

## MEMO

**DATE:** April 14, 2020**RE:** Guidance for Assessment of Vehicle Miles Traveled (VMT) Impacts of Projects in the Tahoe Basin

The purpose of the *Lake Tahoe VMT Impact Analysis Guidance* document is to establish a consistent methodology for determining the VMT impacts of projects proposed in the Tahoe Region to maintain compliance with Compact Article VII (Environmental Impact Statements) and Chapter 4 of the Code of Ordinances (Required Findings). This guidance is the required methodology for project- and plan-level analysis during the period in which TRPA is updating and validating its transportation model and updating the VMT Threshold Standard. The VMT Threshold Standard update process is anticipated to be complete by August 2020. The model may be available for use in project-level analysis in early 2020, at which point this guidance will be updated and re-issued.

This *Guidance* document includes significant background information about how TRPA has required projects to analyze transportation impacts and VMT to-date, then outlines the two key elements that will comprise TRPA's VMT analysis process until further notice. The overall organization of the document includes:

1. **Background** (page 2)– the policy and legislative underpinnings for evaluating VMT;
2. **Screening Criteria** (page 14)– the screening criteria will determine which projects need to undergo an in-depth VMT analysis until this guidance is changed or replaced;
3. **VMT Calculation Methodology** (page 15) – specific guidance on how to conduct the VMT analysis for projects identified by the screening criteria.

This version of the memo is an update to the previous version released on April 4, 2019. All updates are for clarification and readability only, and no substantive changes have been made to the content or methodology.

## Background

TRPA's Vehicle Miles Traveled (VMT) threshold was established in 1982 through TRPA's Resolution 82-11 as an indicator of nitrate deposition in the air quality threshold category. The threshold language reads "reduce vehicle miles of travel in the Basin by 10% of the 1981 base year values." TRPA's threshold evaluation reports, produced every four to five years, have consistently interpreted this to mean that daily VMT should be reduced by 10% of 1981 VMT levels, as estimated for a peak summer day<sup>1</sup> using the TRPA transportation model. While the stated purpose for the VMT threshold has been achieved many times over through vehicle tailpipe nitrogen emission reduction, VMT remains an important performance measure in efforts to reduce greenhouse gases and effectuate TRPA and state policies.

Environmental threshold carrying capacities, or "thresholds" are tied to project environmental analysis in Articles V (Planning) and VII (Environmental Impact Statements) of the TRPA Compact and Chapter 4 of the Code of Ordinances (Required Findings). Article V(g) of the TRPA Compact establishes that TRPA shall adopt ordinances prescribing specific written findings that the agency must make prior to approving any project in the region. Article V(g) specifies that the findings shall insure that the project under review will not cause the adopted environmental threshold carrying capacities of the region to be exceeded. This article is codified in Section 4.4.1.B of the TRPA Code of Ordinances, which states that to approve any project TRPA shall find that the project will not cause the environmental threshold carrying capacities to be exceeded. Finally, Article VII of the Compact establishes that the TRPA, when acting upon matters that have a significant impact on the environment, shall prepare and consider a detailed environmental impact statement before deciding to approve or carry out any project.

### *Historical calculation of the VMT Threshold*

Because the VMT threshold standard was adopted with reference to a 1981 baseline that was not ascertained at the time, it has been necessary to estimate that unknown baseline. Technology has advanced considerably in the last forty years, and the agency has continually sought to utilize the best available data and methods to estimate VMT. TRPA is currently on the fourth generation of its model to estimate VMT and the estimates of VMT have improved significantly. Increase computing power has enabled a more complex and accurate representation of travel behavior and a more complete representation of the regional road network.

TRPA currently uses TransCAD, an activity-based model, to estimate VMT. Activity-based travel demand models contain complex representations of travel behavior and are widely considered the most advanced and accurate method to estimate VMT. As the agency has continued to apply the best

---

<sup>1</sup> Modeled for a day in late August.

available information to provide the most reasonably accurate estimate of VMT, the comparison to historic estimates of VMT has remained a persistent challenge.

When TRPA transitioned from using Tranplan to TransCAD in 2005, it was able to incorporate a more complete representation of the Region's street network. The result of the more complex spatial representation of the road network was an increase in trip lengths throughout the region, and thus a more fine-grained reporting of VMT. At the time of the transition, TRPA ran both models for the 2005 base year. Tranplan estimated VMT at approximately 1.6 million, while TransCAD estimated VMT at 2.1 million. The difference is not an actual change in VMT or an increase in capacity of the roadway network but a finer-grained representation of the road network that pre-existed the switch from Tranplan to TransCAD. The TransCAD estimate captures more of the VMT from the existing roadway network than previous models did.

In an ideal world, the current activity-based model would be run using data from 1981 to establish a VMT estimate for that year. However, the visitor and resident travel behavior data from 1981 needed for the current activity-based model is not known. That data was not collected in 1981 and is not available. In the absence of that data, TRPA has used a traffic count-based adjustment methodology to generate a 1981 VMT estimate whenever improvements are made to the TransCAD model. The chosen methodology assumes that the ratio between today's traffic counts and 1981 traffic counts is the same as the ratio between today's VMT and 1981 VMT.

To determine the 1981 VMT and the threshold number, the ratio between the most recent base-year VMT (currently 2014) and the sum of peak month average daily traffic volumes at 20 Tahoe count stations in that year is calculated. This ratio is multiplied by the sum of peak month traffic volumes measured in 1981. The result is the VMT value in 1981. The VMT threshold is a ten percent reduction from that value. Use of this ratio assumes that all VMT model parameters (e.g., number of vehicle occupants, average trip distance) have remained unchanged between 1981 and the most recent base-year. Because it is unknown how these parameters may have actually changed over the previous decades, the 2011 Threshold Evaluation gave the VMT status and trend a confidence rating of "low."

The most recent base year VMT of 1,937,070 and corresponding VMT threshold standard of 2,030,938 are established on Page 60 of the Air Quality Chapter of the 2015 Threshold Report ([http://www.trpa.org/wp-content/uploads/POST\\_9\\_23\\_RELEASE\\_EDITS\\_Ch3\\_AirQuality-Edits-Accepted.pdf](http://www.trpa.org/wp-content/uploads/POST_9_23_RELEASE_EDITS_Ch3_AirQuality-Edits-Accepted.pdf)).

#### *Base-Year and Forecast Year TransCAD Model Inputs*

Every four years TRPA establishes a new "base-year" and forecast year model runs in support of the environmental analysis for the Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) update. Base-year model runs were conducted in 2014, 2010, and 2005. See Attachment A for

a table of each Base Year VMT and the corresponding threshold value. Previously, model runs were also conducted for the 1995, 1987, and 1981 base years. As noted above, base years prior to 2005 are not comparable to those generated in 2005 or later. In 2012, the base-year and forecast years not only supported the RTP/SCS update, but they also supported an update to TRPA's Regional Plan. Key model inputs for the base-year scenario include existing residential units, existing hotel, motel, and campground units, existing employees, residential and overnight lodging occupancy rates, and percentage of residents in low-, medium-, and high-income categories. These inputs are aggregated at the level of Traffic Analysis Zone (TAZ). TRPA uses the most up-to-date census information for income categories and residential occupancy rates, local survey data for overnight lodging occupancy rates, data collected from local jurisdictions and TRPA permits for residential, tourist, and commercial floor area development, and data consolidators such as Infogroup.

The forecast year scenario includes the same land-use inputs; however, the location of new development must be extrapolated based on proposed policies, programs, and projects. For the 2012 Regional Plan Update forecast scenarios, TRPA estimated where new residential, tourist, and commercial square floor area would be located based on proposed zoning regulations and development incentives. This included a new Transfer of Development Rights Program and Area Plan regulations that incentivize growth in Centers. The "build-out" scenario assumed that all allowable residential, tourist, and commercial development rights would be constructed by 2035. A full description of how each of these development rights were distributed in the model, as well as how other input factors were derived in the 2010 base-year (which supported the 2012 Regional Plan Update), the 2014 base-year (which supported the 2017 RTP/SCS) and the forecast scenarios for the 2012 Regional Plan Update and the 2017 RTP/SCS can be found in the appendices to the draft environmental documents for these plans or by request from TRPA.

Adjustments to VMT based on regional bicycle, pedestrian, transit, Intelligent Transportation Systems (ITS), parking and transportation demand management strategies planned for in the RTP/SCS were also considered in the forecast scenarios, through use of a post-processor spreadsheet tool called the "Trip Reduction Impact Analysis," or TRIA. Because the TransCAD model cannot incorporate most non-auto mode strategies into its structure,<sup>2</sup> it has been necessary to use a post-processor tool to capture these effects. The TRIA is only used to model the effects of regional strategies – i.e., the effects of a completed, regional bicycle and pedestrian network, and ITS, parking, and transportation demand strategies called for at the regional level or in the TRPA Code, such as the TRPA's Employer Trip Reduction Strategy (Code Section 65.5), which is applied to employers Basin-wide.

---

<sup>2</sup> The TransCAD platform does allow for incorporating a limited transit system into the transportation network. Because of the frequent changes to transit routes and schedules, however, the TRPA has not utilized this function to-date. As part of the current model update the TRPA is investigating the benefit of including the transit network in future modelling.

## *Project-Level VMT Requirements in the Code of Ordinances*

The current project-level VMT requirements that are spelled out in the Code of Ordinances are described below. The Methodology section of this *Guidance* further clarifies these requirements.

### Under 100 trips

Under current code proposed activities that generate a certain amount of vehicle trips are required to complete a transportation analysis (Code Section 65.2). The analysis is triggered through the project application. Proposed activities that are allowed uses, generate less than 100 daily vehicle trips and are not changing from one major use classification to another (example: residential to commercial or commercial to tourist accommodation) are not required to complete a transportation analysis or a Change in Operation Form ([http://www.trpa.org/wp-content/uploads/Change\\_In\\_Operation.pdf](http://www.trpa.org/wp-content/uploads/Change_In_Operation.pdf)), although they are still subject to the air quality mitigation fee. All other proposed activities must complete a Change in Operation Form which indicates the level of transportation analysis required. This includes activities which do not involve new construction, but which involve a change in use (this could include, for example, a change of use within an existing commercial space that involved the conversion of a retail space into a restaurant).

### Between 100 and 200 trips

Section 65.2 of the Code of Ordinances also currently requires that projects generating more than 100 additional vehicle trips but less than 200 additional vehicle trips complete a traffic analysis if the project is located within 300 feet of U.S. Highway 50 and in a “maintenance” area. Since the Tahoe Region has achieved its air quality goals and no longer has air quality maintenance areas, under this section projects that generate between 100 and 200 trips are no longer required to complete a full traffic analysis. Per this guidance (page 14), these projects must still complete a VMT analysis, however they are not required to complete a full transportation analysis (i.e. impacts on level-of-service, air quality, ingress and egress will not be required). They are still subject to the air quality mitigation fee.

### Over 200 trips

All projects that generate greater than 200 additional vehicle trips per day must complete a traffic analysis. As specified in Section 65.2.4 of the TRPA Code of Ordinances, a traffic analysis shall include:

1. Trip generation rates of the proposed project;
2. Impacts of the proposed project on the level of service at any impact intersections;
3. Impacts of the proposed project on regional vehicle miles travelled (VMT);
4. Impacts of the proposed project on regional and subregional air quality;

5. Ingress and egress characteristics of the proposed project, and their impacts on traffic flow adjacent to the project area;
6. Measures necessary to mitigate all traffic and air quality impacts to a level consistent with the environmental thresholds, the Goals and Policies, the Regional Transportation Plan, and the 1992 Air Quality Plan; and
7. Additional information that TRPA may require.

The Change in Operation Form worksheet instructs applicants to use the TRPA Trip Table ([http://www.trpa.org/wp-content/uploads/Attachment\\_A\\_Trip\\_Table.pdf](http://www.trpa.org/wp-content/uploads/Attachment_A_Trip_Table.pdf)) to find the trip rates which best fit the proposed and previous or existing operations. Applicants are encouraged to conduct Tahoe-specific surveys of like land-uses for their projects.

Projects have usually followed a similar format for their VMT analysis methodology, although there is some variation, which is called out below. In the past the steps have included:

1. Identifying proposed and existing land uses, and the trip rates associated with those uses;
2. Identifying the proportions of trips made by different types of users (for example, percentages of trips made by visitors, residents, and/or employees). There has been some variation in the level of detail provided in this step, particularly with visitors. Some projects have broken visitors into groups such as “close-proximity visitors” and “far-proximity visitors.”<sup>3</sup> Others broke them into smaller groups, selecting multiple points around the basin from which visitors could be arriving, and estimating what proportion would come from each point. Other projects have grouped all visitors together.
3. Identifying proposed and existing internal trip capture, non-auto mode share and pass-by trips;
4. Identifying trip lengths. This has been another source of variation among analyses. Some project applicants worked with the TRPA to identify average trip lengths by user-type from the TRPA transportation model. Others have generated trip lengths using a map for each specific user-type they identified in Step 2.
5. Multiplying trip rates by trip lengths for each user-type to obtain VMT for the project. In order to obtain all impacts to regional VMT from the project, applicants have been able to adjust this outcome to reflect other VMT effects not captured by this calculation.
6. Subtracting existing VMT from proposed VMT.

See the “VMT Methodology” beginning on page 14 of this memo for the guidance on how projects should conduct VMT analysis moving forward.

Plans and amendments to the Regional Plan are evaluated in comparison to the Regional Plan and have either used the TRPA transportation model to show changes in VMT or have conducted an analysis

---

<sup>3</sup> In some cases these may be the regional access trip versus a local trip.

similar to the one outlined above. Projects that involved changes to the roadway network have compared the change in mileage of the new roadway network to the old network, multiplying this by a 20-year forecast of average daily traffic, and adjusting for changes in traveler behavior (induced travel) based on the new roadway configuration.

#### *Analysis of the VMT Impact of Projects that Generate 200 Daily Trips or Less*

As noted above, the trigger for requiring a project to conduct a VMT analysis and thus fully assess VMT impacts is trip generation of more than 200 trips. Because trip lengths vary from project to project, the VMT impact associated with 200 trips or less is unknown and would differ for every project. To better understand the range of VMT that could be generated by projects that are not currently required to conduct a detailed transportation analysis, TRPA examined several example projects and the amount of VMT they could be expected to generate at a project level, based on average trip lengths produced by the TransCAD model multiplied by trip generation rates from the ITE Manual, 10<sup>th</sup> Edition. While the analysis below assumes that all of this new development is greenfield development (i.e., a new project on a parcel which previously did not have any development), in actuality most projects, particularly tourist and commercial projects, are redevelopment projects that replace existing uses and VMT. The analysis below does not account for any changes to region-wide VMT based on the replacement of existing uses.

Note that the environmental analysis for the 2012 Regional Plan assumed full build-out of all available development rights for the 2035 forecast year. Because the TRPA's VMT threshold was anticipated to be exceeded in the forecast year, mitigation for the allocation of these development rights was included in the Regional Plan and the RTP/SCS. Also, implementation of VMT-reducing projects from the Regional Transportation Plan are integrated into project requirements. New multi-family, commercial, tourist, and public service projects, including those that generate 200 daily trips or less, are required to implement the RTP/SCS through the [Active Transportation Plan Checklist](#)<sup>4</sup> by providing easements for bicycle trails and end-of-trip facilities for bicyclists and pedestrians.

### Residential

#### *Single-family residential*

The most common projects that generate less than 200 trips are single-family residential projects. Single-family residential projects are assumed to generate 9.44 daily trips.<sup>5</sup> The average vehicle trip

---

<sup>4</sup> <http://www.trpa.org/wp-content/uploads/ATP%20Checklist%20FINAL%20Fillable.pdf>

<sup>5</sup> ITE Trip Generation Manual, 10<sup>th</sup> Edition, Land Use 210. The TRPA Trip Table assigns them a trip rate of 10.0, for ease of calculation.

length for a residential trip is 4.7 miles.<sup>6</sup> Thus, one single-family residential home would generate approximately 44 daily VMT, which is 0.002% of the TRPA threshold of 2,030,938. Each year, 120 allocations are released to the local jurisdictions (plus another 10 to the TRPA pool for allocation assignments). If all 120 of these allocations were used, they would generate approximately 5,335 VMT per year, or 0.3% of the TRPA threshold. Since 2013, jurisdictions have averaged a use of only 63.5 allocations per year,<sup>7</sup> which would generate 2,823 VMT, or 0.14% of the threshold.

Note that the daily trip generation rate assumes that the home is fully occupied. Since approximately 60 percent of Lake Tahoe Basin homes are second homes, not all homes constructed are occupied at all times during the year. While a peak summer day (the day for which VMT is evaluated)<sup>8</sup> is a day in which second homes are more likely to be occupied, some second homeowners use their homes exclusively in winter, or during other summer periods, not the peak summer day. Thus, the daily VMT estimate is conservative, as it assumes full occupancy, which is not the norm for Lake Tahoe homes.

### Multi-family

Multi-family residential projects that are under the 200-trip threshold in Lake Tahoe most closely match the “Multi-family Housing (Low-Rise)” ITE Trip Generation Category. In this category, a multi-family unit is estimated to generate 7.32 daily trips per unit,<sup>9</sup> with an average residential trip length of 4.7 miles.<sup>10</sup> Thus, a 13-unit multi-family development would be expected to generate less than 100 trips, and 27 units would be expected to generate less than 200 trips. The 13-unit multi-family development would generate approximately 450 daily VMT (0.02% of the threshold), and a 27-unit multi-family development would generate approximately 930 daily VMT (0.05% of the threshold).

Multi-family developments can be either market-rate, or deed-restricted for affordable, moderate, or “achievable” homes. Those that are deed-restricted cannot be used as second homes or short-term rentals, therefore they are likely to have a high occupancy rate. The ITE trip generation rate for multi-family is based on a 96.2 percent occupancy rate which is likely higher than that generated by the average multi-family development in Tahoe, as multi-family development in Tahoe is a mix of deed-restricted and market-rate, and some of the market-rate apartments could be sold as second homes which may sit empty even on a peak summer day. Thus, these VMT estimates for multi-family are likely conservative estimates.

### Tourist Accommodation

---

<sup>6</sup> TRPA Transportation Model, 2014 Base Year, Trip File, with non-auto trips and external VMT subtracted out.

<sup>7</sup> Ken Kasman, TRPA Research and Analysis Division, e-mail correspondence February 15, 2019

<sup>8</sup> Modeled for a day in late August.

<sup>9</sup> ITE Trip Generation Manual, 10<sup>th</sup> Edition, Land Use 220

<sup>10</sup> TRPA Transportation Model, 2014 Base Year, Trip File, with non-auto trips and external VMT subtracted out.



Tourist accommodation units are estimated to generate 8.36 daily trips per unit,<sup>11</sup> with an average trip length for overnight visitors of 7.7 miles.<sup>12</sup> An 11-unit hotel would be the largest tourist project that would generate less than 100 trips and could be expected to generate 708 daily VMT (0.04% of the threshold). A 23-unit hotel is the largest tourist development that would generate less than 200 trips, at 1,481 daily VMT (0.07% of the threshold).

Since 2013, no new tourist accommodation units have been distributed – new projects have used transferred units.<sup>13</sup>

### Commercial

Commercial projects can comprise many different land-uses and attract both residents, external workers and visitors. They generate different trip rates depending on the type of uses included in the development. As part of its Development Rights Strategic Initiative which was approved by the TRPA Governing Board in October 2018, TRPA developed a weighted average trip generation rate based on the mix of existing commercial uses in Tahoe. This trip rate is 31.68 trips per 1,000 square feet of gross floor area.<sup>14</sup>

Typical commercial projects that generate less than 200 trips for which applications have been received over the last six years have included:

---

<sup>11</sup> ITE Trip Generation Manual, 10<sup>th</sup> Edition, Land use 310, average occupancy rate of 82 percent.

<sup>12</sup> TRPA Transportation Model, 2014 Base Year, Trip File, with non-auto trips and external VMT subtracted out.

<sup>13</sup> Ken Kasman, TRPA Research and Analysis Division, e-mail correspondence February 15, 2019.

<sup>14</sup> The Development Rights Strategic Initiative Code amendments were approved by the TRPA governing board in October 2018.

Description of Commercial Project	Average Daily Trip Rate	Average Trip Length	Estimated Daily Trips	Estimated VMT
6,000 square feet of general commercial/office	20.7 per 1,000 square feet  (average of TRPA's general commercial rate (31.69) and ITE General Office (9.74))	7.2 miles  (weighted average of Recreation, Shop, Eat, Work, AtWorkOther, and External Work trip lengths)	127 Daily Trips	913 Daily VMT (0.05% of threshold)
5,000 square feet of general office	9.74 per 1,000 square feet  (ITE General Office)	6.0 miles  (weighted average of Work, AtWorkOther, External Work trip lengths)	49 Daily Trips	292 daily VMT (0.014% of threshold)
13,000 square feet of general office	9.74 per 1,000 square feet  (ITE General Office)	6.0 miles  (weighted average of Work, AtWorkOther, External Work trip lengths)	127 Daily Trips	760 daily VMT (0.04% of threshold)

On average, local jurisdictions have issued around 7,000 square feet of CFA each year from their allocation pools for projects that have been constructed since 2013.<sup>15</sup> Using an average trip generation rate of 31.68 trips per 1,000 square feet of CFA, 7,000 square feet of CFA could be expected to generate approximately 222 trips.

---

<sup>15</sup> Ken Kasman, TRPA Research and Analysis Division, e-mail correspondence February 15, 2019.

## *Air Quality Mitigation Fee*

### Basis for Air Quality Mitigation Fee

The basis for TRPA's Air Quality Mitigation Fee is established in the Goals and Policies. Policy 2 of Goal #4 of the Development and Implementation Priorities Sub-element states:

*ALL PROJECTS SHALL OFFSET THE TRANSPORTATION AND AIR QUALITY IMPACTS OF THEIR DEVELOPMENT.*

*The implementing ordinances for the Regional Plan will define stationary sources of air pollution which may locate in the Region, and define what constitutes a significant environmental impact on air quality from stationary sources. Commercial and residential development contribute indirect impacts to air quality by increasing the number of vehicle trips in the Region. The cumulative impact of such trips is significant.*

*The ordinances will establish a fee to offset the impacts from minor projects. The fee will be assessed on both commercial and residential development. The ordinances will also define what projects have significant environmental impacts; these projects will be required to complete an EIS and mitigate air quality and traffic impacts with specific projects or programs.*

### Current Air Quality Mitigation Fees

Section 10.8.5 of the Rules of Procedure establishes Air Quality Mitigation fees. The current fees, which were last updated in 2007, are as follows:

#### *A. Air Quality Mitigation Fee*

*1. TRPA shall assess an air quality mitigation fee according to the following schedule:*

- a. For new residential units - \$325.84/daily vehicle trip.*
- b. For new tourist accommodation units - \$325.84/daily vehicle trip.*
- c. For new campground site or recreational vehicle site - \$325.84/daily vehicle trip.*
- d. For new commercial floor area - \$36.20/daily vehicle trip.*
- e. For all other development - \$36.20/daily vehicle trip.*

Section 10.8 also identifies when the fees should be updated:

*2. TRPA shall review the fee schedules in this subsection in light of the costs of needed improvements and the funds available to support those improvements and recommend adjustments to the fee schedules as appropriate.*

#### Development of Air Quality Mitigation Fees

Historically the air quality mitigation fees listed in the Rules of Procedure are developed by dividing the forecasted cost of air quality mitigation projects needed to mitigate new development by the number of vehicle trips expected to be generated by that new development. The year 2002 was the last time that the fee was tied directly to the cost of mitigation projects. In 2002, the air quality mitigation fee was updated using a five-year averaging method:

The TRPA Environmental Improvement Program (EIP) estimated that from FY 2002 through 2006, approximately \$94.0 million would be needed to implement the Mass Transit, Bicycle and Pedestrian projects on the EIP project list for transportation and air quality projects. By the year 2006, internal daily vehicle trips were estimated to increase by 19,963, or 6.572 percent, with region-wide vehicle trips increasing to 303,747. Using an averaging method, growth should pay for 6.572 percent of \$94.0 million, or \$6.18 million. \$6.18 million was divided by 19,963 trips to obtain approximately \$300 per trip.

The 2002 staff memo further explained how this \$300 per trip was divided between trip attractors (residential and tourist uses) and trip generators (commercial, recreation, etc. uses). Each daily vehicle trip has two trip ends. One end is a production, the other end is an attraction. The “beds” account for the productions (houses, hotel/motel rooms, campgrounds, etc.) because they produce a vehicle trip. Commercial business, and recreation areas attract vehicle trips.

TRPA has historically divided the fee associated with each daily vehicle trip between the production and attraction trip ends. This fee may be divided equally, or it can be weighted toward either production or attraction trip end. Since 1987, TRPA has weighted the production end of a vehicle trip at 90 percent, and the attraction end of the trip at 10 percent.

Based on the \$300 per daily vehicle trip end (DVTE) fee shown above, and rounding the fees for the production and attraction ends, the fee schedule in 2001 was determined to be:

- Commercial Trips: \$ 30.00 per DVTE
- Residential/Production Trips: \$270.00 per DVTE

In 2007 TRPA again updated the fee, this time by increasing the fees established in 2002 by the increase in the California Construction Cost index. The fees were increased to \$36.20/DVTE for commercial

development, and \$325.84/DVTE for residential development. These are the fees in place today, as noted above.

### Use of Air Quality Mitigation Fees

Code Section 65.2.6 discusses the use and distribution of Air Quality Mitigation Funds. The code reads:

#### *65.2.6. Use and Distribution of Mitigation Funds*

*A. TRPA shall deposit air quality mitigation funds in a trust account. Interest accruing to the trust account shall remain in the account until used on air quality mitigation projects. TRPA shall keep track of the amount of funds collected for each local jurisdiction, with interest, and shall disburse funds to the local jurisdiction, or to the Tahoe Transportation District at the local jurisdiction's request, for expenditure within the jurisdiction of origin, provided TRPA finds that the expenditure is consistent with TRPA's Regional Transportation Plan or the 1992 Air Quality Plan. Pursuant to subparagraphs 65.2.4.C.2 and 65.2.5.C.2, certain funds may be identified for the construction of specific projects. By October 1 of each year, the recipient shall submit to TRPA an annual report of the funds expended as of June 30 each year.*

*B. As an alternative to distributing air quality mitigation funds to the jurisdiction of origin, a portion of the air quality mitigation funds may be distributed across jurisdictional boundaries to support projects of regional priority that are specifically identified in a regional capital improvement program developed in cooperation with local jurisdictions, such as the Five Year Environmental Improvement Program (EIP) Priority Project List.*

The air quality mitigation fund currently generates approximately \$420,000 annually region-wide. In recent years funds have gone towards bicycle and pedestrian trails, the purchase of transit buses and shelters, alternative fuel buses and support facilities, street sweepers, and complete streets projects.

Looking forward, the overall amount of air quality fees collected and the amount collected per project could shift if the fees were re-evaluated against the most recent Regional Transportation Plan, or if the factors that go into calculation of the fee were modified. An example of a modification to the factors would be if the air quality mitigation fee calculation incorporated project impact on regional vehicle miles traveled, instead of limiting the calculation to daily vehicle trip ends.

## Screening Criteria

The screening criteria are designed to identify projects that will have a less than significant impact on VMT, either through project design or by supporting the compact development goals of the Regional Plan, which mitigates planned growth through the Regional Transportation Plan. All projects, large and small, need to mitigate their impacts on air quality through mitigation measures, payment of the air quality mitigation fee, or both (TRPA Code 65.2). The “Background” section above provides more details on this. All projects must show that they have a less-than-significant effect on VMT. Projects will be presumed either to have a less-than-significant effect on VMT or that any marginal growth in VMT is mitigated through the Regional Transportation Plan and will be exempt from the in-depth VMT evaluation described in the “VMT Methodology” section below if they meet any one of the following criteria:

For transportation projects:

1. Bicycle, pedestrian, and transit projects included within the most recent RTP/SCS; or
2. New bicycle lanes or sidewalks; or
3. Bicycle or pedestrian improvements to the roadway system, such as “green lanes,” bike boxes, pedestrian-activated crossings, or similar; or
4. Amendments to the RTP/SCS to include new bicycle, pedestrian, and transit projects, excluding microtransit,<sup>16</sup> located within ½ mile of a transit stop, within the boundaries of the City of South Lake Tahoe, or within the boundaries of a Regional Center, Town Center or Tourist District; or new bicycle, pedestrian and transit projects, excluding microtransit, not included in the RTP/SCS but which are located within ½ mile of a transit stop, within the boundaries of the City of South Lake Tahoe, or within the boundaries of a Regional Center, Town Center or Tourist District.

For land-use projects (residential, commercial, tourist, public service, mixed-use, recreation, assembly, and entertainment) and plan amendments:

5. Generates less than 100 additional vehicle trips per day;<sup>17</sup> or
6. Is deed-restricted 100% “affordable” residential housing located in a Town Center and utilizes parking rates less than the minimum parking rates established by the local jurisdiction, unless those minimum parking rates already incorporate reduced parking demand for affordable housing or other design or locational elements. “Affordable” housing is defined as residential housing, deed-restricted to

---

<sup>16</sup> Microtransit is defined as a privately-operated transit system. Source:

<http://www.fehrandpeers.com/microtransit/>.

<sup>17</sup> Projects that generate between 100 and 200 trips per day will be required to complete a VMT analysis, but not a full transportation analysis (i.e., impacts on level-of-service, air quality, ingress and egress will not be required.)

be used exclusively for lower-income households (income not in excess of 80 percent of the respective county's median income) and for very low-income households (not to exceed 50 percent of the respective county's median income).

Deed-restricted affordable housing in the Tahoe Region is intended to house local working households, seniors, or people with disabilities, to relieve overcrowded living conditions, and to reduce commuting from outside the Region. Affordable housing located in Town Centers contributes to achieving the TRPA VMT threshold by two means: 1) fulfilling Regional Plan goals for compact, walkable development that provides the lowest-impact locations for housing and supports the future viability and expansion of transit and reduced parking needs;<sup>18</sup> 2) requiring that any new trips generated by the project will be subject to the Air Quality Mitigation Fee, which helps implement the Regional Transportation Plan (RTP). The RTP is an integral element of the 2012 Regional Plan, and RTP projects are the main tool for offsetting VMT generated by planned growth. Further, affordable housing in Lake Tahoe will improve the jobs-housing fit by providing housing at a cost that matches local wage levels, and better jobs-housing fit is correlated with reduced commute distances. Studies from outside of the Basin have shown that lower-income resident-occupied households generate less VMT than market-rate resident-occupied households in areas where the jobs-housing fit is better.<sup>19 20</sup> This analysis aligns with research conducted by the State of California, which supports a presumption of less-than-significant impact for affordable residential development.<sup>21</sup>

## VMT Methodology

The VMT Methodology will vary for different project categories. Both a calculation-based option (i.e., the applicant must show the steps of their calculations) and a model-based option (directly using TRPA's TransCAD transportation model) are presented for most project categories. The model-based option will be the preferred option in the future, as it will provide a more complete understanding of the project's effect on regional VMT, whereas the calculation-based option is more limited in its capacity to truly

---

<sup>18</sup> Average trip lengths by Transportation Analysis Zone (TAZ) from the TRPA's transportation model show that TAZs in Town Centers or closer to transit have lower average trip lengths. Average Trip Length by TAZ Map available at: [https://trpa-shiny-apps.shinyapps.io/Avg\\_Trip\\_Lengths/](https://trpa-shiny-apps.shinyapps.io/Avg_Trip_Lengths/).

<sup>19</sup> Karner and Benner (2016), *The convergence of social equity and environmental sustainability: Jobs-housing fit and commute distance*.

<sup>20</sup> Chapple et al. (2017). *Developing a New Methodology for Analyzing Potential Displacement*, available at <https://www.arb.ca.gov/research/apr/past/13-310.pdf>.

<sup>21</sup> California Office of Planning and Research (2018), *Technical Advisory on Evaluating Transportation Impacts in CEQA*.

capture regional effects. Until the model is updated and validated, however, the calculation-based option is recommended.

As projects apply for permits, TRPA will work with project applicants to test a model-based analysis. Until this methodology is finalized, it is recommended that applicants also use the calculation-based analysis. Both options are described below for each category. New roadway and bicycle trail projects will not have a calculation-based option but will be required to use the TRPA's modeling tools as described below (bicycle projects use a model separate from the TransCAD model). All analyses should be conducted for a peak summer day in August, to be consistent with TRPA's Travel Demand Model analysis timeframe. If the land-use of a particular project does not fit any of the categories described below, the project applicant should consult with TRPA. TRPA will make a determination as to which category is the most appropriate to use for the project's VMT analysis.

The result of the VMT analysis will include the expected change in VMT attributable to the project, and the tables, calculations and assumptions supporting the VMT estimate, as described below. Where project effects are expected to change over time, analyses should consider both a project's short-term and long-term effects on VMT.



### Category 1: Commercial, Office, Residential, Lodging, and Mixed-Use Projects

Because the TRPA's TransCAD model is designed to model regional VMT, it may not be well-suited to analyzing changes at the project-level. As part of the testing of the model methodology outlined in this document, TRPA will determine what size of project may be reliably modeled. If the model is not sensitive to projects of the size normally seen in the Tahoe Region, staff will evaluate the resources needed to include such an upgrade through its model update plan.

Both a calculation-based and model-based methodology are included below. TRPA recommends that projects use the calculation-based methodology while TRPA is further developing the model-based methodology.

#### *Category 1 Calculation-Based Methodology*

1. Identify the Traffic Analysis Zone (TAZ) in which the project is located. A TAZ map is available on [tahoeopendata.org](http://tahoeopendata.org).
2. Identify all land-use types included in the project by number of units (homes, square footage, etc.).
3. Identify trip rates for each land-use type using the TRPA Trip Table or best available surveys. In the absence of Tahoe-specific surveys, applicants should research trip-generation studies from other, similar areas such as resort areas. Project applicants are encouraged to conduct Tahoe-specific surveys where feasible.
4. Multiply the trip rate by the number of units for each land-use to obtain total trips by land-use.
5. Identify the proportion of total trips for each land-use by trip-type. All trip-types shall be based on the TRPA's transportation model. See Table 1 for a complete list of trip-types. The applicant must show the rationale for assumptions used for apportioning total trips to each trip-type (for instance, the percentage of employee work trips versus patron shopping trips for a certain land-use). For residential and overnight visitor trips, applicants have the option of using a standard proportion of trip types, shown in Table 2.

**Table 1: TRPA Transportation Model Trip-Types for calculating VMT**

<b>Trip Types</b> (all trip types include internal trips and trips with one external trip end)
Gaming
Recreation
Shopping
Eat
Maintenance (household maintenance errands such as picking up the mail)
Discretionary (doctor visit, visiting friends)
School (trips made by children and college students)
Work (a trip to or from work to begin or end the work day, includes residential work trips and External Work trips made by workers commuting in and out of the Basin)
AtWorkOther (trips that begin and end at the workplace (such as a lunch-time trip))
Combo Work (combines "Work" and "AtWorkOther" from above) <sup>1</sup>
Escort (picking up or dropping someone off)
Source: Lake Tahoe Resident and Visitor Model, Model Description and Final Results, August 2007. Trip lengths include both trips internal to the region and those that start from an external location.
Note 1: Note that "Combo Work" overlaps with "Work" and "AtWorkOther." Any of these may be used by themselves, and "Work" and "AtWorkOther" may both be used together, but "Combo Work" cannot be used if either "Work" or "AtWorkOther" are used.

**Table 2: Proportion of Trips by Trip-Type for Residential and Overnight Visitor Uses**

Residential	
Work	17%
At Work Other (trips that begin and end at the workplace (such as a lunch-time trip))	13%
Shop	21%
Discretionary (doctor visit, visiting friends)	20%
Escort (picking up or dropping someone off)	13%
Maintenance (household maintenance errands such as picking up the mail)	8%
Eat	8%
Source: 2005 Tahoe Regional Household Survey	
Overnight Visitor	
Recreation	40%
Gaming	14%
Shopping	11%
Other	35%
Source: TRPA 2004 Overnight Visitor Survey.	

6. Adjust trips to account for internal capture (mixed-use projects only), pass-by, and non-auto trips.

a. *Internal capture:*

- i. Determine the percent of project-based resident and overnight visitor trips that will be captured on-site based on the project's land uses using the Institute of Traffic Engineers Trip Generation Handbook, 3<sup>rd</sup> Edition, 2017, Internal Capture methodology. Provide sources for assumptions.
- ii. Multiply the percent of internal trip capture for each use by the percentage of residents and overnight visitor trips making up each residential or lodging use (recall that, for instance, lodging trips might be generated primarily by overnight visitors but a small proportion may also be generated by employee trips). The approximate percentage of resident and overnight visitor trips making up each use should be available from the applicant as part of market studies or other business planning.
- iii. Reduce the residential and overnight visitor trips by the internal trip capture rate. Reduce the number of trips in each category of trip type for the commercial or office uses by the correct internal trip capture rate by use. The total number of commercial trips reduced should match the total number of resident and overnight visitor trips reduced.

- b. *Pass-by:* Pass-by trips are made as intermediate stops on the way from an origin to a primary trip destination without a route diversion. For example, a person stopping at the grocery store along their regular route home from work would be considered to generate a pass-by trip. No additional vehicle trips are added to the external roadway network. Identify the appropriate pass-by rate for shopping- and maintenance-related land-uses. Use either locally generated data or ITE pass-by trip rates. Provide sources for the pass-by rate assumptions.

c. *Non-Auto Trips:*

In most cases the trip generation rates from the TRPA's Trip Table will already take into account non-auto trips. If a project applicant can identify significant non-auto amenities in the vicinity of the project and documented evidence that nearby uses experience lower vehicle trip generation, the applicant may develop a methodology by which to take additional reductions for non-auto trips based on existing non-auto facilities and services. Proposed non-auto facilities and services in most cases will be considered mitigation and should be analyzed as such.

7. Once trips have been reduced for internal capture, pass-by, and non-auto trips, identify the appropriate trip length for each trip-type by Traffic Analysis Zone (TAZ) using TRPA's Trip Length Table (Tables 3 and 4, in Attachment B). If a project has documentation to support using different trip lengths specific to that project, those trip lengths may be used instead of the trip lengths in Tables 3 and 4.<sup>22</sup>
8. For each land use, multiply the number of trips in each trip-type category by the associated trip length. Sum the results from each land-use category to obtain overall project-generated VMT.
9. In order to disclose the impact of the project on regional VMT consider the effects of the addition of the new project and the removal of any existing uses on regional VMT. The following should be considered in this section of the analysis:
  - a) Is a locally-serving commercial use being replaced with a new use, and if so, what will the impact of that removal be on local trips and trip lengths? Will trips now lengthen to account for the need to travel further to obtain the missing good or service?
  - b) Or will the new use attract trips that were previously made to a more distant location?
  - c) Are the new uses locally-serving?<sup>23</sup>
10. Was the use being replaced in operation, and if so, was it operating at capacity? Quantify this in the analysis to the extent possible and add to or subtract VMT from the number generated in Step 8. Where the analysis produces a range of final VMT estimates, select the highest end of the range, to provide a more conservative (i.e. higher) VMT estimate.

---

<sup>22</sup> The trip lengths in the trip table already account for the fact that some trips to that TAZ for that use are longer regional access trips (for instance, the trip that an overnight visitor makes when first arriving to Tahoe) versus shorter, more local trips. If the applicant wishes to generate a more detailed analysis differentiating between regional access and local access trips, they may do so, but must provide documentation supporting the trip length assumptions.

<sup>23</sup> The TRPA Trip-Table ([https://www.trpa.org/attachment\\_a\\_trip\\_table\\_2019/](https://www.trpa.org/attachment_a_trip_table_2019/)) identifies which types of uses may be considered locally-serving. The project proponent must provide substantial evidence verifying that the project's purpose is to provide local-serving retail. Evidence can include market studies or documentation of the planned uses, with verification by TRPA staff that these uses in the Tahoe Basin are locally-serving.

### *Category 1 Model-Based Methodology*

This will be the preferred methodology if TRPA can establish the sensitivity of its model to individual residential, commercial, office, lodging, and mixed-use projects.

1. TRPA will provide the applicant with a copy of the input file to the TransCAD model for either the base year or the appropriate forecast year if the project is scheduled to be constructed more than four years in the future. This file includes land-use assumptions for the base or forecast year, including the expected number of housing units, lodging units, camping spaces, and employees by TAZ based on what is on the ground and/or what will be allowed by the forecast year based on the Regional Plan. The applicant will be required to update this file with anticipated increases or decreases in units and employees by TAZ based on project specifications. Where the applicant has knowledge of income levels associated with the new project (for instance in the case of deed-restricted affordable housing), the income level field in the input file for that TAZ should be modified accordingly.

The applicant will return the updated TransCAD input file to TRPA. TRPA staff will run the model using the updated input files and will also run the model using the unmodified input file. The difference between the VMT result from the project's model run and the unmodified input file model run will be considered the change in VMT attributable to the project.

## Category 2: Public Service (government offices, schools) and Recreation, Assembly and Entertainment

This memo outlines two methodologies for Category 2 – a off-model calculation, and a model-based methodology. TRPA recommends use of the near-term methodology while we are further developing the long-term model-based methodology.

### *Category 2 Calculation-Based Methodology (Near-Term)*

This methodology is calculation-based (applicants must show their calculations).

1. Identify the Traffic Analysis Zone (TAZ) in which the project is located. A map of TAZs is available on [tahoeopendata.org](http://tahoeopendata.org).
2. Identify all land-use types included in the project by number of units (square footage, seats, acres, etc.).
3. Identify trip rates for each land-use type using the TRPA Trip Table, or best available surveys. In the absence of Tahoe-specific surveys, applicants should research trip-generation studies from other, similar areas such as resort areas. The applicant is encouraged to conduct a Tahoe-specific survey or survey of the specific land-use type for land-uses not well-represented in the TRPA Trip Table or ITE Manual. The survey may be based upon the applicant's knowledge of project specifics, such as the number of employees or the number of seats in the venue.
4. Multiply the trip rate by the number of units for each land-use to obtain total trips by land-use.
5. Identify the proportion of total trips for each land-use by trip-type. All trip-types shall be based on the TRPA's transportation model. See Table 1, above for a complete list of trip-types. The applicant must show the rationale for assumptions used for apportioning total trips to each trip-type (for instance, the expected number of employee work trips versus patron recreation trips for a certain land-use).
6. Adjust trips to account for internal, pass-by and non-auto trips if appropriate using the methodology in Step 6, Category 1, above.

7. Identify the appropriate trip length for each trip-type by Traffic Analysis Zone (TAZ) using TRPA's Trip Length Table (Table 3, Attachment B).<sup>24</sup> If a project has documentation to support using different trip lengths specific to that project, those trip lengths may be used instead of the trip lengths in Table 3.
8. For each land use, multiply the number of trips in each trip-type category by the associated trip length to obtain VMT by land-use. Sum each of these for overall project-generated VMT.
9. Consider the effects of the addition of the new project and the removal of any existing uses on regional VMT. For instance, if a locally-serving commercial use is being replaced with a new use, what will the impact of that removal be on local trips and trip lengths? Will trips now lengthen to account for the need to travel further to obtain the missing good or service? Will the new use attract trips that were previously made to a more distant location? Was the use being replaced in operation, and if so, was it operating at capacity? Quantify this in the analysis to the extent possible and add to or subtract VMT from the number generated in Step 10. Where the analysis produces a range of final VMT estimates, select the highest end of the range, to provide a more conservative VMT estimate.
10. If the applicant or TRPA staff has reason to believe that a more accurate VMT estimate may be obtained by conducting a more detailed analysis than the one outlined here, the applicant may choose to or may be asked to expand upon any of these steps. For instance, the applicant may need to split recreation trips into "close-proximity" and "far-proximity" trips or "regional access" and "local access" trips in order to apply different trip lengths to each group, rather than using the average trip length for recreation trips linked to the TAZ in which the project is located. If a new recreation use is planned for a TAZ in which there were no similar previous recreation uses, TRPA may require the applicant to conduct additional research to establish appropriate trip lengths for that use in that TAZ. Sources for all assumptions must be provided. TRPA will provide the raw trip table output from the model upon request.

---

<sup>24</sup> The trip lengths in the trip table already account for the fact that some trips to that TAZ for that use are longer regional access trips (for instance, the trip that an overnight visitor makes when first arriving to Tahoe) versus shorter, more local trips. If the applicant wishes to generate a more detailed analysis differentiating between regional access and local access trips, they may do so, but must provide documentation supporting the trip length assumptions.



## *Category 2 Model-Based Methodology*

It may be possible to modify TRPA's transportation model to approximate VMT generated by a public-service or recreational project, two projects types for which the model is not currently designed to analyze. Two potential methods for modifying the model are outlined below. TRPA will work to test one or both methods and may also identify other methods through the Model Working Group. The cost and timing for modifying the model will be considered through a longer-term model update plan.

### Model-Based Method 1: Manual Comparison, Employees as Proxy for Unique Land Use

1. Using the methodology outlined above, in the "*Category 2 Calculation-Based Methodology*" section, generate trips manually for the project.
2. In the base year model input file (or forecast year if the project is anticipated to occur four years or more in the future), make changes to the number of employees in the TAZ in which the project will be located so that the number of employees generates the same number of trips estimated manually in Step 1. The analyst may also consider modifying the attraction factor of that TAZ, instead of, or in combination with modifying the number of employees.
3. Run the model. Using the model output files (trip summary file), compare the trips coming and going from the TAZ in which the project is located to the trips generated manually in Step 1. If they are different, adjust the employment levels (or attraction factors) and re-run the model. Complete these steps until the model outputs match the trips generated manually.

### Model-Based Method 2: Big Data Comparison, Modify Trip Table

1. Obtain mobile-device and traffic count data from time periods and locations in which a similar land-use operated.
2. From the mobile-device data, identify travel patterns that are similar to those that would occur with the new land-use.
3. Edit the trip table from the appropriate model year run to match the travel patterns found in the mobile device data.
4. Insert the trip table back into the model, complete the model run.
5. The difference in VMT between the model run using the modified trip table and a model run that uses the unmodified trip table will be the project impact on regional VMT.

### Category 3: Transportation Projects

A variety of transportation projects may need to conduct a VMT analysis. Per the screening criteria above, certain transportation projects do not need to conduct a VMT analysis. These include:

1. Bicycle, pedestrian, and transit projects included within the most recent RTP/SCS.
2. New bicycle lanes or sidewalks.
3. Bicycle or pedestrian improvements to the roadway system, such as “green lanes,” bike boxes, pedestrian-activated crossings, or similar.
4. Amendments to the RTP/SCS to include new bicycle, pedestrian, and transit projects, excluding microtransit,<sup>25</sup> located within ½ mile of a transit stop, within the boundaries of the City of South Lake Tahoe, or within the boundaries of a Regional Center, Town Center or Tourist District; or new bicycle, pedestrian and transit projects, excluding microtransit, not included in the RTP/SCS but which are located within ½ mile of a transit stop, within the boundaries of the City of South Lake Tahoe, or within the boundaries of a Regional Center, Town Center or Tourist District.

Other projects should follow the methodology below.

#### *Changes to the roadway network:*

TRPA will request that the applicant provide three pieces of information:

1. A GIS file showing the location and geometry of the proposed roadway project (if applicable).
2. A description of the relevant roadway project characteristics such as multidirectional capacity, lanes, functional classification, and speeds (if applicable). TRPA will provide a form that outlines the requested roadway characteristics.
3. The anticipated construction year for the project.

Once the requested information is received, TRPA will model the project by changing the roadway network data in the most applicable model scenario (either base-year or a forecast year) and then re-running the model. As noted above, the model will need to be tested for sensitivity to induced travel effects before this methodology can be finalized.

---

<sup>25</sup> Microtransit is defined as a privately-operated transit system. Source: <http://www.fehrandpeers.com/microtransit/>.

*Bicycle paths:*

New bicycle paths that do not meet the screening criteria should utilize the Bike Trail User Model methodology to calculate the increase or decrease in VMT attributable to the project. The Bike Trail User Model instructions contain detailed guidance on how to calculate the network effects of adding connections to the bicycle trail network, and project applicants should be sure to apply the full methodology. This will be considered to account for the bicycle path's impact on regional VMT. The methodology can be found on the LT Info website: <https://monitoring.laketahoeinfo.org/BikePed>.

#### Category 4: Regional Plan Amendments

Regional Plan amendments could include amendments to the Code of Ordinances, amendments to the Goals and Policies, and new Area Plans or Area Plan amendments that go beyond what was considered in the Regional Plan and associated environmental analysis.

Where the proposed changes to the Regional Plan involve additions to residential units of use, tourist accommodation units, camping spaces, or commercial floor area, the TRPA will analyze these changes using the TransCAD model per the guidance below. Where changes to land-uses are proposed that cannot be analyzed using the TransCAD model, analysis of VMT for these new land uses shall utilize the guidance under Category 2.

#### *Category 4 Modeling Regional Plan Amendments using the TransCAD Transportation Model*

1. TRPA will provide the applicant with a copy of the Regional Plan input file to the TransCAD model for the 2040 forecast year. This file includes land-use assumptions for the forecast year, including the expected number of housing units, lodging units, camping spaces, and employees by TAZ based on what is allowed in the Regional Plan. The applicant will be required to update this file with anticipated increases or decreases in units and employees by TAZ based on proposed policies in the Regional Plan amendment. For example, if an Area Plan Amendment were to increase densities outside of Town Centers, the applicant would need to update the input file with additional housing units in TAZs where the additional density was proposed and reduce the number of anticipated housing units in other TAZs by the same amount. TRPA will provide additional guidance on how to ensure that reductions to anticipated development are distributed proportionately throughout the region.
2. The applicant will return the updated TransCAD input file to TRPA. TRPA staff will run the model, including applying the Trip Reduction Impact Analysis (TRIA) post-processor spreadsheet tool for the forecast year using the updated input files. The difference between the VMT result from the Regional Plan amendment model run and the Regional Plan model run will be considered the change in VMT attributable to the Regional Plan amendment.

### Category 5: Other Projects

Other projects not falling into Categories 1-4 or not meeting the screening criteria will still be required to analyze their VMT impacts. The process for this analysis should be determined with TRPA staff.

## Attachment A

Table of VMT Base Year Estimates and Corresponding Threshold Values

Base Year	Base Year VMT	VMT Threshold	Source
2005	2,079,849	2,000,000	2005 VMT: 2008 Regional Transportation Plan, page 62. The RTP did not state the actual threshold but instead stated that the 2005 VMT was 6.5 percent below 1981 levels.
2010	1,984,600	2,067,600	2012 Regional Plan Update EIS, page 3.3-3.
2011	2,036,642	2,067,600	2011 Threshold Evaluation, Chapter 3, Air Quality, page 3-50
2014	1,937,070	2,030,938	2015 Threshold Evaluation, Chapter 3, Air Quality, page 3-60

## Attachment B

Tables 3 and 4

### Trip Lengths by Trip Type and Traffic Analysis Zone (TAZ)

The trip lengths in the following tables are generated from the TRPA's transportation model. They reflect both trips internal to the region, and trips with one point external to the region. VMT from outside the Basin boundaries is not included. Thru-trips are not included. Not all TAZs have trips for each trip type. Where no trips of a certain trip type occur, "n/a" appears.

A map of Average Trip Lengths by TAZ may be found here: [https://trpa-shiny-apps.shinyapps.io/Avg\\_Trip\\_Lengths/](https://trpa-shiny-apps.shinyapps.io/Avg_Trip_Lengths/)

Table 3  
 Trip Lengths (in miles) by TAZ for Residential and Lodging Projects

TAZ	RESIDENT								OVERNIGHT VISITOR			
	Eat	Escort	Maintenan ce	School	Shop	Work	AtWorkOther (Work-based other)	Discretionar y	Gaming	Recreation	Shopping	Other
9	3.2	2.4	2.9	3.4	4.6	4.3	0.9	3.4	9.0	7.2	2.9	3.7
10	3.9	3.0	3.2	6.8	3.8	4.3	1.0	3.6	4.9	6.8	3.6	2.7
11	3.2	2.3	3.2	3.2	3.9	4.0	1.1	3.2	5.1	7.0	3.0	3.3
12	3.2	2.4	3.5	2.8	3.9	3.8	1.3	3.2	14.6	8.4	3.7	3.1
13	3.0	2.6	3.1	3.0	4.2	4.0	0.9	3.3	3.8	5.6	3.8	3.6
14	3.5	2.3	3.6	2.8	4.6	4.2	1.5	3.6	15.5	7.7	4.2	4.3
15	3.2	2.1	3.6	3.5	4.0	4.5	1.5	3.8	12.6	7.2	3.5	4.4
16	7.2	n/a	n/a	n/a	4.2	4.1	1.6	4.5	n/a	n/a	n/a	n/a
17	3.9	2.5	3.7	4.6	6.3	4.6	1.7	3.6	9.0	5.4	4.1	6.4
18	3.3	2.4	3.3	2.5	3.7	3.7	1.2	3.2	8.1	7.3	3.7	3.6
19	2.6	1.9	3.3	2.0	3.6	3.6	1.2	3.3	5.4	5.1	3.0	4.1
20	2.5	2.1	2.9	2.7	2.8	3.6	1.1	3.1	5.5	6.2	3.7	3.8
21	3.4	2.6	3.4	2.3	4.1	4.2	0.9	3.2	3.1	7.5	3.2	4.7
22	n/a	n/a	1.6	1.4	2.4	3.2	2.6	4.2	n/a	2.5	2.7	n/a
23	3.8	2.4	3.9	2.7	4.4	4.2	2.2	3.5	6.8	7.4	3.3	5.2
24	3.0	2.4	3.3	2.6	3.9	4.0	1.5	3.2	5.1	5.4	4.2	3.1
25	5.1	2.2	3.5	2.9	3.8	4.2	1.3	3.7	n/a	6.1	3.8	5.1
26	3.5	2.9	3.7	2.7	4.6	4.1	1.7	3.6	n/a	6.4	4.0	4.6
27	2.5	2.8	3.4	2.8	3.0	3.7	0.9	3.3	11.2	6.3	4.5	5.0
28	2.7	3.4	2.8	3.1	3.6	3.7	0.8	2.9	10.7	6.2	3.3	3.8
29	3.5	2.1	2.8	n/a	n/a	3.9	1.0	n/a	12.8	5.8	4.4	4.0
30	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
31	3.4	3.2	3.2	4.1	3.7	4.2	0.9	3.7	2.7	4.8	4.1	4.4
32	3.6	3.2	4.0	3.9	4.2	4.9	1.7	3.8	8.4	8.3	4.4	5.7
33	3.8	2.5	3.9	3.3	4.3	5.0	2.7	3.6	8.2	7.6	8.4	5.0
34	3.6	2.5	3.9	2.7	4.4	4.1	2.8	3.9	2.8	7.1	3.7	4.8
35	3.5	3.0	3.3	3.2	4.4	4.8	1.9	4.0	n/a	10.0	4.2	4.0
36	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
37	3.4	3.0	3.8	2.5	3.9	4.2	1.7	3.5	4.5	6.8	3.6	4.3
38	3.9	2.6	2.9	2.4	4.0	4.3	1.2	3.4	5.7	8.6	3.3	4.6
39	2.9	2.5	3.3	2.4	4.0	4.1	1.2	3.2	6.5	7.8	3.9	4.6
40	3.2	2.5	3.2	2.6	3.3	3.5	1.8	3.2	11.4	5.0	6.1	3.3
41	3.0	2.5	3.6	2.7	4.0	3.8	2.0	3.3	5.0	9.6	4.3	4.3
42	3.0	2.6	3.4	2.3	3.7	4.3	1.4	3.2	8.3	5.8	3.7	4.1
43	4.0	2.4	3.4	2.4	4.0	4.3	1.4	3.3	5.7	6.9	4.9	5.1
44	3.4	2.9	3.8	3.7	4.8	5.4	1.2	4.3	7.7	7.7	4.3	4.4
45	4.4	3.0	4.6	3.5	4.4	5.7	2.2	4.3	9.2	9.8	3.8	4.6
46	2.8	2.7	3.0	2.7	4.3	5.0	2.0	3.6	8.1	8.1	4.6	3.3
47	3.0	2.3	3.0	2.6	3.5	4.5	1.1	3.1	12.0	6.2	5.0	4.8
48	3.5	2.4	3.6	2.7	3.8	4.4	1.5	3.7	6.4	7.9	3.7	4.2
49	3.2	2.3	2.9	2.9	3.5	4.3	1.2	3.0	8.4	6.9	5.1	5.9
50	3.3	2.1	2.7	3.4	3.0	3.8	0.9	3.2	18.2	6.1	4.9	5.3
51	2.7	2.4	4.3	2.9	4.0	4.9	1.2	4.2	7.5	5.8	2.6	5.3
52	3.0	2.5	2.7	3.2	3.8	4.6	1.5	3.6	7.8	9.8	3.8	3.9
53	4.3	3.0	3.2	3.1	4.4	4.2	2.2	3.8	5.0	9.1	4.1	5.4
54	3.6	2.3	3.1	3.5	4.0	5.1	2.2	3.7	8.7	8.9	3.5	3.7
55	3.6	2.9	n/a	4.1	n/a	5.1	n/a	n/a	n/a	n/a	n/a	n/a
56	3.3	2.3	3.2	3.2	3.5	4.5	0.8	3.4	7.4	8.9	5.6	5.2
57	3.2	1.8	2.8	3.2	2.7	3.8	0.9	3.1	n/a	5.0	4.1	5.2
58	3.9	2.3	3.4	3.2	3.5	4.2	1.2	3.5	9.1	7.3	4.9	5.4
59	3.4	2.4	3.4	2.9	4.1	4.7	1.2	3.5	8.4	8.6	4.5	5.1
60	3.7	2.4	3.3	3.3	4.2	4.4	1.6	3.7	8.4	6.4	4.2	5.1
61	3.7	2.6	2.7	2.5	3.0	3.6	0.9	3.3	11.4	7.1	4.4	4.7
62	3.2	2.4	3.1	2.9	3.2	3.7	1.0	3.2	9.5	6.8	4.7	4.5
63	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
64	n/a	n/a	4.5	n/a	4.4	10.0	11.1	5.5	n/a	n/a	n/a	n/a
65	3.3	3.3	4.1	3.2	4.5	5.1	3.4	4.5	5.8	6.1	5.0	5.3
66	4.3	3.4	3.7	2.7	4.3	5.2	3.5	4.0	4.9	6.7	4.5	3.7
67	3.6	3.2	4.3	2.7	4.1	4.3	2.6	3.5	5.5	10.1	4.8	3.9
68	3.3	3.1	4.2	2.7	5.2	4.8	n/a	4.3	4.5	5.2	4.4	6.5
69	4.2	3.4	3.6	4.2	4.4	6.6	n/a	4.5	n/a	7.1	4.3	4.6
70	4.3	3.5	5.2	3.4	4.9	5.8	6.4	4.5	6.7	10.3	5.0	8.0
71	3.1	3.5	5.6	3.2	5.8	4.8	4.7	4.5	5.6	10.7	4.7	7.1
72	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
73	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
74	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	36.3
75	5.2	3.9	5.8	5.4	5.8	6.9	2.2	5.0	9.1	12.4	6.4	6.4
76	4.5	3.7	4.3	5.0	5.5	5.9	1.8	4.5	6.9	11.3	4.7	4.5
77	4.8	4.2	5.1	3.9	5.7	6.9	0.7	4.1	n/a	14.9	4.6	7.8
78	4.5	4.0	7.0	4.4	5.2	6.4	2.8	5.1	7.0	6.6	5.3	6.4
79	4.6	4.0	5.6	4.9	5.9	6.9	3.8	4.8	7.2	8.7	6.1	5.8
80	n/a	1.9	2.3	n/a	4.4	3.6	0.9	3.5	7.4	6.4	3.5	3.6
81	3.8	3.6	3.7	4.0	3.2	4.5	2.1	4.5	n/a	7.2	6.2	4.9
82	5.1	3.7	4.0	5.0	4.4	5.1	1.8	5.1	n/a	15.5	4.4	8.6
83	5.7	3.6	6.9	5.6	5.8	7.1	n/a	5.7	n/a	16.9	5.4	8.9
84	n/a	n/a	5.0	n/a	3.7	5.2	2.0	4.0	5.9	9.9	4.5	9.0
85	7.2	3.3	4.5	5.8	4.5	5.5	1.0	4.6	9.8	12.4	3.1	8.0



Table 3  
Trip Lengths (in miles) by TAZ for Residential and Lodging Projects

TAZ	RESIDENT								OVERNIGHT VISITOR			
	Eat	Escort	Maintenan ce	School	Shop	Work	AtWorkOther (Work-based other)	Discretionar y	Gaming	Recreation	Shopping	Other
86	5.1	3.8	5.3	6.7	4.5	6.5	1.1	4.4	7.9	8.4	6.5	5.2
87	10.2	9.9	4.5	8.0	5.1	8.3	n/a	5.8	n/a	8.6	7.2	16.2
88	6.8	3.8	5.1	6.9	5.6	9.4	2.9	5.6	32.6	8.6	5.4	7.0
89	14.9	n/a	8.0	11.2	7.5	10.7	6.4	5.5	n/a	13.3	9.4	12.9
90	8.3	n/a	8.9	7.0	7.1	9.0	n/a	6.3	n/a	13.8	8.6	11.3
91	4.4	3.4	5.9	6.4	5.1	8.1	5.0	5.1	11.1	11.1	8.8	7.4
92	6.2	5.7	6.8	8.1	6.3	9.7	3.6	6.1	14.6	11.8	7.5	8.5
93	n/a	n/a	0.5	n/a	5.2	6.1	n/a	n/a	6.9	11.2	6.4	9.9
94	8.0	4.6	6.0	7.0	4.4	8.7	n/a	5.1	n/a	10.2	7.3	4.9
95	5.0	3.7	5.9	6.2	7.7	8.8	2.0	5.7	10.7	12.4	6.5	6.1
96	3.9	4.0	2.9	5.1	3.3	4.9	1.8	4.9	31.6	12.1	5.3	5.5
97	4.7	2.7	5.3	3.2	7.2	7.2	1.8	4.3	10.8	9.0	6.3	5.6
98	n/a	2.7	n/a	n/a	n/a	4.5	1.9	4.9	n/a	8.5	n/a	3.0
99	7.3	n/a	6.1	n/a	8.4	6.5	n/a	2.9	n/a	n/a	4.9	n/a
100	5.0	3.9	6.4	5.0	6.0	7.1	1.8	5.3	9.1	9.4	5.0	6.8
101	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
102	4.7	5.4	5.7	5.7	7.4	7.1	2.1	5.8	5.7	8.4	6.2	7.1
103	3.5	4.4	5.4	4.9	5.6	6.2	2.8	5.2	10.5	8.5	6.3	7.0
104	n/a	n/a	n/a	n/a	n/a	7.3	n/a	3.9	14.1	9.6	7.5	7.9
105	n/a	1.7	3.0	3.1	3.8	7.6	1.6	3.6	8.0	7.1	2.7	5.3
106	n/a	5.7	n/a	n/a	n/a	6.2	2.5	4.6	15.8	9.0	6.7	8.2
107	7.6	7.5	9.7	n/a	11.4	16.5	n/a	8.3	n/a	6.1	9.9	10.3
108	9.1	8.0	7.4	8.3	8.8	10.0	2.2	8.8	11.7	11.5	8.2	9.2
109	n/a	n/a	7.4	6.8	17.6	7.6	n/a	n/a	n/a	9.0	6.0	11.1
110	4.8	n/a	5.3	4.0	3.9	5.8	n/a	2.5	7.4	9.1	5.9	7.6
111	n/a	8.3	1.6	8.8	9.1	9.9	n/a	12.9	n/a	10.0	7.5	11.7
112	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	16.4	12.5	8.4	10.2
113	7.6	n/a	6.5	6.6	7.1	8.3	18.2	6.4	10.8	10.4	9.4	9.9
114	8.2	n/a	7.1	6.5	8.6	11.2	n/a	7.1	10.4	9.5	6.6	10.5
115	n/a	n/a	n/a	8.5	13.0	11.2	n/a	8.7	11.1	11.6	9.6	8.9
116	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	16.3	15.3	12.0	12.7
117	6.4	5.1	10.3	n/a	12.4	14.4	n/a	21.1	32.4	13.9	12.4	12.5
118	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	17.8	16.2	12.2	13.1
119	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
120	n/a	n/a	n/a	14.4	15.9	15.5	n/a	12.0	n/a	19.3	15.5	4.2
121	n/a	n/a	n/a	n/a	10.0	18.3	n/a	20.3	n/a	15.6	13.7	13.2
122	14.8	5.3	6.8	16.7	7.1	16.1	7.1	9.5	19.3	17.4	14.3	13.5
123	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
124	15.5	4.3	5.7	16.3	10.0	14.3	1.3	11.2	23.8	15.6	14.1	11.6
125	7.6	2.8	3.5	n/a	6.4	11.2	1.6	7.5	23.4	15.7	14.2	7.0
126	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	20.5	n/a	11.0	1.8
127	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
128	n/a	4.2	3.5	19.5	4.2	5.4	1.2	2.0	16.3	14.9	10.5	9.7
129	7.4	1.3	9.0	16.3	4.9	8.1	1.0	5.5	29.1	16.3	11.9	11.1
130	5.3	2.7	4.9	17.9	7.7	12.1	3.6	6.8	24.3	16.6	10.6	8.6
131	n/a	4.3	1.9	n/a	4.3	7.6	0.8	11.8	25.5	14.2	7.4	9.1
132	8.5	4.6	7.6	8.2	13.8	11.0	4.0	7.8	11.4	12.1	9.1	9.0
133	1.2	2.4	2.2	11.8	2.3	7.7	1.4	6.1	19.8	18.2	5.9	8.4
134	8.0	2.7	7.1	13.5	4.2	9.6	1.0	7.2	26.4	14.9	9.7	10.1
135	1.0	2.8	3.6	14.9	3.9	10.4	n/a	9.8	22.2	10.8	9.1	9.4
136	3.7	2.3	4.7	12.6	4.9	10.2	1.5	7.0	25.3	17.7	9.2	9.3
137	4.6	2.6	6.2	13.2	3.3	7.0	2.0	6.3	19.5	12.4	9.6	7.0
138	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
139	4.5	2.7	4.2	15.7	2.9	6.7	1.7	9.5	22.7	10.5	4.6	5.1
140	n/a	1.7	3.0	n/a	2.9	5.9	0.8	3.8	n/a	14.0	n/a	4.9
141	5.9	3.1	5.8	11.6	5.6	8.1	3.9	5.0	25.9	12.4	7.7	6.2
142	3.6	4.3	4.1	10.6	4.5	6.3	1.5	4.6	23.5	10.2	7.7	7.6
143	6.3	3.4	8.7	14.4	6.9	9.0	4.7	6.3	17.4	12.3	8.9	7.5
144	2.7	3.6	4.4	16.1	4.9	5.6	10.0	5.3	20.4	10.9	4.6	6.8
145	n/a	3.4	n/a	n/a	5.1	5.0	n/a	4.2	n/a	14.5	n/a	6.0
146	6.1	6.3	9.7	16.0	9.7	10.8	n/a	6.7	n/a	n/a	n/a	n/a
147	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
148	5.2	4.0	6.3	15.6	8.0	7.2	3.2	7.8	25.0	13.3	6.1	7.1
149	5.4	2.9	4.0	13.1	4.8	6.7	1.5	6.1	21.7	11.3	6.3	6.0
150	7.2	4.4	2.6	n/a	2.3	7.3	0.5	2.8	21.8	10.9	5.9	7.6
151	5.4	3.1	5.6	8.1	4.4	5.4	1.6	5.4	20.0	12.2	4.5	6.4
152	3.4	3.0	5.7	13.0	8.4	7.1	1.2	6.0	19.3	9.4	4.6	4.6
153	3.2	2.8	3.2	8.9	3.8	6.1	1.1	6.2	19.0	8.7	5.2	6.5
154	5.6	2.2	4.4	12.9	4.9	6.4	1.1	6.3	18.8	11.4	5.7	6.5
155	3.9	2.2	3.9	12.6	4.1	6.6	0.9	5.3	15.9	8.7	4.5	5.9
156	n/a	0.9	3.6	n/a	2.7	6.5	1.0	7.4	15.2	8.3	5.4	6.1
157	4.3	3.1	4.1	4.7	3.5	7.2	0.8	5.9	14.0	10.7	5.4	5.6
158	n/a	2.0	n/a	n/a	n/a	5.2	0.7	3.7	n/a	12.1	n/a	5.0
159	2.8	n/a	3.5	n/a	3.6	4.8	0.7	3.9	18.3	9.7	4.2	3.3
160	6.3	2.5	3.8	15.8	6.9	5.5	1.1	5.6	16.2	10.9	6.0	5.4
161	n/a	4.1	7.3	n/a	2.9	2.7	1.3	7.0	19.6	n/a	n/a	0.9
162	3.9	4.5	7.6	12.4	10.2	8.9	2.8	8.5	17.2	13.3	8.2	7.4



Table 3  
 Trip Lengths (in miles) by TAZ for Residential and Lodging Projects

TAZ	RESIDENT								OVERNIGHT VISITOR			
	Eat	Escort	Maintenan ce	School	Shop	Work	AtWorkOther (Work-based other)	Discretionar y	Gaming	Recreation	Shopping	Other
240	11.0	5.2	9.3	12.4	14.9	12.9	1.2	11.3	12.2	12.1	10.1	7.6
241	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	7.9
242	n/a	1.1	10.8	10.6	15.4	16.1	15.9	13.2	7.1	11.4	8.4	11.5
243	11.6	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4.9
244	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	16.9	3.4	n/a
245	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	11.7	15.8	11.5	11.4
246	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
247	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
248	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
249	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	15.2	12.4	18.2	14.1
250	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	13.8	14.9	13.2	14.4
251	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
252	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
253	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
254	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
255	5.0	n/a	7.1	n/a	8.4	9.5	n/a	4.5	11.2	14.8	10.7	10.6
256	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
257	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
258	n/a	n/a	n/a	n/a	15.7	4.9	1.9	2.4	9.1	11.2	7.9	11.3
259	4.8	n/a	n/a	n/a	5.2	22.4	n/a	14.6	12.5	n/a	25.1	7.9
260	6.1	9.7	3.3	8.1	8.7	7.8	1.3	6.5	6.7	4.6	2.2	6.5
261	5.5	9.8	3.0	5.7	11.1	5.8	1.4	5.5	8.6	11.5	5.2	5.6
262	2.4	8.6	2.9	3.2	10.8	5.3	1.6	3.8	8.0	13.8	4.5	4.2
263	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	9.9	8.7	5.4	6.8
264	2.2	14.1	3.6	4.6	7.4	4.2	0.9	4.6	11.3	9.2	4.4	4.8
265	2.6	2.3	2.2	1.9	5.8	4.0	0.8	5.1	7.3	9.7	6.2	4.7
266	4.0	3.7	3.0	n/a	9.7	5.7	2.3	6.9	6.3	11.1	7.0	5.3
267	4.2	11.9	4.3	5.3	12.3	6.9	1.3	5.9	9.4	10.9	6.1	6.1
268	n/a	n/a	3.7	n/a	10.1	6.5	1.6	7.4	n/a	13.7	4.9	6.3
269	4.0	12.5	4.9	8.7	13.0	8.9	0.7	7.3	10.3	10.5	6.6	6.3
270	4.9	12.8	4.2	6.6	12.6	7.5	1.5	5.5	5.9	9.0	6.2	5.5
271	2.3	6.4	7.0	7.1	12.2	5.5	1.3	3.0	13.6	14.4	17.3	3.2
272	2.8	8.8	3.0	4.0	7.8	4.3	1.2	5.2	7.4	11.8	5.0	3.8
273	5.0	16.4	3.0	5.3	11.4	6.2	2.0	4.7	6.7	10.0	6.5	5.8
274	4.5	12.1	4.4	5.6	10.9	7.0	1.9	5.0	7.1	9.2	6.0	5.9
275	2.3	6.2	3.7	5.7	10.1	6.5	1.4	4.2	11.4	11.7	5.9	7.1
276	3.8	10.0	3.0	4.3	9.8	6.2	1.5	4.8	8.9	8.6	6.9	5.6
277	4.0	7.1	2.9	8.7	9.8	4.5	1.2	5.4	7.9	9.0	5.9	6.8
278	5.0	10.3	3.4	5.3	8.4	4.8	1.0	4.7	9.4	10.9	5.6	5.6
279	3.7	7.5	2.4	6.8	7.9	4.1	1.2	4.4	8.5	10.6	4.7	5.8
280	7.7	2.8	2.3	3.4	4.2	3.1	0.8	5.3	7.7	8.1	4.5	6.0
281	2.2	9.7	2.9	6.2	10.8	6.8	0.9	4.9	10.0	6.4	12.5	4.0
282	3.1	8.8	3.3	5.1	10.2	5.4	1.5	4.6	6.3	6.8	4.3	5.5
283	3.9	12.1	4.2	4.2	10.4	6.7	1.7	5.5	8.6	12.7	6.8	8.4
284	2.4	2.4	2.2	2.8	6.5	5.0	0.9	4.1	10.5	14.1	5.1	4.1
285	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
286	5.5	16.0	4.7	5.0	12.1	7.8	2.1	6.6	5.7	10.4	5.7	6.7
287	5.1	16.2	4.8	6.5	11.9	7.8	3.3	6.9	5.1	8.1	5.0	6.7
288	n/a	3.8	1.7	8.2	7.7	4.3	n/a	5.8	5.8	10.3	5.1	3.7
289	4.8	2.2	7.1	3.9	8.7	6.5	6.0	5.7	8.5	13.4	7.8	5.5
290	n/a	1.2	2.4	n/a	1.9	4.7	1.0	7.7	7.8	12.1	4.8	4.6
291	5.0	14.6	4.7	6.3	11.4	7.1	1.7	5.9	9.2	8.3	4.6	7.2
292	9.2	21.4	2.7	n/a	11.4	n/a	2.6	7.0	n/a	n/a	n/a	n/a
293	5.3	12.3	4.3	7.7	11.4	8.0	1.0	6.7	7.8	7.8	4.4	7.2
294	4.5	5.3	5.0	7.6	10.8	8.5	2.3	6.8	8.3	8.1	5.0	6.3
295	7.3	7.2	4.0	n/a	14.6	5.5	0.8	5.1	9.4	7.9	5.2	5.6
296	4.9	5.9	6.7	4.3	10.8	5.9	0.8	6.1	10.1	9.2	5.5	5.5
297	n/a	10.0	1.6	13.0	16.1	7.1	n/a	5.0	10.6	7.9	13.5	2.5

Table 4  
 Trip Lengths (in miles) by TAZ for Commercial, Office, Recreation and Public Service Projects

TAZ	Gaming (Day Visitor, Overnight Visitor)	Recreation (Day Visitor, Overnight Visitor)	Shop and Shopping (Day Visitor, Overnight Visitor, Resident)	Eat	Maintenance (Convenience)	School	All Work Trips (Work, AtWorkOther, External Work)	Work and External Work	AtWorkOther	Discretionary (Resident)
9	9.4	7.5	4.3	3.2	2.9	3.4	3.5	4.9	0.9	3.4
10	6.6	7.2	3.8	3.9	3.2	6.8	3.8	4.7	1.0	3.6
11	6.8	7.2	3.7	3.2	3.2	3.2	4.1	4.7	1.1	3.2
12	11.8	8.8	4.1	3.2	3.5	2.8	3.9	4.1	1.3	3.2
13	7.8	5.7	4.4	3.0	3.1	3.0	4.0	4.6	0.9	3.3
14	17.4	7.7	4.7	3.5	3.6	2.8	4.2	4.4	1.5	3.6
15	14.7	9.1	3.9	3.2	3.6	3.5	4.9	5.3	1.5	3.8
16	n/a	n/a	4.2	7.2	n/a	n/a	3.3	4.1	1.6	4.5
17	10.4	9.2	5.7	3.9	3.7	4.6	4.9	5.5	1.7	3.6
18	8.9	7.5	3.9	3.3	3.3	2.5	3.9	4.2	1.2	3.2
19	8.5	7.1	3.6	2.6	3.3	2.0	3.9	4.4	1.2	3.3
20	10.1	6.8	4.3	2.5	2.9	2.7	5.0	5.4	1.1	3.1
21	4.5	8.7	4.1	3.4	3.4	2.3	4.1	4.2	0.9	3.2
22	21.3	2.5	2.5	n/a	1.6	1.4	3.0	3.2	2.6	4.2
23	6.8	7.9	4.3	3.8	3.9	2.7	4.3	4.4	2.2	3.5
24	9.1	7.3	4.4	3.0	3.3	2.6	3.9	4.2	1.5	3.2
25	n/a	6.8	3.8	5.1	3.5	2.9	4.2	4.5	1.3	3.7
26	9.2	6.5	4.5	3.5	3.7	2.7	4.0	4.1	1.7	3.6
27	12.3	6.8	4.9	2.5	3.4	2.8	4.6	5.3	0.9	3.3
28	9.9	7.2	4.6	2.7	2.8	3.1	3.6	4.3	0.8	2.9
29	11.3	6.9	5.8	3.5	2.8	n/a	4.9	5.6	1.0	n/a
30	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
31	12.3	7.4	5.0	3.4	3.2	4.1	6.5	6.6	0.9	3.7
32	9.4	9.3	4.3	3.6	4.0	3.9	9.7	10.2	1.7	3.8
33	8.2	7.6	4.4	3.8	3.9	3.3	4.9	5.0	2.7	3.6
34	2.8	7.1	4.5	3.6	3.9	2.7	4.2	4.2	2.8	3.9
35	n/a	10.0	4.4	3.5	3.3	3.2	4.7	4.8	1.9	4.0
36	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
37	7.7	7.4	3.8	3.4	3.8	2.5	4.3	4.4	1.7	3.5
38	6.1	9.7	4.1	3.9	2.9	2.4	4.0	4.3	1.2	3.4
39	7.3	8.1	4.2	2.9	3.3	2.4	4.1	4.4	1.2	3.2
40	10.5	8.0	4.6	3.2	3.2	2.6	4.4	4.8	1.8	3.2
41	10.6	9.7	4.5	3.0	3.6	2.7	3.9	4.0	2.0	3.3
42	9.1	7.5	3.9	3.0	3.4	2.3	4.3	4.6	1.4	3.2
43	8.7	7.5	4.3	4.0	3.4	2.4	4.2	4.5	1.4	3.3
44	10.6	9.4	4.8	3.4	3.8	3.7	5.9	6.2	1.2	4.3
45	9.2	10.0	4.3	4.4	4.6	3.5	5.8	5.9	2.2	4.3
46	8.1	8.1	4.4	2.8	3.0	2.7	5.5	5.8	2.0	3.6
47	13.1	6.5	4.1	3.0	3.0	2.6	4.9	5.1	1.1	3.1
48	8.3	8.0	4.0	3.5	3.6	2.7	4.6	5.1	1.5	3.7
49	11.3	7.8	4.3	3.2	2.9	2.9	4.4	4.9	1.2	3.0
50	10.9	7.7	5.7	3.3	2.7	3.4	4.5	5.2	0.9	3.2
51	7.5	5.8	3.8	2.7	4.3	2.9	4.8	5.1	1.2	4.2
52	8.5	9.8	3.8	3.0	2.7	3.2	4.8	5.0	1.5	3.6
53	5.0	9.8	4.4	4.3	3.2	3.1	4.2	4.3	2.2	3.8
54	9.3	9.1	4.0	3.6	3.1	3.5	5.0	5.1	2.2	3.7
55	n/a	n/a	n/a	n/a	n/a	n/a	4.1	5.1	n/a	n/a
56	12.1	8.6	4.0	3.3	3.2	3.2	4.7	5.3	0.8	3.4
57	11.1	7.2	4.3	3.2	2.8	3.2	3.4	4.4	0.9	3.1
58	11.0	7.9	4.8	3.9	3.4	3.2	4.5	5.0	1.2	3.5
59	8.4	9.0	4.2	3.4	3.4	2.9	4.9	5.3	1.2	3.5
60	9.8	7.3	4.2	3.7	3.3	3.3	4.5	4.9	1.6	3.7
61	11.4	8.2	5.0	3.7	2.7	2.5	3.9	4.6	0.9	3.3
62	11.9	7.4	3.4	3.2	3.1	2.9	3.9	4.4	1.0	3.2
63	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
64	n/a	n/a	4.4	n/a	4.5	n/a	10.3	10.0	11.1	5.5
65	8.5	7.9	4.8	3.3	4.1	3.2	6.4	6.4	3.4	4.5
66	4.9	6.7	4.4	4.3	3.7	2.7	5.6	5.6	3.5	4.0
67	6.0	10.0	4.2	3.6	4.3	2.7	4.6	4.6	2.6	3.5
68	4.5	7.0	5.2	3.3	4.2	2.7	4.9	4.9	n/a	4.3
69	n/a	7.1	4.4	4.2	3.6	4.2	7.5	7.5	n/a	4.5
70	6.7	10.3	4.9	4.3	5.2	3.4	5.9	5.9	6.4	4.5
71	12.3	10.7	5.7	3.1	5.6	3.2	5.5	5.5	4.7	4.5
72	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
73	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
74	15.3	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
75	8.9	12.4	6.0	5.2	5.8	5.4	7.0	7.2	2.2	5.0
76	6.9	12.2	5.4	4.5	4.3	5.0	5.8	5.9	1.8	4.5
77	n/a	14.9	5.6	4.8	5.1	3.9	6.7	6.9	0.7	4.1
78	7.1	6.7	5.2	4.5	7.0	4.4	6.7	6.8	2.8	5.1
79	7.2	8.7	6.0	4.6	5.6	4.9	6.8	6.9	3.8	4.8
80	11.7	8.1	3.6	n/a	2.3	n/a	3.2	3.6	0.9	3.5
81	13.2	8.7	4.6	3.8	3.7	4.0	4.9	5.4	2.1	4.5
82	n/a	15.5	4.4	5.1	4.0	5.0	5.3	6.6	1.8	5.1
83	n/a	15.5	5.8	5.7	6.9	5.6	7.1	7.1	n/a	5.7
84	7.1	9.9	3.8	n/a	5.0	n/a	7.8	8.3	2.0	4.0
85	10.9	13.9	4.8	7.2	4.5	5.8	5.7	6.4	1.0	4.6
86	10.1	8.2	5.5	5.1	5.3	6.7	6.8	7.6	1.1	4.4
87	n/a	8.6	5.4	10.2	4.5	8.0	8.3	8.3	n/a	5.8
88	32.6	8.6	5.6	6.8	5.1	6.9	8.9	9.4	2.9	5.6
89	11.8	13.3	7.9	14.9	8.0	11.2	10.3	10.7	6.4	5.5
90	n/a	13.8	7.3	8.3	8.9	7.0	9.0	9.0	n/a	6.3
91	10.6	9.9	5.4	4.4	5.9	6.4	8.8	8.9	5.0	5.1
92	12.5	11.2	6.7	6.2	6.8	8.1	9.6	9.9	3.6	6.1
93	9.4	11.2	6.3	n/a	0.5	n/a	6.1	6.1	n/a	n/a
94	n/a	10.2	4.9	8.0	6.0	7.4	8.7	8.7	n/a	5.1
95	10.6	12.7	6.0	5.0	5.7	6.4	8.1	8.2	2.2	5.5
96	10.8	11.3	5.4	3.9	3.1	5.8	5.7	6.3	1.8	3.9
97	10.5	8.2	5.1	4.7	5.2	4.0	6.6	6.8	1.9	4.3
98	8.1	9.1	n/a	n/a	n/a	n/a	5.9	6.9	1.9	4.9

Table 4  
 Trip Lengths (in miles) by TAZ for Commercial, Office, Recreation and Public Service Projects

TAZ	Gaming (Day Visitor, Overnight Visitor)	Recreation (Day Visitor, Overnight Visitor)	Shop and Shopping (Day Visitor, Overnight Visitor, Resident)	Eat	Maintenance (Convenience)	School	All Work Trips (Work, AtWorkOther, External Work)	Work and External Work	AtWorkOther	Discretionary (Resident)
99	n/a	n/a	4.4	7.3	6.1	n/a	6.5	6.5	n/a	2.9
100	8.9	9.9	5.4	5.0	5.8	5.1	6.4	6.5	2.1	5.1
101	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
102	6.8	8.4	5.8	4.7	5.7	5.7	6.7	7.1	2.1	5.7
103	14.7	10.5	6.3	3.5	5.4	4.9	7.3	7.9	3.1	5.4
104	15.3	10.4	7.5	n/a	n/a	n/a	12.3	12.3	n/a	3.9
105	11.3	7.8	3.0	n/a	3.0	3.1	9.5	12.3	1.6	3.6
106	13.6	10.6	6.7	n/a	n/a	n/a	5.5	6.2	2.5	5.1
107	n/a	6.1	10.2	7.6	9.7	n/a	15.3	15.3	n/a	8.3
108	13.9	12.7	9.0	9.1	7.9	8.3	16.4	17.0	2.2	8.4
109	20.9	9.0	7.0	n/a	7.4	6.8	11.5	11.5	n/a	n/a
110	13.4	8.9	4.8	4.8	5.3	4.0	5.8	5.8	n/a	2.5
111	n/a	10.0	8.3	n/a	n/a	8.8	11.0	11.0	n/a	11.7
112	17.9	13.8	8.9	n/a	n/a	n/a	n/a	n/a	n/a	n/a
113	11.7	12.1	7.8	7.6	6.5	6.6	14.3	14.3	13.2	6.4
114	10.4	9.5	7.2	8.2	6.9	6.5	9.7	9.7	n/a	7.1
115	12.8	11.9	9.7	n/a	n/a	8.5	12.9	12.9	n/a	8.7
116	19.5	15.8	12.1	n/a	n/a	n/a	n/a	n/a	n/a	n/a
117	22.9	15.8	12.4	6.4	10.3	n/a	16.1	16.1	n/a	15.6
118	19.8	16.3	12.2	n/a	n/a	n/a	n/a	n/a	n/a	n/a
119	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
120	n/a	19.3	13.3	n/a	n/a	14.4	15.5	15.5	n/a	12.0
121	n/a	15.6	11.0	n/a	n/a	n/a	18.3	18.3	n/a	14.8
122	19.3	17.4	11.2	14.8	7.0	16.2	15.5	16.0	6.5	10.1
123	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
124	23.8	15.9	11.7	15.5	6.1	16.3	15.1	15.9	1.3	11.4
125	21.0	15.9	12.7	7.6	3.7	n/a	19.6	20.4	1.6	7.1
126	22.2	n/a	11.0	n/a	n/a	n/a	n/a	n/a	n/a	n/a
127	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
128	19.0	14.8	10.6	n/a	3.5	19.5	16.1	19.1	1.2	3.2
129	29.1	17.0	8.5	7.4	7.9	16.3	9.1	9.6	1.0	6.1
130	23.9	16.6	8.7	5.3	5.1	16.8	10.7	11.2	3.4	7.3
131	25.5	14.2	5.8	n/a	2.0	n/a	7.4	9.3	0.8	11.2
132	11.4	8.9	8.1	8.5	7.7	8.2	10.3	10.4	4.0	7.1
133	19.8	17.9	6.4	1.2	2.3	11.8	10.5	11.9	1.6	8.3
134	26.4	15.2	6.4	8.0	6.7	13.1	9.8	10.0	1.0	8.0
135	21.2	14.2	6.5	1.0	3.6	14.9	17.8	17.8	n/a	8.2
136	25.3	18.2	6.2	3.7	4.7	12.6	9.7	10.0	1.5	7.4
137	18.5	12.4	4.6	4.6	5.3	13.2	13.3	13.6	2.0	5.4
138	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
139	21.5	11.0	4.9	4.5	4.0	13.2	7.5	8.3	2.0	8.5
140	n/a	13.6	2.9	n/a	3.0	n/a	6.1	8.6	0.9	5.5
141	24.3	12.2	6.4	5.9	5.2	9.6	8.3	9.0	3.5	4.7
142	23.5	10.2	5.7	3.6	4.1	9.1	5.2	5.4	1.5	5.0
143	16.2	11.6	7.1	6.3	7.8	11.9	9.6	9.7	4.7	5.3
144	20.4	10.9	4.9	2.7	4.3	12.6	5.3	5.4	4.5	4.5
145	n/a	12.3	6.2	n/a	n/a	n/a	15.2	15.2	n/a	4.2
146	n/a	n/a	8.9	6.1	9.0	13.7	10.5	10.5	n/a	6.7
147	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
148	23.8	13.3	6.9	5.2	5.7	12.4	6.1	6.3	3.2	6.5
149	18.9	10.9	5.9	5.4	4.0	10.4	7.4	8.0	1.8	5.3
150	16.9	10.4	5.7	7.2	3.5	n/a	6.7	17.9	0.5	2.8
151	18.3	11.9	4.4	5.4	4.6	5.9	4.4	4.7	1.6	4.3
152	19.1	9.3	5.7	3.4	5.8	8.9	5.9	6.7	1.3	4.3
153	13.7	8.6	5.3	3.2	3.4	7.5	5.7	6.9	1.1	4.8
154	17.9	10.2	5.1	5.6	4.1	8.8	6.4	7.2	1.1	4.8
155	12.2	7.8	4.5	3.9	4.2	10.5	7.0	8.3	0.9	4.3
156	12.2	7.5	4.8	n/a	3.6	n/a	5.5	7.8	1.0	4.6
157	11.4	9.2	5.0	4.3	4.2	4.9	7.0	8.2	0.8	4.4
158	n/a	8.0	n/a	n/a	n/a	n/a	8.8	9.6	0.7	4.3
159	14.2	8.8	4.9	2.8	3.6	n/a	7.6	11.2	0.7	3.9
160	13.2	8.3	5.7	6.3	4.1	14.0	5.5	6.9	1.1	5.1
161	19.6	n/a	3.9	n/a	3.6	n/a	2.5	2.7	1.3	4.3
162	13.5	10.0	6.3	3.9	7.6	12.4	9.0	9.8	3.0	4.5
163	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
164	9.4	8.7	6.5	3.4	2.8	9.9	6.5	6.7	0.7	4.4
165	12.1	8.1	6.1	n/a	3.9	n/a	5.6	7.9	1.3	4.5
166	13.5	9.6	6.2	4.9	4.0	8.2	6.0	6.8	1.3	4.5
167	16.7	10.4	6.5	4.6	4.6	9.4	6.1	6.2	1.8	4.8
168	15.8	10.6	5.3	2.9	3.9	5.9	6.6	6.9	3.6	4.6
169	12.9	12.8	5.1	5.3	6.1	1.7	5.4	6.3	2.4	4.8
170	18.4	6.3	5.2	3.1	3.1	10.4	6.8	7.9	2.0	4.7
171	12.9	8.9	6.2	5.1	3.7	4.0	6.0	6.7	1.1	5.3
172	11.1	9.3	6.2	3.7	4.3	6.1	12.4	13.6	1.2	3.4
173	18.3	10.8	5.1	5.3	4.4	5.9	6.3	6.7	1.8	5.0
174	14.7	9.0	6.6	5.7	5.6	8.6	7.4	7.5	3.4	5.8
175	10.4	7.4	6.9	9.9	2.2	5.2	8.2	8.2	n/a	6.3
176	11.8	11.1	6.5	5.4	4.5	12.2	9.2	10.0	2.3	5.2
177	10.9	9.5	6.5	5.0	3.9	8.2	7.0	7.5	1.9	4.4
178	12.9	10.4	6.1	5.3	4.3	6.9	7.6	7.7	4.5	5.5
179	15.1	10.6	7.2	4.9	5.3	7.8	6.9	7.0	2.5	4.5
180	n/a	7.0	5.8	3.8	4.4	6.8	6.8	7.1	1.2	4.4
181	9.5	7.9	6.1	4.5	3.5	6.4	5.7	6.3	1.5	3.9
182	11.2	7.5	5.1	3.7	3.5	7.5	5.4	5.8	2.1	3.9
183	11.8	6.0	5.6	3.5	3.3	6.1	5.1	5.8	1.0	3.7
184	13.6	5.9	4.8	2.8	4.0	9.4	4.8	4.7	7.5	3.2
185	9.0	7.9	9.6	4.9	4.0	6.0	5.7	7.0	0.9	5.9
186	12.6	8.0	6.8	4.7	4.9	6.7	7.0	7.0	n/a	4.8
187	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
188	12.4	8.1	5.0	5.2	3.7	7.8	6.4	6.5	2.3	4.2

Table 4  
 Trip Lengths (in miles) by TAZ for Commercial, Office, Recreation and Public Service Projects

TAZ	Gaming (Day Visitor, Overnight Visitor)	Recreation (Day Visitor, Overnight Visitor)	Shop and Shopping (Day Visitor, Overnight Visitor, Resident)	Eat	Maintenance (Convenience)	School	All Work Trips (Work, AtWorkOther, External Work)	Work and External Work	AtWorkOther	Discretionary (Resident)
189	8.2	10.4	5.8	3.9	4.1	4.2	5.0	5.5	1.2	4.2
190	8.5	9.2	6.0	4.4	4.2	4.5	6.2	6.6	1.6	4.2
191	9.8	7.7	6.8	5.2	5.6	6.2	7.4	7.7	1.2	4.6
192	8.8	8.1	6.9	4.9	4.2	6.0	5.9	6.5	1.2	4.9
193	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
194	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
195	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
196	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
197	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
198	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
199	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
200	13.9	6.8	3.6	3.6	3.2	3.5	4.5	5.1	1.0	3.7
201	n/a	10.0	n/a	n/a	1.7	n/a	4.0	4.6	0.8	3.5
202	14.0	6.9	3.7	3.4	3.1	4.1	4.8	5.4	1.0	4.0
203	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
204	10.1	6.0	4.7	2.3	3.1	2.6	4.9	5.9	1.1	4.0
205	9.6	6.7	4.4	3.9	3.4	n/a	4.7	5.7	1.2	3.8
206	13.0	8.2	4.9	4.0	3.0	4.3	3.7	4.2	1.1	3.6
207	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
208	n/a	20.4	5.7	n/a	5.2	8.5	5.8	5.8	n/a	5.8
209	4.8	10.4	6.8	4.7	5.7	7.4	5.5	5.8	1.9	5.8
210	n/a	n/a	6.4	5.3	5.6	7.7	6.0	6.0	3.1	5.6
211	3.3	8.7	5.6	3.5	5.0	6.1	4.8	4.9	2.6	4.5
212	10.6	8.6	5.7	3.5	4.9	4.8	4.0	4.8	1.1	3.6
213	11.2	8.3	5.0	4.7	4.4	4.8	4.7	5.1	1.5	3.8
214	n/a	n/a	5.7	n/a	n/a	6.3	3.5	3.5	n/a	15.6
215	9.6	5.6	5.2	6.2	3.2	6.8	4.8	4.9	2.7	4.6
216	6.0	8.8	7.0	5.7	6.8	7.1	6.6	6.7	5.3	5.2
217	11.4	8.3	5.1	3.3	4.0	4.7	4.3	4.8	1.4	4.2
218	13.5	8.1	6.3	7.0	3.3	n/a	6.2	7.1	2.1	3.4
219	11.4	9.2	7.0	5.5	4.4	5.8	6.0	6.2	2.3	5.6
220	5.8	11.2	8.4	4.7	4.8	6.2	6.2	6.9	0.9	6.1
221	9.7	5.7	5.7	3.4	3.5	4.9	4.4	4.7	1.3	4.2
222	12.9	7.4	6.3	3.1	3.5	6.0	5.3	6.0	1.1	4.8
223	11.7	9.7	6.5	4.7	4.6	5.7	5.0	5.6	0.9	5.1
224	13.2	9.1	7.2	4.1	4.8	6.1	6.3	7.0	1.6	5.4
225	7.7	8.9	6.9	5.2	5.0	5.6	6.7	7.2	2.3	6.3
226	11.7	8.5	5.3	n/a	n/a	n/a	n/a	n/a	n/a	n/a
227	14.4	10.7	7.4	4.6	5.0	4.3	7.7	8.2	1.8	5.7
228	n/a	11.5	n/a	n/a	n/a	n/a	6.2	6.2	n/a	n/a
229	10.3	11.6	7.9	6.1	6.6	6.5	7.6	7.9	1.4	6.9
230	6.5	9.0	7.9	6.9	5.1	6.9	8.5	8.8	4.1	6.3
231	11.3	11.1	7.7	9.4	7.9	7.8	7.5	8.1	1.0	7.9
232	17.3	14.2	7.5	n/a	7.0	6.7	8.6	8.9	6.7	10.1
233	n/a	14.1	8.1	10.4	16.3	n/a	4.8	4.8	n/a	8.2
234	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
235	n/a	11.8	7.6	17.9	8.4	5.6	8.1	8.1	n/a	5.3
236	n/a	20.1	6.8	n/a	6.7	n/a	8.6	10.2	1.0	4.9
237	10.2	10.6	6.9	n/a	3.8	4.6	8.5	9.3	1.1	6.7
238	7.1	11.5	11.4	n/a	2.2	n/a	5.9	5.9	n/a	n/a
239	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
240	12.2	12.1	7.5	11.0	6.0	6.6	8.8	8.9	1.2	6.9
241	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
242	7.6	11.4	7.1	n/a	7.0	7.9	11.2	11.4	5.9	9.5
243	n/a	n/a	n/a	11.6	n/a	n/a	3.0	3.0	n/a	n/a
244	12.5	16.7	3.4	n/a	n/a	n/a	n/a	n/a	n/a	n/a
245	13.8	12.9	10.3	n/a	n/a	n/a	n/a	n/a	n/a	n/a
246	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
247	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
248	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
249	14.8	13.6	18.2	n/a	n/a	n/a	n/a	n/a	n/a	n/a
250	15.4	15.6	13.2	n/a	n/a	n/a	n/a	n/a	n/a	n/a
251	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
252	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
253	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
254	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
255	11.9	14.2	11.5	5.0	7.1	n/a	9.7	9.7	n/a	4.5
256	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
257	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
258	9.8	10.9	8.9	n/a	n/a	n/a	3.9	4.9	1.9	2.4
259	12.5	n/a	15.1	4.8	n/a	n/a	13.8	13.8	n/a	8.3
260	6.7	4.6	4.6	6.1	2.7	5.2	5.4	5.8	1.3	5.0
261	9.1	11.9	6.8	5.5	2.8	3.9	5.0	5.4	1.3	4.3
262	9.3	14.5	5.6	2.4	2.5	2.5	4.9	5.6	1.4	3.5
263	9.8	9.7	8.2	n/a	n/a	n/a	n/a	n/a	n/a	n/a
264	15.1	10.6	5.2	2.2	3.2	3.8	4.6	5.3	0.9	3.7
265	8.0	10.3	5.7	2.6	2.3	1.8	3.9	4.7	0.8	3.8
266	10.9	9.6	6.8	4.0	2.9	n/a	5.1	5.7	1.9	5.3
267	10.2	12.4	6.3	4.2	3.8	3.5	5.2	5.6	1.4	4.6
268	6.6	15.7	5.7	n/a	3.7	n/a	9.0	9.7	1.6	4.8
269	10.3	10.6	6.2	4.0	4.0	4.1	6.3	6.3	0.7	5.3
270	7.0	9.2	6.3	4.9	3.4	3.2	5.1	5.2	1.5	4.3
271	13.6	15.3	7.6	2.3	6.1	3.9	5.8	6.1	1.3	2.5
272	9.0	13.5	6.0	2.8	3.0	3.3	4.3	4.9	1.3	3.8
273	8.2	10.4	5.9	5.0	2.6	2.7	4.3	4.6	1.6	3.5
274	8.6	11.4	5.4	4.5	3.5	5.4	5.2	5.3	2.1	3.6
275	9.2	11.0	5.9	2.3	2.8	3.7	4.0	4.1	1.4	3.8
276	8.8	8.9	6.2	3.8	2.7	3.0	4.9	5.1	1.5	3.8
277	7.1	9.7	6.4	4.0	2.9	4.8	4.0	4.5	1.1	3.8
278	9.3	11.0	5.1	5.0	2.9	3.0	4.2	4.8	1.0	3.7

Table 4  
 Trip Lengths (in miles) by TAZ for Commercial, Office, Recreation and Public Service Projects

TAZ	Gaming (Day Visitor, Overnight Visitor)	Recreation (Day Visitor, Overnight Visitor)	Shop and Shopping (Day Visitor, Overnight Visitor, Resident)	Eat	Maintenance (Convenience)	School	All Work Trips (Work, AtWorkOther, External Work)	Work and External Work	AtWorkOther	Discretionary (Resident)
279	8.6	11.3	4.7	3.7	2.5	3.9	4.4	5.3	1.1	3.5
280	8.8	8.9	6.1	7.7	2.3	3.4	3.7	4.5	0.8	4.0
281	9.6	8.5	8.0	2.2	2.4	3.3	4.9	5.6	1.0	4.3
282	7.7	6.7	5.7	3.1	2.9	3.1	4.1	4.5	1.6	3.7
283	8.6	12.7	5.5	3.9	3.4	2.6	4.8	5.1	1.7	4.1
284	8.3	14.9	7.2	2.4	2.3	3.0	5.6	6.1	0.9	3.0
285	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
286	9.5	10.5	5.2	5.5	4.0	3.2	5.3	5.4	2.2	4.6
287	6.3	8.8	5.5	5.1	3.7	3.6	5.6	5.7	2.3	5.1
288	7.2	9.9	4.8	n/a	1.7	4.5	3.2	3.2	n/a	3.7
289	8.6	13.7	5.6	4.8	4.6	3.1	6.1	6.2	3.6	4.1
290	8.4	12.9	5.9	n/a	2.3	n/a	8.4	9.1	1.0	5.3
291	8.6	8.5	5.9	5.0	3.9	4.0	5.6	5.8	1.9	4.5
292	n/a	n/a	6.1	9.2	2.7	n/a	2.6	n/a	2.6	4.6
293	8.4	7.9	6.4	5.3	3.3	5.9	6.5	6.8	1.0	4.5
294	8.3	8.1	5.9	4.5	4.2	4.8	6.0	6.2	2.3	5.2
295	8.9	8.6	6.0	7.3	4.1	n/a	5.3	6.1	0.9	3.5
296	11.5	9.3	6.3	4.9	4.7	3.7	4.8	5.6	0.9	4.4
297	10.6	7.9	10.7	n/a	1.6	6.7	5.0	5.0	n/a	4.0