



SAN RAFAEL CITY COUNCIL AGENDA REPORT

Department: Public Works

**Prepared by: Bill Guerin,
Director of Public Works**

City Manager Approval: _____

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TOPIC: TRAFFIC MITIGATION FEES

SUBJECT: ANNUAL TRAFFIC MITIGATION FEE REPORT - FY 2021-22

RECOMMENDATION: Accept the Annual Traffic Mitigation Fee Report.

BACKGROUND: Traffic mitigation fees are a type of development impact or public facility fee. They are charged by a local governmental agency to an applicant in connection with the approval of a development project. They are not a tax or special assessment. Rather, their purpose is to offset the cost of public facilities made necessary by the development project. Traffic Mitigation Fees are collected to provide funds for increasing street capacity to accommodate additional traffic generated by new development. [Assembly Bill \(AB\) 1600](#) (California Government Codes §66000 – 66025) established requirements for how cities collect, maintain, and spend impact fees.

Impact fees must demonstrate a reasonable connection between the fee charged and the cost of the improvements for which they are collected, must be deposited in a separate account, segregated from the City's general fund, and used only for the identified improvements. AB 1600 requires cities to spend or commit the fees within five years of collection or return them to the developer unless a finding can be made that a reasonable relationship continues to exist between the current need for the fee and the purpose for which it was originally collected (Gov. Code §66001(d)).

Following the direction of the General Plan 2040, the Traffic Impact Fee was updated by the City Council by Resolution No. 14983 adopted on October 4, 2021. The update was based on a nexus study conducted by Fehr and Peers Consultants. The nexus report justified the increase of the trip rate to \$6,909. The City Council directed that this fee be implemented gradually over a five-year period starting in January 2022 and provided for an annual adjustment of the fee according to the Lee Saylor Construction Cost Index.

Of the City's various development fees, the Traffic Mitigation Fee is the only such fee subject to AB 1600 reporting. Pursuant to Government Code Section §66006, cities must publish annual reports on these fees, which are to be available to the public.

FOR CITY CLERK ONLY

Council Meeting:

Disposition:

ANALYSIS: The Traffic Mitigation Fee report consists of the following required seven elements pursuant to Government Code Section §66006:

1. *Fee description:* The Traffic Mitigation Fee is charged to new development projects. It is intended to pay for those circulation system improvements identified in General Plan 2040 needed to accommodate the proposed development, including additional improvements that may become necessary in the long-term and are desirable to enhance San Rafael’s circulation system.
2. *Amount of the fee:* Following the City Council’s October 4, 2021 increase of the fees, each new A.M. and P.M. peak hour trip generated by a development is charged a fee according to the following schedule:

	5 Year Option
Year 1 – January 1, 2022	\$4,779
Year 2 – January 1, 2023	\$5,312*
Year 3 – January 1, 2024	\$5,845*
Year 4 – January 1, 2025	\$6,378*
Year 5 – January 1, 2026	\$6,909*

*This amount does not include the approved Construction Cost Index annual adjustment.

Fees are calculated based on land use types and their estimated trips generated.

3. *The following is a table summarizing the beginning and ending year fund balance, as well as specific revenues and expenditures for Traffic Mitigation Fund #246 for FY 21.*

Fund 246 (Traffic Mitigation Fund) balance July 1, 2020	\$2,150,944
Revenue (20/21)	
• Interest income	\$3,582
• Traffic Mitigation Fees	\$1,870,288
Total Revenue	\$1,873,870
Expenditures (20/21)	
• <i>Capital Projects</i>	
2 nd and 3 rd Street Queue Cutters #11335	\$7,640.00
Innovative Deployment of Enhanced Arterials (IDEA) #11348	\$987,684.55
Second Street Intersection Improvement #11369	\$157,609.90
C & D Street Two-Way Conversion #11378	\$83,284.26
TAM Safe Pathways to Schools Program #11379	\$52,259.97
Grand Avenue Protected Two-Way Cycle Track #11393	\$24,660.00
Miscellaneous Traffic Signal Improvements (Operational)	\$120,191.70
Total Expenditures	\$1,433,330
Net Change Fund Activity	\$440,540
Fund Balance June 30, 2021	\$2,591,484

4. *List of improvements on which fees were expended, amount of expenditure and total percentage of cost covered by fee:* A list of all major planned circulation improvements identified in the

General Plan is provided in Attachment 1 of this report. Following are the projects for which Traffic Mitigation Fees were used during the 2020-21 fiscal year:

- a. 2nd and 3rd Street Queue Cutters (#11335) – In preparation for the extension of SMART to Larkspur, which includes rail line crossing Second and Third Streets, the City needed to make signalization improvements. Design was started in FY 2017-18, and construction was awarded by the City Council on [December 3, 2018](#). There is limited remaining signal work to improve safety.
- b. Innovative Deployment of Enhanced Arterials (IDEA) Grant (#11348) – San Rafael is a successful recipient of the [Innovative Deployment of Enhanced Arterials \(IDEA\)](#) grant, funded by the Metropolitan Transportation Commission (MTC). On January 10, 2018, MTC awarded the City \$830,000 to develop and implement an [Automated Traffic Signal Performance Measures \(ATSPM\) system](#), with \$365,856 in matching local funds, for a total project budget of \$1,195,856. This system consists of a network of cameras at intersections in combination with an analytic program that measures traffic volumes, provides approach delay per vehicle, reports arrivals on red, pedestrian delay, and highly sophisticated coordination data. Once installed, data collected from the ATSPM can be used to more accurately program and time the traffic signals based on historical traffic patterns in Central San Rafael. The ATSPM system benefits all users, including vehicles, bicyclists, and pedestrians. [On June 1, 2020](#), the City Council authorized the execution of an agreement with Mike Brown Electric for work on this project.
- c. Second Street Intersection Improvements (#11369) – Second Street is a major thoroughfare through Downtown San Rafael. This project rehabilitated critical intersections and includes pavement resurfacing, wheelchair ramps, and traffic signal upgrades with new communication equipment.
- d. C & D Street Two-Way Conversion (#11378) – This project involved the conversion of C and D Streets from one-way streets to two-way streets between Fifth Avenue and First Street/Second Street to improve access for emergency vehicles and greatly help with emergency response time, especially for vehicles located at the Public Safety Center. The contract for construction was awarded at the regular [June 15, 2020 City Council meeting](#). This project was partially funded (\$45,000) by Traffic Mitigation fees, as the traffic signal upgrades that are a part of the project are improvements identified in Exhibit 21 of the 2020 General Plan.
- e. TAM Safe Pathways to Schools Program (#11379) – San Rafael was successful in receiving Safe Pathways grant funding through the Transportation Authority of Marin (TAM) for improvements at locations within school zones. TAM administers the Safe Routes to Schools Program, which works to relieve traffic congestion around schools by promoting alternatives to commuting to school, such as walking, biking, taking the bus and carpooling.
- f. Grand Avenue Protected Two-Way Cycle Track (#11393) – The City plans to construct a protected two-way cycle track and widened sidewalk on the east side of Grand Avenue from Second Street to Fourth Street. This would achieve the goal of getting bicyclists and pedestrians to and from Fourth Street, the main east-west multi-modal route through town. This segment is also a project in the [Bicycle and Pedestrian Master Plan, 2018 Update](#).

5. *Approximate date by which construction will commence when City has determined that sufficient funds have been collected:* See No. 4 above. Projects identified in General Plan 2040 are major infrastructure improvements which often require substantial state and federal funding in addition to Traffic Mitigation resources. Scheduling of those projects therefore depends upon the availability of these supplemental funds.
6. *Any interfund loan or transfer, including the public improvement where it will be spent:* No transfers were made.
7. *Refunds made due to sufficient funds being collected:* No refunds were made.

An analysis of the accumulated fund balance follows. A first in, first out (FIFO) accounting method assumes the first revenue collected is the first spent. Staff analyzed the annual balances for the past 5 fiscal years and determined that no funds have been held for more than 5 years, as shown in the following table:

Traffic Mitigation Fund #246

Revenues only:

0-1 Year	1-2 Years	2-3 Years	3-4 Years	4-5 Years	5+ Years
Unspent & received in FY 20-21	Unspent & received in FY 19/20	Unspent & received in FY 18-19	Unspent & received in FY 17-18	Unspent & received in FY 16-17	Unspent & received 1/1/89 to 6/30/16
1,873,870	573,818	2,438,253	896,147	382,554	(3,573,158)

As evidenced by the projects described above, current traffic improvement projects underscore the connection between the current need for the fees and the purpose for which they were originally collected. The City anticipates the following projects will continue to incur Traffic Mitigation Funds expenses in FY 2021-22:

- TAM Safe Pathways to Schools Program (#11379)
- IDEA Grant (#11348)
- Grand Avenue Protected Two-Way Cycle Track (#11393)

While these are the projects currently under construction, it is worth noting that the total cost of the Citywide Project List eligible for Traffic Mitigation Fees is estimated at \$85.66 million of which (28%) would come from traffic mitigation fees.

FISCAL IMPACT: There is no fiscal impact associated with accepting the report.

OPTIONS:

- Accept the report as recommended.
- Do not accept the report.

RECOMMENDED ACTION: Accept the Traffic Mitigation Fee Report.

ATTACHMENTS:

1. City of San Rafael Transportation Fee Nexus Report. June 2021
2. Exhibit 21 General Plan 2020

Draft Report

City of San Rafael Transportation Fee Nexus Report



June 2021

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1. Introduction

Background and Purpose

The Traffic Mitigation Fee (TMF) on development projects in San Rafael was last updated by the City Council on November 15, 2004. The fee was updated in conjunction with the San Rafael General Plan 2020 that was also adopted by the City Council in 2004, with the purpose of providing funds to support implementation of improvements identified in the Circulation Element due to the potential impacts of projected future development.

The purpose of this report is to serve as the necessary documentation to allow the City to update the existing citywide TMF program in conjunction with the current update to the General Plan and preparation of a Downtown Precise Plan. The City of San Rafael TMF is based on multiplying the number of net new peak hour trips (AM plus PM peak hours) for a project by the fee of \$4,246 per trip. The fee of \$4,246 per trip has not changed since 2004.

Impact fees are established under a state law known as Assembly Bill (AB) 1600, the Mitigation Fee Act. Fees charged pursuant to this legislation are used to build capital facilities needed to offset the impacts generated by new development. It is common practice throughout California for local jurisdictions to establish impact fee programs to fund the construction of several types of public infrastructure and facilities; one common type of fee program is a transportation impact or mitigation fee, which generates funds that are used to construct infrastructure and provide facilities that support the transportation needs of new residents and businesses.

Per the requirements of AB 1600, each impact fee program must be supported by a “nexus” analysis, which is a rational and documented set of procedures by which the agency establishes that there is a reasonable relationship (or “nexus”) between anticipated future development in the jurisdiction, the need for new infrastructure to support that development, and the fees that will be charged to help fund that infrastructure. Thus, the technical reports (such as this report) that are prepared to support a fee program are commonly called nexus studies.

Study Area

This nexus study addresses anticipated future development in the incorporated City of San Rafael as well as in the sphere of influence (SOI) area that immediately surrounds the incorporated city.

Organization of the Report

After this introductory section, the report contains four additional sections:

- *Section 2* – Project List describes the list of capital improvement projects that would be included in the program.
- *Section 3* – Growth Projections documents the amount of growth anticipated over the next twenty years in the geographic areas that would be covered by the Citywide TMF.
- *Section 4* – Nexus Analysis and Fee Calculations describes the results of the nexus analysis and calculates the fee amounts using the information presented in the report.
- *Section 5* – Summary of Required Program Elements summarizes how the information in this report satisfies the requirements of the Mitigation Fee Act (AB 1600).

2. Project List

The General Plan Update team comprised of City staff collaborated to develop a list of capital improvement projects for inclusion as part of the Citywide TMF. The projects reflect the goals and objectives in the General Plan Circulation Element, with particular emphasis on improving traffic flow and reducing conflicts for vehicles, bicyclists and pedestrians through the application of intersection improvements such as constructing roundabouts, additional turn and merge lanes, and other facilities that would smooth traffic flow and reduce exposure of more vulnerable road users. Priority was given to projects that are located on the City's arterial and collector streets, defined as existing roadways that serve as primary travel routes to and through the City.

Table 1 contains a description of each project along with its estimated cost. The projects in Table 1 are broken down into the following six categories.

- Interchange Projects
- Downtown Area Improvements
- Active Transportation (Pedestrian/Bicycle) Improvements
- Complete Streets & Corridors
- Intersection Improvements
- Smart Infrastructure (Technology)

A total of 16 projects or programs are listed within the six categories listed above. As noted in Table 1, 12 of the 16 projects or programs are included in the current Citywide TMF.

The four projects that are added to the current Citywide TMF are as follows.

- Downtown San Rafael Remaining One-Way Street Conversions – as described in Downtown Precise Plan, convert one-way segment of B Street to two-way operation
- US 101/Downtown San Rafael Interchange – improvements to local road segments and intersections along Irwin Street, Hetherton Avenue, 2nd Street, and 3rd Street in the vicinity of the Downtown northbound and southbound ramps to US 101
- Fourth Street (West End) Intersection Realignment – realignment of Fourth Street/Second Street/Marquard Avenue intersection per alternatives developed for the 3rd Street
- Fourth Street Multimodal Improvements – as described in Downtown Precise Plan, improve pedestrian and bicycle connections while maintaining high quality transit route along 4th Street

The above four improvements are identified to serve planned residential and employment growth in Downtown San Rafael as identified in both the General Plan Update and Downtown Precise Plan. PM peak hour volumes on the segments of 2nd Street, 3rd Street, 4th Street, Irwin Street, and Hetherton Avenue that are part of the four new above projects are forecast to increase from 16 percent to 29 percent from existing to 2040 conditions due to planned growth.

Table 1: City of San Rafael Citywide TMF Project List

#	DESCRIPTION	COST (\$M)
1. INTERCHANGE PROJECTS		
Includes modifications to interchanges for capacity, safety, access, and improved circulation		
1A ¹	US 101/Freitas Parkway Interchange West. Reconfigure the US 101 off-ramp / Freitas Parkway (Del Presidio) and Northgate Rd/ Freitas Parkway intersection to address safety, circulation, and capacity issues. Improvements would be coordinated with ongoing development plans and anticipated Northgate Specific Plan/ Precise Plan process where appropriate.	\$15
1B ¹	US 101/ Freitas Parkway Interchange East. Reconfigure the US-101 NB off-ramp/Civic Center Drive intersection to address safety, circulation, and capacity issues. Improvements would be coordinated with ongoing development plans and Northgate PDA, and future planning process where appropriate.	\$15
1C ¹	Smith Ranch Road/Lucas Valley Road Multimodal Improvements at US 101. Road widening and additional lane capacity from Los Gamos to Redwood Highway. Improve pedestrian and bicycle access across the US-101 underpass by reconstructing the bridge to provide dedicated bicycle facilities and wider pedestrian sidewalks.	\$6
Category 1 Subtotal		\$36
2. DOWNTOWN AREA IMPROVEMENTS		
Includes improvements in the downtown area as defined by the Downtown Precise Plan area. Projects and improvements may include projects from other adopted City plans but is intended to include improvements to meet the vision, goals, and objectives of the Downtown Precise Plan.		
2A	Downtown roadway and intersection improvements (traffic signals, roundabouts, pedestrian/bicycle, ADA, and/or turn lane modifications) and improvements to gateway streets to Downtown, including: <ul style="list-style-type: none"> ▪ Downtown San Rafael Remaining One-Way Street Conversions, per Downtown Precise Plan ▪ New traffic control devices¹ (e.g., traffic signal, roundabout, or other devices) at Fifth Ave/H St, First St/C St, First St/D St, Fourth St/Union St, and Mission Ave/Court St 	\$4
2B	US 101/ Downtown San Rafael Interchange. Improvements to Irwin St, Hetherton Ave, 2nd St, and 3rd St in the vicinity of the NB off-ramp and SB on-ramp.	\$10
2C	Fourth Street (West End) Intersection Realignment. Re-align Fourth Street/Second Street/Marquard Avenue intersection.	\$6
2D ¹	Second Street Multimodal Improvements. Improve Second Street corridor operations while addressing pedestrian and bicycle safety at crossing locations, and widen sidewalks and remove parking where feasible	\$6
2E	Fourth Street Multimodal Improvements. Improve pedestrian and bicycle connections while maintaining high quality transit route along 4th Street. Improvements include converting parking to loading, widening sidewalks, and improving the bus and bike experience. Also Includes 4th Street signal and ADA upgrades.	\$13
Category 2 Subtotal		\$43
3. ACTIVE TRANSPORTATION (PEDESTRIAN/BICYCLE) IMPROVEMENTS		
Includes multimodal improvements and programs with a focus on pedestrian and bicycle improvements identified in the Bicycle & Pedestrian Master Plan.		

Table 1: City of San Rafael Citywide TMF Project List

#	DESCRIPTION	COST (\$M)
3A ¹	Includes various projects identified in the 2018 BPMP, consistent with the priorities expressed in that Plan.	\$9.6
Category 3 Subtotal		\$9.6
4. COMPLETE STREETS & CORRIDORS		
Corridor level improvements including reconstruction of sidewalks, streets, pavement, signing, striping, and crossing improvements, with the objective of improving peak hour traffic flows and accommodate modes other than just motorized vehicles.		
4A ¹	Lincoln Avenue Peak Period Lanes/Parking Restrictions. Extend the existing PM peak period parking restrictions, to allow for two lanes in each direction during both AM and PM peak periods, from Hammondale Court/SB US 101 ramps to Mission Ave. Provide additional parking in corridor. Include ADA upgrades, crossing improvements, and other multimodal improvements/accommodations.	\$4.6
4B ¹	Northgate Area Intersection and Complete Streets Improvements. Includes Las Gallinas/Northgate and Las Gallinas/Del Presidio intersections. Also includes improvements to Las Gallinas Avenue and Los Ranchitos Road, Northgate Drive, and Del Presidio Blvd, and continued development of North San Rafael Promenade. Additional improvements to be identified through future PDA planning process.	\$2.3
4C ¹	Francisco Boulevard East Corridor Improvements. Increase capacity from Bellam to Grand Avenue bridge and install signal, ADA, and pedestrian improvements at Harbor St. Additional improvements to be identified through future PDA planning process.	\$10.2
Category 4 Subtotal		\$17.1
5. INTERSECTION IMPROVEMENTS		
Intersection improvements including new traffic signals, intersection realignments/reconfigurations, and other major changes to spot locations that are outside the Downtown Precise Plan area.		
5A ¹	Fourth Street (Miracle Mile) Intersection Improvement. Improve performance of Fourth Street signal at Ross Valley Dr and Santa Margarita Dr, including ADA upgrades.	\$0.5
5B ¹	Lincoln/DuBois/Irwin. New signal, roundabout, or other intersection improvement to improve safety and traffic flow.	\$2.5
Category 5 Subtotal		\$3.0
6. SMART INFRASTRUCTURE (TECHNOLOGY)		
Traffic signal and communication infrastructure upgrades, including monitoring equipment, fiber optic/communication systems, and other technology enhancements to facilitate smart management of transportation system.		
6A ¹	Intersection Technology. Traffic signal equipment, cameras, modems, wireless, Bluetooth, automated data collection, etc.	\$4.0
6B ¹	Corridor Communication System. Fiber optic cable and conduit along major arterials and central City system upgrades.	\$2.0
Category 6 Subtotal		\$6.0
TOTAL		\$114.7

¹ Project in current transportation mitigation fee program.

3. Growth Projections

An important element of every fee calculation is the estimate of future growth in the fee area. The growth forecasts that are used in this nexus study are based on the existing and 2040 forecasts from the preferred land use alternative for San Rafael General Plan 2040, as shown in **Table 2**.

The land use data shown in Table 2 was incorporated into the Transportation Authority of Marin Travel Demand Model (TAMDM) and forecasts of person trips and vehicle trips prepared for both the base year and 2040 scenarios. The forecast growth in the number of net new AM and PM peak vehicle hour trips was extracted from the model, as the current City of San Rafael TMF is based on multiplying the number of net new peak hour vehicle trips (AM plus PM peak hours) for a project by the fee of \$4,246 per vehicle trip. As shown in Table 1, a total of 3,513 net new vehicle trips are forecast to be added to the street network for a typical weekday based on growth in the City of San Rafael over the next 20 years. This represents the total number of net new peak hour vehicle trips estimated to occur because of new development in San Rafael and will be the basis for calculating the updated fee.

Table 2: Projected Growth in San Rafael

	INCORPORATED CITY	SOI AREA	TOTAL CITY + SOI
POPULATION			
Existing	61,230	14,521	75,751
2040	69,240	15,421	84,661
Growth	8,010	900	8,910
EMPLOYMENT			
Existing	42,050	2,150	44,200
2040	46,100	2,215	48,315
Growth	4,050	65	4,115
SERVICE POPULATION (POPULATION + EMPLOYMENT)			
Existing	103,280	16,671	119,951
2040	115,340	17,636	132,976
Growth	12,060	965	13,025
Projected Growth in New AM Peak Hour plus PM Peak Hour Trips for a Typical Weekday (2020-2040)			3,513

Source: Trip growth from TAM Marin County Travel Demand Model (TAMDM) based on the San Rafael Plan 2040 population and employment growth forecasts, Fehr & Peers.

4. Nexus Analysis and Fee Calculations

Analysis of Future Usage

A key part of the nexus study process is to conduct an analysis of the future usage of the TMF facilities to establish a relationship between the travel needs generated by new development in San Rafael and the facilities that are proposed to be improved through application of fee revenues. A common practice in nexus studies is to use a travel demand model for this purpose. Below we present a brief introduction to travel demand models, followed by a description of the process used to conduct this nexus analysis and the results.

Brief Description of Travel Demand Models

Travel demand models are developed by transportation planners and engineers with specific training in this field. The models are built using specialized software and a wide range of data about the existing transportation system. This data includes Geographic Information Systems (GIS) data about the locations and characteristics of all the streets and highways in the study area, data about the types of land uses (e.g., single-family homes, retail shops, office buildings, etc.) located in the study area, data about the socioeconomic characteristics (such as age, income, and employment status) of the people living in the study area, and survey data about how people with varying characteristics tend to travel. Once the input data is developed and checked, the model is calibrated to reflect existing travel patterns; that is, the mathematical procedures applied within the model are adjusted until the model's outputs (such as traffic volumes and speeds on each road) match reasonably well with actual observations.

At that point, the model is considered ready for use in analyzing future scenarios. Model inputs can be changed to reflect different possible futures, and then the outputs are examined to see how future travel patterns might change in response to those different scenarios. For example, there may be a proposal to build a group of new office and retail buildings on a site that is currently vacant; the model inputs can be adjusted to reflect that proposed new development (size of the new buildings, types of uses, etc.), and then the model will be applied to see how the traffic volumes in that vicinity might be expected to change.

Modeling in Marin County

The travel model that is currently used for transportation planning purposes in Marin County is developed and maintained by the Transportation Authority of Marin (TAM) and is referred to as the Transportation Authority of Marin Travel Demand Model (TAMDM). TAM has maintained a travel model for many years and applies industry-standard model development and calibration procedures. The TAMDM was most

recently updated in 2019 and the most current available version of the model has been used for this nexus analysis. The horizon year of the model is year 2040.

Procedure for Analyzing Future Usage

For the purposes of a nexus analysis, a model is used to determine the linkage between traffic coming from the geographic areas subject to the TMF and the usage of the specific facilities that are going to be funded with TMF revenues. In a travel demand model, roads and intersections are represented by a network of “links” and “nodes”; in general, each link represents a road segment and each node (i.e., a location where two links are joined) represents an intersection. For each of the projects included in the Citywide TMF program, the links in the model network that represent that project location were identified. Then, “select link” model runs were conducted for each of the proposed TMF projects. The select link analysis identifies the origins and destinations of each vehicle that is projected to use each selected link; with this information, the fair share of cost associated with each project can be allocated to development in San Rafael and included in the impact fee.

For the fair share calculations for the San Rafael TMF programs, there are four types of trips identified through the select link process:

1. Trips that both start and end in San Rafael;
2. Trips that have an origin in San Rafael and a destination elsewhere;
3. Trips that have a destination in San Rafael and an origin elsewhere; and,
4. Trips that have neither an origin nor a destination in San Rafael but are using roads that pass-through San Rafael (also referred to as “pass-through” trips).

Trips that fall into the final category, “pass-through” trips, should not be included in the fee program because those trips are not related to San Rafael development that is subject to the fee. Trips from the other three categories are attributable to development in San Rafael and thus can be included in the TMF calculations.

Results of Analyzing Future Usage

The results are shown in **Table 3**. The column titled “Proportion of 2040 Trips from City and SOI Areas” shows the percentage of traffic on each facility that falls within the first three categories described above (i.e., the traffic that is linked to development in San Rafael). That percentage is then applied to the estimated cost for each project to determine the dollar amount that is considered eligible for inclusion in the TMF program.

It should be noted that the intent of this analysis is solely for the purposes of the TMF nexus analysis. The primary result is the percentage of trips projected to use each facility that are linked to development in San Rafael. It is not intended for these results to be used to determine the appropriate size or configuration for any particular facility.

Table 3: Eligible TMF Costs: Future Trip Allocation for City of San Rafael and SOI Zones

Number	Category	Total Cost Estimate (2020 \$)	Proportion of 2040 Trips from City and SOI Zones	Cost Eligible for Citywide TMF
1	Interchange Projects	\$36 M	89%	\$32.2 M
2	Downtown Area Improvements	\$43 M	64%	\$28.0 M
3	Active Transportation (Pedestrian/Bicycle)	\$9.6 M	60%	\$ 5.7 M
4	Complete Streets & Corridors	\$17.1 M	84%	\$14.3 M
5	Intersection Improvements	\$3.0 M	75%	\$ 2.2 M
6	SMART Infrastructure (Technology)	\$6.0 M	60%	\$ 3.6 M
TOTAL		\$114.7 M		\$85.66 M

Fee Amounts

Table 4 displays the calculated impact fees. These fees have been calculated based on the list of projects as shown in Table 1, and the projected number of new daily trips as shown in Table 2. Based on consultation with City staff, it was determined that \$90 million in revenues (or about 78 percent of the total program cost) would be acquired from other revenue sources such as federal, state, and regional grant programs as well as public benefit contributions from large developments.

The result of the calculations is a fee per new peak hours trip that would be applied to applicants for new building permits in San Rafael. The fee below represents a 63 percent increase in the current fee program that has not been updated since November 2004. The 2004 TMF update included a provision for the traffic mitigation fee to be adjusted annually to account for inflation based on a construction cost index. The National Highway Construction Cost Index (NHCCI) maintained by the Federal Highway Administration (FHWA) indicates that the cost for construction increased 72 percent from 2004 through 2020.

Table 4: Calculation of San Rafael TMF Fees

Calculation	Value
Total Estimated TMF Project Costs	\$114,700,000
Total Funds from Other Revenue Sources	\$ 90,430,000
Total Cost of Projects Funded by TMF (note: this represents about 28 percent of the \$85.66 million eligible for Citywide TMF per Table 3 above)	\$ 24,270,000
Divided by Growth in AM and PM Peak Hour Trips (20 years)	3,513
Fee per Net New AM and PM peak Hour Trip	\$6,909

Fee Update Implementation

Two alternatives for implementing the updated transportation fees are presented in **Table 4** for consideration. Option A would involve a one-time adjustment of the current fee of \$4,246 per AM and PM peak hour trip to \$6,900 as shown in Table 4. This one-time adjustment would result in a fee that would be slightly less than an updated amount adjusted for inflation since the fee was last updated in 2004, which would be approximately \$7,300 based on the National Highway Construction Cost Index (NHCCI) maintained by the Federal Highway Administration (FHWA). Option B would involve pro-rating the one-time adjustment in Option A over three years.

Table 5: Options for Implementing Updated Transportation Fees

YEAR	UPDATED FEES WITH IMPLEMENTATION OPTIONS	
	Option A: One-Time Increase	Option B: Increase Pro-rated Over 3 Years
2021	\$6,909	\$5,134
2022	Adjusted each year based on prior year inflation	\$6,021
2023		\$6,909
2024		Adjusted each year based on prior year inflation
2025		
2026		

¹ The average annual inflation rate based on the National Highway Construction Cost Index (NHCCI) maintained by the Federal Highway Administration (FHWA) from 2004 through 2020 was 4.5 percent.

5. Summary of Required Program Elements

This report has provided a detailed discussion of the elements of the San Rafael Transportation Mitigation Fee program and explained the analytical techniques used to develop this nexus study. The report addresses all of the fee program elements required by AB 1600, as summarized below.

1. *Identifying the purpose of the fee*

The City of San Rafael TMF program was established for the purpose of supporting public infrastructure improvements and facilities needed to mitigate the traffic-related impacts of new development in the City of San Rafael.

2. *Identifying how the fee will be used and the facilities to be funded through the fee*

The fee will be used to help fund capital improvement projects that will accommodate future transportation needs throughout Sam Rafael. Table 1 identifies the projects to be funded through the fee.

3. *Determining a reasonable relationship between the fee's use and the type of development on which the fee is imposed*

As described in this report, different types of development generate traffic with different characteristics. The calculations presented in Table 2 account for these characteristics by calculating the number of peak trips generated by the different land use types that are assumed to occur over the next 20 years in the San Rafael General Plan 2040. These considerations account for the differential impacts on the local transportation system generated by different development types.

4. *Determining a reasonable relationship between the need for the public facility and the type of development on which the fee is imposed*

The need for the facilities listed in Table 1 has been established through planning processes including the San Rafael General Plan 2040 and Downtown Precise Plan prepared by the City of San Rafael. As described in the report, the facilities included in the TMF currently operate acceptably so there are no existing deficiencies on the facilities included in this program, indicating that the need for improvements is not caused by existing development.

5. *Determining a reasonable relationship between the amount of the fee and the cost of the public facility (or portion of facility) attributable to new development*

Section 4 of this report describes the calculations applied to determine the cost of the public facility that is attributable to new development in San Rafael; this process accounts for the effects of existing deficiencies (of which there are none in this program) and the effects of traffic generated from outside the area that will be subject to the fee. Thus, a reasonable effort has been made to quantitatively establish the relationship between the fees charged in the San Rafael TMF program and the costs of public improvements attributable to new development within the TMF area.

Exhibit 21
Major Planned Circulation Improvements ^a

	Proposed Roadway Improvements	Projected Cost	Mitigation Fee	Funding Source		Projected Project Timing (b)
				Redevelopment	State & Federal	
1	Smith Ranch Road/Lucas Valley Road Widen roadway to provide two westbound and two eastbound lanes between Redwood Highway and Los Gamos. Widen northbound 101 off ramp and southbound 101 off ramp for additional right and left turn lanes.	\$4,000,000	\$4,000,000			Depends On Development Timing
2	Lucas Valley/Los Gamos Widen Lucas Valley Road to provide two through lanes for eastbound and westbound, and provide two westbound left turn lanes. Widen southbound Los Gamos to provide 2 lanes for 300 feet and merge back to one lane. Signalize intersection and coordinate with adjacent intersections.	\$2,000,000	\$2,000,000			Depends On Development Timing
3	Las Gallinas Avenue (Merrydale to Del Presidio) Remove parking and widen street to provide four lanes (one southbound, two northbound and one two-way left turn).	\$300,000	\$300,000			Depends On Development Timing
4	Freitas/Las Gallinas Upgrade the traffic signal system and operation. Improve intersection geometry, cover portions of drainage ditch	\$650,000	\$650,000			5-7 years
5	Freitas/Del Presidio Explore feasibility of double northbound right turn and southbound 101 on ramp widening	\$900,000	\$900,000			Depends On Development Timing
6	Freitas/ Northbound 101 Ramps- Redwood-Civic Center widening and signalization. Right of Way Required.	\$7,500,000	\$7,500,000			Depends On Development Timing

	Proposed Roadway Improvements	Projected Cost	Mitigation Fee	Funding Source		Projected Project Timing (b)
				Redevelopment	State & Federal	
7	Grand Avenue (south of Grand Avenue bridge to Fourth Street)					
	Widen north/south, add one lane as required, and upgrade traffic signal system. Requires right of way and major bridge widening.	\$6,500,000	\$3,250,000	\$3,250,000		Depends On Development Timing
	Signalize Grand/ Fifth, and restrict parking to provide turn lanes.	\$200,000	\$200,000			5-7 years
	Signalize Grand/ Mission, and restrict parking to provide turn lanes.	\$200,000	\$200,000			5-7 years
8	Francisco Blvd. East (Bellam to Grand Avenue Bridge)					
	Four lanes required. One southbound, one two-way left turn and two northbound lanes. Major right of way required.	\$10,000,000	\$5,000,000	\$5,000,000		Depends On Development Timing
	Signalize Francisco Blvd. East/Harbor.	\$200,000	\$200,000			5-7 years
9	Lincoln Avenue (Second Street to southbound 101 ramps - Hammondale or as required)					
	Extend the existing PM peak northbound Tow-Away zone for AM peak as well (four lanes may be required). This parking restriction is likely to be extended north toward the southbound 101 ramps.	\$400,000	\$400,000			3-5 years
	Signalize Lincoln/ Grand, and restrict parking to provide turn lanes.	\$200,000	\$200,000			3-5 years
10	Mission/Lincoln	\$4,000,000	\$4,000,000			Depends On Development Timing
	Provide additional lanes for northbound, and westbound; upgrade traffic signal system, requires right of way.					
11	Fourth Street (Miracle Mile)	\$450,000	\$450,000			5-7years
	Re-align Ross Valley and Santa Margarita and re-design intersection operation. LOS may deteriorate but community access will be provided.					
	Additional Signalization					
12	Signalize Fifth & H Street, and restrict parking to provide turn lanes.	\$100,000	\$100,000			3 years

	Proposed Roadway Improvements	Projected Cost	Mitigation Fee	Funding Source		Projected Project Timing (b)
				Redevelopment	State & Federal	
13	Signalize First/C Street, and restrict parking to provide turn lanes.	\$150,000	\$150,000			3 years
14	Signalize First/ D Street, and restrict parking to provide turn lanes.	\$150,000	\$150,000			3 years
15	Signalize Fourth/Union Street, and restrict parking to provide turn lanes.	\$200,000	\$200,000			Depends On Development Timing
16	Signalize or Roundabout Mission/Court Street.	\$200,000	\$100,000	\$100,000		Depends On Development Timing
17	Signalize Merrydale/Southbound 101 Ramps, and provide turn lanes.	\$250,000	\$250,000			5-7years
18	Signalize Lincoln/DuBois/Irwin and re-align intersection. Right of way required.	\$2,500,000		\$2,500,000		Depends On Development Timing
19	Third/Union Street Widen Union Street to provide 4 lanes between Third and Fourth. Fire Station 4 modification required. Reconfigure Third/Union eastbound left turn pocket. Provide westbound right turn pocket. Upgrade the traffic signal system and operation.	\$900,000	\$900,000			2 years
20	Kerner Blvd or Francisco Blvd. East. To Andersen Drive Undercrossing Provide a minimum 3-lane connector near Shoreline Parkway. Signalize at both ends.	\$8,000,000	\$4,000,000	\$4,000,000		Depends On Development Timing
21	Andersen /East Sir Francis Drake-eastbound 580 Ramps Major widening and signalization.	\$2,000,000	\$500,000	\$500,000	\$1,000,000	5-7 years
22	Upgrade traffic signal system.	\$3,000,000	\$1,500,000		\$1,500,000	7 years
23	Install traffic monitoring sensors and camera system.	\$1,000,000	\$500,000		\$500,000	7 years
24	Install Fiber Optic network throughout the traffic system.	\$2,000,000	\$1,000,000		\$1,000,000	7 years
	Sub Total	\$57,950,000	\$38,600,000	\$15,350,000	\$4,000,000	

Proposed Roadway Improvements	Projected Cost	Mitigation Fee	Funding Source		Projected Project Timing (b)
			Redevelopment	State & Federal	
Other Projects	Projected Cost	City Funds	Redevelopment	State & Federal	
25 Implement Bicycle and Pedestrian Master Plan	\$5,300,000	\$2,650,000		\$2,650,000	7-20 years
26 Pedestrian bridge at Third/Hetherton – GGT Transportation Center	\$2,000,000	\$500,000	\$500,000	\$1,000,000	Depends On SMART, 10-20 years
27 Pedestrian bridge to connect Canal to Andersen Drive/Downtown.	\$4,500,000	\$1,125,000	\$1,125,000	\$2,250,000	10-20 years
28 Pedestrian bridge to connect Canal to Montecito Shopping Center.	\$4,000,000	\$1,000,000	\$1,000,000	\$2,000,000	10-20 years
29 Freitas / Northbound 101 Ramps - Redwood-Civic Center or a new flyover from Civic Center Dr. to Freitas.	\$12,000,000	\$6,000,000		\$6,000,000	Depends On Development Timing
30 Second Street (from E Street to east side of A Street). The projected volume requires right turn lanes or through/right lanes be added in the long term. Right of way required.	\$6,000,000	\$1,500,000	\$3,000,000	\$1,500,000	10-20 years
31 Pedestrian bridge over Canal between the Canal and Montecito/Happy Valley neighborhoods.	\$4,000,000	\$1,000,000	\$2,000,000	\$1,000,000	10-20 years
32 North San Rafael Promenade	\$2,000,000	\$1,000,000		\$1,000,000	10-20 years
Sub Total Other Projects	\$39,800,000	\$14,775,000	\$7,625,000	\$17,400,000	
Grand Total Project Cost	\$97,750,000				

(a) Priorities for circulation improvements are set in the Capital Improvements Program. This list may be amended as part of the five-year General Plan update.

(b) The timing for the improvements depends on the size, type and phasing of additional development. Policies LU-2 (Development Timing) requires findings when project-related traffic will not cause the LOS to be exceeded.

Source: San Rafael Public Works Department