP,TR_ID+ 5) * (1 -
                  XI(PURP,TR_ID)) +
                  REST_KSF    * TR(1,TR_ID+ 6) * AF(PURP,TR_ID+ 6) * (1 -
                  XI(PURP,TR_ID)) +
                  CONV_KSF    * TR(1,TR_ID+ 7) * AF(PURP,TR_ID+ 7) * (1 -
                  XI(PURP,TR_ID)) +
                  ENT_KSF     * TR(1,TR_ID+ 8) * AF(PURP,TR_ID+ 8) * (1 -
                  XI(PURP,TR_ID)) +
                  MED_KSF     * TR(1,TR_ID+ 9) * AF(PURP,TR_ID+ 9) * (1 -
                  XI(PURP,TR_ID)) +
                  LI_KSF      * TR(1,TR_ID+10) * AF(PURP,TR_ID+10) * (1 -
                  XI(PURP,TR_ID)) +
                  HOT_RM      * TR(1,TR_ID+11) * AF(PURP,TR_ID+11) * (1 -
                  XI(PURP,TR_ID)) +
                  STOR_UN     * TR(1,TR_ID+12) * AF(PURP,TR_ID+12) * (1 -
                  XI(PURP,TR_ID)) +
                  ELEM_SCH    * TR(1,TR_ID+13) * AF(PURP,TR_ID+13) * (1 -
                  XI(PURP,TR_ID)) +
                  HIGH_SCH    * TR(1,TR_ID+14) * AF(PURP,TR_ID+14) * (1 -
                  XI(PURP,TR_ID)) +
                  SPECIAL     * TR(1,TR_ID+15) * AF(PURP,TR_ID+15) * (1 -
                  XI(PURP,TR_ID)) +
                  S7          * TR(1,TR_ID+16) * AF(PURP,TR_ID+16) * (1 -
                  XI(PURP,TR_ID)) +
                  S6          * TR(1,TR_ID+17) * AF(PURP,TR_ID+17) * (1 -
                  XI(PURP,TR_ID)) +
                  S5          * TR(1,TR_ID+18) * AF(PURP,TR_ID+18) * (1 -
                  XI(PURP,TR_ID)) +
                  S4          * TR(1,TR_ID+19) * AF(PURP,TR_ID+19) * (1 -
                  XI(PURP,TR_ID)) +
                  S3          * TR(1,TR_ID+20) * AF(PURP,TR_ID+20) * (1 -
                  XI(PURP,TR_ID)) +
                  S2          * TR(1,TR_ID+21) * AF(PURP,TR_ID+21) * (1 -
                  XI(PURP,TR_ID)) +
```

```
            S1          * TR(1,TR_ID+22) * AF(PURP,TR_ID+22) * (1 -
            XI(PURP,TR_ID))

    P[7] = P[7] +
           SFDU        * TR(1,TR_ID+ 1) * PF(PURP,TR_ID+ 1) * IX(PURP,TR_ID)
           +
           MFDU        * TR(1,TR_ID+ 2) * PF(PURP,TR_ID+ 2) * IX(PURP,TR_ID)
           +
           OFF_KSF     * TR(1,TR_ID+ 3) * PF(PURP,TR_ID+ 3) * IX(PURP,TR_ID)
           +
           RET_KSF     * TR(1,TR_ID+ 4) * PF(PURP,TR_ID+ 4) * IX(PURP,TR_ID)
           +
           GROC_KSF    * TR(1,TR_ID+ 5) * PF(PURP,TR_ID+ 5) * IX(PURP,TR_ID)
           +
           REST_KSF    * TR(1,TR_ID+ 6) * PF(PURP,TR_ID+ 6) * IX(PURP,TR_ID)
           +
           CONV_KSF    * TR(1,TR_ID+ 7) * PF(PURP,TR_ID+ 7) * IX(PURP,TR_ID)
           +
           ENT_KSF     * TR(1,TR_ID+ 8) * PF(PURP,TR_ID+ 8) * IX(PURP,TR_ID)
           +
           MED_KSF     * TR(1,TR_ID+ 9) * PF(PURP,TR_ID+ 9) * IX(PURP,TR_ID)
           +
           LI_KSF      * TR(1,TR_ID+10) * PF(PURP,TR_ID+10) * IX(PURP,TR_ID)
           +
           HOT_RM      * TR(1,TR_ID+11) * PF(PURP,TR_ID+11) * IX(PURP,TR_ID)
           +
           STOR_UN     * TR(1,TR_ID+12) * PF(PURP,TR_ID+12) * IX(PURP,TR_ID)
           +
           ELEM_SCH    * TR(1,TR_ID+13) * PF(PURP,TR_ID+13) * IX(PURP,TR_ID)
           +
           HIGH_SCH    * TR(1,TR_ID+14) * PF(PURP,TR_ID+14) * IX(PURP,TR_ID)
           +
           SPECIAL     * TR(1,TR_ID+15) * PF(PURP,TR_ID+15) * IX(PURP,TR_ID)
           +
           S7          * TR(1,TR_ID+16) * PF(PURP,TR_ID+16) * IX(PURP,TR_ID)
           +
           S6          * TR(1,TR_ID+17) * PF(PURP,TR_ID+17) * IX(PURP,TR_ID)
           +
           S5          * TR(1,TR_ID+18) * PF(PURP,TR_ID+18) * IX(PURP,TR_ID)
           +
           S4          * TR(1,TR_ID+19) * PF(PURP,TR_ID+19) * IX(PURP,TR_ID)
           +
           S3          * TR(1,TR_ID+20) * PF(PURP,TR_ID+20) * IX(PURP,TR_ID)
           +
           S2          * TR(1,TR_ID+21) * PF(PURP,TR_ID+21) * IX(PURP,TR_ID)
           +
           S1          * TR(1,TR_ID+22) * PF(PURP,TR_ID+22) * IX(PURP,TR_ID)

    A[8] = A[8]+
           SFDU        * TR(1,TR_ID+ 1) * AF(PURP,TR_ID+ 1) * XI(PURP,TR_ID)
           +
           MFDU        * TR(1,TR_ID+ 2) * AF(PURP,TR_ID+ 2) * XI(PURP,TR_ID)
           +
           OFF_KSF     * TR(1,TR_ID+ 3) * AF(PURP,TR_ID+ 3) * XI(PURP,TR_ID)
           +
           RET_KSF     * TR(1,TR_ID+ 4) * AF(PURP,TR_ID+ 4) * XI(PURP,TR_ID)
           +
```

```
               GROC_KSF   * TR(1,TR_ID+ 5) * AF(PURP,TR_ID+ 5) * XI(PURP,TR_ID)
               +
               REST_KSF   * TR(1,TR_ID+ 6) * AF(PURP,TR_ID+ 6) * XI(PURP,TR_ID)
               +
               CONV_KSF   * TR(1,TR_ID+ 7) * AF(PURP,TR_ID+ 7) * XI(PURP,TR_ID)
               +
               ENT_KSF    * TR(1,TR_ID+ 8) * AF(PURP,TR_ID+ 8) * XI(PURP,TR_ID)
               +
               MED_KSF    * TR(1,TR_ID+ 9) * AF(PURP,TR_ID+ 9) * XI(PURP,TR_ID)
               +
               LI_KSF     * TR(1,TR_ID+10) * AF(PURP,TR_ID+10) * XI(PURP,TR_ID)
               +
               HOT_RM     * TR(1,TR_ID+11) * AF(PURP,TR_ID+11) * XI(PURP,TR_ID)
               +
               STOR_UN    * TR(1,TR_ID+12) * AF(PURP,TR_ID+12) * XI(PURP,TR_ID)
               +
               ELEM_SCH   * TR(1,TR_ID+13) * AF(PURP,TR_ID+13) * XI(PURP,TR_ID)
               +
               HIGH_SCH   * TR(1,TR_ID+14) * AF(PURP,TR_ID+14) * XI(PURP,TR_ID)
               +
               SPECIAL    * TR(1,TR_ID+15) * AF(PURP,TR_ID+15) * XI(PURP,TR_ID)
               +
               S7         * TR(1,TR_ID+16) * AF(PURP,TR_ID+16) * XI(PURP,TR_ID)
               +
               S6         * TR(1,TR_ID+17) * AF(PURP,TR_ID+17) * XI(PURP,TR_ID)
               +
               S5         * TR(1,TR_ID+18) * AF(PURP,TR_ID+18) * XI(PURP,TR_ID)
               +
               S4         * TR(1,TR_ID+19) * AF(PURP,TR_ID+19) * XI(PURP,TR_ID)
               +
               S3         * TR(1,TR_ID+20) * AF(PURP,TR_ID+20) * XI(PURP,TR_ID)
               +
               S2         * TR(1,TR_ID+21) * AF(PURP,TR_ID+21) * XI(PURP,TR_ID)
               +
               S1         * TR(1,TR_ID+22) * AF(PURP,TR_ID+22) * XI(PURP,TR_ID)
                    ENDLOOP

     A[7]   = IX_A
     P[8]   = XI_P

   PHASE=ADJUST
       ; *** PRINT TOTAL P/A BEFORE BALANCING ***
       PTOT1   = PTOT(1)
       PTOT2   = PTOT(2)
       PTOT3   = PTOT(3)
       PTOT4   = PTOT(4)
       PTOT5   = PTOT(5)
       PTOT6   = PTOT(6)
       PTOT7   = PTOT(7)
       PTOT8   = PTOT(8)
       ATOT1   = ATOT(1)
       ATOT2   = ATOT(2)
       ATOT3   = ATOT(3)
       ATOT4   = ATOT(4)
       ATOT5   = ATOT(5)
       ATOT6   = ATOT(6)
       ATOT7   = ATOT(7)
```

```
        ATOT8   = ATOT(8)

        PRINT FORM=13,
            LIST="BEFORE BALANCING","\n",
                 ",,HBW,HBO,NHB,REGION,ELEM,HIGH,IX,XI","\n",

                 ",PTOT,",PTOT1,",",PTOT2,",",PTOT3,",",PTOT4,",",PTOT5,",",PTO
                 T6,",",PTOT7,",",PTOT8,"\n",

                 ",ATOT,",ATOT1,",",ATOT2,",",ATOT3,",",ATOT4,",",ATOT5,",",ATO
                 T6,",",ATOT7,",",ATOT8,"\n",
            FILE="PA_Unbalanced.CSV", REWIND=T

        ; *** P/A BALANCING ***
        BALANCE A2P=1,2,7,          ; BALANCE ATTRS TO PRODS FOR OTHERS
                NHB=3,              ; PRODS SET TO ATTRS FOR NHB
                P2A=4,5,6,8         ; BALANCE PRODS TO ATTRS FOR SCH, XI

        ; *** PRINT TOTAL P/A AFTER BALANCING ***
        PTOT1   = PTOT(1)
        PTOT2   = PTOT(2)
        PTOT3   = PTOT(3)
        PTOT4   = PTOT(4)
        PTOT5   = PTOT(5)
        PTOT6   = PTOT(6)
        PTOT7   = PTOT(7)
        PTOT8   = PTOT(8)
        ATOT1   = ATOT(1)
        ATOT2   = ATOT(2)
        ATOT3   = ATOT(3)
        ATOT4   = ATOT(4)
        ATOT5   = ATOT(5)
        ATOT6   = ATOT(6)
        ATOT7   = ATOT(7)
        ATOT8   = ATOT(8)

        PRINT FORM=13,
            LIST="AFTER BALANCING","\n",
                 ",,HBW,HBO,NHB,REGION,ELEM,HIGH,IX,XI","\n",

                 ",PTOT,",PTOT1,",",PTOT2,",",PTOT3,",",PTOT4,",",PTOT5,",",PTO
                 T6,",",PTOT7,",",PTOT8,"\n",

                 ",ATOT,",ATOT1,",",ATOT2,",",ATOT3,",",ATOT4,",",ATOT5,",",ATO
                 T6,",",ATOT7,",",ATOT8,"\n",
            FILE="PA_Unbalanced.CSV", APPEND=T
    ENDPHASE

ENDRUN

;
******************************************************************************
*******
;
;                            MASTER NETWORK TO SCENARIO SPECIFIC NETWORK
;
;
```

```
*******************************************************************************
;
; STEP 2
;
RUN PGM=HWYNET

    NETI="Master_Network\TRINITY_MASTER.NET"  ; MASTER NETWORK
    NETO="TRINITY_@YEAR@.NET",                     ; MODEL YEAR NETWORK
        INCLUDE=A,B,DISTANCE,STREET,LANES,TSVA,CAPACITY,
                RTP_YEAR,GISLINKID,GPFUNCTION,
                SCREENLINE,INDVSCNLIN,COUNT09DAI,COUNT09AM,COUNT09PM
    NODEO="NODE.DBF", FORMAT=DBF,
        INCLUDE=N,X,Y
    LINKO="LINK.DBF", FORMAT=DBF,
        INCLUDE=A,B

    PHASE=LINKMERGE
        ; CREATE LANES, TSVA, CAPACITY, DELCURV
        LANES    = LANES@YEAR@
        TSVA     = TSVA@YEAR@
        CAPACITY = CAP@YEAR@
        ; SELECT SCENARIO LINKS
         IF ((RTP_YEAR > @YEAR@) || LANES == 0) DELETE
    ENDPHASE

ENDRUN

;
; CHECK MODEL YEAR NETWORK TAZ CONNECTIVITY
;
; STEP 3
;
RUN PGM=MATRIX

    ZDATI[1]="NODE.DBF", Z=N
    ZDATI[2]="LINK.DBF", Z=A
    ZDATI[3]="LINK.DBF", Z=B

    ZONES=1087

    IF (ZI.1.X>0 && ZI.2.A==0 && ZI.3.B==0) PRINT,
        LIST=Z(8), FILE="Master_Network\UNCONNECTED.TXT"

ENDRUN

;
;===================
;  SKIMMING
;===================
;
; STEP 4
;
RUN PGM=HWYLOAD

    ; *** FILE I/O ***
    NETI     = "TRINITY_@YEAR@.NET"              ; NETWORK
```

```
    TURNPENI = "@YEAR@\TURNPEN_@YEAR@.CSV"    ; TURN PENALITY
    MATO     = "TEMP_SKIM_@YEAR@.MAT",           ; TEMP SKIM MATRIX
               MO=1, NAME=TIME

    ; *** PARAMETERS ***
    ZONES=999                                                  ; SET NO. OF
    ZONES

    PHASE=LINKREAD
        SPEED = LI.TSVA                                        ; USE TSVA FOR
        SPEED
    ENDPHASE

    PHASE=ILOOP
        PATH=TIME, PENI=1, MW[1]=PATHTRACE(TIME),              ; SKIM
        FREE-FLOW TRAVEL TIME
                           NOACCESS=0                          ; NO ACCESS
                           CELL VALUE = 0
    ENDPHASE

ENDRUN
;
; SET INTRAS AND ADD TERM TIMES
;
; STEP 5
;
RUN PGM=MATRIX

    ; *** FILE I/O ***
    MATI   = "TEMP_SKIM_@YEAR@.MAT",            ; TEMP SKIM MATRIX
    ZDATI  = "@YEAR@\LU_@YEAR@.DBF", Z=TAZ    ; TERM TIME
    MATO   = "SKIM_@YEAR@.MAT",                 ; SKIM MATRIX
             MO=1, NAME=TIME

    MW[1] = MI.1.TIME

;     IF (ROWSUM(1)=0)                                          ; QUIT IF
FOUND NOACCESS ZONES
;         ABORT MSG='*** FOUND INACCESSIBLE ZONE ***
;     ENDIF
;
    MW[1][I]=LOWEST(1,2,0.001,999,I)                           ; TIME TO
    NEAREST 2 ZONES
    IF (LOWCNT>0)
        MW[1][I]=(MW[1][I]/LOWCNT)/2                           ; SET INTRAS TO
        50% OF TIME TO NEAREST 2 ZONES
    ELSE
        MW[1][I]=0                                             ; SET INTRAS TO
        0
    ENDIF

    MW[1] = MW[1] + ZI.1.TERMINAL_O[I]                         ; ADD ORIGIN
    ZONE TERMINAL TIME

    JLOOP
        MW[1][J] = MW[1][J] + ZI.1.TERMINAL_D[J]               ; ADD DEST ZONE
        TERMINAL TIME
```

```
    ENDJLOOP

ENDRUN
/*
;=====================
;  TRIP DISTRIBUTION
;=====================
;
; SCHOOL TRIP DISTRIBUTION WILL BE LIMITED TO ONLY ZONES WITHIN SCHOOL DISTRICT
;
;
; CREATE SCHOOL TRIP FRICTION FACTORS (A TO P)
;
; STEP 6
;
; Disabled limited school distribution
;RUN PGM=MATRIX
;
;    ; *** FILE I/O ***
;    MATI  = "SKIM_@YEAR@.MAT"        ; SKIM MATRIX
;    ZDATI = "LU_@YEAR@.DBF", Z=TAZ   ; SCHOOL DIST DEF, ENROLLMENT
;    MATO  = "TEMP_SCHFF_@YEAR@.MAT", ; SCHOOL TRIP FF IN A-P FORMAT
;            MO=10-12
;
;    ; *** LOOKUP FUNCTION***
;    LOOKUP NAME=SCHFF,                                          ; FRICTION
FACTOR FILE
;        LOOKUP[5]=1, RESULT=6,                                  ; ELEM = PURP
5
;        LOOKUP[6]=1, RESULT=7,                                  ; MID  = PURP
6
;        LOOKUP[7]=1, RESULT=8,                                  ; HIGH = PURP
7
;        INTERPOLATE=Y,
;        FILE="@YEAR@\FRICTIONFACTORS.CSV",
;        FAIL=0,0
;
;    MW[1]=MI.1.1.T                                              ; TRANSPOSED
SKIM MATRIX
;
;    ; ELEMENTRY SCHOOL
;    LOOP ELM=1,10
;        IF (ZI.1.ELEM_SCH[I]>0)
;            JLOOP
;                IF (ZI.1.ELEM_BNDRY[J]==ZI.1.ELEM_BNDRY[I])
;                    MW[10] = MW[10] + SCHFF(5,MW[1])
;                ENDIF
;            ENDJLOOP
;        ENDIF
;    ENDLOOP
;    ; MID SCHOOL
;    LOOP MID=1,2
;        IF (ZI.1.MID_SCH[I]>0)
;            JLOOP
;                IF (ZI.1.MID_BNDRY[J]==ZI.1.MID_BNDRY[I])
;                    MW[11] = MW[11] + SCHFF(6,MW[1])
;                ENDIF
```

```
;             ENDJLOOP
;         ENDIF
;     ENDLOOP
;     ; HIGH SCHOOL
;     LOOP HIGH=1,2
;         IF (ZI.1.HIGH_SCH[I]>0)
;             JLOOP
;                 IF (ZI.1.HIGH_BNDRY[J]==ZI.1.HIGH_BNDRY[I])
;                     MW[12] = MW[12] + SCHFF(7,MW[1])
;                 ENDIF
;             ENDJLOOP
;         ENDIF
;     ENDLOOP
;
;ENDRUN
;;
;; CREATE SCHOOL TRIP FRICTION FACTORS (P TO A)
;;
;; STEP 7
;;
;RUN PGM=MATRIX
;
;     ; *** FILE I/O ***
;     MATI= "TEMP_SCHFF_@YEAR@.MAT"  ; SCHOOL TRIP FF IN A-P FORMAT
;     MATO= "SCHFF_@YEAR@.MAT",      ; SCHOOL TRIP FF IN P-A FORMAT
;           MO=1-3, NAME=ELEM_FF,MID_FF,HIGH_FF
;
;     MW[1] = MI.1.1.T
;     MW[2] = MI.1.2.T
;     MW[3] = MI.1.3.T
;
;ENDRUN
;
; TRIP DISTRIBUTION
;
; STEP 8
*/
RUN PGM=TRIPDIST

    ; *** FILE I/O ***
    MATI[1] = "SKIM_@YEAR@.MAT"    ; SKIM MATRIX
;     MATI[2] = "SCHFF_@YEAR@.MAT"   ; SCHOOL TRIP FF
    ZDATI   = "PA_Balanced.DBF", Z=Z          ; P/A TRIPENDS
    MATO    = "TEMP_PA_@YEAR@.MAT",
              MO=1-8,
              NAME=HBW,HBO,NHB,REGION,ELEM,HIGH,IX,XI

    ; *** PARAMETERS ***
    MAXITERS = 10
    MAXRMSE  = 0.01

    ; *** LOOKUP FUNCTION***
    LOOKUP NAME=FF,                                        ; FRICTION
    FACTOR FILE
        LOOKUP[1] =1, RESULT=2,
        LOOKUP[2] =1, RESULT=3,
        LOOKUP[3] =1, RESULT=4,
```

```
        LOOKUP[4] =1, RESULT=5,
        LOOKUP[5] =1, RESULT=6,
        LOOKUP[6] =1, RESULT=7,
        LOOKUP[7] =1, RESULT=8,
        LOOKUP[8] =1, RESULT=9,
        INTERPOLATE=Y,
        FILE="@YEAR@\FRICTIONFACTORS.CSV",
        FAIL=0,0

    ;  SETUP THE WORKING P AND A
    SETPA P[1]=P1    A[1]=A1
    SETPA P[2]=P2    A[2]=A2
    SETPA P[3]=P3    A[3]=A3
    SETPA P[4]=P4    A[4]=A4
    SETPA P[5]=P5    A[5]=A5
    SETPA P[6]=P6    A[6]=A6
    SETPA P[7]=P7    A[7]=A7
    SETPA P[8]=P8    A[8]=A8

    MW[9]=MI.1.TIME

    ; APPLY GRAVITY MODEL FOR ALL EXCEPT SCHOOL TRIPS
    GRAVITY   PURPOSE=1,  LOS=MW[9], FFACTORS=FF
    GRAVITY   PURPOSE=2,  LOS=MW[9], FFACTORS=FF
    GRAVITY   PURPOSE=3,  LOS=MW[9], FFACTORS=FF
    GRAVITY   PURPOSE=4,  LOS=MW[9], FFACTORS=FF
    GRAVITY   PURPOSE=5,  LOS=MW[9], FFACTORS=FF    ; Added ffactors to schools
    GRAVITY   PURPOSE=6,  LOS=MW[9], FFACTORS=FF    ; Added ffactors to schools
    GRAVITY   PURPOSE=7,  LOS=MW[9], FFACTORS=FF
    GRAVITY   PURPOSE=8,  LOS=MW[9], FFACTORS=FF

; Disabled limited school distribution
;    ; SCHOOL TRIP DISTRIBUTION
;    MW[105] = MI.2.ELEM_FF           ; ELEM SCHOOL TRIP FF FOR ACCESSIBLE
ZONES ONLY
;    MW[106] = MI.2.MID_FF            ; MID  SCHOOL TRIP FF FOR ACCESSIBLE
ZONES ONLY
;    MW[107] = MI.2.HIGH_FF           ; HIGH SCHOOL TRIP FF FOR ACCESSIBLE
ZONES ONLY
;
;    LOOP PURP=5,7
;        TMP_PURP = 110 + PURP
;        MW[TMP_PURP] = A[PURP] * MW[100+PURP]           ; USE FF FOR
ACCESSIBLE ZONES ONLY
;        ; IMPLETEMENT GRAVITY MODEL FOR SCHOOL TRIPS
;        RSUM=ROWSUM(TMP_PURP)
;        IF (RSUM>0)
;            PAF=P[PURP]/RSUM
;        ELSE
;            PAF=0
;        ENDIF
;        MW[PURP]=PAF * MW[TMP_PURP]                     ; SCHOOL TRIPS
;    ENDLOOP

    ; TRIP LENGTH FREQUENCY REPORT
    FREQUENCY VALUEMW=1,  BASEMW=9, RANGE=1-80         ; FREQUENCY DISTRIBUTION
    FREQUENCY VALUEMW=2,  BASEMW=9, RANGE=1-80         ; FREQUENCY DISTRIBUTION
```

```
    FREQUENCY VALUEMW=3,  BASEMW=9, RANGE=1-80         ; FREQUENCY DISTRIBUTION
    FREQUENCY VALUEMW=4,  BASEMW=9, RANGE=1-80         ; FREQUENCY DISTRIBUTION
    FREQUENCY VALUEMW=5,  BASEMW=9, RANGE=1-80         ; FREQUENCY DISTRIBUTION
    FREQUENCY VALUEMW=6,  BASEMW=9, RANGE=1-80         ; FREQUENCY DISTRIBUTION
    FREQUENCY VALUEMW=7,  BASEMW=9, RANGE=1-80         ; FREQUENCY DISTRIBUTION
    FREQUENCY VALUEMW=8,  BASEMW=9, RANGE=1-80         ; FREQUENCY DISTRIBUTION

ENDRUN
;
; Create through trip matrix from CSV format (bp)
;
; STEP 9
;
RUN PGM=MATRIX

    FILEI MATI="@YEAR@\THRU_@YEAR@.CSV", PATTERN=IJ:V, FIELDS=#1,0,2-7  ; CSV
    FORMAT THROUGH TRIPS
    FILEO MATO="THRU_@YEAR@.MAT", MO=1                            ; MAT FORMAT
    THROUGH TRIPS
    PAR  ZONES=6
    MW[1]=MI.1.1

ENDRUN
;
; CALCULATE COMPLETE P/A MATRIX
;
; STEP 10
;
RUN PGM=MATRIX

    ; *** FILE I/O ***
    MATI[1]="TEMP_PA_@YEAR@.MAT"           ; INTERNAL P/A TRIPS
    MATI[2]="THRU_@YEAR@.MAT"              ; THROUGH TRIPS
    MATO   ="PA_@YEAR@.MAT",
            MO=1-9,
            NAME=HBW,HBO,NHB,REGION,ELEM,HIGH,IX,XI,XX

    FILLMW MW[1]=MI.1.HBW,HBO,NHB,REGION,ELEM,HIGH,IX,XI
    MW[9]=MI.2.1

ENDRUN
;
;=========================
;  DAILY TRIP ASSIGNMENT
;=========================
;
; CALCULATE DAILY OD MATRIX
;
; STEP 11
;
RUN PGM=MATRIX

    ; *** FILE I/O ***
    MATI[1] = "PA_@YEAR@.MAT"
    MATO    = "DAILY_@YEAR@.MAT",
              MO=1-10,
              NAME=HBW,HBO,NHB,REGION,ELEM,HIGH,IX,XI,XX,TOTAL
```

```
    MW[1]  = (MI.1.1 + MI.1.1.T) * 0.5            ; HBW
    MW[2]  = (MI.1.2 + MI.1.2.T) * 0.5            ; HBO
    MW[3]  = (MI.1.3 + MI.1.3.T) * 0.5            ; NHB
    MW[4]  = (MI.1.4 + MI.1.4.T) * 0.5            ; REGION
    MW[5]  = (MI.1.5 + MI.1.5.T) * 0.5            ; ELEM
    MW[6]  = (MI.1.6 + MI.1.6.T) * 0.5            ; HIGH
    MW[7]  = (MI.1.7 + MI.1.7.T) * 0.5            ; IX
    MW[8]  = (MI.1.8 + MI.1.8.T) * 0.5            ; XI
    MW[9]  = (MI.1.9 + MI.1.9.T) * 0.5            ; XX
    DUMMY  = ROWADD(10,1,2,3,4,5,6,7,8,9)      ; TOTAL

    ENDRUN
;
; DAILY TRIP ASSIGNMENT
;
; STEP 12
;
RUN PGM=HWYLOAD

    ; *** FILE I/O ***
    NETI     = "TRINITY_@YEAR@.NET"            ; BASE NETWORK
    TURNPENI = "@YEAR@\TURNPEN_@YEAR@.CSV"     ; TURN PENALITY
    MATI[1]  = "DAILY_@YEAR@.MAT"              ; DAILY TRIPS
    NETO     = "TEMP_DAILY_@YEAR@.NET"         ; TEMP LOADED NETWORK

    ; *** PARAMETERS ***
    COMBINE=EQUI                                                ;
    EQUILIBRIUM ASSIGNMENT
    MAXITERS=49
    GAP=0.0001
    CAPFAC=10                                                   ; ASSUMING
    10% PHF

    ; *** FUNCTIONS ***
    FUNCTION {
        TC[1]  = T0 * (1 + 0.25 * VC^9)                         ; Freeway
        TC[2]  = T0 * (1 + 0.40 * VC^4)                         ; Freeway
        Ramp
        TC[3]  = T0 * (1 + 0.70 * VC^4)                         ; Highway
        TC[4]  = T0 * (1 + 0.50 * VC^4)                         ; Parkway
        TC[5]  = T0 * (1 + 0.45 * VC^4)                         ; Major
        Arterial
        TC[6]  = T0 * (1 + 0.40 * VC^4)                         ; Minor
        Arterial
        TC[7]  = T0 * (1 + 0.15 * VC^4)                         ; Collector
        TC[8]  = T0 * (1 + 0.10 * VC^4)                         ; Local
        Road
        V      = VOL[10]                                        ; USE TOTAL
        VOL FOR CAP RESTRAINT
        COST   = TIME                                           ; TIME AS
        SYSTEM COST
    }

    PHASE=LINKREAD
        DISTANCE   = LI.DISTANCE                                ; USE
        DISTANCE FOR DISTANCE
```

```
        IF(LI.CAPACITY==2000)                                          ; Freeway
        Link Class
           LINKCLASS = 1
        ENDIF
        IF(LI.CAPACITY==1500)                                          ; Freeway
        Ramp Link Class
           LINKCLASS = 2
        ENDIF
        IF(LI.CAPACITY==1400)                                          ; Highway
        Link Class
           LINKCLASS = 3
        ENDIF
        IF(LI.CAPACITY==900)                                          ; Parkway
        Link Class
           LINKCLASS = 4
        ENDIF
        IF(LI.CAPACITY==800)                                           ; Major
        Arterial Link Class
           LINKCLASS = 5
        ENDIF
        IF(LI.CAPACITY==700)                                           ; Minor
        Arterial Link Class
           LINKCLASS = 6
        ENDIF
        IF(LI.CAPACITY==600)                                           ; Collector
        Link Class
           LINKCLASS = 7
        ENDIF
        IF(LI.CAPACITY==400)                                           ; Local
        Road Link Class
           LINKCLASS = 8
        ENDIF
        IF(LI.CAPACITY==10000)                                         ; Centroid
        Connector Link Class
           LINKCLASS = 9
        ENDIF

        SPEED      = LI.TSVA                                           ; USE TSVA
        FOR SPEED

        DAILYFAC   = 10                                                ; DAILY
        CAPACITY FACTOR

        C          = LI.CAPACITY * LI.LANES * DAILYFAC                 ; USE
        CAPACITY/LANE * LANES FOR CAPACITY

        T0         = DISTANCE*60/SPEED                                 ; CALCULATE
        FREE FLOW TRAVEL TIME

    ENDPHASE

    PHASE=ILOOP
        PATHLOAD PATH = COST, PENI=1,
                 VOL[1]  = MI.1.HBW   ,
                 VOL[2]  = MI.1.HBO   ,
                 VOL[3]  = MI.1.NHB   ,
```

```
                 VOL[4]  = MI.1.REGION,
                 VOL[5]  = MI.1.ELEM  ,
                 VOL[6]  = MI.1.HIGH  ,
                 VOL[7]  = MI.1.IX    ,
                 VOL[8]  = MI.1.XI    ,
                 VOL[9]  = MI.1.XX    ,
                 VOL[10] = MI.1.TOTAL
    ENDPHASE

ENDRUN
;
; RENAME LINK VARIABLES ON LOADED NETWORK
;
; STEP 13
;
RUN PGM=HWYNET

    ; *** FILE I/O ***
    NETI = "TEMP_DAILY_@YEAR@.NET",
            RENAME=V_1     - V_LINK       ,  ; LINK VOL FOR CAP RESTRAINT
                   V1_1    - V_HBW        ,
                   V2_1    - V_HBO        ,
                   V3_1    - V_NHB        ,
                   V4_1    - V_REGION     ,
                   V5_1    - V_ELEM       ,
                   V6_1    - V_HIGH       ,
                   V7_1    - V_IX         ,
                   V8_1    - V_XI         ,
                   V9_1    - V_XX         ,
                   V10_1   - V_TOTAL      ,
                   VT_1    - V_LINK_TOT   ,  ; NON-DIRECTIONAL LINK VOL
                   V1T_1   - V_HBW_TOT    ,
                   V2T_1   - V_HBO_TOT    ,
                   V3T_1   - V_NHB_TOT    ,
                   V4T_1   - V_REGION_TOT,
                   V5T_1   - V_ELEM_TOT   ,
                   V6T_1   - V_HIGH_TOT   ,
                   V7T_1   - V_IX_TOT     ,
                   V8T_1   - V_XI_TOT     ,
                   V9T_1   - V_XX_TOT     ,
                   V10T_1  - V_TOTAL_TOT
    NETO = "DAILY_@YEAR@.NET"

ENDRUN
;
;===========================
;  AM/PM PEAK HOUR ASSIGNMENT
;===========================
;
LOOP HR=1,2  ; PEAK ASSIGNMENT LOOP

    ; SET THE PEAK HOUR TO CALCULATE
    IF (HR==1)          ; AM
        PEAKHOUR = 7
        PH_NAME= 'AM'
    ELSE                ; PM
        PEAKHOUR = 16
```

```
        PH_NAME= 'PM'
    ENDIF
    ;
    ; CALCULATE PEAK OD MATRIX
    ;
    ; STEP 14 & 17
    ;
    RUN PGM=MATRIX

        ; *** FILE I/O ***
        MATI[1] = "PA_@YEAR@.MAT"
        MATO    = "@PH_NAME@_@YEAR@.MAT",
                  MO=1-10,
                  NAME=HBW,HBO,NHB,REGION,ELEM,HIGH,IX,XI,XX,TOTAL

        LOOKUP,                              ; PEAK HOUR FACTOR LOOKUP
            FILE="@YEAR@\HOURLYFACTORS.CSV",
            NAME=PHFAC,
            LOOKUP[1] =1, RESULT= 2,         ; DEP_HBW
            LOOKUP[2] =1, RESULT= 3,         ; RET_HBW
            LOOKUP[3] =1, RESULT= 4,         ; DEP_HBO
            LOOKUP[4] =1, RESULT= 5,         ; RET_HBO
            LOOKUP[5] =1, RESULT= 6,         ; DEP_NHB
            LOOKUP[6] =1, RESULT= 7,         ; RET_NHB
            LOOKUP[7] =1, RESULT= 8,         ; DEP_REGION
            LOOKUP[8] =1, RESULT= 9,         ; RET_REGION
            LOOKUP[9] =1, RESULT=10,         ; DEP_ELEM
            LOOKUP[10]=1, RESULT=11,         ; RET_ELEM
            LOOKUP[11]=1, RESULT=12,         ; DEP_HIGH
            LOOKUP[12]=1, RESULT=13,         ; RET_HIGH
            LOOKUP[13]=1, RESULT=14,         ; DEP_IX
            LOOKUP[14]=1, RESULT=15,         ; RET_IX
            LOOKUP[15]=1, RESULT=16,         ; DEP_XI
            LOOKUP[16]=1, RESULT=17,         ; RET_XI
            LOOKUP[17]=1, RESULT=18,         ; DEP_XX
            LOOKUP[18]=1, RESULT=19          ; RET_XX

        MW[1]   = MI.1.HBW    *PHFAC( 1,@PEAKHOUR@)/100 + MI.1.HBW.T    *PHFAC(
        2,@PEAKHOUR@)/100
        MW[2]   = MI.1.HBO    *PHFAC( 3,@PEAKHOUR@)/100 + MI.1.HBO.T    *PHFAC(
        4,@PEAKHOUR@)/100
        MW[3]   = MI.1.NHB    *PHFAC( 5,@PEAKHOUR@)/100 + MI.1.NHB.T    *PHFAC(
        6,@PEAKHOUR@)/100
        MW[4]   = MI.1.REGION *PHFAC( 7,@PEAKHOUR@)/100 + MI.1.REGION.T *PHFAC(
        8,@PEAKHOUR@)/100
        MW[5]   = MI.1.ELEM   *PHFAC( 9,@PEAKHOUR@)/100 + MI.1.ELEM.T
        *PHFAC(10,@PEAKHOUR@)/100
        MW[6]   = MI.1.HIGH   *PHFAC(11,@PEAKHOUR@)/100 + MI.1.HIGH.T
        *PHFAC(12,@PEAKHOUR@)/100
        ;IX, XI, & XX PEAK HOUR CALCULATION
  IF(I==1-6) ;1-6 ARE GATEWAYS
     MW[11] = MI.1.IX.T  *PHFAC(13,@PEAKHOUR@)/100
  ELSE
     MW[12] = MI.1.IX    *PHFAC(14,@PEAKHOUR@)/100
  ENDIF
  IF(I==1-6) ;1-6 ARE GATEWAYS
     MW[13] = MI.1.XI    *PHFAC(16,@PEAKHOUR@)/100
```

```
  ELSE
     MW[14] = MI.1.XI.T  *PHFAC(15,@PEAKHOUR@)/100
  ENDIF
        MW[7] = MW[11] + MW[12] ; IX TOTAL
        MW[8] = MW[13] + MW[14] ; XI TOTAL
        MW[9] = MI.1.XX     *PHFAC(17,@PEAKHOUR@)/100 + MI.1.XX.T
        *PHFAC(18,@PEAKHOUR@)/100  ; XX TOTAL
        DUMMY  = ROWADD(10,1,2,3,4,5,6,7,8,9)                     ; TOTAL TRIPS

    ENDRUN
    ;
    ; PEAK HOUR ASSIGNMENT
    ;
    ; STEP 15 & 18
    ;
    RUN PGM=HWYLOAD

        ; *** FILE I/O ***
        NETI      = "TRINITY_@YEAR@.NET"      ; BASE NETWORK
        TURNPENI = "@YEAR@\TURNPEN_@YEAR@.CSV"    ; TURN PENALITY
        MATI[1]   = "@PH_NAME@_@YEAR@.MAT"      ; DAILY TRIPS
        NETO      = "TEMP_@PH_NAME@_@YEAR@.NET" ; TEMP LOADED NETWORK
        FILEO TURNVOLO = "TURNS_@PH_NAME@_@YEAR@.DBF",FORMAT=DBF, DEC=0
        TURNS T=TURN[10], N=3313, 3459, 3496, 3375, 3426, 3296, 3466, 3463, 4134
        3310, 3661, 3533, 2286, 2248, 1271, 1081        ; INTERSECTIONS FOR SYNCHRO
        POST-PROCESSOR?

        ; *** PARAMETERS ***
        COMBINE=EQUI                                                       ;
        EQUILIBRIUM ASSIGNMENT
        MAXITERS=49
        GAP=0.0001

        ; *** FUNCTIONS ***
        FUNCTION {
          TC[1] = T0 * (1 + 0.25 * VC^9)                               ; Freeway
          TC[2] = T0 * (1 + 0.40 * VC^4)                               ; Freeway
          Ramp
          TC[3] = T0 * (1 + 0.70 * VC^4)                               ; Highway
          TC[4] = T0 * (1 + 0.50 * VC^4)                               ; Parkway
          TC[5] = T0 * (1 + 0.45 * VC^4)                               ; Major
          Arterial
          TC[6] = T0 * (1 + 0.40 * VC^4)                               ; Minor
          Arterial
          TC[7] = T0 * (1 + 0.15 * VC^4)                               ; Collector
          TC[8] = T0 * (1 + 0.10 * VC^4)                               ; Local
          Road
          V     = VOL[10]                                              ; USE TOTAL
          VOL FOR CAP RESTRAINT
          COST  = TIME                                                 ; TIME AS
          SYSTEM COST
      }

      PHASE=LINKREAD
          DISTANCE  = LI.DISTANCE                                      ; USE
          DISTANCE FOR DISTANCE
```

```
      IF(LI.CAPACITY==2000)                                    ; Freeway
      Link Class
         LINKCLASS = 1
      ENDIF
      IF(LI.CAPACITY==1500)                                    ; Freeway
      Ramp Link Class
         LINKCLASS = 2
      ENDIF
      IF(LI.CAPACITY==1400)                                    ; Highway
      Link Class
         LINKCLASS = 3
      ENDIF
      IF(LI.CAPACITY==900)                                    ; Parkway
      Link Class
         LINKCLASS = 4
      ENDIF
      IF(LI.CAPACITY==800)                                     ; Major
      Arterial Link Class
         LINKCLASS = 5
      ENDIF
      IF(LI.CAPACITY==700)                                     ; Minor
      Arterial Link Class
         LINKCLASS = 6
      ENDIF
      IF(LI.CAPACITY==600)                                     ; Collector
      Link Class
         LINKCLASS = 7
      ENDIF
      IF(LI.CAPACITY==400)                                     ; Local
      Road Link Class
         LINKCLASS = 8
      ENDIF
      IF(LI.CAPACITY==10000)                                   ; Centroid
      Connector Link Class
         LINKCLASS = 9
      ENDIF

      SPEED      = LI.TSVA                                     ; USE TSVA
      FOR SPEED

      C          = LI.CAPACITY * LI.LANES                      ; USE
      CAPACITY/LANE * LANES FOR CAPACITY

      T0         = DISTANCE*60/SPEED                           ; CALCULATE
      FREE FLOW TIME

    ENDPHASE

    PHASE=ILOOP
       PATHLOAD PATH = COST, PENI=1,
                VOL[1]   = MI.1.HBW    ,
                VOL[2]   = MI.1.HBO    ,
                VOL[3]   = MI.1.NHB    ,
                VOL[4]   = MI.1.REGION,
                VOL[5]   = MI.1.ELEM   ,
                VOL[6]   = MI.1.HIGH   ,
                VOL[7]   = MI.1.IX     ,
```

```
                     VOL[8]  = MI.1.XI    ,
                     VOL[9]  = MI.1.XX    ,
                     VOL[10] = MI.1.TOTAL
        ENDPHASE

    ENDRUN
    ;
    ; RENAME LINK VARIABLES ON LOADED NETWORK
    ;
    ; STEP 16 & 19
    ;
    RUN PGM=HWYNET

        ; *** FILE I/O ***
        NETI = "TEMP_@PH_NAME@_@YEAR@.NET",
                RENAME=V_1     - V_LINK       ,   ; LINK VOL FOR CAP RESTRAINT
                       V1_1    - V_HBW        ,
                       V2_1    - V_HBO        ,
                       V3_1    - V_NHB        ,
                       V4_1    - V_REGION     ,
                       V5_1    - V_ELEM       ,
                       V6_1    - V_HIGH       ,
                       V7_1    - V_IX         ,
                       V8_1    - V_XI         ,
                       V9_1    - V_XX         ,
                       V10_1   - V_TOTAL      ,
                       VT_1    - V_LINK_TOT   ,   ; NON-DIRECTIONAL LINK VOL
                       V1T_1   - V_HBW_TOT    ,
                       V2T_1   - V_HBO_TOT    ,
                       V3T_1   - V_NHB_TOT    ,
                       V4T_1   - V_REGION_TOT,
                       V5T_1   - V_ELEM_TOT   ,
                       V6T_1   - V_HIGH_TOT   ,
                       V7T_1   - V_IX_TOT     ,
                       V8T_1   - V_XI_TOT     ,
                       V9T_1   - V_XX_TOT     ,
                       V10T_1 - V_TOTAL_TOT
        NETO = "@PH_NAME@_@YEAR@.NET"

    ENDRUN
ENDLOOP    ; PEAK ASSIGNMENT LOOP
```

Appendix C

Static Model Validation Reports

Trinity County Model Validation Results: Daily Two-Way Total Traffic Volumes

Roadway	Segment	A Node	B Node	Model Link ID	Model Volume	Traffic Count	Model /Count	Maximum Deviation	Within Deviation	Model - Count	Difference Squared
Mill Street	South of SR 299	3354	4846	3354-4846	384	699	0.55	0.60	Yes	-315	99,284
Oregon Street	Between SR 299 and Miner Street	3302	3319	3302-3319	2,603	2,727	0.95	0.60	Yes	-124	15,479
Oregon Street	Between Miner Street and Odd Fellows Avenu	3297	3302	3297-3302	1,456	1,171	1.24	0.60	Yes	285	81,225
Washington Street	North of SR 299	3375	3381	3375-3381	2,846	3,179	0.90	0.60	Yes	-333	110,756
Washington Street	South of SR 3	3426	3427	3426-3427	2,714	3,216	0.84	0.60	Yes	-502	251,991
Washington Street	South of SR 299	3375	4822	3375-4822	486	867	0.56	0.60	Yes	-381	145,339
S. Miner Street	South of Forest Ave	3283	4845	3283-4845	2,085	2,050	1.02	0.60	Yes	35	1,225
S. Minter Street	North of Oregon Street	4834	3302	4834-3302	1,864	2,045	0.91	0.60	Yes	-181	32,747
Bremer Street	South of SR 299	3324	3340	3324-3340	553	526	1.05	0.60	Yes	27	743
Martin Road	East of SR 299	3466	4836	3466-4836	1,781	1,853	0.96	0.60	Yes	-72	5,138
Rush Creek Road	South of SR 3	3661	3665	3661-3665	424	685	0.62	0.60	Yes	-261	67,860
Airport Road	East of SR 3	4322	4326	4322-4326	667	645	1.03	0.60	Yes	22	485
Mary Avenue	South of Airport Road	4326	4828	4326-4828	566	593	0.95	0.60	Yes	-27	716
Trinity Dam Boulevard	North of SR 299	4130	4133	4130-4133	239	903	0.27	0.60	No	-664	440,285
Brady Road	North of SR 3	2286	2294	2286-2294	263	620	0.42	0.60	Yes	-358	127,830
Morgan Hill Road	East of SR 3	2239	2247	2239-2247	435	787	0.55	0.60	Yes	-352	124,125
Hyampom Road	West of SR 3	2232	2248	2232-2248	1,227	1,114	1.10	0.60	Yes	113	12,810
Oak Avenue	South of SR 3	2358	2359	2358-2359	2,469	1,704	1.45	0.60	Yes	765	584,807
Mulligan Street (East)	North of SR 3	3403	3406	3403-3406	340	200	1.69	0.60	No	139	19,384
Mulligan Street (West)	North of SR 3	3353	3359	3353-3359	324	516	0.63	0.60	Yes	-192	37,025
Glen Road	West of Nugget Lane	4848	3455	4848-3455	1,153	1,502	0.77	0.60	Yes	-349	121,596
Center Street	East of SR 299	3338	3350	3338-3350	784	504	1.56	0.60	Yes	280	78,620
Center Street	South of SR 3	3337	4835	3337-4835	1,029	827	1.24	0.60	Yes	202	40,777
Weaver Street	East of SR 299	3398	3404	3398-3404	519	850	0.61	0.60	Yes	-331	109,243
Masonic Lane	South of SR 299	3397	3405	3397-3405	654	769	0.85	0.60	Yes	-115	13,216
Mountain View Street	South of SR 299	3419	3422	3419-3422	539	738	0.73	0.60	Yes	-199	39,537
N. Miner Street	South of SR 299	3222	3231	3222-3231	94	184	0.51	0.60	Yes	-89	7,967
Mad River Road	South of SR 36	1272	1275	1272-1275	368	388	0.95	0.60	Yes	-20	411
Van Duzen Road	South of SR 36	1081	1084	1081-1084	360	581	0.62	0.60	Yes	-222	49,201
299	HUMBOLT/TRINITY COUNTY LINE - Back	6	1032	0006-1032	3,529	3,400	1.04	0.60	Yes	129	16,687
299	EAST LIMITS SALYER - Back	1045	1046	1045-1046	3,529	3,400	1.04	0.60	Yes	129	16,687
299	BURNT RANCH ROAD - Back	1450	1456	1450-1456	2,895	3,150	0.92	0.60	Yes	-255	64,913
299	DEL LOMA - Back	2007	2008	2007-2008	2,801	1,600	1.75	0.60	No	1,201	1,442,209
299	LITTLE FRENCH CR - Back	2046	2052	2046-2052	2,801	1,900	1.47	0.60	Yes	901	811,657
299	BIGFLATCMP-WHEELGLUCHRD - Ahead	2214	2217	2214-2217	3,033	2,950	1.03	0.60	Yes	83	6,899
299	WEAVERVILLE, WEST CITY LIMITS - Back	3186	3191	3186-3191	4,629	3,730	1.24	0.60	Yes	899	807,518
299	WEAVERVILLE, WASHINGTON STREET	3375	4847	3375-4847	10,447	11,600	0.90	0.34	Yes	-1,153	1,328,395
299	MARTIN/NUGGET ROADS - Back	3459	4853	3459-4853	9,109	7,100	1.28	0.42	Yes	2,009	4,035,679
299	MARTIN/NUGGET ROADS - Ahead	3466	3472	3466-3472	7,830	6,400	1.22	0.44	Yes	1,430	2,043,642
299	EAST JCT. RTE. 3 - Back	3285	3310	3285-3310	5,214	4,350	1.20	0.60	Yes	864	747,153
299	EAST JCT. RTE. 3 - Ahead	3310	3348	3310-3348	4,677	3,850	1.21	0.60	Yes	827	684,458
299	LEWISTON ROAD - Back	3728	3734	3728-3734	4,419	3,400	1.30	0.60	Yes	1,019	1,039,339
299	LEWISTON ROAD - Ahead	3734	3743	3734-3743	3,759	3,100	1.21	0.60	Yes	659	433,991
299	NEW LEWISTON ROAD - Ahead	3960	3965	3960-3965	3,759	3,750	1.00	0.60	Yes	9	77
299	TRINITY/SHASTA COUNTY LINE - Back	4285	4287	4285-4287	3,902	3,750	1.04	0.60	Yes	152	22,970
3	JCT. RTE. 36 - Ahead	2319	2321	2319-2321	576	210	2.74	0.60	No	366	134,088
3	MORGAN HILL ROAD - Back	2238	2239	2238-2239	883	670	1.32	0.60	Yes	213	45,463
3	MORGAN HILL ROAD - Ahead	2239	3200	2239-3200	894	660	1.35	0.60	Yes	234	54,681
3	HAYFORK - Ahead	2580	2584	2580-2584	1,761	2,050	0.86	0.60	Yes	-289	83,486
3	WEAVERVILLE, NORTH JCT. RTE. 299 - Bac	3290	3310	3290-3310	2,951	1,450	2.03	0.60	No	1,501	2,252,100
3	WEAVERVILLE, NORTH JCT. RTE. 299 - Ahe	3337	3353	3337-3353	3,394	4,000	0.85	0.60	Yes	-606	366,848
3	COUNTY DUMP ROAD - Back	3482	3496	3482-3496	3,001	3,700	0.81	0.60	Yes	-699	488,769
3	COUNTY DUMP ROAD - Ahead	3496	3515	3496-3515	2,866	3,150	0.91	0.60	Yes	-284	80,611
3	RUSH CREEK ROAD - Back	3663	3661	3663-3661	1,256	1,300	0.97	0.60	Yes	-44	1,968
3	RUSH CREEK ROAD - Ahead	3661	3666	3661-3666	1,010	590	1.71	0.60	No	420	176,568
3	TRINITY CENTER STATE HIGHWAY MAINTE	4315	4318	4315-4318	897	660	1.36	0.60	Yes	237	56,340
3	COFFEE CREEK RD - Back	4329	4324	4329-4324	483	660	0.73	0.60	Yes	-177	31,414
3	U. S. FOREST SERVICE ROAD - Ahead	4617	4597	4617-4597	198	190	1.04	0.60	Yes	8	61
3	TRINITY/SISKIYOU COUNTY LINE - Back	4477	4476	4477-4476	198	190	1.04	0.60	Yes	8	61
36	HUMBOLDT/TRINITY COUNTY LINE	1070	1072	1070-1072	1,008	940	1.07	0.60	Yes	68	4,616
36	LOWER MAD RIV RD 501 RT - Back	1266	1271	1266-1271	812	680	1.19	0.60	Yes	132	17,313
36	FOREST GLEN MAINTENANCE STATION	1999	2001	1999-2001	622	330	1.88	0.60	No	292	85,287
36	JCT. RTE. 3 NORTH - Back	2312	2319	2312-2319	622	330	1.88	0.60	No	292	85,287
36	JCT. RTE. 3 NORTH - Ahead	2319	2320	2319-2320	300	400	0.75	0.60	Yes	-100	10,036
36	TRINITY/SHASTA COUNTY LINE - Back	3014	3016	3014-3016	384	360	1.07	0.60	Yes	24	586
				Subtotal	**129,674**	**122,392**					

Model/Count Ratio = **1.06**

Percent Within Caltrans Maximum Deviation = **88%** > 75%

Percent Root Mean Square Error = **24%** < 30%

Coefficient of Determination (R^2) = **0.93** > 0.77

Correlation Coefficient = **0.97** > 0.88

Trinity County Model Validation Results: AM Peak Hour Two-Way Total Traffic Volumes

Roadway	Segment	A Node	B Node	Model Link ID	Model Volume	Traffic Count	Model /Count	Maximum Deviation	Within Deviation	Model - Count	Difference Squared
Mill Street	South of SR 299	3354	4846	3354-4846	24	29	0.82	0.60	Yes	-5	27
Oregon Street	Between SR 299 and Miner Street	3302	3319	3302-3319	132	95	1.39	0.60	Yes	37	1,386
Oregon Street	Between Miner Street and Odd Fellows Avenu	3297	3302	3297-3302	88	55	1.59	0.60	Yes	33	1,062
Washington Street	North of SR 299	3375	3381	3375-3381	155	75	2.05	0.60	No	79	6,310
Washington Street	South of SR 3	3426	3427	3426-3427	131	151	0.87	0.60	Yes	-19	373
Washington Street	South of SR 299	3375	4822	3375-4822	28	32	0.86	0.60	Yes	-4	20
S. Miner Street	South of Forest Ave	3283	4845	3283-4845	108	56	1.94	0.60	No	52	2,744
S. Minter Street	North of Oregon Street	4834	3302	4834-3302	96	54	1.76	0.60	No	41	1,702
Bremer Street	South of SR 299	3324	3340	3324-3340	32	30	1.05	0.60	Yes	2	2
Martin Road	East of SR 299	3466	4836	3466-4836	91	68	1.34	0.60	Yes	23	526
Rush Creek Road	South of SR 3	3661	3665	3661-3665	27	58	0.47	0.60	Yes	-31	941
Airport Road	East of SR 3	4322	4326	4322-4326	38	26	1.49	0.60	Yes	13	158
Mary Avenue	South of Airport Road	4326	4828	4326-4828	33	18	1.82	0.60	No	15	220
Trinity Dam Boulevard	North of SR 299	4130	4133	4130-4133	13	53	0.25	0.60	No	-40	1,598
Brady Road	North of SR 3	2286	2294	2286-2294	16	31	0.51	0.60	Yes	-15	223
Morgan Hill Road	East of SR 3	2239	2247	2239-2247	30	45	0.67	0.60	Yes	-15	224
Hyampom Road	West of SR 3	2232	2248	2232-2248	71	68	1.04	0.60	Yes	3	9
Oak Avenue	South of SR 3	2358	2359	2358-2359	148	133	1.11	0.60	Yes	14	202
Mulligan Street (East)	North of SR 3	3403	3406	3403-3406	21	12	1.79	0.60	No	9	85
Mulligan Street (West)	North of SR 3	3353	3359	3353-3359	19	47	0.40	0.60	No	-28	812
Glen Road	West of Nugget Lane	4848	3455	4848-3455	62	68	0.91	0.60	Yes	-6	36
Center Street	East of SR 299	3338	3350	3338-3350	49	26	1.90	0.60	No	23	548
Center Street	South of SR 3	3337	4835	3337-4835	42	15	2.80	0.60	No	27	729
Weaver Street	East of SR 299	3398	3404	3398-3404	24	31	0.78	0.60	Yes	-7	47
Masonic Lane	South of SR 299	3397	3405	3397-3405	40	33	1.22	0.60	Yes	7	51
Mountain View Street	South of SR 299	3419	3422	3419-3422	33	36	0.92	0.60	Yes	-3	8
N. Miner Street	South of SR 299	3222	3231	3222-3231	9	6	1.42	0.60	Yes	3	6
Mad River Road	South of SR 36	1272	1275	1272-1275	20	27	0.74	0.60	Yes	-7	51
Van Duzen Road	South of SR 36	1081	1084	1081-1084	19	33	0.59	0.60	Yes	-14	186
299	WEAVERVILLE, WEST CITY LIMITS - Back	3186	3191	3186-3191	266	227	1.17	0.60	Yes	39	1,519
299	EAST JCT. RTE. 3 - Back	3285	3310	3285-3310	286	344	0.83	0.60	Yes	-58	3,344
3	JCT. RTE. 36 - Ahead	2319	2321	2319-2321	33	20	1.64	0.60	No	13	163
3	WEAVERVILLE, NORTH JCT. RTE. 299 - Bac	3290	3310	3290-3310	166	124	1.34	0.60	Yes	42	1,766
3	WEAVERVILLE, NORTH JCT. RTE. 299 - Ahe	3337	3353	3337-3353	215	285	0.75	0.60	Yes	-70	4,966
3	RUSH CREEK ROAD - Back	3663	3661	3663-3661	73	146	0.50	0.60	Yes	-73	5,274
3	TRINITY CENTER STATE HIGHWAY MAINTE	4315	4318	4315-4318	50	96	0.52	0.60	Yes	-46	2,081
36	JCT. RTE. 3 NORTH - Ahead	2319	2320	2319-2320	16	41	0.40	0.60	Yes	-25	601
				Subtotal	**2,703**	**2,693**		**Model/Count Ratio =**		**1.00**	
								Percent Within Caltrans Maximum Deviation =		**73%**	> 75%
								Percent Root Mean Square Error =		**45%**	< 30%
								Coefficient of Determination (R^2) =		**0.80**	> 0.77
								Correlation Coefficient =		**0.90**	> 0.88

Trinity County Model Validation Results: PM Peak Hour Two-Way Total Traffic Volumes

Roadway	Segment	A Node	B Node	Model Link ID	Model Volume	Traffic Count	Model /Count	Maximum Deviation	Within Deviation	Model - Count	Difference Squared
Mill Street	South of SR 299	3354	4846	3354-4846	30	55	0.55	0.60	Yes	-25	618
Oregon Street	Between SR 299 and Miner Street	3302	3319	3302-3319	230	190	1.21	0.60	Yes	40	1,607
Oregon Street	Between Miner Street and Odd Fellows Avenu	3297	3302	3297-3302	110	104	1.06	0.60	Yes	6	36
Washington Street	North of SR 299	3375	3381	3375-3381	237	232	1.02	0.60	Yes	5	27
Washington Street	South of SR 3	3426	3427	3426-3427	239	242	0.99	0.60	Yes	-3	8
Washington Street	South of SR 299	3375	4822	3375-4822	37	68	0.54	0.60	Yes	-31	963
S. Miner Street	South of Forest Ave	3283	4845	3283-4845	187	122	1.53	0.60	Yes	65	4,225
S. Minter Street	North of Oregon Street	4834	3302	4834-3302	169	129	1.31	0.60	Yes	40	1,624
Bremer Street	South of SR 299	3324	3340	3324-3340	55	32	1.69	0.60	No	22	495
Martin Road	East of SR 299	3466	4836	3466-4836	155	163	0.95	0.60	Yes	-8	61
Rush Creek Road	South of SR 3	3661	3665	3661-3665	31	40	0.79	0.60	Yes	-8	67
Airport Road	East of SR 3	4322	4326	4322-4326	50	50	1.01	0.60	Yes	1	0
Mary Avenue	South of Airport Road	4326	4828	4326-4828	43	53	0.80	0.60	Yes	-11	116
Trinity Dam Boulevard	North of SR 299	4130	4133	4130-4133	20	59	0.34	0.60	No	-39	1,512
Brady Road	North of SR 3	2286	2294	2286-2294	20	58	0.34	0.60	No	-38	1,449
Morgan Hill Road	East of SR 3	2239	2247	2239-2247	31	49	0.65	0.60	Yes	-17	298
Hyampom Road	West of SR 3	2232	2248	2232-2248	93	86	1.09	0.60	Yes	7	56
Oak Avenue	South of SR 3	2358	2359	2358-2359	201	132	1.52	0.60	Yes	69	4,784
Mulligan Street (East)	North of SR 3	3403	3406	3403-3406	25	18	1.44	0.60	Yes	8	60
Mulligan Street (West)	North of SR 3	3353	3359	3353-3359	24	2	12.24	0.60	No	22	505
Glen Road	West of Nugget Lane	4848	3455	4848-3455	98	154	0.64	0.60	Yes	-55	3,075
Center Street	East of SR 299	3338	3350	3338-3350	77	35	2.18	0.60	No	42	1,724
Center Street	South of SR 3	3337	4835	3337-4835	85	70	1.21	0.60	Yes	15	217
Weaver Street	East of SR 299	3398	3404	3398-3404	47	95	0.50	0.60	Yes	-47	2,226
Masonic Lane	South of SR 299	3397	3405	3397-3405	52	58	0.90	0.60	Yes	-6	33
Mountain View Street	South of SR 299	3419	3422	3419-3422	42	53	0.81	0.60	Yes	-10	103
N. Miner Street	South of SR 299	3222	3231	3222-3231	6	8	0.76	0.60	Yes	-2	3
Mad River Road	South of SR 36	1272	1275	1272-1275	31	23	1.32	0.60	Yes	8	57
Van Duzen Road	South of SR 36	1081	1084	1081-1084	30	67	0.45	0.60	Yes	-37	1,357
299	WEAVERVILLE, WEST CITY LIMITS - Back	3186	3191	3186-3191	368	284	1.30	0.60	Yes	84	7,098
299	EAST JCT. RTE. 3 - Back	3285	3310	3285-3310	419	398	1.05	0.60	Yes	21	439
3	JCT. RTE. 36 - Ahead	2319	2321	2319-2321	48	23	2.10	0.60	No	25	644
3	WEAVERVILLE, NORTH JCT. RTE. 299 - Bac	3290	3310	3290-3310	232	148	1.56	0.60	Yes	84	6,987
3	WEAVERVILLE, NORTH JCT. RTE. 299 - Ahe	3337	3353	3337-3353	269	382	0.70	0.60	Yes	-113	12,785
3	RUSH CREEK ROAD - Back	3663	3661	3663-3661	95	150	0.63	0.60	Yes	-55	3,057
3	TRINITY CENTER STATE HIGHWAY MAINTE	4315	4318	4315-4318	70	104	0.67	0.60	Yes	-34	1,189
36	JCT. RTE. 3 NORTH - Ahead	2319	2320	2319-2320	25	44	0.57	0.60	Yes	-19	355
				Subtotal	**3,983**	**3,977**			**Model/Count Ratio =**	**1.00**	
									Percent Within Caltrans Maximum Deviation =	**84%**	> 75%
									Percent Root Mean Square Error =	**37%**	< 30%
									Coefficient of Determination (R^2) =	**0.84**	> 0.77
									Correlation Coefficient =	**0.92**	> 0.88

Appendix D

2040 Growth Distribution

2040 Land Use Allocation

	TAZ	SFDU	MFDU	OFF_KSF	RET_KSF	GROC_KSF	REST_KSF	CONV_KSF	ENT_KSF	MED_KSF	LI_KSF	HOT_RM	STOR_UN	ELEM_SCH	HIGH_SCH	SPECIAL
Additional Land Use		1356	227	61	73	20	13	2	9	4	57	45	170	339	177	0
TAZs																
Hawkins Bar		10%	2													
	235	68	11	3	4	1	1	0	0	0	3	2	8	17	9	0
	236	68	11	3	4	1	1	0	0	0	3	2	8	17	9	0
Trinity Center		12%	3													
	221	54	9	2	3	1	1	0	0	0	2	2	7	14	7	0
	222	54	9	2	3	1	1	0	0	0	2	2	7	14	7	0
	227	54	9	2	3	1	1	0	0	0	2	2	7	14	7	0
Lewiston		14%	7													
	201	27	5	1	1	0	0	0	0	0	1	1	3	7	4	0
	202	27	5	1	1	0	0	0	0	0	1	1	3	7	4	0
	203	27	5	1	1	0	0	0	0	0	1	1	3	7	4	0
	204	27	5	1	1	0	0	0	0	0	1	1	3	7	4	0
	205	27	5	1	1	0	0	0	0	0	1	1	3	7	4	0
	206	27	5	1	1	0	0	0	0	0	1	1	3	7	4	0
	207	27	5	1	1	0	0	0	0	0	1	1	3	7	4	0
Burnt Ranch / Cedar Flat		2%	1													
	237	27	5	1	1	0	0	0	0	0	1	1	3	7	4	0
Covington Mill		2%	4													
	218	7	1	0	0	0	0	0	0	0	0	0	1	2	1	0
	219	7	1	0	0	0	0	0	0	0	0	0	1	2	1	0
	228	7	1	0	0	0	0	0	0	0	0	0	1	2	1	0
	229	7	1	0	0	0	0	0	0	0	0	0	1	2	1	0
Junction City		1%	2													
	241	7	1	0	0	0	0	0	0	0	0	0	1	2	1	0
	242	7	1	0	0	0	0	0	0	0	0	0	1	2	1	0
Douglas City		2%	1													
	245	27	5	1	1	0	0	0	0	0	1	1	3	7	4	0
Post Mountain		1%	1													
	266	14	2	1	1	0	0	0	0	0	1	0	2	3	2	0
Ruth / Mad River		2%	2													
	251	14	2	1	1	0	0	0	0	0	1	0	2	3	2	0
	252	14	2	1	1	0	0	0	0	0	1	0	2	3	2	0
Weaverville		42%	17													
	104	33	6	1	2	0	0	0	0	0	1	1	4	8	4	0
	105	33	6	1	2	0	0	0	0	0	1	1	4	8	4	0
	105	33	6	1	2	0	0	0	0	0	1	1	4	8	4	0
	106	33	6	1	2	0	0	0	0	0	1	1	4	8	4	0
	108	33	6	1	2	0	0	0	0	0	1	1	4	8	4	0

	109	33	6	1	2	0	0	0	0	0	1	1	4	8	4	0
	110	33	6	1	2	0	0	0	0	0	1	1	4	8	4	0
	152	33	6	1	2	0	0	0	0	0	1	1	4	8	4	0
	167	33	6	1	2	0	0	0	0	0	1	1	4	8	4	0
	168	33	6	1	2	0	0	0	0	0	1	1	4	8	4	0
	172	33	6	1	2	0	0	0	0	0	1	1	4	8	4	0
	173	33	6	1	2	0	0	0	0	0	1	1	4	8	4	0
	174	33	6	1	2	0	0	0	0	0	1	1	4	8	4	0
	182	33	6	1	2	0	0	0	0	0	1	1	4	8	4	0
	183	33	6	1	2	0	0	0	0	0	1	1	4	8	4	0
	185	33	6	1	2	0	0	0	0	0	1	1	4	8	4	0
	186	33	6	1	2	0	0	0	0	0	1	1	4	8	4	0
Hayfork		12%	3													
	261	54	9	2	3	1	1	0	0	0	2	2	7	14	7	0
	274	54	9	2	3	1	1	0	0	0	2	2	7	14	7	0
	275	54	9	2	3	1	1	0	0	0	2	2	7	14	7	0

0.8% Growth per year between 2009 & 2040		
2040	6,194	1,036
Difference	**1,356**	**227**

Allocation of County growth

Community	Percent of	SFDU **1,356**	MFDU **227**
Hawkins Bar	10%	136	23
Trinity Center	12%	163	27
Lewiston	14%	190	32
Burnt Ranch / Cedar Flat	2%	27	5
Covington Mill	2%	27	5
Junction City	1%	14	2
Douglas City	2%	27	5
Post Mountain	1%	14	2
Ruth / Mad River	2%	27	5
Weaverville	42%	569	95
Hayfork	12%	163	27
Total	100%	1,356	227

Appendix E

2040 Land Use

Trinity County 2040 Land Use

TAZ	ATYPE	ATYPE_STR	IX_A	XI_P	ELEM_BNDI	MID_BNDR'	HIGH_BNDF	TERMINAL_	TERMINAL_	SFDU	MFDU	OFF_KSF	RET_KSF	GROC_KSF	REST_KSF	CONV_KSF	ENT_KSF	MED_KSF	LI_KSF	HOT_RM	STOR_UN	ELEM_SCH	HIGH_SCH	SPECIAL	S7	S6	S5	S4	S3	S2	S1	SPECIALSTR
1	1	External	186	186	1	1	1	0	0	0	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
2	1	External	50	50	1	1	1	0	0	0	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
3	1	External	3742	3742	1	1	1	0	0	0	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
4	1	External	354	354	1	1	1	0	0	0	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
5	1	External	936	936	1	1	1	0	0	0	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
6	1	External	3394	3394	1	1	1	0	0	0	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
7	1	External	0	0	1	1	1	0	0	0	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
8	1	External	0	0	1	1	1	0	0	0	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
9	1	External	0	0	1	1	1	0	0	0	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
10	1	External	0	0	1	1	1	0	0	0	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
11	1	External	0	0	1	1	1	0	0	0	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
12	1	External	0	0	1	1	1	0	0	0	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
13	1	External	0	0	1	1	1	0	0	0	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
14	1	External	0	0	1	1	1	0	0	0	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
15	1	External	0	0	1	1	1	0	0	0	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
16	1	External	0	0	1	1	1	0	0	0	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
17	1	External	0	0	1	1	1	0	0	0	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
18	1	External	0	0	1	1	1	0	0	0	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
19	1	External	0	0	1	1	1	0	0	0	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
20	1	External	0	0	1	1	1	0	0	0	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
21	1	External	0	0	1	1	1	0	0	0	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
22	1	External	0	0	1	1	1	0	0	0	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
23	1	External	0	0	1	1	1	0	0	0	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
24	1	External	0	0	1	1	1	0	0	0	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
101	1	Weavervil	0	0	1	1	1	1	1	52	1	12.8	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
102	1	Weavervil	0	0	1	1	1	1	1	18	1	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
103	1	Weavervil	0	0	1	1	1	1	1	0	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	400.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Mill - 12
104	1	Weavervil	0	0	1	1	1	1	1	39	1	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
105	1	Weavervil	0	0	1	1	1	1	1	0	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
106	1	Weavervil	0	0	1	1	1	1	1	0	0	0.0	0.0	0.0	0.0	0	0	0.0	16.5	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
107	1	Weavervil	0	0	1	1	1	1	1	26	1	0.0	0.0	0.0	0.0	0	0	0.0	5.9	0.0	0	0.0	0.0	75.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Weavervil
108	1	Weavervil	0	0	1	1	1	1	1	0	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
109	1	Weavervil	0	0	1	1	1	1	1	106	1	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
110	1	Weavervil	0	0	1	1	1	1	1	0	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
111	1	Weavervil	0	0	1	1	1	1	1	23	1	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
112	1	Weavervil	0	0	1	1	1	1	1	0	0	0.0	0.0	0.0	0.0	0	0	0.0	34.3	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
113	1	Weavervil	0	0	1	1	1	1	1	25	1	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
114	1	Weavervil	0	0	1	1	1	1	1	23	1	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
115	1	Weavervil	0	0	1	1	1	1	1	17	1	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
116	1	Weavervil	0	0	1	1	1	1	1	18	1	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
117	1	Weavervil	0	0	1	1	1	1	1	21	0	4.3	1.1	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
118	1	Weavervil	0	0	1	1	1	1	1	30	1	0.0	1.9	0.0	1.0	3	0	5.3	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
119	1	Weavervil	0	0	1	1	1	1	1	10	74	6.2	2.4	0.0	0.0	0	0	2.2	0.0	0.0	30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
120	1	Weavervil	0	0	1	1	1	1	1	0	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
121	1	Weavervil	0	0	1	1	1	1	1	16	1	0.0	2.0	0.0	0.0	0	1	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
122	1	Weavervil	0	0	1	1	1	1	1	28	4	0.0	11.9	0.0	1.1	0	0	0.0	1.6	0.0	104	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
123	1	Weavervil	0	0	1	1	1	1	1	3	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
124	1	Weavervil	0	0	1	1	1	1	1	27	1	0.0	0.0	0.0	0.0	0	0	0.0	2.0	0.0	36	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
125	1	Weavervil	0	0	1	1	1	1	1	2	2	9.4	9.6	0.0	4.9	0	6	0.0	0.0	7.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
126	1	Weavervil	0	0	1	1	1	1	1	22	0	20.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
127	1	Weavervil	0	0	1	1	1	1	1	5	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
128	1	Weavervil	0	0	1	1	1	1	1	0	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	1590.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Hospital
129	1	Weavervil	0	0	1	1	1	1	1	18	1	0.0	0.0	0.0	0.0	0	0	0.0	0.0	12.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
130	1	Weavervil	0	0	1	1	1	1	1	8	0	10.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
131	1	Weavervil	0	0	1	1	1	1	1	0	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
132	1	Weavervil	0	0	1	1	1	1	1	26	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	400.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
133	1	Weavervil	0	0	1	1	1	1	1	4	2	4.0	12.6	0.0	1.5	0	0	1.1	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
134	1	Weavervil	0	0	1	1	1	1	1	0	0	6.6	18.9	1.9	1.8	0	10	1.9	7.1	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
135	1	Weavervil	0	0	1	1	1	1	1	16	1	1.2	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
136	1	Weavervil	0	0	1	1	1	1	1	26	1	0.0	10.7	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	2600.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Post offi
137	1	Weavervil	0	0	1	1	1	1	1	23	1	6.3	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
138	1	Weavervil	0	0	1	1	1	1	1	57	1	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
139	1	Weavervil	0	0	1	1	1	1	1	18	39	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
140	1	Weavervil	0	0	1	1	1	1	1	0	0	0.0	0.0	0.0	0.0	0	1	0.7	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
141	1	Weavervil	0	0	1	1	1	1	1	2	0	15.3	2.0	0.0	1.6	0	0	0.0	24.5	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
142	1	Weavervil	0	0	1	1	1	1	1	6	56	1.1	4.3	0.0	0.0	0	0	0.0	8.6	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
143	1	Weavervil	0	0	1	1	1	1	1	13	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	13.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
144	1	Weavervil	0	0	1	1	1	1	1	27	1	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
145	1	Weavervil	0	0	1	1	1	1	1	32	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
146	1	Weavervil	0	0	1	1	1	1	1	11	0	2.0	10.1	0.0	0.0	1	0	0.0	0.0	0.0	13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
147	1	Weavervil	0	0	1	1	1	1	1	0	0	1.3	0.0	0.0	0.0	0	0	0.0	0.7	11.0	17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
148	1	Weavervil	0	0	1	1	1	1	1	1	0	1.2	28.3	40.6	2.8	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
149	1	Weavervil	0	0	1	1	1	1	1	0	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
150	1	Weavervil	0	0	1	1	1	1	1	3	0	2.2	1.0	0.0	5.6	0	0	0.0	1.2	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	

151	1	Weavervil	0	0	1	1	1	1	1	4	0	1.3	2.3	0.0	4.9	0	0	0.0	6.5	67.0	112	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
152	1	Weavervil	0	0	1	1	1	1	1	24	1	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
153	1	Weavervil	0	0	1	1	1	1	1	1	0	3.1	2.3	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
154	1	Weavervil	0	0	1	1	1	1	1	0	0	0.0	10.8	0.0	11.0	0	14	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
155	1	Weavervil	0	0	1	1	1	1	1	21	0	1.1	34.6	3.0	0.0	1	0	0.0	0.0	20.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
156	1	Weavervil	0	0	1	1	1	1	1	3	0	3.6	0.0	0.0	0.0	0	0	0.0	10.3	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
157	1	Weavervil	0	0	1	1	1	1	1	53	1	5.6	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
158	1	Weavervil	0	0	1	1	1	1	1	42	1	3.8	3.9	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
159	1	Weavervil	0	0	1	1	1	1	1	38	1	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
160	1	Weavervil	0	0	1	1	1	1	1	0	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	320.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Golf Cour
161	1	Weavervil	0	0	1	1	1	1	1	8	1	8.1	2.4	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
162	1	Weavervil	0	0	1	1	1	1	1	25	1	0.0	0.9	0.0	0.0	0	0	0.0	1.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
163	1	Weavervil	0	0	1	1	1	1	1	5	0	0.0	2.4	0.0	0.0	0	0	0.0	4.8	0.0	50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
164	1	Weavervil	0	0	1	1	1	1	1	1	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
165	1	Weavervil	0	0	1	1	1	1	1	1	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
166	1	Weavervil	0	0	1	1	1	1	1	29	1	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
167	1	Weavervil	0	0	1	1	1	1	1	0	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
168	1	Weavervil	0	0	1	1	1	1	1	22	1	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
169	1	Weavervil	0	0	1	1	1	1	1	16	1	0.0	0.0	0.0	0.0	0	0	0.0	0.0	20.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
170	1	Weavervil	0	0	1	1	1	1	1	13	0	2.6	2.3	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
171	1	Weavervil	0	0	1	1	1	1	1	8	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
172	1	Weavervil	0	0	1	1	1	1	1	1	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
173	1	Weavervil	0	0	1	1	1	1	1	0	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
174	1	Weavervil	0	0	1	1	1	1	1	0	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
182	1	Weavervil	0	0	1	1	1	1	1	0	0	0.0	0.0	0.0	0.0	0	0	0.0	5.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
183	1	Weavervil	0	0	1	1	1	1	1	31	1	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
184	1	Weavervil	0	0	1	1	1	1	1	58	2	0.0	0.0	0.0	0.0	0	0	0.0	4.9	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
185	1	Weavervil	0	0	1	1	1	1	1	8	1	2.4	29.7	0.8	0.0	0	0	0.0	0.0	0.0	135	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
186	1	Weavervil	0	0	1	1	1	1	1	5	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	400.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
187	1	Weavervil	0	0	1	1	1	1	1	87	1	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
188	1	Weavervil	0	0	1	1	1	1	1	0	0	5.0	1.1	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
201	2	Rural Tri	0	0	1	1	1	1	1	10	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
202	2	Rural Tri	0	0	1	1	1	1	1	65	24	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
203	2	Rural Tri	0	0	1	1	1	1	1	60	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
204	2	Rural Tri	0	0	1	1	1	1	1	150	60	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	99.0	0.0	370.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Lewiston
205	2	Rural Tri	0	0	1	1	1	1	1	25	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
206	2	Rural Tri	0	0	1	1	1	1	1	10	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
207	2	Rural Tri	0	0	1	1	1	1	1	45	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
208	2	Rural Tri	0	0	1	1	1	1	1	104	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
209	2	Rural Tri	0	0	1	1	1	1	1	15	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
210	2	Rural Tri	0	0	1	1	1	1	1	10	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
211	2	Rural Tri	0	0	1	1	1	1	1	10	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
212	2	Rural Tri	0	0	1	1	1	1	1	10	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
218	2	Rural Tri	0	0	1	1	1	1	1	10	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
219	2	Rural Tri	0	0	1	1	1	1	1	10	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
220	2	Rural Tri	0	0	1	1	1	1	1	12	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
221	2	Rural Tri	0	0	1	1	1	1	1	5	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
222	2	Rural Tri	0	0	1	1	1	1	1	15	12	1.3	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	46.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
223	2	Rural Tri	0	0	1	1	1	1	1	65	13	2.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
224	2	Rural Tri	0	0	1	1	1	1	1	25	12	1.3	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
225	2	Rural Tri	0	0	1	1	1	1	1	20	0	0.0	0.0	0.0	0.0	0	0	0.0	5.8	0.0	0	0.0	0.0	220.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Trinity C
226	2	Rural Tri	0	0	1	1	1	1	1	40	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
227	2	Rural Tri	0	0	1	1	1	1	1	10	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	12	0.0	0.0	110.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Trinity C
228	2	Rural Tri	0	0	1	1	1	1	1	12	0	0.0	0.0	0.0	0.0	0	0	0.0	5.2	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
229	2	Rural Tri	0	0	1	1	1	1	1	12	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
230	2	Rural Tri	0	0	1	1	1	1	1	51	14	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
231	2	Rural Tri	0	0	1	1	1	1	1	10	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
232	2	Rural Tri	0	0	1	1	1	1	1	20	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
235	3	Western T	0	0	1	1	1	1	1	241	41	0.0	1.0	0.0	0.0	0	0	0.0	5.0	3.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
236	3	Western T	0	0	1	1	1	1	1	54	9	0.0	1.0	0.0	0.0	0	0	0.0	5.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
237	3	Western T	0	0	1	1	1	1	1	100	17	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	100.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	
238	3	Western T	0	0	1	1	1	1	1	100	17	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
239	2	Rural Tri	0	0	1	1	1	1	1	86	15	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	14.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	
240	2	Rural Tri	0	0	1	1	1	1	1	146	25	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
241	2	Rural Tri	0	0	1	1	1	1	1	206	36	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	68.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	
242	2	Rural Tri	0	0	1	1	1	1	1	165	28	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
243	2	Rural Tri	0	0	1	1	1	1	1	74	13	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
245	2	Rural Tri	0	0	1	1	1	1	1	170	29	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	138.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	
246	2	Rural Tri	0	0	1	1	1	1	1	157	27	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
247	2	Rural Tri	0	0	1	1	1	1	1	204	35	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
251	3	Western T	0	0	1	1	1	1	1	163	28	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	85.0	50.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	
252	3	Western T	0	0	1	1	1	1	1	162	28	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	15.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Ruth Airp
260	4	Hayfork	0	0	1	1	1	1	1	154	28	8.9	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	15.0	8.0	10.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Hyampom A
261	4	Hayfork	0	0	1	1	1	1	1	33	5	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
262	4	Hayfork	0	0	1	1	1	1	1	21	3	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
263	4	Hayfork	0	0	1	1	1	1	1	12	2	0.0	7.0	5.8	0.0	0	0	2.3	0.9	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	

264	4	Hayfork	0	0	1	1	1	1	1	13	2	3.7	9.3	0.0	0.0	2	0	0.0	0.0	0.0	36	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
265	4	Hayfork	0	0	1	1	1	1	1	16	3	11.8	0.0	0.0	0.0	0	0	0.0	2.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
266	4	Hayfork	0	0	1	1	1	1	1	48	10	6.0	3.0	0.0	0.0	0	0	0.0	0.0	0.0	30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
267	4	Hayfork	0	0	1	1	1	1	1	33	5	6.7	9.7	0.0	6.1	0	0	0.0	10.3	0.0	0	246.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
268	4	Hayfork	0	0	1	1	1	1	1	60	10	5.0	8.1	8.9	3.0	0	0	0.0	2.8	6.0	30	0.0	0.0	1140.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Hayfork P
269	4	Hayfork	0	0	1	1	1	1	1	64	11	10.9	5.2	0.0	0.0	0	0	0.0	5.7	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
270	4	Hayfork	0	0	1	1	1	1	1	13	2	18.1	6.0	9.3	0.0	0	0	0.0	11.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
271	4	Hayfork	0	0	1	1	1	1	1	0	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	30.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Hayfork A
272	4	Hayfork	0	0	1	1	1	1	1	35	6	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
273	4	Hayfork	0	0	1	1	1	1	1	81	14	0.0	0.0	0.0	0.0	0	0	0.0	13.3	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
274	4	Hayfork	0	0	1	1	1	1	1	86	14	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
275	4	Hayfork	0	0	1	1	1	1	1	4	1	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
276	4	Hayfork	0	0	1	1	1	1	1	0	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
277	4	Hayfork	0	0	1	1	1	1	1	0	0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0	0.0	174.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	