Local Traffic Mitigation Fee 2023 Nexus Study Update

Final Report

County of Nevada

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The Power of Commitment

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Executive summary

The Mitigation Fee Act requires that mitigation fees be periodically updated. This is to ensure that the assumptions regarding future growth, the need for projects, their costs, etc. continue to provide a reasonable nexus between the impacts of new development and the fees charged. This report describes the methodology used in updating the nexus, the resulting recommended fee structure, and the revised forecast for the Local Traffic Mitigation Fee (LTMF) program revenues based on the new growth assumptions and recommended fees.

Since the previous LTMF nexus study was prepared in 2016, the effects of global COVID-19 pandemic caused an economic slump which not only effected most industries but also affected travel patterns nationwide due to stay-at-home order, school closures, and a prolonged increase in employees being able to work from home. New forecasts for future development incorporate both a lower existing base of households and employment and lower future growth projections. These factors have resulted in lower existing volumes in some places, reduced forecasts for future traffic congestion, and a reduced need for roadway operational improvements. However, it also means that the cost of projects will be spread over fewer new units. This combination of factors increases the amount that needs to be and can be collected through the LTMF to mitigate the future transportation impacts of new development. However, the combination with the Nevada County Transportation Commission's (NCTC's) Regional Transportation Mitigation Fee (RTMF) will offset the increase in LTMF for most residential developments in western Nevada County. Additionally, trip generation rates have been updated to reflect the most recent data presented in the Institute of Transportation Engineer's Trip Generation Manual, which results in some differences in the proposed fees. Assembly Bill (AB) 602, signed into law January 1, 2022, imposed new requirements for fees on residential development (effective July 1, 2022). The law requires that the fee reflect a reasonable relationship to the size of the dwelling unit. This is explained further is Section 3.6. Table ES.1.1 and Table ES.1.2 present the recommended revised fee structure for residential and non-residential developments, respectively.

Table ES.1.1 Current and Recommended LTMF Fees – Residential Land Uses

Typical Use	Unit	Current Fee per Unit	Proposed Fee per Unit	% Change in Fee
Single Family				
Small (<1,500 sq.ft.)	Dwelling Unit	$2,140	$2,075	-3%
Medium (1,500-2,500 sq.ft.)	Dwelling Unit	$2,140	$2,499	**17%**
Large (<2,500 sq.ft.)	Dwelling Unit	$2,140	$2,774	**30%**
Multi-Family				
Small (<1,500 sq.ft.)	Dwelling Unit	$1,481	$579	-61%
Medium (1,500-2,500 sq.ft.)	Dwelling Unit	$1,481	$698	-53%
Large (<2,500 sq.ft.)	Dwelling Unit	$1,481	$775	-48%
Mobile Home in Park				
Small (<1,500 sq.ft.)	Dwelling Unit	$1,122	$1,425	**27%**
Medium (1,500-2,500 sq.ft.)	Dwelling Unit	$1,122	$1,717	**53%**
Large (<2,500 sq.ft.)	Dwelling Unit	$1,122	$1,906	**70%**
Senior Residential				
Small (<1,500 sq.ft.)	Dwelling Unit	$801	$401	-50%
Medium (1,500-2,500 sq.ft.)	Dwelling Unit	$801	$483	-40%
Large (<2,500 sq.ft.)	Dwelling Unit	$801	$536	-33%
Accessory Dwelling Unit (ADU) – Calculated based on ratio of size to primary unit. See below for more information.				

Table ES.1.2 Current and Recommended LTMF Fees – Non-Residential Land Uses

Land Use Category	Unit	Current Fee per Unit	Proposed Fee per Unit	% Change in Fee
Office	Thousand Sq. ft.	$1,034	$539	-48%
Medical Office	Thousand Sq. ft.	$3,030	$1,686	-44%
Industrial	Thousand Sq. ft.	$478	$218	-54%
Warehouse	Thousand Sq. ft.	$319	$163	-49%
Retail - Low	Thousand Sq. ft.	$2,140	$991	-54%
Retail - Medium	Thousand Sq. ft.	$4,574	$2,315	-49%
Retail - High	Room	$8,111	$4,213	-48%
Lodging	Thousand Sq. ft.	$578	$193	-67%
Public & Quasi-Public*	Student	Exempt	Exempt	N/A
School K-8th Grade*	Student	Exempt	Exempt	N/A
School 9-12th Grade*	Student	Exempt	Exempt	N/A
Public College*	Thousand Sq. ft.	Exempt	Exempt	N/A

Senate Bill (SB) 13, passed in 2019, establishes a new system for assessing fees on accessory dwelling units (ADUs). The law states that ADUs less than 750 square feet are exempt from impact fees, and that ADUs larger than 750 square feet are charged the impact fee based on the ratio of its floor area in relation to the primary unit, multiplied by the fee that the primary unit would pay, if it was being built today (i.e., ADU sq.ft. / primary unit sq.ft. x LTMF for primary unit). This is explained further in Section 3.6.1.

Developments in eastern Nevada County are a special case and are currently transferred to the Truckee's fee program. We recommend that developments in eastern Nevada County continue to be transferred to Truckee's fee program. Developments in eastern Nevada County will thus pay the Truckee fee and roads in eastern Nevada County will be eligible for Truckee-funded improvements.

If the forecasts for future residential and non-residential development prove correct, then total revenues from the LTMF over the next twenty years will be approximately $3.4M which will provide approximately 12% of the total cost of the projects on the LTMF list. The remaining 88% of project costs are attributable to existing deficiencies and by law must be covered by some source other than impact fees.

Contents

Table index

Figure index

Appendices

1. Introduction

1.1 Background

In April of 1997 the County of Nevada adopted the Local Traffic Mitigation Fee (LTMF) to help fund local roadway improvements triggered by new development[1]. The LTMF covers traffic impacts to local streets in the unincorporated portion of the county while a companion program, the western Nevada County Regional Transportation Mitigation Free (RTMF) program[2], covers traffic impacts to state roads including some within the unincorporated county. Together these programs provide a mechanism for new development to pay its fair share towards the cost of construction of the regional system of roads, streets, and highways needed to accommodate growth in unincorporated Nevada County.

The LTMF program operates pursuant to the Mitigation Fee Act, also known as California Assembly Bill 1600 (AB 1600) or California Government Code Sections 66000 et seq., which governs impact fees in California. The Mitigation Fee Act requires that all local agencies in California, including cities, counties, and special districts follow some basic principles when instituting impact fees as a condition of new development. Agencies must:

1. Identify the purpose of the fee. (Government Code Section 66001(a)(1))
2. Identify the use to which the fee is to be put. (Government Code Section 66001(a)(2))
3. Determine that there is a reasonable relationship between the fee's use and the type of development on which the fee is to be imposed. (Government Code Section 66001(a)(3))
4. Determine how there is a reasonable relationship between the need for the public facility and the type of development project on which the fee is to be imposed. (Government Code Section 66001(a)(4))
5. Discuss how there is a reasonable relationship between the amount of the fee and the cost of the public facility or portion of the public facility attributable to the development on which the fee is to be imposed. (Government Code Section 66001(b))

These principles closely emulate two landmark U.S. Supreme Court rulings that each provide guidance on the application of impact fees. The first case, *Nollan v. California Coastal Commission* (1987) 107 S.Ct. 3141, established that local governments are not prohibited from imposing impact fees or dedications as conditions of project approval provided the local government establishes the existence of a "nexus" or link between the exaction and the state interest being advanced by that exaction. The *Nollan* ruling clarifies that once the adverse impacts of development have been quantified, the local government must then document the relationship between the project and the need for the conditions that mitigate those impacts. The ruling further clarifies that an exaction may be imposed on a development even if the development project itself will not benefit, provided the exaction is necessitated by the project's impacts on identifiable public resources.

The second case, *Dolan v. City of Tigard* (1994) 114 S.Ct. 2309, held that in addition to the *Nollan* standard of an essential nexus, there must be a "*rough proportionality" between proposed exactions and the project impacts that the exactions are intended to allay. As part of the Dolan ruling, the U.S. Supreme Court advised that "a term such as 'rough proportionality' best encapsulates what we hold to be the requirements of the Fifth Amendment. No precise mathematical calculation is required, but the city (or other local government) must make some sort of individualized determination that the required dedication is related both in nature and extent to the impact of the proposed development.*"

The combined effect of both rulings is the requirement that public exactions must be carefully documented and supported. This requirement is reiterated by the provisions of the Mitigation Fee Act and subsequent rulings in the California Supreme Court *(Ehrlich v. City of Culver City* (1996) 12 C4th 854) and the California Court of Appeals (*Loyola Marymount University v. Los Angeles Unified School District 45* (1996) Cal.App.4th 1256).

[1] Resolution 97-141, dated April 15, 1997

[2] The RTMF was established in 2001 through a partnership of Nevada County, Nevada City, Grass Valley, and the Nevada County Transportation Commission (NCTC). It is administered by NCTC.

This Nexus Study report is intended to satisfy the requirements of the State of California Mitigation Fee Act. Specifically, this Nexus Study report will outline the purpose and use of the LTMF, the relationship between new development and impacts on the transportation system, the estimated cost to complete necessary improvements to the local road system in unincorporated Nevada County, and the 'rough proportionality' or 'fair share' fee for differing development types.

In 2021, AB-602 was signed into law, which amended the Mitigation Fee Act to include new requirements regarding the contents (§66016.5(a)(4)) and timing (§66016.5(a)(8)) of nexus studies adopted after July 2022, and how fees for residential development are to be computed (§66016.5(a)(5)). Chapters 2 and 3 of this report fulfill the new requirement to describe changes in input assumptions that led to the changes in fees. Section 3.6 fulfills the new requirements regarding how fees for residential development is to be computed.

2. Updates of Key Inputs

2.1 Trip Generation Rates

Institute of Transportation Engineer's Trip Generation Manual has been updated with new survey material since the edition that was used in the previous nexus study. The trip generation rates have accordingly been updated to those of the latest (11th) edition. Table 2.1 shows a detailed correspondence list between the general land use categories, the ITE land use codes, and the derivation of the updated trip generation rates used for broad categories from the individual rates of sub-categories.

Table 2.1 Trip Generation Rates for Different Land Use Categories

Land Use Category	Unit	ITE Code	Weekday Trips per Unit
RESIDENTIAL			
Single Family Detached House	Dwelling Unit	210	9.43
Multi-Family			
Apartment	Dwelling Unit	220	6.74
Low Rise Apartment	Dwelling Unit	221	4.54
Residential Condominium/Townhouse	Dwelling Unit	230	3.44
Median for Multi-Family			*4.54*
Mobile Home in Park	Dwelling Unit	240	7.12
Senior Residential			
Senior Adult Housing - Detached	Dwelling Unit	251	4.31
Senior Adult Housing - Attached	Dwelling Unit	252	3.24
Median for Senior Residential			*3.78*
NON-RESIDENTIAL			
Office			
General Office	KSF	710	10.84
Single Tenant Office	KSF	715	13.07
Office Park	KSF	750	11.07
Business Park	KSF	770	12.44
Clinic	KSF	630	37.60
Medical-Dentist Office	KSF	720	36.00
Median for Office			*12.76*
Industrial			
General Light Industry	KSF	110	4.87
General Heavy Industry	KSF	120	1.50
Industrial Park	KSF	130	3.37
Manufacturing	KSF	140	4.75
Median for Industrial			*4.06*
Warehousing	KSF	150	3.56
Retail/Service - Low			
Building Materials and Lumber	KSF	812	17.05
Hardware/Paint Store	KSF	816	8.07
Furniture Store	KSF	890	6.30
Discount Home Furnishing Superstore	KSF	869	20.00
Tire Superstore	KSF	849	20.37
Department Store	KSF	875	22.88

Land Use Category	Unit	ITE Code	Weekday Trips per Unit
Tire Store	KSF	848	27.69
Factory Outlet Center	KSF	823	26.59
Home Improvement Superstore	KSF	862	30.74
New Car Sales	KSF	841	27.06
Median for Retail - Low			*21.63*
Retail/Service - Medium			
Discount Club	KSF	857	42.46
Shopping Center	KSF	820	37.01
Electronics Superstore	KSF	863	41.05
Discount Superstore	KSF	813	50.52
Arts and Crafts Store	KSF	879	56.55
Discount Store	KSF	815	53.87
Auto Parts Store	KSF	843	54.57
Specialty Retail Center	KSF	814	63.66
Median for Retail - Medium			*50.52*
Retail/Service - High			
Nursery (Garden Center)	KSF	817	68.10
Supermarket	KSF	850	93.84
Apparel Store	KSF	876	66.40
Pharmacy/Drugstore w/o Drive Through Window	KSF	880	90.08
Pharmacy/Drugstore with Drive Through Window	KSF	881	108.40
Drive-in Bank	KSF	912	100.35
Quality Restaurant	KSF	931	83.84
High Turnover (Sit-Down) Restaurant	KSF	932	107.20
Median for Retail - High			*91.96*
Lodging			
Hotel	Room	310	7.99
All Suites Hotel	Room	311	4.40
Business Hotel	Room	312	4.02
Motel	Room	320	3.35
Median for Lodging			*4.21*
Public & Quasi-Public			
Military Base	KSF	501	0.39
Library	KSF	590	72.05
Government Office Building	KSF	730	22.59
State Motor Vehicles Department	KSF	731	11.21
United States Post Office	KSF	*732*	103.94
Government Office Complex	KSF	*733*	27.92
Median for Public Sector			25.26
School K-8th Grade	Student	520 & 522	2.25
School 9th-12 Grade	Student	522 & 530	1.98
Junior/Community College	Student	540	1.15
Other Non-Residential			
All Port and Terminal Uses		000-099	The trip generation for any project in these categories shall be computed using the ITE daily trip-generation rate for their land use type or, at the
All Recreational Uses		300-399	
All Private Institutional Uses (Public Institutions are Exempt)		500-599	
Convenience Market		851	
Convenience Market with Gasoline Pumps		853	
Fast Food Restaurant with Drive Through		934	
Coffee/Donut Shop with Drive Through		937	
Coffee/Donut Shop Drive Through No Seating		938	

Land Use Category	Unit	ITE Code	Weekday Trips per Unit
Gasoline/Service Station		944	discretion of agency staff, through a separate traffic study
Gasoline/Service Station with Convenience Market		945	
Gasoline/Service Station with Convenience Market and Car Wash		946	
Self-Service Car Wash		947	
Based on ITE Trip Generation Manual, 11th Ed. *KSF = 1,000 square feet*			

For the purposes of the LTMF second units added to a single-family home are to be counted as multi-family dwellings rather than single-family dwellings.

2.2 Growth Forecasts

Assumptions regarding future growth are critical inputs for a traffic mitigation fee since they help determine both whether roadway deficiencies will develop and how many new homes or square feet of new commercial development will contribute towards the costs of mitigations. Since the LTMF is a long-term program, we must look at long-term trends to forecast growth over the study horizon. Figure 2.1 shows the number of housing starts for California for the period 1954 to 2020.

Figure 2.1 Housing Starts in California by Year

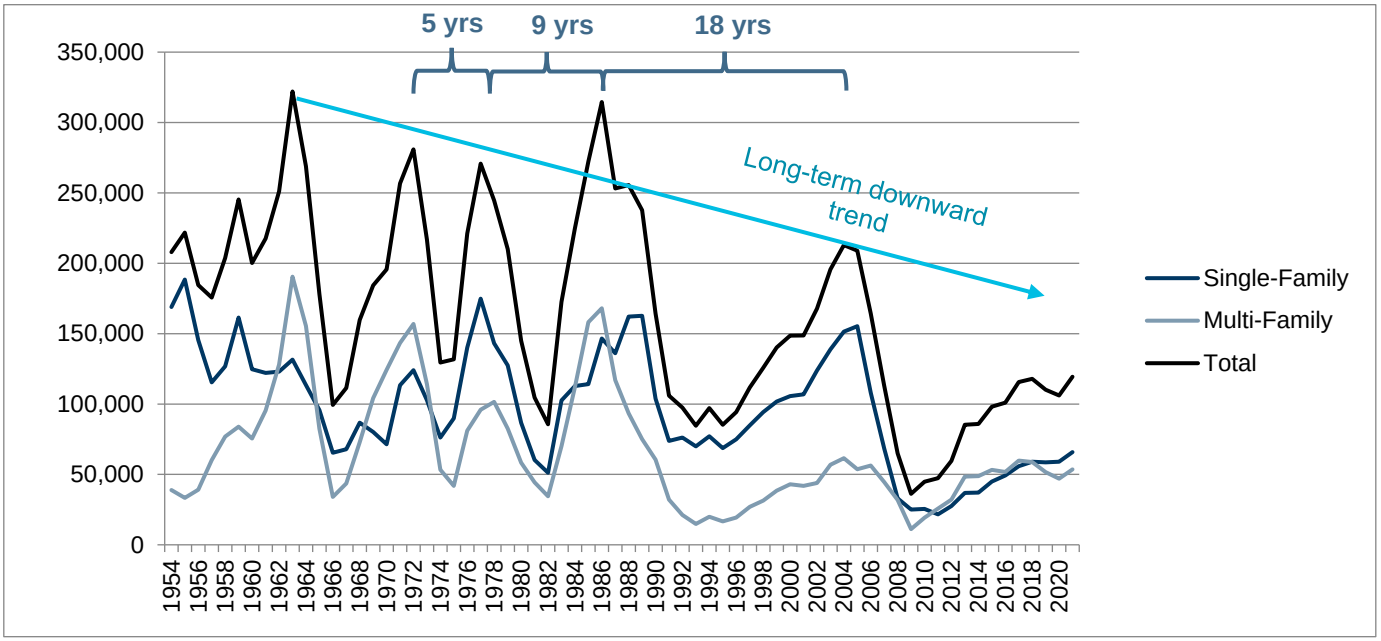


Figure 2.1 shows the unstable nature of the housing market in California, with five major “housing booms” and five “housing busts” occurring during this period. Several patterns are discernible, namely:

– The housing booms are occurring further and further apart. Five years elapsed between the peaks of the 1972 and 1977 booms, 9 years between the peaks of the 1977 and 1986 booms, and 18 years between the 1986 and 2004 booms. If this pattern continues it may be decades before the next peak occurs.

– The size of the booms is trending downwards. The 2004 boom was the smallest of the five, being only about 2/3rds the size of the previous boom.

– From the 1960’s through the 1980’s single-family and multi-family housing was being built in similar quantities in California. Multi-family housing production exceeded single-family housing in 3 of the 4 housing booms in this period. The period from 1990 to 2005, when single-family housing was produced at more than 2½ times the pace

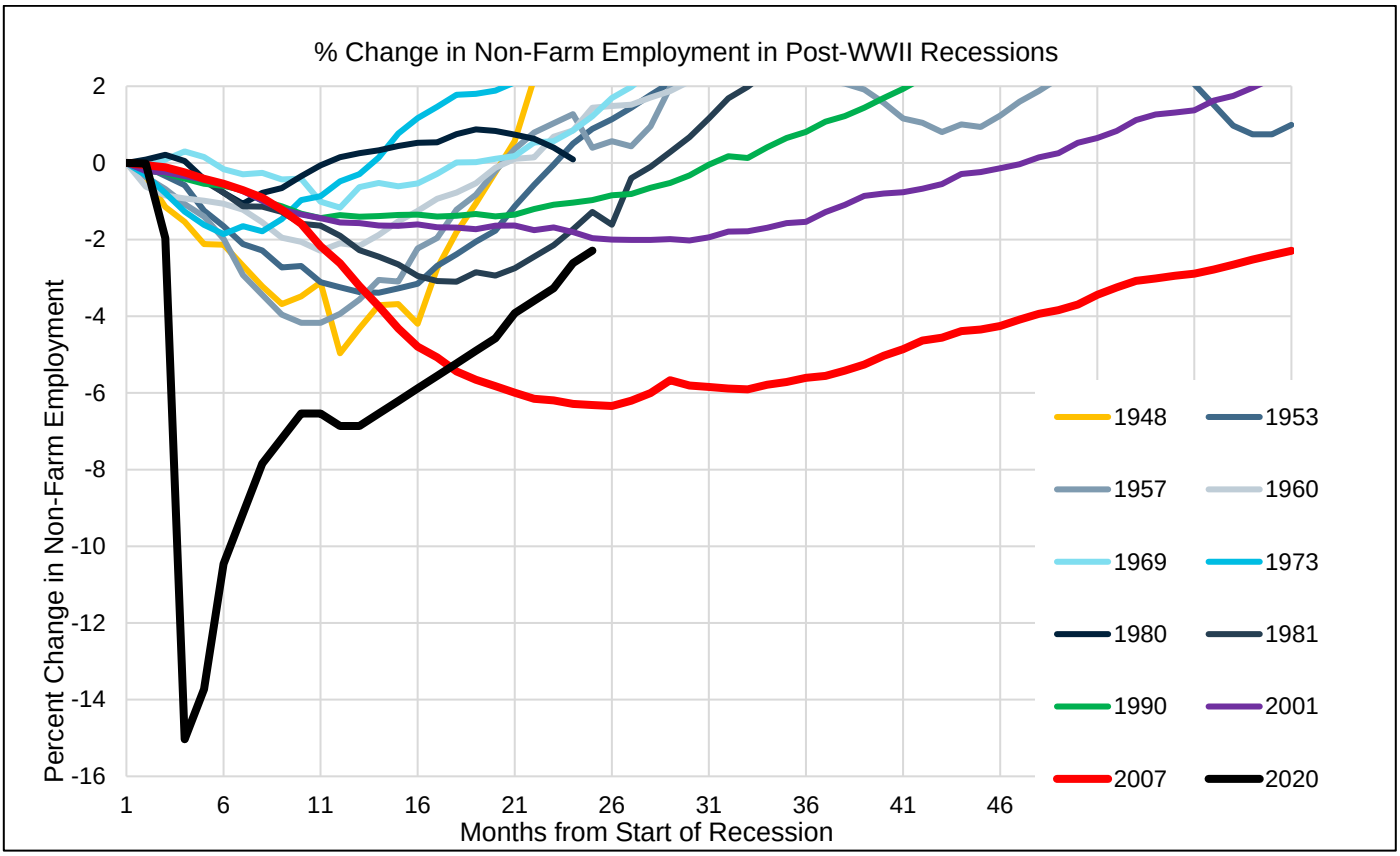
of multi-family, appears in retrospect to have been an aberration from the historical pattern. Since 2005, multi-family housing has returned to being about half of all new housing being built.

– The housing market crash in 2008 also affected housing production significantly, where housing production was the lowest it's been since before the 1950's. As shown, the market is on a gradual recovery from that.

The Great Recession was deeper and much longer than any previous recession since post-WWII (see Figure 2.2) and the collapse of the real estate market was at the heart of the recession. This was, hopefully, a one-off event unlikely to recur within the time horizon of the current study (to 2045). More recently the real estate market has been affected by inflation and construction costs due to supply limitations from COVID-19. Employment losses with the statewide shut-down were significantly deeper than even the Great Recession. However, employment has bounced back relatively swiftly almost to post-2001 recession levels. There have been long-term travel and housing changes resulting from COVID-19 due to employers implementing flexible schedules and more people working from home. Housing prices were affected, short-term, and there was an increased demand for senior housing due to people going into early retirement from the shut-down and layoffs.

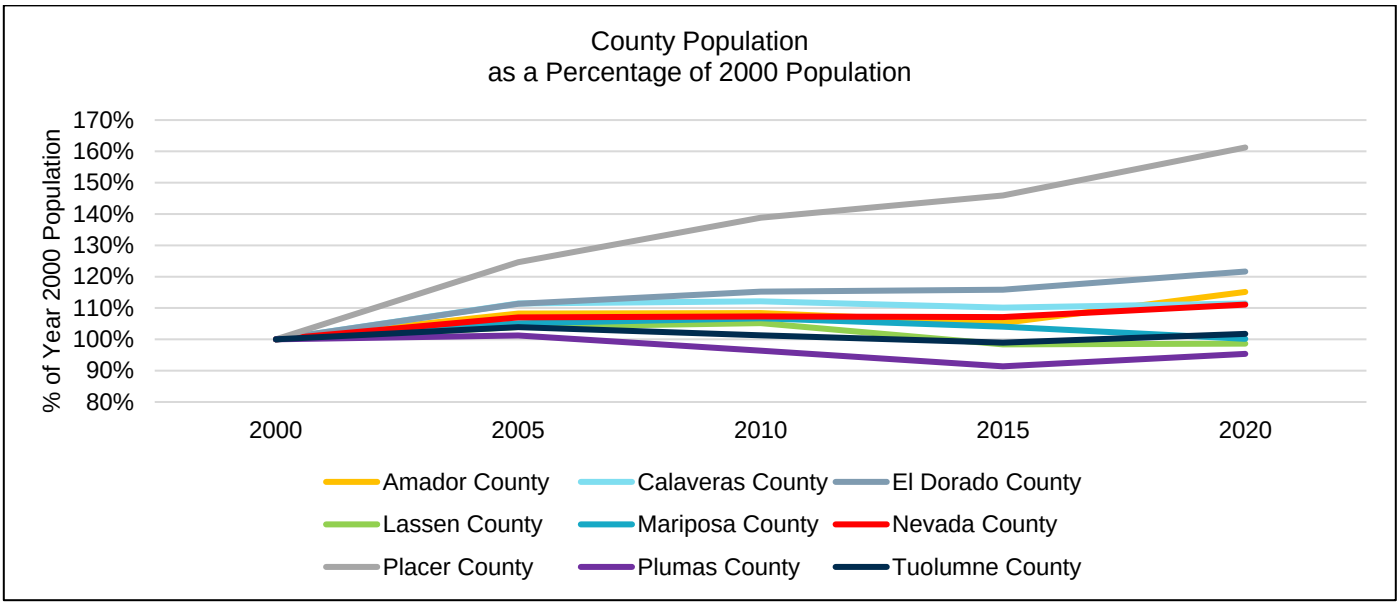
Nevertheless, it seems unlikely that things will "go to back to normal" (i.e., to the conditions prevailing in the 1990-to-2005 period) in terms of real estate development; structural and demographic changes have occurred resulting in a new normal. Any assumptions regarding real estate development that were made based on pre-recession or pre-COVID data therefore need to be re-examined to determine if they remain valid.

Figure 2.2 US Employment by Year



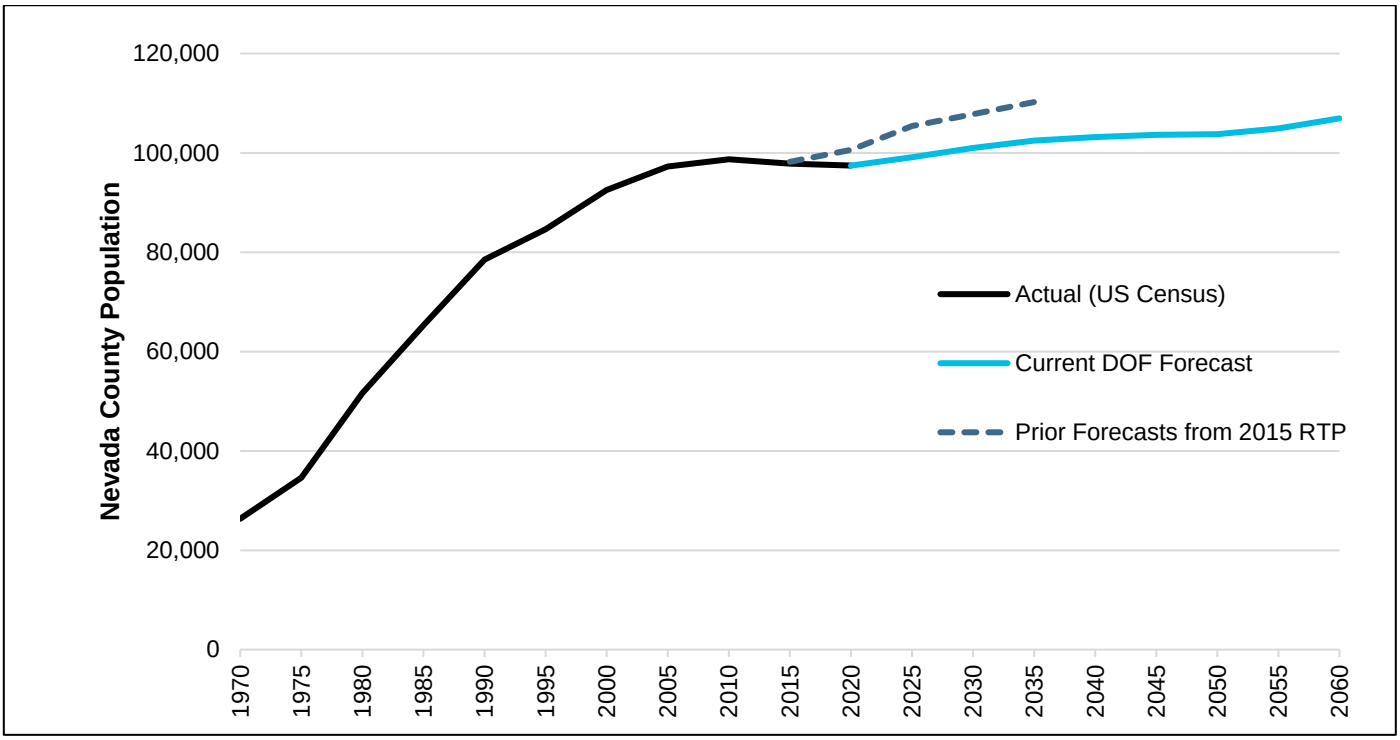
Scaling down from the state-wide level to the local level, data from the U.S. Census Bureau shows that in recent years the foothills counties have been growing slowly, if at all (see Figure 2.3).

Figure 2.3 Foothill Counties Population by Year



Post-recession population forecasts by Caltrans[3] suggests that only modest growth can be expected for the foreseeable future (see Figure 2.4). The DOF's most recent forecast is for slower growth than had been anticipated in the 2015 forecasts used for the NCTC Regional Transportation Plan (RTP).

Figure 2.4 Nevada County Population by Year - Actual & Forecasted



The growth forecasts used in the previous LTMF update were based on data collected in the construction boom leading up to the Great Recession. The forecasts used in the current study are based on an assumed lower growth

[3] California County-Level Economic Forecast, 2014-2040, Office of State Planning, California Department of Transportation, September 2014

rate and therefore the 2045 population in the current forecast is lower than the 2035 forecast used in the previous study.

The lower forecast for future population has several effects on the LTMF, most notably:

– Fewer new households mean less traffic impacts and therefore less need for roadway improvements as mitigation. Some projects may no longer be needed and for other projects a smaller portion of the need will be attributable to new development.
– However, for those projects that are still needed, fewer new dwelling units means that each will have to pay a higher share of the cost.

These trends work in opposite directions; the first would tend to lower fees while the second would tend to raise them. The interaction of these opposing trends is discussed further in a later section of this report.

Based on the growth projections supplied by the local jurisdictions, the growth forecast by land use type is shown in Table 2.2.

Table 2.2 Growth Forecast by Land Use Type

Land Use Category		Entire LTMF Area			*% Growth*
Description	Unit	Year 2018	Year 2040	Growth	
Residential					
Single-Family Dwelling	DU	25,739	26,079	340	1%
Multi-Family Dwelling	DU	329	1,227	898	273%
Mobile Home	DU	1,080	1,331	251	23%
Senior Housing	DU	0	390	390	39000%
Total		27,148	29,027	1,879	7%
Non-Residential					
Retail/Service - Low	KSF	238	273	35	14%
Retail/Service - Medium	KSF	190	218	28	14%
Retail/Service - High	KSF	48	55	7	14%
Office	KSF	100	115	15	15%
Office-Medical	KSF	3	57	54	1800%
Industrial	KSF	247	247	0	0%
Lodging	Rooms	53	53	0	0%

2.3 Funding from Other Sources

In some cases, the need for projects that receive LTMF funding is not 100 percent attributable to new development; there is an existing deficiency that new development by law cannot be held responsible for. In such cases another source of funds must be used to fund the portion of the project not attributable to new development.

Several different sources can be used as matching funds. The most recently used matching funds include:

– Regional Surface Transportation Program (RSTP) - Used for construction, reconstruction, rehabilitation, resurfacing, restoration, and operational improvements on federal aid highways and bridges.
– Grants - County staff regularly apply for, and the County receives grant funding from a variety of sources. This includes from the Highway Safety Improvement Program (HSIP), Highway Bridge Program (HBP), Congestion Mitigation and Air Quality (CMAQ) improvement program, and the Community Development Block Grants (CDBG), among others. These programs help fund much needed roadway safety projects, bridge replacement

and rehabilitation projects, congestion and air quality improvement projects, and projects that improve accessibility to federal properties. In addition, other one-time grants can help augment road safety, vegetation and tree removal, and a myriad of other County public works activities.

– Road Maintenance and Rehabilitation Account (RMRA) - In April 2017, Governor Brown signed SB1 into law. SB1 results in an average total increase of approximately $3 million annually over the next ten years for Nevada County for road safety, maintenance and improvement projects. SB1 is intended to stabilize HUTA revenue and includes annual inflationary adjustments to ensure long-term fiscal solvency of gas tax revenues. As a result, RMRA revenues have become a stable revenue source.
– Other –Specific funds such as wastewater funds, Rule 20A undergrounding funds, Local Transportation Funds, Highway User Tax Account funds, Regional Transportation Mitigation Fees, etc.

The County of Nevada has received approximately $4.7 million in non-LTMF funding for recent LTMF road projects from these sources over the last 4 years (see Table 2.3). For the projected LTMF projects in this document, matching funds are anticipated from a variety of sources including grant funds. Based on the average of $1.1 million/year in non-fee funding shown below, it is estimated that $23 million will be available from these sources over the next 20 years.

Table 2.3 Funding Available from Other Sources

Fiscal Year	RSTP	RMRA	Grants	Other	Total
2020/2021	$1,290,438	$536,696		$1,757,713	$3,584,847
2019/2020					$0
2018/2019					$0
2017/2018			$521,900	$530,738	$1,052,638
Total for 4 Years					$4,637,485
Average per Year					$1,159,371
Expected 20-Year Receipts (Annual average multiplied by 20)					**$23,187,425**

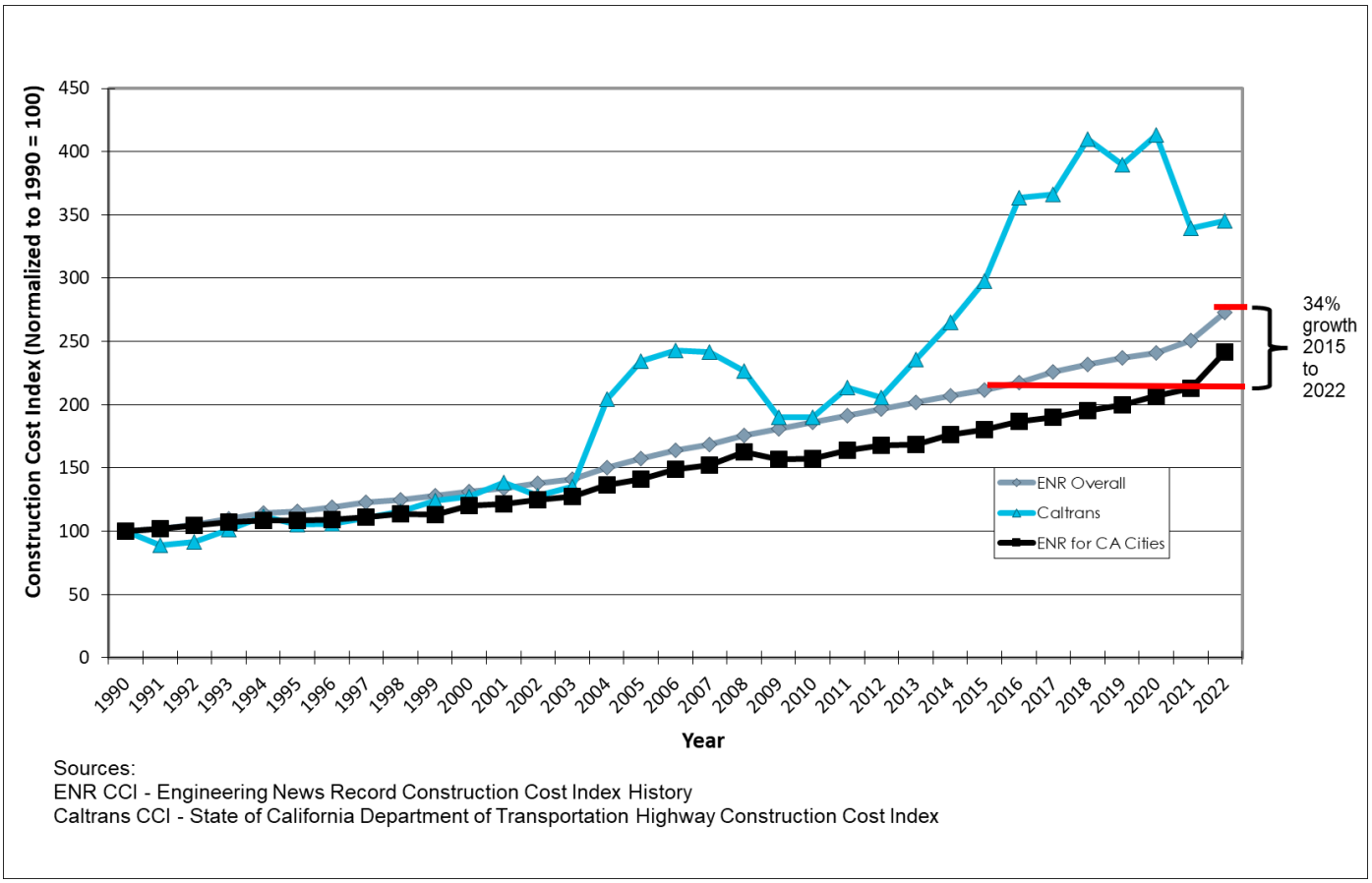
2.4 Updated Project Costs

The cost of road construction has varied significantly over the course of the last decade, so it is important that this be factored into the fee structure for the LTMF.

Figure 2.5 shows the Caltrans construction price index for highway projects for the period from 1990 to 2022. As can be seen in the figure, there was a slow and stable rise in prices throughout the 1990's and early years of the 2000's. However, in 2004 a combination of a construction boom, rising land and fuel costs, and the effect of a weakening U.S. dollar on the cost of imported construction materials, caused construction prices to rise more in a single year then they had in the previous 15 years combined; the highest single-year increase since Caltrans started the index. This was followed in 2005 by the second-highest single-year increase. The rapid increase was followed by a rapid decrease with the collapse of the housing market, which used many of the same construction inputs as Caltrans.

The Caltrans cost index is based on actual bid prices for projects done in the previous year. There is a second cost index, prepared by the Engineering News Record (ENR) that is computed based on the market prices for various major inputs to road projects (concrete, steel, aggregate, etc.). This index is less volatile than the Caltrans index because it does not include the effect of contractors' changing profit expectations in response to strong or weak market conditions. The two indices are compared in Figure 2.5. The Caltrans index over the past seven years (since 2015) has experienced an overall 16% increase, and a 39% increase between 2015 and 2020, while the ENR index for California cities has experienced a 34% increase, and the ENR overall index have only experienced a 29% increase. The impacts of the COVID-19 pandemic increased and then subsequently lowered the index.

Figure 2.5 Caltrans Construction Price Index, 1990-2022



Nevada County policy specifies that the ENR index for California Cities is to be used as the basis for cost adjustments for the LTMF. This decision was based in part on the relative stability of the ENR index, which makes the fee program more predictable for developers compared to the highly volatile Caltrans index. Therefore, since the CA ENR index has risen 34% since the last nexus study, for projects where no recent cost estimates are available, the project cost estimates were increased 34% from estimates used in the previous nexus study.

3. Updated Fee Calculation

An overview of the methodology used to compute the LTMF is provided in the section below, followed by sections providing more in-depth discussion of the key components.

3.1 Computation Methodology

The methodology used in the fee computation is outlined in Figure 3.1 below. The major steps include:

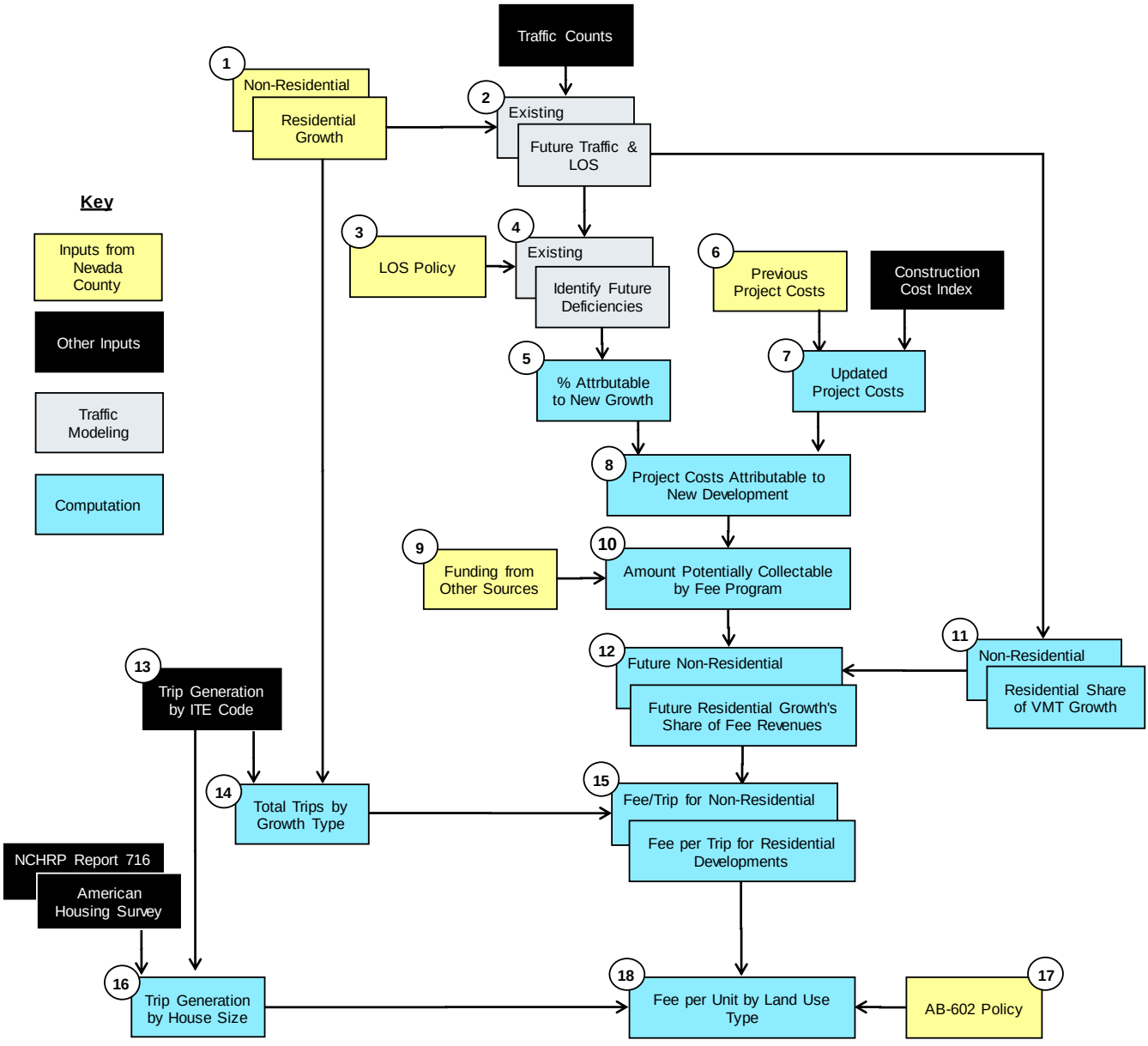
1. The starting point was a set of forecasts for residential and non-residential growth from NCTC, the City of Grass Valley, Nevada City, and Nevada County. The forecasts were described in Section 2.2.
2. The growth forecasts were used as inputs into the NCTC traffic model, which was then used to forecast traffic volumes for 2040. Recent traffic counts were used to find current traffic volumes. The volumes were then used to determine the level of service (LOS) for each potential project site under 2022 and 2040 conditions.
3. Each jurisdiction sets its LOS standards through resolutions, usually as part of its General Plan.
4. The existing and future LOS were compared to the LOS standard to determine where deficiencies currently exist and where they may develop in the future. Potential projects were identified that would correct the deficiencies.
5. The outputs of Step 4 were used to determine the percentage of the need for each potential project that is attributable to new development.
6. The estimated cost for different projects come from a variety of sources, including engineering studies and planning-level estimates.
7. The project cost estimates were updated, if necessary, using the Engineering New Record construction cost index to reflect current prices. This was described in Section 2.4.
8. The outputs from steps 5 and 7 were used to determine the dollar cost for each project that is attributable to new development.
9. Next, any funding that may be available from other sources for the listed projects was identified. This was discussed in Section 2.3.
10. The amount of funding available from other sources was compared to the project costs to determine if it exceeded the amount attributable to existing deficiencies (i.e., not attributable to new development). If so, the surplus of other funds was used to reduce the amount needed from new development. The result was the maximum amount of funding allowable by law that could potentially be collected using the LTMF.
11. The NCTC traffic model was used to determine the percentage share of growth in vehicle-miles traveled (VMT) that will be associated with residential and non-residential development for Nevada County.
12. The results of Steps 10 and 11 were then combined to determine the portion of project costs that could be attributed to new residential and non-residential development.
13. Next, the trip generation rate was determined for each land use type. For residential land uses the unit of measurement was daily trips/dwelling unit, while for non-residential uses trip-generation was measured in terms of daily trips/thousand square feet of space, except for schools, where the unit was daily trips/student and lodging, where daily trips/room were used.
14. The number of new units for each development type was then multiplied by the trip generation rate to produce the total number of new trips associated with each type of land use development.
15. The project funding attributable to residential and non-residential developments (from Step 12) was then divided by the expected number of new residential and non-residential trips (from Step 14) to produce the potential impact fee per trip for each type of unit.
16. AB 602 introduced a requirement that unit size be taken into account when assessing impact fees on new residential development. Data from the American Housing Survey and the National Cooperative Highway

Research Program (NCHRP) were used to estimate trip generation rates for different sized residential units. This is described in Section 3.7.

17. AB 602 offers agencies several options for incorporating dwelling size into a fee program. The NCTC Technical Advisory Committee selected an option that divided new dwellings into small, medium, and large size categories and applies different rates for different types of dwellings. This is described in Section 3.7.
18. The policies from Step 17 were applied to take the fees per trip from Step 15 and combine them with the trip generation rates from Step 13 (for non-residential units) and Step 16 (for residential units) to compute the fee per unit.

The next sections describe several key steps in the process in more detail.

Figure 3.1 Fee Computation Methodology Flowchart



3.2 Existing & Future Deficiencies

Existing and future deficiencies were identified by comparing the existing and future LOS to the LOS standards adopted by the County. The County General Plan has a target LOS D for County roads and intersections within a Community Region and LOS C for roads and intersections outside Community Regions. Table 3.1 shows the existing and future LOS at the 8 capacity-increasing project locations listed in the previous (2016) LTMF update. Existing and forecasted traffic volumes and the LOS worksheets are included in the Appendix. One additional site was identified as potentially requiring improvement by the County; this was added to the table. The 2016 nexus study identified 10 projects for the fee program. Of these:

- 2 projects have been completed. This includes Combie Road widening from SR 49 to Magnolia Road, and installation of a traffic signal at Combie Road at Higgins Road.
- 1 new project – Magnolia Road from Combie Road to Lakeshore North – is currently deficient and new development is expected to worsen the deficiency.
- 1 project - Rough and Ready Highway at Ridge Road - is currently deficient and new development is expected to worsen the deficiency. It was retained in the LTMF program.
- 1 project – Stampede Meadows to Truckee Town limits – is also currently deficient and eligible to be in the fee program. However, the County has decided to remove this from the project list due to cost.
- 1 project - SR-20 at Pleasant Valley Road – is adequate now but will become deficient in the future due to the effects of new development. This site was therefore retained in the LTMF program.
- 2 projects were forecast not to have a deficiency in the future and so were not retained in the LTMF program. These were Combie Road at Lakeshore Drive, and Combie Road at Magnolia Road.
- District safety projects were retained in the LTMF program, however narrowed down based on cost.

Table 3.2 shows safety-related projects identified as Project IDs D-H in Table 3.1. These are places where either the current lane width or the current shoulder width do not meet the County's recommended standard (Ordinance 2488 L-XVII Road Standards, Table II), and where traffic from new development will worsen the safety problems.

Table 3.1 Existing & Future LOS at Proposed Project Locations

2022 Project ID	Intersection or *Roadway*	Traffic Control	LOS Standard	Prior Nexus Study (Existing) Delay (sec/veh) *or ADT*	LOS	Prior Nexus Study (2035) Delay (sec/veh) *or ADT*	LOS	Current Nexus Study (Existing) Delay (sec/veh) *or ADT*	LOS	Current Nexus Study (2040) Delay (sec/veh) *or ADT*	LOS	Notes
	Facilities in Current LTMF CIP											
	Combie Road: SR 49 to Magnolia Rd	Major Collector	D	15,943	**F**	17,400	**F**	16,050	C	18,530	D	Roadway has been widened to 4 lanes. No longer deficient.
A	Magnolia Road: Combie Rd to Lakeshore North	Major Collector	D	N/A		N/A		10,970	**F**	12,120	**F**	Currently deficient and conditions expected to worsen.
B	Rough and Ready Highway @ Ridge Road	Signal	D	23.6	C	182.7	**F**	134.9	**F**	183.4	**F**	Currently deficient and conditions expected to worsen.
C	*SR-20 @ Pleasant Valley Rd*	Signal	D	**SB queue length 330ft**		**SB queue length >450ft**		SB queue length 260ft		**SB queue length 300ft**		Currently deficient SB Queue Length and conditions expected to worsen. Storage length is 275 feet.
	Combie Rd @ Lakeshore Dr	AWSC	D	10.6	B	11.4	B	12.6	B	12.8	B	Not deficient.
	Combie Rd @ Magnolia Rd	SSSC	D	19.2	B	22.5	C	36.1	D	49.3	D	Not deficient.
	Combie Rd @ Higgins Rd	Signal	D	72.4	**F**	> 180	**F**	N/A		N/A		Improvement (traffic signal) has been constructed since prior fee study. Intersection not analyzed. Will be removed from fee program project list.
	Stampede Meadows to Truckee Town		D	**Deficient Widths**		**Deficient Widths**		**Deficient Widths**		**Deficient Widths**		County decided to remove for this update due to cost.
D	District 1 Safety Projects			**Deficient Widths**		**Deficient Widths**		**Deficient Widths**		**Deficient Widths**		ORD 2488 L-XVII Road Standards, Table II
E	District 2 Safety Projects			**Deficient Widths**		**Deficient Widths**		**Deficient Widths**		**Deficient Widths**		ORD 2488 L-XVII Road Standards, Table II
F	District 3 Safety Projects			**Deficient Widths**		**Deficient Widths**		**Deficient Widths**		**Deficient Widths**		ORD 2488 L-XVII Road Standards, Table II
G	District 4 Safety Projects			**Deficient Widths**		**Deficient Widths**		**Deficient Widths**		**Deficient Widths**		ORD 2488 L-XVII Road Standards, Table II
H	District 5 Safety Projects			**Deficient Widths**		**Deficient Widths**		**Deficient Widths**		**Deficient Widths**		ORD 2488 L-XVII Road Standards, Table II
J	Admin Costs and 5-year reviews											
I	Traffic Model Updates											

Notes: a) For signalized intersections average delay and LOS for all approaches are reported.
b) "AWSC" means "all way stop-controlled." For AWSC intersections, average intersection delay and LOS are reported.
c) "SSSC" means "side-street stop controlled." For SSSC intersections, delay and LOS for the worst performing approach are reported.

Table 3.2 Safety Projects

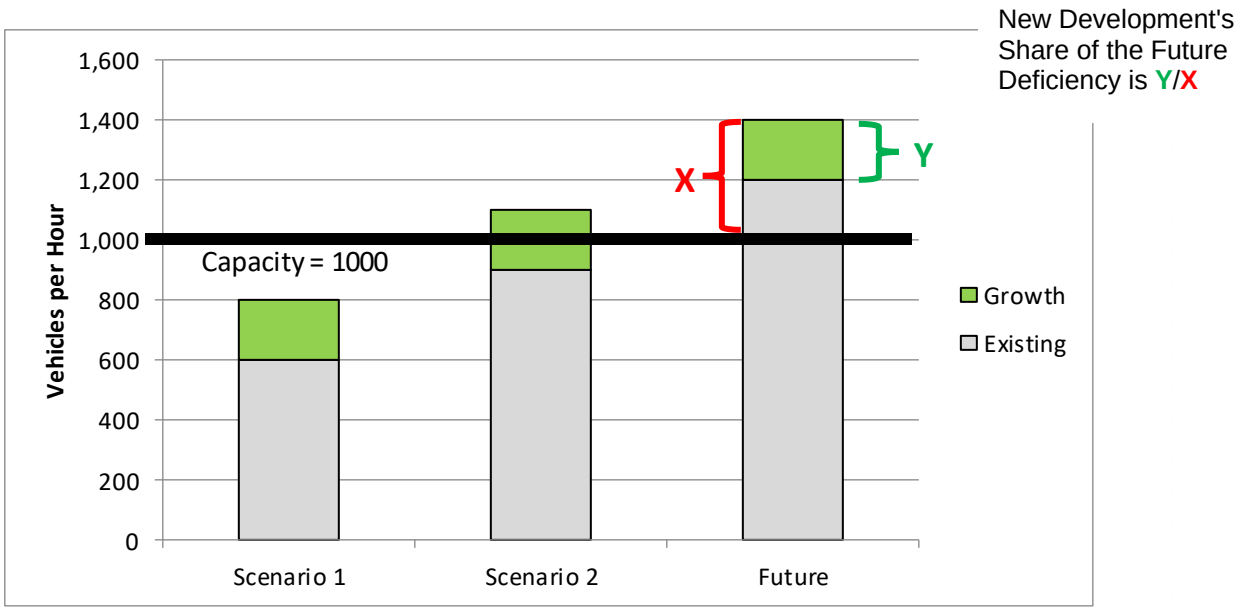
Street Name	Beginning	Ending	Length (mi)	Description	Total Cost
District 1					
NORTH BLOOMFIELD-GRANITEVILLE ROAD	SOUTH YUBA RIVER	0.7 MI SO.	0.7	Road widening needed for safety, bicycles/peds, and evacuation purposes. Current road is only one lane wide in several locations. Serves Nevada City, Highway 20 and north county areas. Improvements would be tied to Edwards Crossing Bridge Project.	$ 700,000
District 2					
DOG BAR ROAD AT BEAR RIVER BRIDGE - SHOULDER WIDENING	1000' WEST OF BEAR RIVER BRIDGE	BEAR RIVER BRID	0.1	Dog Bar Bridge is planned to be replaced as soon as FY 23/24. The road is planned to be widened for safety, bicycles & peds near the bridge.	$ 450,000
District 3					

Street Name	Beginning	Ending	Length (mi)	Description	Total Cost
GREENHORN ROAD - SHOULDER WIDENING	BRUNSWICK RD	DOWNWIND CT	0.5	Shoulder widening needed for safety, bicycles/peds, and evacuation purposes.	$ 250,000
YOU BET ROAD - SHOULDER WIDENING	HWY 174	FAWNHILL DR	0.5	Shoulder widening needed for safety and evacuation purposes. Serves You Bet, Banner Mountain, Cascade Shores areas.	$ 250,000
District 4					
NORTH BLOOMFIELD-GRANITEVILLE ROAD - ROAD WIDENING	SOUTH YUBA RIVER	0.7 MI NO.	0.7	Road widening needed for safety, bicycles/peds, and evacuation purposes. Current road is only one lane wide in several locations. Serves Nevada City, Highway 20 and north county areas. Improvements would be tied to Edwards Crossing Bridge Project.	$ 700,000
District 5					
WASHINGTON ROAD - SHOULDER WIDENING	MP 2	MP 1.5	1.5	Shoulder widening needed for safety and evacuation purposes. Serves the Town of Washington and is often the only way out	$ 750,000
Subtotal					**$ 3,100,000**

3.3 Portion of Project Need Attributable to New Development

The procedure for determining the percentage of the need to add capacity to a roadway facility that is attributable to new development is illustrated in Figure 3.2.

Figure 3.2 Percent Attributable Cases



The capacity is the maximum volume that can be accommodated at the adopted LOS. Figure 3.2 shows a hypothetical roadway with a capacity of 1,000 vehicles per hour. There are three possible cases, namely:

– In Case 1, the roadway facility is operating at below its capacity under existing conditions and is forecast to continue to do so under future conditions (2040). In such cases there is no deficiency and so no impact fees can be collected for the project[4].
– In Case 2 the facility operates below its maximum capacity under existing conditions, but the capacity is insufficient to accommodate the expected future growth in traffic. In such cases the need to provide additional capacity is entirely attributable to new development.
– In Case 3 the traffic using the facility already exceeds its rated capacity and the expected growth in traffic will exacerbate the situation. In such cases the percentage attributable to new development is the portion of the volume beyond the rated capacity that comes from new development (Y/X).

Several of the candidate projects listed in Table 3.1 fall into Case 1. These projects, Combie Road at Magnolia Road for example, are not eligible for improvements funded by impact fees. They were not assigned a project ID in Table 3.1 because they will not be part of the LTMF project list.

One project listed in Table 3.1 falls into Case 2. This was Project C, SR 20 at Pleasant Valley Rd. In this case, the entire need for the improvement is attributable to new development.

[4] This is not to say that the project is not justified; only that the justification is unrelated to the need to provide additional capacity to accommodate future development. The seismic retrofit of a bridge would be an example of a project where the need is not based on insufficient capacity.

The remaining projects listed in Table 3.1 fall into Case 3. Two of these projects, Project A, Magnolia Road from Combie Road to Lakeshore North, and Project B, Rough and Ready Highway at Ridge Road, have existing capacity problems that will be worsened by traffic associated with new development. The computation of the percentage of the need for the improvement that is attributable to new development is shown in Table 3.3.

For the other Case 3 projects (the District safety projects), there is a deficiency that is related to the County Road Standards, such as lane or shoulder width. In such cases new development's share of responsibility is equal to its share of total future traffic.

The proposed improvements identified for the fee program are listed below:

A. Magnolia Road: Combie Road to Lakeshore North – widening to four lanes

B. Rough and Ready Highway at Ridge Road – install a traffic signal or roundabout

C. SR 20 at Pleasant Valley Road – improve to have dual left turn lanes

D. District Safety Projects – Improve to County Road Standards

Table 3.3 Percent of Project Need Attributable to New Development

Project ID	Facility	Location	LOS Standard	Existing (2022)				Future (2040) Without Improvements				% of Deficiency Attributable to New Development
				Peak-Hour Entering Volume or ADT	Capacity*	V/C Ratio	LOS	Peak-Hour Entering Volume or ADT	Capacity*	V/C Ratio	LOS	
				(A)	(B)	(C)=(A)/(B)	(D)	(E)	(F)	(G)=(E)/(F)	(H)	(I)=(G-D)/(D-1)
A	Magnolia Road	Combie to Lakeshore North	D	10,970	9,900	**1.11**	**F**	12,120	9,900	**1.22**	**F**	52%
B	Rough and Ready Highway	@ Ridge Road	D	1,161	960	**1.21**	**F**	1,230	960	**1.28**	**F**	26%
C	SR-20	@Pleasant Valley Rd (SB Left)	D	393	400	0.98		**440**	400	**1.10**		100%
D	District 1 Safety Projects	Various		Deficient Widths								15%
E	District 2 Safety Projects	Various		Deficient Widths								15%
F	District 3 Safety Projects	Various		Deficient Widths								15%
G	District 4 Safety Projects	Various		Deficient Widths								15%
H	District 5 Safety Projects	Various		Deficient Widths								15%

* For roadway segments, capacity is the volume that does not exceed the LOS standard, as defined in the General Plan. For intersections, capacity is defined as the maximum sum of the approach volumes that does not exceed the LOS standard

** For safety projects the percent attributable to new growth is percentage growth in total VMT on the County road system for the 2025-to-2035 period.

3.4 Determination of the Amount Collectible through the LTMF

The amount potentially collectable through the LTMF program was calculated using the updated project costs and the percentage of project need attributable to new development. This calculation is shown in Table 3.4. The amount potentially collectable through the LTMF is equal to the costs attributable to new development, which is $6.6 million (see Column C), minus other funds available (Column E) and the remaining balance of LTMF funds already collected (Column F). The cost of administering the impact fee program – including future costs to update the fee program - is then added on to this, as allowed by state law. The final amount potentially collectable by the LTMF is thus $3.8 million.

Column D in Table 3.4 shows the amount of funding needed to correct existing deficiencies for these projects. A comparison of this amount, $24.8 million, with the amount of funding reasonably foreseeable for potential[5] matching funds ($63.7M, see Section 2.4 of this report), shows that the County will be able to fully fund the non-LTMF portion of the projects shown in Table 3.4.

[5] The projects show in Table 3.4 are not the complete list of projects that the City will be funding from these sources.

Table 3.4 Amount Potentially Collectable Through LTMF between 2023 to 2040

Project ID	Facility	Segment	Updated Cost Estimate	% of Need Attributable to New Development	Costs Attributable to New Development	Costs Attributable to Existing Deficiencies (not New Development)	Funding from Other Sources (STIP, SHOPP, Developer Direct Mitigations, etc.)	LTMF Funds Currently Available	Amount Potentially Collectable from LTMF
			(A)	(B)	(C) = (A)*(B)	(D) = (A) - (B)	(E)	(F)	(G)=(C)-(E)-(F)
A*	Magnolia Road	Combie Road to Lakeshore North	$1,000,000	52%	$518,018	$481,982		$0	$518,018
B	Rough and Ready Highway	@ Ridge Road	$4,221,713	26%	$1,078,882	$3,142,831	$2,690,175	$0	$1,078,882
C**	SR 20	@ Pleasant Valley	$804,000	100%	$804,000	$0	$0	$0	$804,000
D	District 1 Safety Projects	Various	$700,000	15%	$105,247	$594,753	$0	$0	$105,247
E	District 2 Safety Projects	Various	$450,000	15%	$67,659	$382,341	$0	$0	$67,659
F	District 3 Safety Projects	Various	$500,000	15%	$75,176	$424,824	$0	$0	$75,176
G	District 4 Safety Projects	Various	$700,000	15%	$105,247	$594,753	$0	$0	$105,247
H	District 5 Safety Projects	Various	$750,000	15%	$112,765	$637,235	$0	$0	$112,765
I	Traffic Model Updates		$100,000	100%	$100,000	$0	$0	$0	$100,000
	Total		$9,225,713		$2,966,994	$6,258,719	$5,657,169	$0	$2,966,994
	As a percent of total costs for needed projects				32%	68%	61%	0%	32%
	Administrative Costs (3% of project costs)								$89,010
	Total Amount Potentially Collectable from LTMF								**$3,056,004**

*Indicates a new project in this update.

** Cost for SR 20 @ Pleasant Valley Road is based on previous study. Cost may be more based on outcome of ICE study through Caltrans.

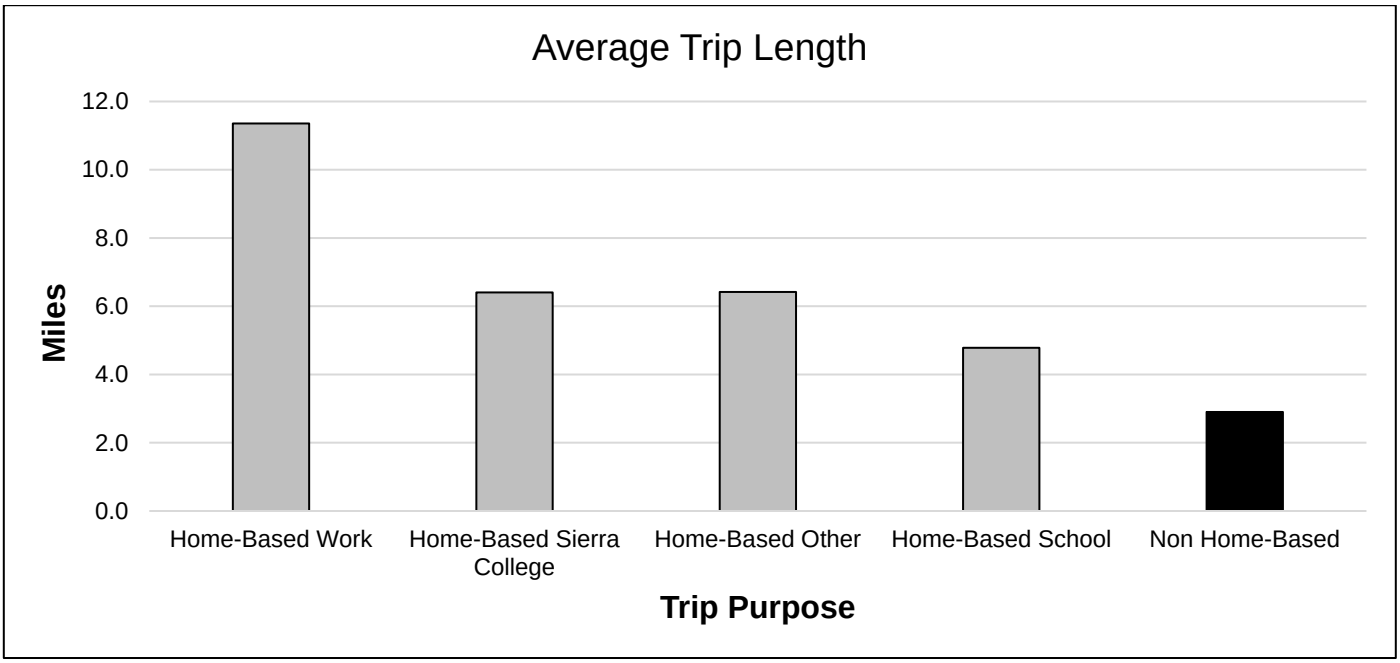
3.5 Residential & Non-Residential Shares of Traffic Impacts

The State of California has instituted a new policy[6] by which vehicle-miles travelled (VMT) will now be used as the main indicator of traffic impacts. VMT takes into account the fact that traffic impacts are proportional both to the number of new trips associated with the development and the average length of those trips.

Outputs from the NCTC Travel Demand Model were used to forecast the growth in VMT for the five different types of trips that are represented in the model. The growth in VMT from new development was attributed to residential and non-residential developments based on trip type, for trips in Nevada County. Standard practice for how to do this can be found in NCHRP Report 187[7], a primary reference for travel estimation techniques used in travel demand modeling, which states that "HBW (Home Based Work) and HBNW (Home Based Non-Work) trips are generated at the households, whereas the NHB (Non-Home Based) trips are generated elsewhere." The current study follows this practice by attributing all trips beginning or ending at the traveler's home (roughly 2/3rds of all trips) to the residential land use while all trips not involving a residential location (roughly 1/3rd of all trips) are attributed to non-residential land uses. The Non-Home-Based trips include things like trip chaining between locations other than the traveler's home.

Figure 3.3 shows the average trip length by trip purpose in Nevada County from the NCTC traffic model. The four home-based trip purposes, shown in grey, have longer average lengths than non-home-based trips. Consequently, the change from trip-based fees to VMT-based fees tends to shift the incidence of the fees away from non-residential development and more towards residential development.

Figure 3.3 Average Trip Length by Trip Purpose



The forecast growth in VMT from residential and non-residential land uses is shown Table 3.5.

[6] SB-743, signed into law in 2013
[7] Quick Response Urban Travel Estimation Techniques and Transferable Parameters User's Guide, Transportation Research Board, 1978

Table 3.5 Percentage of VMT Growth Attributable to Residential & Non-Residential Development

Trip Purpose	Growth in VMT	% of Total VMT Growth
Attributable to Residential Development		
Home-Base Other Trips	122,759	36%
Home-Base Work Trips	169,544	49%
Home-Based School Trips	2,068	1%
Home-Based Sierra College Trips	1,427	0%
Attributable to Non-Residential Development		
Non-Home-Based Trips	47,670	14%
Total	**343,467**	**100%**

Based on this calculation, 86% of VMT growth was attributed to residential development and 14% was attributed to non-residential development.

3.6 Consideration of Residential Floor Area

Since the 2016 study, the State of California has instituted a new policy[8] pertaining to fees on residential developments. California Government Code (CGC) Section 66016.5(a)(5), which is new with the enactment of AB-602, states that,

"(A) A nexus study adopted after July 1, 2022, shall calculate a fee imposed on a housing development project proportionately to the square footage of proposed units of the development. A local agency that imposes a fee proportionately to the square footage of the proposed units of the development shall be deemed to have used a valid method to establish a reasonable relationship between the fee charged and the burden posed by the development.

(B) A nexus study is not required to comply with subparagraph (A) if the local agency makes a finding that includes all of the following:

(i) An explanation as to why square footage is not appropriate metric to calculate fees imposed on housing development project.

(ii) An explanation that an alternative basis of calculating the fee bears a reasonable relationship between the fee charged and the burden posed by the development.

(iii) That other policies in the fee structure support smaller developments, or otherwise ensure that smaller developments are not charged disproportionate fees.

(C) This paragraph does not prohibit an agency from establishing different fees for different types of developments."

AB-602 applies to impact fee programs generally and was not specifically designed to suit transportation impact fees regarding trip generation and unit size. Web research revealed that there are currently no well-established sources for trip generation rates based on residential unit size. However, data on the number of persons per household can be obtained from the U.S. Census Bureau's American Housing Survey, and data on the number of trips by household size is available from the National Cooperative Highway Research Program (NCHRP) Report 716, *Travel Demand Forecast: Parameters and Techniques*. This data was combined as shown in Table 3.6.

[8] Assembly Bill 602, signed into law in September 2021.

Table 3.6 Computation of Average Trip Generation by Dwelling Size Category

Persons per House-hold	Trips per House-hold	Less than 1,500 sq.ft			1,501 to 2,500 sq.ft			Greater than 2,500 sq.ft		
		Number of Units	Percent of Units	Trips	Number of Units	Percent of Units	Trips	Number of Units	Percent of Units	Trips
	(A)	(B)	(C)=(B)*Σ(B)	(D)=(A)*(C)	(E)	(F)=(E)*Σ(E)	(G)=(A)*(F)	(H)	(I)=(H)*Σ(H)	(J)=(A)*(I)
1	4.1	21,895	39%	1.58	7,828	20%	0.81	2,387	12%	0.48
2	8.2	18,076	32%	2.61	14,701	37%	3.04	7,754	38%	3.11
3	11.2	7,592	13%	1.50	6,928	17%	1.96	3,098	15%	1.70
4	16.1	5,355	9%	1.52	5,928	15%	2.41	4,106	20%	3.24
5	18.6	2,368	4%	0.78	2,754	7%	1.29	1,924	9%	1.75
6	18.6	907	2%	0.30	989	2%	0.46	755	4%	0.69
7+	18.6	525	1%	0.17	553	1%	0.26	398	2%	0.36
Total		**56,718**	**100%**	**8.46**	**39,681**	**100%**	**10.22**	**20,422**	**100%**	**11.33**
Average Persons Per Household		2.17			2.66			2.97		
Trip-Gen Rate as a % of SFD Average		**83%**			**100%**			**111%**		
Sources:	Columns (A),(C) - NCHRP Report 716, Columns (B), (E), and (H) - American Housing Survey									

As can be seen in Table 3.6, although the trip generation rate is somewhat related to the size of the residence, it is not directly proportional to the floor area, as is assumed in Section 66016.5(a)(5)(A). We therefore find, pursuant to Section 66016.5(a)(5)(B)(i), that it would not be appropriate to use square footage directly as the metric of traffic impacts for the purposes of this fee program. We instead find, pursuant to Section 66016.5(a)(5)(B)(ii), that the data supports basing the fees on new small, medium, and large-sized homes on the relationships shown in the bottom row of Table 3.6. We further find, pursuant to Section 66016.5(a)(5)(B)(iii), that these relationships would ensure that smaller units would not be charged disproportionate fees compared to larger units.

CGC Section 66016.5(a)(5)(C) allows agencies to establish different fees for different types of developments. In alignment with AB 602, the City of Grass Valley believes that fees on multi-family and senior housing should be set lower than those of single-family dwellings, in recognition of their lower trip generation rates. Unfortunately, a calculation like that shown in Table 3.6 could not be done for these other classes of residential development because the American Housing Survey only has data on the number of persons per household for single-family dwellings (Table 3.6 uses SFD data). DUEs for multi-family, mobile homes, and senior age-restricted housing were therefore calculated based on their respective PM peak-hour trip-generation rates found in ITE's *Trip Generation Manual*. The average size for these housing types in the LTMF fee area falls within the "Small" category, so the ITE average rate for them was used to compute the "Small" value. The ratio of the values shown in the bottom row of Table 3.6 were then used to compute the DUEs for "Medium" and "Large" multi-family, mobile homes, and senior age-restricted housing. The results as shown in Table 3.7.

Table 3.7 Computation of Dwelling DUEs by Size and Dwelling Type

Dwelling Type	ITE 11th Edition Trip-Gen Rate (Daily)	Average Unit as % of Average SFD Trip-Gen Rate	Dwelling Unit Equivalents (DUE)		
			Small (< 1,500 sq.ft)	Medium (1,501 to 2,500 sq.ft)	Large (> 2,500 sq.ft)
Single-Family Dwelling	9.43	100%	0.83	1.00	1.11
Multi-Family Dwelling	4.54	48%	0.48	0.58	0.64
Senior Age-Restricted	3.78	40%	0.40	0.48	0.54
Mobile Home	7.12	76%	0.76	0.91	1.01

Since fees are based on DUEs, as can be seen in Table 3.7, the highest fees would be paid by large single-family dwellings, which would pay 111% of the base rate for SFD. The lowest fees would be paid by small senior dwellings, which would pay 40% of the base rate.

3.6.1 Accessory Dwelling Units (ADUs)

In addition to the considerations discussed above pursuant to AB 602, a separate piece of legislation, SB-13, passed in 2019, establishes a new system for assessing fees on accessory dwelling units (ADUs). It amended CGC Section 65852.2(3)(A)(f)(3) to read,

> "*A local agency, special district, or water corporation shall not impose any impact fee upon the development of an accessory dwelling unit less than 750 square feet. Any impact fees charged for an accessory dwelling unit of 750 square feet or more shall be charged proportionately in relation to the square footage of the primary dwelling unit."*

Based on this sub-section, if an ADU is smaller than 750 square feet then it is exempt from LTMF fees. Fees on ADU's larger than 750 square feet require a two-part calculation. First the LTMF fee that would be charged to the primary unit (if it were new) is calculated, then the fee on the ADU is computed based on the ratio of its floor area in relation to the primary unit. For example, if the primary dwelling was 2,000 sq.ft. and would be charged a fee of $800, then an ADU 1,000 sq.ft. in size on that property would be charged a fee of $400.

3.7 Determination of Total Trips and Fee per Trip

As described earlier, the next step in the process is to determine the total number of trips for residential and non-residential development. This was done by multiplying the trip generation rate for each land use category (see Table 2.1) by number of new units of each land use type (see Table 2.2). The result is shown in Table 3.8.

Table 3.8 Total Trips by Land Use - Residential and Non-Residential Trips

Land Use Type	Unit	Daily Trip-Gen Rate	Estimated Split of Residential Units by Dwelling Type	# of new units	Dwelling Unit Equivalent (DUE)	Total New Trips
		(A)	(B)	(C)=(C_{Total})*(B)	(D)	(E)=(A)*(C)*(D)
Residential						
Single Family House	**DU**			**340**		**3,203**
Small (<1,500 sq.ft.)	DU	9.43	22%	75	0.83	585
Medium (1,500-2,500 sq.ft.)	DU	9.43	45%	153	1.00	1,443
Large (<2,500 sq.ft.)	DU	9.43	33%	112	1.11	1,174

Multi-Family	**DU**			**898**		**1,963**
Small (<1,500 sq.ft.)	DU	4.54	100%	898	0.48	1,963
Medium (1,500-2,500 sq.ft.)	DU	4.54	0%	0	0.58	0
Large (<2,500 sq.ft.)	DU	4.54	0%	0	0.64	0
Mobile Home in Park	**DU**			**251**		**1,470**
Small (<1,500 sq.ft.)	DU	7.12	63%	158	0.76	850
Medium (1,500-2,500 sq.ft.)	DU	7.12	37%	93	0.91	602
Large (<2,500 sq.ft.)	DU	7.12	1%	3	1.01	18
Senior Residential	**DU**			**390**		**672**
Small (<1,500 sq.ft.)	DU	3.78	40%	156	0.40	236
Medium (1,500-2,500 sq.ft.)	DU	3.78	37%	144	0.48	263
Large (<2,500 sq.ft.)	DU	3.78	22%	86	0.54	173
Total Residential Trips						**7,307**
Non-Residential						
Office	KSF	11.76		15		176
Medical Office	KSF	36.80		54		1,987
Industrial	KSF	4.75		0		0
Warehouse	KSF	3.56		0		0
Retail/Service - Low	KSF	21.63		35		746
Retail/Service - Medium	KSF	50.52		28		1,394
Retail/Service - High	KSF	91.96		7		635
Lodging	Rooms	4.21		0		0
Public & Quasi-Public	TSF	47.32		27		1,278
School K-8th Grade	Students	1.33		448		596
School 9-12th Grade	Students	1.69		0		0
College	Students	1.15		0		0
Total Non-Residential Trips						**6,812**

The amount potentially collectable by the LTMF ($3.0M, see Table 3.4) was multiplied by the percent attributable to residential and non-residential development (see Table 3.5) to find the fee-eligible costs for residential and non-residential development. This was then divided by the number of trips shown in Table 3.8 to determine the fee per EDU for residential developments and the fee per trip for non-residential developments (see Table 3.9). Lastly, the fee per trip end for residential units was multiplied by the daily trip generation rate of 9.43 to determine the fee per DUE (dwelling unit equivalent) for residential uses.

Table 3.9 LTMF Fee per Trip and Fee per EDU

Item	Formula	Total	Attributable to Residential Development	Attributable to Non-Residential Development
Total Project Costs	(A)	$3,056,004		
LTMF Fund Balance (Amount Collected)	(B)	$807,118		
Remaining Cost for Fee Collection	(C)	$2,248,886		
% Attributable by Category	(D)		86%	14%
Amount Attributable by Category	(E)=(C)*(D)		$1,936,765	$312,121
Trip Ends	(F)		7,307	6,812
LTMF per Trip End	**(G)=(E)/(F)**		**$265.06**	**$45.82**
LTMF per EDU	**(H)=(G_{RES})*9.43**		**$2,499**	

Note: 9.43 is the trip rate equivalent to a single family detached housing unit

Based on the fee per EDU and fee per trip from Table 3.9, the recommended changes in the LTMF are presented in Table 3.10:

– A 17% increase, from $2,140/EDU to $2,499/EDU, for medium-sized single family residential developments in western Nevada County. Note that this is lower than the effect of inflation (29%) described in Section 2.4 since the last fee update. When combined with the proposed increase in RTMF fees[9] the net result would be a 9% increase in the traffic impact fees paid by medium-sized single family residential developers.
– An 49% decrease, from $90.07/trip to $45.82/trip, for trips from non-residential developments in western Nevada County. When combined with the proposed decrease in RTMF fees the net result would be a 40% decrease in the traffic impact fees paid by non-residential developers.

[9] *Regional Transportation Mitigation Fee 2023 Nexus Study Update* (GHD, 2023).

Table 3.10 Calculation of Revised Fee Levels – Residential Uses

Land Use Category	Dwelling Unit Equivalents (DUE) (A)	Proposed Cost per DUE (B)	Proposed LTMF Fee per Unit (C)=(A)*(B)	Current LTMF Fee (D)	% Change in LTMF Fee (E)=(C)/(D)-1	Proposed RTMF Fee (F)	Current RTMF Fee (G)	% Change in RTMF Fee (H)=(F)/(G)-1	Proposed Total Fee (I)=(C)+(F)	Current Total Fee (J)=(D)+(G)	% Change in Total Fee (K)=(I)/(J)-1
Residential											
Single Family House											
Small (<1,500 sq.ft.)	0.83	$2,499	$2,075	$2,140	-3%	$4,030	$4,621	-13%	$6,104	$6,761	-10%
Medium (1,500-2,500 sq.ft.)	1.00	$2,499	$2,499	$2,140	**17%**	$4,868	$4,621	5%	$7,367	$6,761	9%
Large (<2,500 sq.ft.)	1.11	$2,499	$2,774	$2,140	**30%**	$5,396	$4,621	**17%**	$8,171	$6,761	**21%**
Multi-Family											
Small (<1,500 sq.ft.)	0.48	$1,203	$579	$1,481	-61%	$1,128	$3,199	-65%	$1,708	$4,680	-64%
Medium (1,500-2,500 sq.ft.)	0.58	$1,203	$698	$1,481	-53%	$1,363	$3,199	-57%	$2,061	$4,680	-56%
Large (<2,500 sq.ft.)	0.64	$1,203	$775	$1,481	-48%	$1,511	$3,199	-53%	$2,286	$4,680	-51%
Mobile Home in Park											
Small (<1,500 sq.ft.)	0.76	$1,887	$1,425	$1,122	**27%**	$2,775	$2,422	**15%**	$4,200	$3,544	**19%**
Medium (1,500-2,500 sq.ft.)	0.91	$1,887	$1,717	$1,122	**53%**	$3,352	$2,422	**38%**	$5,069	$3,544	**43%**
Large (<2,500 sq.ft.)	1.01	$1,887	$1,906	$1,122	**70%**	$3,716	$2,422	**53%**	$5,622	$3,544	**59%**
Senior Residential											
Small (<1,500 sq.ft.)	0.40	$1,001	$401	$801	-50%	$780	$1,728	-55%	$1,181	$2,529	-53%
Medium (1,500-2,500 sq.ft.)	0.48	$1,001	$483	$801	-40%	$942	$1,728	-45%	$1,425	$2,529	-44%
Large (<2,500 sq.ft.)	0.54	$1,001	$536	$801	-33%	$1,045	$1,728	-40%	$1,580	$2,529	-38%
Accessory Dwelling Unit (ADU)											
< 750 sq.ft.	Exempt					Exempt			Exempt		
> 750 sq.ft.	Fee is based on the ratio of its floor area in relation to the primary unit, multiplied by the fee that the primary unit would pay, if it was being built today. (LTMF for primary unit (C)) x (ADU sq.ft. divided by primary unit sq.ft.)					Fee is based on the ratio of its floor area in relation to the primary unit, multiplied by the fee that the primary unit would pay, if it was being built today. (RTMF for primary unit (F)) x (ADU sq.ft. divided by primary unit sq.ft.)					

Table 3.11 Calculation of Revised Fee Levels – Non-Residential Uses

Land Use Category	Proposed Fee per Trip End (A)	Proposed Trip-Gen Rate (B)	Proposed LTMF Fee per Unit (C)=(A)*(B)	Current LTMF Fee (D)	% Change in LTMF Fee (E)=(C)/(D)-1	Proposed RTMF Fee (F)	Current RTMF Fee (G)	% Change in RTMF Fee (H)=(F)/(G)-1	Proposed Total Fee (I)=(C)+(F)	Current Total Fee (J)=(D)+(G)	% Change in Total Fee (K)=(I)/(J)-1
Non-Residential											
Office	$46	11.76	$539	$1,034	-48%	$755	$1,033	-27%	$1,294	$2,067	-37%
Medical Office	$46	36.80	$1,686	$3,030	-44%	$755	$1,033	-27%	$2,441	$4,063	-40%
Industrial	$46	4.75	$218	$478	-54%	$281	$457	-38%	$499	$935	-47%
Warehouse	$46	3.56	$163	$319	-49%	$211	$305	-31%	$374	$624	-40%
Retail - Low	$46	21.63	$991	$2,140	-54%	$1,280	$2,047	-37%	$2,271	$4,187	-46%
Retail - Medium	$46	50.52	$2,315	$4,574	-49%	$2,990	$4,373	-32%	$5,305	$8,948	-41%
Retail - High	$46	91.96	$4,213	$8,111	-48%	$5,443	$7,754	-30%	$9,657	$15,865	-39%
Lodging	$46	4.21	$193	$578	-67%	$249	$553	-55%	$442	$1,131	-61%
Public & Quasi-Public*	Exempt		Exempt			Exempt				Exempt	
School K-8th Grade*	Exempt		Exempt			Exempt				Exempt	
School 9-12th Grade*	Exempt		Exempt			Exempt				Exempt	
Public College*	Exempt		Exempt			Exempt				Exempt	

3.8 Revenues Raised by the LTMF Program

Based on the number of new units of development shown in Table 2.2 and the recommended fee schedule shown in Table 3.10, the total fee revenue expected to be generated by the LTMF in the next 20 years is $2.1 million, as shown in Table 3.12. Note that this is 4% less than the $3M in project costs attributable to new development shown in Column G of Table 3.4. This is because public-sector developments are exempt from the LTMF, and their share of the costs cannot legally be transferred to others development since the latter are responsible only for mitigating their own impacts.

Table 3.12 Forecast of LTMF Revenues

Land Use Category	LTMF/ Trip End	Trip-Gen Rate	LTMF/ Unit	Expected # of New Units	Expected Revenues	Percent of Revenues
	(A)	(B)	(C)=(A)*(B)	(D)	(E)=(C)*(D)	
Residential						
Single Family House	$265.06	9.43	$2,499	340		
Small (<1,500 sq.ft.)		83%	$2,075	22%	$155,178	7%
Medium (1,500-2,500 sq.ft.)		100%	$2,499	45%	$382,420	18%
Large (<2,500 sq.ft.)		111%	$2,774	33%	$311,290	14%
Multi-Family	$265.06	4.54	$1,203	898		
Small (<1,500 sq.ft.)		48%	$579	100%	$520,252	24%
Medium (1,500-2,500 sq.ft.)		58%	$698	0%	$0	0%
Large (<2,500 sq.ft.)		64%	$775	0%	$0	0%
Mobile Home in Park	$265.06	7.12	$1,887	251		
Small (<1,500 sq.ft.)		76%	$1,425	63%	$225,320	10%
Medium (1,500-2,500 sq.ft.)		91%	$1,717	37%	$159,435	7%
Large (<2,500 sq.ft.)		101%	$1,906	1%	$4,783	0%
Senior Residential	$265.06	3.78	$1,001	390		
Small (<1,500 sq.ft.)		40%	$401	40%	$62,486	3%
Medium (1,500-2,500 sq.ft.)		48%	$483	37%	$69,638	3%
Large (<2,500 sq.ft.)		54%	$536	22%	$45,961	2%
			Total for Residential >		**$1,936,765**	**90%**
Non-Residential						
Office	$45.82	11.76	$539	15	$8,079	0%
Medical Office	$45.82	36.80	$1,686	54	$91,050	4%
Industrial	$45.82	4.75	$218	0	$0	0%
Warehouse	$45.82	3.56	$163	0	-$16	0%
Retail - Low	$45.82	21.63	$991	35	$34,183	2%
Retail - Medium	$45.82	50.52	$2,315	28	$63,887	3%
Retail - High	$45.82	91.96	$4,213	7	$29,073	1%
Lodging	$45.82	4.21	$193	0	$0	
Public & Quasi-Public	Exempt	47.32	$0	27	$0	
School K-8th Grade	Exempt	1.33	$0	448	$0	
School 9-12th Grade	Exempt	1.69	$0	0	$0	
Public College	Exempt	1.15	$0	0	$0	
			Total for Non-Residential >		**$226,256**	**10%**
				Total Expected Revenue ->	**$2,163,020**	
As a Percentage of Project Costs Attributable to New Development >					**96%**	

4. Mitigation Fee Act Findings

The Mitigation Fee Act, as set forth in the California Government Code Sections 66000 through 66008, establishes the framework for mitigation fees in the State of California. The Act requires agencies to make certain findings with respect to a proposed fee. These are described in the sections below.

4.1 Purpose of the Fee

Identify the purpose of the fee

The purpose of the LTMF is to mitigate the cumulative impacts of future developments on traffic conditions on roads in unincorporated Nevada County. The fees will help fund improvements needed to maintain the target level of service in the face of the higher traffic volumes brought on by new developments.

4.2 Use of Fee Revenues

Identify the use to which the fees will be put. If the use is financing facilities, the facilities shall be identified

The list of projects to receive LTMF funding is shown in Table 3.4. We recommend that the LTMF should be used only for non-State roads in the city. NCTC has a complementary program (the RTMF) to mitigate cumulative traffic impacts on state roads in the county.

4.3 Use/Type of Development Relationship

Determine the reasonable relationship between the fees' use and the type of development project on which the fees are imposed

To determine the "use" relationship, the development being assessed an impact fee must be reasonably shown to derive some use or benefit from the facility being built using the fee. In the case of the LTMF the projects that will be funded are high-priority roads means that all of the county's new residents and businesses will benefit in important ways from the maintenance of a reasonable level of service. Most drivers in the new developments can be expected to use these roads regularly, and those that do not will nevertheless benefit because good traffic conditions on the LTMF-funded roads will keep drivers from diverting to other roads and causing congestion in other parts of the county. Even residents or workers in the new developments who do not drive at all will benefit from access to goods and services made possible in part by the serviceability of the Nevada County road network.

4.4 Need/Type of Development Relationship

Determine the reasonable relationship between the need for the public facilities and the types of development on which the fees are imposed

To determine the "need" relationship, the facilities to be financed must be shown to be needed at least in part because of the new development. This was determined by analyzing the forecast traffic demand with the expected degree of new development and comparing that with the demand without new development. Projects were analyzed individually and the degree to which the need for the project was attributable to new development varied from project to project (see Table 3.1, Table 3.2, and Table 3.4). The growth in vehicle trips and the increases in congestion at project sites are evidence that new developments contribute towards the need for roadway improvements.

4.5 Proportionality Relationship

Determine how there is a reasonable relationship between the fee amount and the cost of the facilities or portion of the facilities attributable to the development on which the fee is imposed

The “proportionality” relationship requires that there be rough proportionality between the fee charged to each type of development and the cost of the facility being financed. In the case of the LTMF the differences in the traffic generated by different types of development were factored into the fee to be charged for each type, as is described earlier in this report. Within each land use category, the size of the project, i.e., the number of dwelling units constructed or size of the building, is accounted for in assessing the fee. This ensures that projects that generate a lot of traffic and therefore have a greater traffic impact will pay more than other projects that have less impacts.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