NEXUS STUDY

LAMORINDA DEVELOPMENT MITIGATION FEE PROGRAM

PREPARED FOR
LAMORINDA FEE AND FINANCE AUTHORITY

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DKS

Nexus Study
Lamorinda Development Mitigation Fee Program

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1 INTRODUCTION

1.1 Background and Purpose

The purpose of the Lamorinda Development Mitigation Fee Program is to help fund improvements to the Lamorinda roadway, transit, bicycle and pedestrian facilities needed to accommodate travel demand generated by new land development within the three Lamorinda jurisdictions – Lafayette, Moraga, and Orinda. This report documents an update of the original nexus study for the fee program produced in 1998. This report establishes the nexus for the new fee structure and rates and identifies a new method for allocation of the revenue collected by the fees to the three jurisdictions.

The three Lamorinda jurisdictions have various methods for financing transportation improvements. One of the methods is the Lamorinda Development Mitigation Fee Program. The Lamorinda Development Mitigation Fee Program collects funds from new development in Lafayette, Moraga and Orinda to finance a portion of the transportation improvements associated with travel demand generated by that development. Fees are differentiated by type of development in relationship to its relative impacts on the transportation system. The intent of the fee program is to provide an equitable means of ensuring that future development contributes its fair share of transportation improvements, so that the General Plan circulation policies of the three jurisdictions and quality of life in Lamorinda can be maintained.

One of the objectives of the Contra Costa Growth Management Plan established by Contra Costa County Sales Tax Measure C and continued under Measure J is to relate new development directly to the provision of community facilities necessary to serve that new development. Accordingly, development cannot be allowed to occur unless a mechanism is in place to provide the funding for the infrastructure necessary to serve that development. The Lamorinda Development Mitigation Fee Program is a fee mechanism providing funds to construct transportation improvements to serve new residential, commercial and industrial development. Requiring that all new development pay a transportation improvement fee will help ensure that it participates fairly in the cost of improving the transportation system. This Program applies only to new development within Lafayette, Moraga and Orinda.

Each new development project or expansion of an existing development will generate new travel demand for all travel modes. Where the existing transportation system is inadequate to meet future needs based on new development, improvements are required to meet the new demand. The purpose of this development program is to determine improvements that will ultimately be needed to serve estimated future development and to require the developers to pay a fee to fund their fair share of these improvements. Because the fee is based on the relative impact of new development on the transportation system and the costs of the necessary improvements to mitigate this impact, the fee amount is roughly proportional to the development impact. This nexus study establishes this impact and mitigation relationship to new development and the basis for the fee amount.

1.2 Lamorinda Development Mitigation Fee Program

On June 8, 1998, the Cities of Lafayette and Orinda and the Town of Moraga approved a Joint Powers Agreement to implement the Lamorinda Development Mitigation Fee Program under the direction of the Lamorinda Fee and Finance Authority (LFFA). This program applied a fee structure defined by a nexus study that related the fees to the amount of new development expected and the transportation improvements needed to accommodate the new development. Although the fee rates have been updated periodically to reflect inflation, there has not been a full update of the nexus study until now.

The Lamorinda area has experienced changes in the area's circulation needs and development potential since the 1998 nexus study. Most of the residential development potential has been fulfilled, and many of the original fee program projects have been constructed. These changes have prompted this revision to the Development Mitigation Fee Program, resulting in a new project list and fee schedule.

The purpose of this nexus study is to provide the technical basis for a comprehensive update of the overall transportation system in Lamorinda that serves the expected future demand based on changes in regional and local land use projections, planned and approved development projects, and associated changes to capital improvements and updated cost estimates.

This report documents the analytical approach for determining the nexus between the fees, the local impact created by anticipated development in Lamorinda, and the transportation improvements to be funded with fee revenues. A fair-share cost analysis was conducted to equitably distribute the costs of the necessary improvements to developments that cause the impacts, per the provisions of the Mitigation Fee Act[1].

1.3 Other Existing Development Fees in Local Jurisdictions

The primary mechanism for collecting revenue from new development to fund transportation improvements to mitigate the impact of new development in Lamorinda is the Lamorinda Development Mitigation Fee Program. In each of the three jurisdictions, a development is sometimes also required to provide mitigations as part of the CEQA process for improvements not specifically included in the Expenditure Plan (project list) for the Lamorinda Development Mitigation Fee Program. If the required mitigations are included in the Expenditure Plan, a credit may be applied to the Lamorinda Development Mitigation Fee.

Only Moraga has a separate additional fee program. In addition to the charges for the Lamorinda Development Mitigation Fee Program, new developments in Moraga must also pay fees according to the following schedule for transportation mitigation:

- Single Family Detached Home $788/dwelling unit
- Multi-Family Housing $366/dwelling unit
- Senior Housing $116/dwelling unit
- Commercial $836/1000 square feet
- Office $435/1000 square feet
- Hotel $160/1000 square feet

The Town of Moraga is currently considering elimination of this separate transportation mitigation fee if the proposed new rates and revenue re-allocation formula of this update are adopted by the three jurisdictions.

[1] California Government Code, Sections 66000 through 66026

2 EVALUATION OF CURRENT LAMORINDA DEVELOPMENT MITIGATION FEE PROGRAM

The current Lamorinda Development Mitigation Fee Program was developed in 1998 based on the expected list of projects needed to accommodate the growth that was forecast at the time. This list of projects and estimates of their costs were used in developing the appropriate fee rates and established the projects eligible for funding under the fee program. Some but not all of the projects on the list have been completed using a combination of fee program funds, other local jurisdiction funds and regional funds. As part of this update, a new needs analysis was conducted to update this project list along with new project cost estimates. The process and results are described in Sections 3, 4 and 5 of this Nexus Study.

The current Lamorinda Development Mitigation Fee Program uses "peak hour factors" to allocate trips by land use types based on Institute of Transportation Engineers (ITE) trip generation rate estimates for the evening (PM) peak hour. However, ITE trip rates only reflect the amount of traffic coming in and out of development's entrances, not the extent of the roadway system that is impacted by those trips. This nexus study refines this approach to reflect current impact fee programs' best practices when estimating the impact of new development on the transportation system.

For example, simple trip rates may over-estimate the traffic impact of retail development on the overall roadway system. The average length of trips coming in and out of a new residential development is longer than trips coming in and out of a retail development. Furthermore, studies show that about 25 to 50 percent of the trips that will go in and out of a new retail development will already be traveling on roadways near that development, and thus are "pass-by" or "diverted" trips, not "new trips" to the surrounding roadway system. Substantially all of the trips going to and from a new residential unit are typically considered "new trips".

To integrate best practices, the updated Lamorinda Development Mitigation Fee Program will instead use estimates of vehicle-miles of travel (VMT) added by new development. The VMT rates multiply the trip rate for a land use type by its average trip length and also use percentages to reflect "pass-by trips" versus "new trips." The calculation of fee rates based on this methodology is discussed in Section 4 of this study.

3 DETERMINATION OF LAMORINDA DEVELOPMENT POTENTIAL

The transportation needs analysis and allocation of improvement costs for Lamorinda is based on the countywide travel demand model developed by the Contra Costa Transportation Authority (CCTA) using a 2040 horizon year. The calculation of fees is based on the general land use categories and associated measurement units listed in **Table 1** that are used as a basis for the land use inputs in CCTA's travel demand model.

Table 1. Land Use Types and Units

Land Use Type	Units
Single Family	Dwelling Units (DU)
Multi-Family	Dwelling Units (DU)
Commercial/Retail	Jobs
Office	Jobs
Industrial	Jobs

CCTA's latest land use estimates of existing conditions and 2040 forecasts of new development by Traffic Analysis Zones (TAZs) in Lamorinda were summarized and reviewed with staff of each of the three jurisdictions. Based on that review, adjustments were made and the resulting growth estimate for Lamorinda is summarized in **Table 2.** The table converts the estimates of jobs for nonresidential land uses used by the CCTA's model to estimates of building square feet used in the Lamorinda Development Mitigation fee program.

Table 2. Summary of Estimated Development Growth for the Lamorinda Development Mitigation Fee Program

	Single Family DU			Multi Family DU			Total Employment		
Jurisdiction	**2013**	**2040**	**Growth**	**2013**	**2040**	**Growth**	**2013**	**2040**	**Growth**
Totals									
Lafayette	7,812	8,250	438	1,903	2,815	912	9,818	11,470	1,652
Moraga	5,064	5,404	340	957	1,444	487	4,091	4,959	868
Orinda	5,652	5,780	128	418	635	217	5,279	5,789	510
All	**18,528**	**19,434**	**906**	**3,278**	**4,894**	**1,616**	**19,188**	**22,218**	**3,030**
Percent of Total 2040 Development that is Growth (2040-2013)									
Lafayette	5.3%			32.4%			14.4%		
Moraga	6.3%			33.7%			17.5%		
Orinda	2.2%			34.2%			8.8%		
All	**4.7%**			**33.0%**			**13.6%**		

The forecasts of growth in each jurisdiction reflect all expected growth in residential units and employment during the period from 2013 to 2040. This includes all new residential units including second units on parcels with existing single family home, but not expansion of existing units. The second units are included in the forecast of multi-family units. The forecast of employment growth includes new businesses as well as expansion of existing businesses. Additional growth in travel may also occur as a result of new development or expansion of existing developments that does not add residential units or commercial floor area. This expected increase in travel is also captured in the development of the development impact fee rates using an "other" category that will be reflected in an estimate of daily vehicle trips produced by the change in land use.

4 TRANSPORTATION NEEDS ANALYSIS

Defining the transportation needs and project list for Lamorinda involved the following steps:

1. Review of documents related to future transportation needs in Lamorinda including Transportation Impact Studies for proposed developments, subarea transportation studies by individual jurisdictions and the Draft 2015 Lamorinda Action Plan
2. Collecting traffic count data (intersections and roadway segments)
3. Identifying existing deficiencies, including level of service (LOS) and roadway standard deficiencies
4. Preparing travel demand forecasts of 2040 conditions
5. Conducting transportation system analysis to identify improvement needs
6. Identifying roadway improvements and improvements for non-auto, active transportation modes
7. Preparing a draft Lamorinda Development Mitigation project list
8. Presenting analysis and findings at LFFA meetings to obtaining input on the draft project list.
9. Finalizing project list

The key technical tasks are described in Sections 4.1 through 4.4 below.

4.1 Travel Demand Forecasting

The transportation needs analysis and allocation of improvement costs were based on CCTA's travel demand model using a 2040 horizon year and the development assumptions summarized in **Table 2**. Before its use, the output of the CCTA travel demand model for existing conditions was compared to existing traffic count data in Lamorinda and some adjustments were made to the model within and near Lamorinda to improve its accuracy and detail.

4.2 Roadway/Intersection Analysis

The technical methods and standards used to identify the impact of new development on roadway and intersection vehicular congestion are described below. The same methods and standards are used to identify existing deficiencies in the roadway network as well as future deficiencies caused by 2040 travel demand from new development. When an existing deficiency is identified, it affects how the cost of an improvement is allocated to new development. New development can only fund its fair share of the total cost of an improvement not associated with correcting an existing deficiency (see Section 6).

Traffic count data is required to determine existing deficiencies and to support the future year roadway/intersection needs analysis. Traffic counts were collected on weekdays in March 2013 at key roadway segments and signalized intersections within Lamorinda.

4.2.1 Signal Warrants

Traffic signal warrants are a series of standards that provide guidelines for determining if a traffic signal is appropriate. A planning-level signal warrant analysis based on traffic volumes was conducted to determine if the traffic signals would be warranted at study intersections under existing and future (2040) conditions. If one or more of the signal warrants are met, signalization of the intersection was recommended.

4.2.2 Level of Service

The needs analysis for the Lamorinda fee program used the level of service (LOS) standards in the General Plans of the three jurisdictions, which have different standards for different areas, based on land use types. LOS is calculated separately for intersections and roadway segments. Intersection LOS analysis is based on average vehicle delay and analysis methods recommended by the Highway Capacity Manual (Transportation Research Board, 2010). Roadway segment LOS analysis compares traffic levels with roadway segment capacities determined by the number of travel lanes and the roadway type.

4.3 Transit and Non-Auto Needs Analysis

New development also has impacts on roadway design that are not accommodated by increases in vehicle capacity or improvements to vehicle safety. New development generates non-vehicular trips (bicycle and pedestrian) that are accommodated by improving roadway shoulders to provide bicycle lanes and pedestrian walkways. On roadways that require improvements based on the roadway/intersection analysis described above bicycle and pedestrian facilities would be implemented to the extent that they are represented in the County's current standard roadway designs and in accordance with adopted "Complete Streets" policies and programs and locally adopted plans. Transit, bicycle, and pedestrian improvements also reduce vehicular congestion by shifting trips from autos to these alternative modes.

4.4 Selected Project List

The capital improvements to the transportation system in Lamorinda consist of the following types of projects:

1. Pedestrian walkway facility improvements
2. Bicycle paths, lanes and other supporting facility improvements
3. Multi-use trail improvements
4. Transit center and satellite parking
5. Transit facilities and improved access
6. Structural improvements to roadways
7. Roadway signalization, roundabouts or other traffic control enhancements or upgrades
8. Roadway widening and additional turn lanes
9. Improved roadway access to SR 24
10. Roadway safety improvements
11. Signage improvements

The draft project list was prepared to meet the needs defined above and then was presented to the LFFA Board, which approved the list shown in **Appendix A.**

5 IMPROVEMENT COST ESTIMATES

Planning-level cost estimates were prepared by the staff from the jurisdiction where the improvement would be implemented. The cost estimates include the following key elements in the implementation of each project:

- Project contingencies
- Survey, design and construction management
- Environmental mitigation
- Right-of-way

The cost estimates for each of the selected projects for funding by the Lamorinda Development Mitigation Fee Program (the "Expenditure Plan") are provided in **Appendix A** and summarized in **Table 3.**

Table 3. Summary of Expenditure Plan for the Lamorinda Development Mitigation Fee Program

Jurisdiction	Transit and Non-Auto Projects	Roadway Projects	Total
Lafayette	$ 22,147,600	$ 77,193,000	$ 99,340,600
Moraga	$ 14,725,200	$ 37,828,600	$ 52,553,800
Orinda	$ 8,794,300	$ 77,473,500	$ 86,267,800
Total	**$ 45,667,100**	**$ 192,495,100**	**$ 238,162,200**

6 METHOD FOR CALCULATING FEES

6.1 Allocation of Costs by Development Type

This section describes the process used to allocate improvement costs to new development in Lamorinda and the estimated development fees that result from this analysis. The calculation of fees for the Lamorinda Development Mitigation Fee Program Update is based on the general land use categories that are used in the existing Lamorinda Development Mitigation Fee Program:

Land Use Type	Units
Single Family	Dwelling Units (DU)
Multi-Family[1]	Dwelling Units (DU)
Commercial (Combination of Retail and Office)	Sq. Ft.
Other (Uses not covered by the other categories)	Daily Trips

[1] Multi-family also includes second residential units on parcels with an existing single-family home.

The Lamorinda Development Mitigation Fee Program Update fee rates by development type are based on estimates of the average daily vehicle-miles of travel (VMT) generated by each land-use type. A similar method was used in the current Development Mitigation Fee Program, but rates were based on peak-hour trips. Because many of the projects on the updated list are focused on mobility improvements, not entirely on peak-hour congestion relief, daily VMT is a better metric to represent the trip-making contribution from each development type. In the allocation of costs to various land-use types, each development type is assigned a "dwelling unit equivalent" or "DUE". The DUE rates are shown in **Table 4.**

Table 4. Dwelling Unit Equivalent Rates

Land Use	Units	Weekday Trip Rate[1]	Pass-by Rate[2]	Trip Length[3]	Weekday VMT	DUE Rate
Formula		*A*	*B*	*C*	*D=A*(1-B)*C*	*E=D/47.60*
Single-Family	Dwelling Units	9.52	0%	5.0	47.60	1.00
Multi-Family		6.65	0%	5.0	33.25	0.70
Retail[4]	Square Feet	.0679	45%	1.8	.06722	0.00141
Office		.01103	8%	4.5	.04566	0.00096
Commercial[5]						0.00107
Other[6]	Daily Trips	1.00	0	5.0	5.00	0.11

1. Trip Generation Manual, 9th Edition (Institute of Transportation Engineers, 2012)
2. Pass-by Rate is estimated based on rates from the ITE Trip Generation Manual
3. Trip Length was based on values from the CCTA Countywide Transportation Model
4. Trip rate based on a property of roughly 100,000 square feet of retail
5. Reflects a weighted average of retail and office DUE rates based on projected growth in each category
6. Used for unique uses, such as colleges, where trip generation is estimated in a traffic impact analysis

DUEs are numerical measures of how the trip-making characteristics of a land-use type compares to a single-family residential unit. A single-family residential unit is assigned a DUE rate of 1. Land uses that would have a greater overall traffic impact than a single-family residential unit would be assigned a value greater than 1, while land uses with a lower overall traffic impact would be assigned a value less than 1.

DUE rates for each land-use type were developed by comparing both the daily trip generation and average trip length characteristics of various land uses to those of the single-family residential units. Also considered in the calculation of DUEs is the percentage of "pass-by" trips since some of the vehicles attracted to non-residential uses would have been on the roadway system regardless of the presence of that traffic generator. Average trip lengths for the remaining "primary" trips generated by a development type are then utilized to better reflect overall impact of longer trips on the Lamorinda roadway system.

The current fee program has a single "commercial" category that covers retail and office uses. The updated fee calculation maintains this single category and uses a weighted average of retail and office DUE rates based on the projected growth of square footage in each category (see **Table 4**).

The current fee rate for colleges is based on the total number of students, while the current fee rate for "other" uses is based on peak-hour trips. Colleges are unique uses and their trip generation is often based on more than one factor, (i.e. more than just total students). Thus colleges and other unique uses (included in the "Other" category) are allocated costs based on a project's increase in daily vehicle trip generation from a traffic impact study.

6.2 Fee Calculation

The DUE rates in **Table 4** were applied to the estimated growth in development by land-use type to estimate a growth of 3,392 DUEs through 2040 in Lamorinda, which is shown in **Table 5**.

Table 5. Estimated Growth in Dwelling Unit Equivalents

Land Use	Units	Estimated Development			DUE Factor	DUEs		
		Existing	2040	Growth		Growth	2040	Growth / 2040
Single-Family	Dwelling Units	18,528	19,434	906	1.00	906	19,434	4.67%
Multi-Family		3,278	4,894	1,616	0.70	1,131	3,426	33.02%
Commercial	Jobs	19,188	22,218	3,030				
Commercial	Sq Ft[1]	6,715,800	7,776,300	1,060,500	0.00107	1,135	8,321	13.64%
Other [2]	Daily Trips	9,200	11,200	2,000[3]	0.11	220	1,232	17.86%
					Total	**3,392**	**32,412**	**10.46%**

[1] Assumes average of 350 square feet per job in retail and office space
[2] A college currently constitutes the vast majority of this category and is used as a basis for the trip rate. Existing college trips are estimated based on an enrollment of 4,040 students and 2.28 daily trips per student.
[3]The estimate of growth in trips in the "Other" category was a rough estimate by the LFFA Technical Advisory Committee based on their knowledge or improvements being contemplated by Saint Mary's College in Moraga and other potential changes in land uses not covered by the residential and commercial categories.

A growth of 2,000 daily trips was used for the ”Other” category. This was based on knowledge that Saint Mary’s College was developing plans for changes on the campus that could generate more daily trips from students and visitors and the possibility for other land use changes in the Lamorinda area that could produce additional vehicle trips from developments not included in the residential or commercial categories. At the time this nexus study was prepared, the plans for the college and other potential developments were not sufficiently defined to provide an estimate of what the change in daily trips from the improvements would be, and so the LFFA chose to use 2000 daily trips as a rough estimate on the recommendation of the consultant.

Table 6 illustrates the distribution of growth by dwelling unit equivalents by jurisdiction. Have of the growth is expected to occur in Lafayette with Moraga account for 36.1 % and Orinda for 13.9%

Table 6. Distribution of Growth in Dwelling Unit Equivalents by Jurisdictions

Jurisdiction	Single Family Growth (Dwelling Units)	Multi-Family Growth (Dwelling Units)	Employment Growth (Jobs)	Dwelling Unit Equivalents (%)
Lafayette	438	912	1,652	50.0%
Moraga	340	487	868	36.1%
Orinda	128	217	510	13.9%
All	**906**	**1,616**	**3,030**	**100.0%**

The project list for the 2015 LFFA Fee Program contains a wide range of transportation projects, many of which are new bicycle and pedestrian facilities. Since these improvements would benefit both existing and future residents, the portion of the total cost of all projects that is allocated to new development is equal to the development growth’s share of the total DUEs in 2040. **Table 5** indicated that projected growth in DUEs represents 10.46% of the total estimated 2040 DUEs in Lamorinda.

Table 7 shows that the project list has about $238 million in costs that are eligible for the LFFA Fee Program. The full list of projects and the estimated cost of each is presented in an Appendix A. The new development’s share would be about $24.7 million or 10.46%. After subtracting the current account LFFA Fee Program balance as of July 1, 2014 of $267,265, the estimated cost per DUE is $7,269.

Table 7. Cost Per Dwelling Unit Equivalent

Jurisdiction	LFFA Eligible Costs
Lafayette	$99,340,600
Moraga	$52,553,800
Orinda	$86,267,800
Total	**$238,162,200**
Cost Allocation to Growth	
Percent	10.46%
Allocated Cost	$24,923,500
Fee Balance	$267,265
Unfunded	**$24,656,235**
Cost per DUE	
DUE Growth	3,392
Cost per DUE	**$7,269**

Table 8 shows the fee rates by land-use types (based on the DUE rates in **Table 4**) and compares those rates to current fee rates. The rates in **Table 8** apply to all new residential units and any change in commercial floor area or other changes in non-residential land use that would create additional vehicle trips from the development.

Table 8. Updated Lamorinda Development Mitigation Fee Program Rates

		Fee Rates		Change		Expected Fee Revenue			
						New Rates		From Current Rates	
Land Use	Units	New Rates	Current Rates	Amount	%	Amount	%	Amount	%
Single-Family	Dwelling Units	$7,269	$6,461	$808	13%	$6,585,777	26.7%	$5,853,666	35.3%
Multi-Family[1]		$5,088	$4,031	$1,057	26%	$8,222,772[3]	33.3%	$6,514,096[3]	39.2%
Multi-Family (TOD)[2]		$2,697	NA						
Commercial	Sq Ft	$7.78	$2.72	$5.06	186%	$8,248,468	33.5%	$2,884,560	17.4%
Other	Daily Trips	$800	NA			$1,599,195	6.5%	$1,348,246	8.1%
				Total		**$24,656,212**	**100.0%**	**$16,600,568**	**100.0%**

[1] Multi-family also includes new second units constructed on parcels with existing single-family homes
[2] TOD – Transit Oriented Development
[3] Estimates of "Expected Fee Revenue" were based on the unrestricted multi-family rate. Actual revenue may be somewhat lower depending on the amount of multi-family development that occurs in a Transit-Oriented Development.

The information describing how the new rates were estimated illustrates the importance of growth forecasts and updating project costs. The new rates are based on the expected growth between 2013 and 2040, an Expenditure Plan that uses 2014 cost estimates and an audited account balance on July 1, 2014. Any new developments for which fees are required that occur between 2013 and the date the rates in this nexus study are adopted would pay the prevailing rates. Because the new rates in **Table 8** are based on 2014 costs, the rates should be updated annually to reflect changes in project construction costs as reflected in the Engineering News Record Construction Cost Index for the San Francisco Bay Area.

The nexus fees need to be consistent with the Mitigation Fee Act, including the amendment added by AB 3005 in 2008. This amendment applies to new housing that meets the following requirements for Transit-Oriented Development (TOD):

1. The housing development is located within one-half mile of a transit station and there is direct access between the housing development and the transit station along a barrier-free, walkable pathway not exceeding one-half mile in length.
2. Convenience retail uses, including a store that sells food, are located within one-half mile of the housing development.
3. The housing development provides either the minimum number of parking spaces required by the local ordinance, or no more than one onsite parking space for zero to two bedroom units, and two onsite parking spaces for three or more bedroom units, whichever is less.

Based on the definitions in AB 3005, multi-family housing development within one-half mile of the Orinda and Lafayette BART stations could meet these requirements. It is unlikely that single-family units within one-half mile of the BART stations would meet the third requirement above. For new housing development that meets all of these requirements, AB 3005 states the following:

> "...the fee, or the portion thereof relating to vehicular traffic impacts, shall be set at a rate that reflects a lower rate of automobile trip generation associated with such housing developments in comparison with housing developments without these characteristics…"

The trip reduction for housing developments that meet all requirements of AB 3005 in Lamorinda is based on data in the study "Vehicle Trip Reduction Impacts of Transit-Oriented Housing" (Robert Cervero and G.B. Arrington, 2008). That study included data on five multi-family housing developments near BART stations in the Bay Area that appear to meet the AB 3005 requirement for a limited amount of parking spaces per unit. This study shows that those developments have an average 47 % reduction in daily vehicle trip rates for typical suburban multi-family housing units. **Table 7** includes a reduced fee rate for multi-family TOD units that meet the requirements of AB 3005.

7 NEXUS ANALYSIS

This nexus analysis has been prepared on the Lamorinda Development Mitigation Fee Program in accordance with the procedural guidelines established in AB1600 which is codified in California Government Section 66000 et seq. These code sections set forth the procedural requirements for establishing and collecting various development impact fees. These procedures require that "a reasonable relationship or nexus must exit between a governmental exaction and the purpose of the condition." Specifically, each local agency imposing a fee must:

- Identify the purpose of the fee;
- Identify how the fee is to be used;
- Determine how a reasonable relationship exists between the fee's use and the type of development project on which the fee is imposed.
- Determine how a reasonable relationship exists between the need for the public facility and the type of development project on which the fee is imposed; and
- Demonstrate a reasonable relationship between the amount of the fee and the cost of public facility or potion of the public facility attributable to the development on which the fee is imposed.

The purpose of the Lamorinda Development Mitigation Fee Program is to fund improvements to Lamorinda's major roadway, transit, bicycle and pedestrian facilities needed to accommodate travel demand generated by new land development in Lamorinda over the next 27 years (through 2040).

The Lamorinda Development Mitigation Fee Program will help meet the General Plan policies of each jurisdiction including maintenance of adequate levels of service and safety for roadway facilities. New development in Lamorinda will increase the demand for all modes of travel (including walking, biking, transit, automobile and truck/goods movement) and thus the need for improvements to transportation facilities. The Lamorinda Development Mitigation Fee Program will help fund transportation facilities necessary to accommodate residential and non-residential development in Lamorinda.

7.1 Use of Fees

The fees from new development in Lamorinda will be used to fund additions and improvements to the transportation system needed to accommodate future travel demand resulting from residential and non-residential development. The Lamorinda Development Mitigation Program will help fund improvements to roadways (include the widening or extensions of arterial and collector roadways, intersection improvements and provision of shoulders and complete streets) bikeways and walkways plus fee program administration costs. The transportation improvements to be wholly or partially funded by the program are described in more detail in Section 4.

7.2 Relationship between use of Fees and Type of Development

Fee revenues generated by the Lamorinda Development Mitigation Fee Program will be used to develop the transportation improvements as outlined in Section 4. All of these improvements increase the capacity, improve the safety, or facilitate the use of alternative modes (transit, bicycle, pedestrian) on those segments of the transportation system affected by new development. The results of the transportation modeling analysis summarized in this report demonstrate that these improvements either mitigate impacts from and/or provide benefits to new development.

7.3 Relationship between Need for Facility and Type of Development

The projected residential and non-residential development described in Section 3 will add to the incremental need for transportation facilities by increasing the amount of demand on the transportation system. The transportation analysis presented in Section 4 demonstrates that improvements are required to minimize the negative impact on current levels of service caused by new development and/or accommodate the increased need for alternative transportation modes (transit, bicycle, pedestrian).

7.4 Relationship between Amount of Fees and the Cost of Facility Attributed to Development upon which Fee is Imposed

The basis for allocating improvement costs to development is described in Section 6. Construction of necessary transportation improvements will directly serve residential and non-residential development within Lamorinda and will directly benefit development in those areas.

As described in Section 7, the fee that a developer pays for a new residential unit or commercial building varies by the type of development based on its impact on the transportation system. Each development type is assigned a “dwelling unit equivalent” or “DUE” rate based on its estimated vehicle-miles of travel (VMT) per unit of development.

Since the improvements funded by the Lamorinda Development Mitigation Fee Program would benefit both existing and future residents, new development within the Lamorinda Development Mitigation fee program is allocated a percentage of costs based on development growth’s share of the total DUEs in 2040.

8 ALLOCATION OF FEE REVENUE TO JURISDICTIONS

A new methodology has been developed to replace the existing methodology for calculating how much of the revenue from the LFFA Development Mitigation Fee Program is returned to each jurisdiction. The methodology is based on the premise that the fee revenues should be distributed to each jurisdiction in proportion to the amount of growth-generated vehicle miles of travel in Lamorinda that is likely to occur in that jurisdiction during the period for which the fee update is based - 2013 to 2040.

The share of growth–generated travel in each jurisdiction was estimated by using the CCTA Countywide Transportation Model. One run of the model was made for 2040 with the CCTA estimates of 2040 land use in all areas of the modeled area other than Lamorinda and the Lamorinda jurisdictions' estimates of land use for Lamorinda. With this run, an estimate was made of all of the daily vehicular miles of travel on the non-freeway streets of each of the Lamorinda jurisdictions. SR 24 was not included in the analysis because no projects were included in the projects lists for the main lanes of the freeway. A second run of the model was then initiated keeping the 2040 land use everywhere except Lamorinda. Within Lamorinda the 2013 land-use data, as adjusted by the local staff, was used to represent the existing land use. The travel within Lamorinda from this run was designed to represent the existing traffic in Lamorinda plus the added travel from growth expected by 2040 outside of Lamorinda. The difference between these two estimates of "growth travel" was considered a good estimate of the growth travel for new development in Lamorinda between 2013 and 2040. The estimated shares of "growth travel" for the period 2013 to 2040 are as follows:

- Lafayette – 52.5%
- Moraga – 26.2%
- Orinda – 21.2%

These estimates indicate that of the new, non-freeway vehicular travel that will occur in Lamorinda as a result of development between 2013 and 2040, 52.2% will be on Lafayette streets, 26.2% will on Moraga streets and 21.2% of it will be on Orinda streets. In this allocation scheme, Moraga is a net exporter of travel - meaning that its percentage of growth travel (26.2%) is lower than its percentage of growth DUEs (36.1%). Moraga is a net exporter because many of the trips generated from growth in Moraga would also travel in or through either Lafayette or Orinda. As a result, both Lafayette and Orinda are net importers of travel. Lafayette would have 52.5% of the travel but only 50.2% of the growth in DUEs. Orinda would have 21.2% of the travel but only 13.9% of the growth in DUEs. Because the fee revenue distribution to each jurisdiction would be proportional to the share of growth traffic that is experienced by the road network in that jurisdiction, Moraga would also get less fee revenue than it is expected to generate. Both Lafayette and Orinda as net importers of growth in travel would receive a higher share of fee revenues than their own growth is expected to generate.

The existing allocation method for the Lamorinda Development Mitigation Fee Program has a two-step process. In the first step, each jurisdiction retains a local set-aside portion of the fees collected for development in their jurisdiction. The fixed percentages are as follows:

- Lafayette – 80% retained
- Moraga – 20% retained
- Orinda – 80% retained

The portion of the fee not retained locally goes into a regional pool and is then redistributed in a second step using the following percentage distribution:

- Lafayette – 55% of regional (non-local) funds
- Moraga – 10% of regional (non-local) funds
- Orinda – 35% of regional (non-local) funds

To remain somewhat consistent with the existing fee program and to ensure that there is an equitable allocation of revenues in case the future distribution of new development is different than that forecast, a two-step process has been retained in the proposed allocation methodology. This distinction between local share and regional share has been made so that jurisdictions receiving a higher than expected share of the development will get a higher share of the revenue. Another advantage of retaining a local share is that it gives each jurisdiction the ability to waive a portion of the fees (i.e. the local share) for new development that it is trying to encourage.

In the proposed methodology, the first step is again a local share that is retained by each jurisdiction. The local share kept by each jurisdiction was based on the percent of project cost for the jurisdiction that are considered "local" following the criteria laid out in **Appendix B.**

The above criteria yield the following local share percentages: Lafayette – 51.7%, Moraga - 56.7%, Orinda - 45.9%. When considering the entire project list from all three Lamorinda jurisdictions as a whole, the local share percentage is calculated to be 50.6%. Given the tight range of individual percentages, the jurisdictions have agreed to use 50% as the local share across the board in the allocation formula. Using a 50% local share is reasonable given the minor differences in the percentages.

The percentage of fees collected that is not considered as local will go into a regional pool of funds intended to fund interjurisdictional projects within Lamorinda. The proposed methodology for the reallocation of these regional funds is to do so such that the total amount of funds that each jurisdiction gets is in proportion to the jurisdiction's proportion of "growth travel" assuming all development occurs as forecast by 2040. As previously defined, the "growth travel" is the percent of vehicle miles of travel experienced by the road network in a particular jurisdiction resulting from new development in Lamorinda by 2040. The percent of the regional fee revenues that are returned to each jurisdiction is also a function of the local shares agreed to. The formula for reallocation of the regional funds is designed to produce an overall distribution of fee revenues – local and regional – that is proportional to the percentage of "growth travel" in each jurisdiction if all of the development occurs as forecast. The formula for determining the shares for regional fund reallocation are provided in **Appendix C** to this memorandum. Because of the importance of forecasts of travel in the allocation of the LFFA Fee Program funds, it is again important that the fee program be updated on a regular basis.

With each jurisdiction retaining 50% of the fees collected from development within its boundaries as the local share, the allocation of regional funds would be as follows:

- Lafayette – 55.0% of interjurisdictional funds
- Moraga – 16.5% of interjurisdictional funds
- Orinda – 28.5% of interjurisdictional funds

If all of the development occurs as expected between 2013 and 2040, the total allocation of fee revenue to the jurisdictions (local retention and interjurisdictional reallocation) would be the same as the estimated share of "growth travel":

- Lafayette – 52.5%
- Moraga – 26.2%
- Orinda – 21.2%

The application of the local and regional shares for each individual jurisdiction based on the expected amount of new development is shown in **Table 9.**

Table 9. Distribution of Fee Revenue for Expected Development – 2013 to 2040

Jurisdiction	% of Total DUEs	Proposed Local Share	Proposed Share of Regional Pool	Local Share as % of Total Fee Revenue	Regional Share as % of Total Fee Revenue	Total Share of Revenue-Proposed	Total Share of Revenue-Proposed
Lafayette	50.0%	50.0%	55.0%	25.0%	27.5%	**52.5%**	**$12,944,511**
Moraga	36.1%	50.0%	16.5%	18.1%	8.3%	**26.3%**	**$ 6,484,584**
Orinda	13.9%	50.0%	28.5%	7.0%	14.3%	**21.2%**	**$ 5,227,117**
	100.0%		100.0%	50.0%	50.0%	**100.0%**	**$24,656,212**

Appendix A
Cost Estimates for Selected Projects in Lamorinda

Lafayette

#	Item	Source	Description	Total Costs 2014$
	Pedestrian, Bicycle and Transit Projects			
1	**EBMUD Aqueduct Public Crossings**	**EBMUD Aqueduct Trail Feasibility Study**	**Install multi-use pathway to provide an alternative mode east-west corridor parallel to Mt. Diablo Boulevard and SR 24 through downtown Lafayette.**	
	Phase 1 Segment 1 Risa Road to BART			
a	*Risa Road Crossing*			$ 144,400
b	*Private Drive Crossing*			$ 67,800
c	*Dolores Drive Crossing*			$ 249,000
d	*Happy Valley Road Crossing*			$ 1,238,100
	Phase 1 Construction Subtotal			**$ 1,699,300**
	Phase 2 Segment 2 BART to Oak Hill Road			
f	*Oak Hill Road Crossing (option 3)*			$ 721,200
	Phase 2 Construction Subtotal			**$ 721,200**
	Phase 3 Segment 3 Oak Hill Road to First Street and Segment 4 First Street to Brown Avenue			
g	*Oak Hill Road to First Street*			$ 274,100
h	*First Street Crossing (options 3 and 4)*			$ 720,000
i	*First Street to Brown Avenue*			$ 246,000
	Phase 3 Construction Subtotal			**$ 1,240,100**
	Subtotal EBMUD Aqueduct Public Crossings Projects			**$ 3,660,600**
2	**Walkway Plan Projects**	**Master Walkways Plan**	**Complete network envisioned by master plan.**	
a	*Pleasant Hill Road Corridor Complete Streets (Mt. Diablo Blvd. to Springhill Road/Quandt Road*			$ 4,237,000
b	*Moraga Rd.*		Both sides, Mt. Diablo Blvd. to Tanglewood Dr. (Old Mtn. View Drive west side) and Old Jonas Hill Rd. (east side).	$ 250,000
c	*Deer Hill Road*		Northside: Pleasant Hill Rd. to Happy Valley Road	$ 550,000
d	*Mt. Diablo Blvd. (gap closure 4,500 lf)*		Both sides: Pleasant Hill Road to Acalanes Road	$ 900,000
e	*School Street*		Moraga Rd.-Lafayette-Moraga Trail Connector	$ 1,500,000
f	*St. Mary's Road*		Acampo to Topper Lane	$ 300,000
	Subtotal Walkway Plan Project			**$ 7,737,000**
$ 3	**Bicycle Plan Projects**	**Master Bikeways Plan**	**Complete network envisioned by master plan.**	
a	*Class I Bike Paths*		EBMUD Aqueduct, Hidden Valley - Acalanes Road connector, Buckeye Fields - Lafayette-Moraga Trail Connector, and Pleasant Hill Road Bike and Ped Projects ($11,134,000 in 2006$) Net of "Crossings" costs from above.	$ 8,329,000
b	*Class II Bike Lanes*		Pleasant Hill Road Gap Connector ($191,000 in 2006 $)	$ 246,000
c	*Shared Lane Markings*		Downtown Mt. Diablo Bypass Route, School Access Route ($726,000 in 2006 $)	$ 934,000
d	*Class lll Bike Routes*		RRS and IRR Moraga Boulevard and Mt. Diablo ($32,000 in 2006 $)	$ 41,000
	Subtotal Bicycle Plan Projects			**$ 9,550,000**
$ 4	Improve Lafayette-Moraga Trail Street Crossings	Lamorinda Action Plan	see page 6-6 of Bikeways Plan. St. Mary's/Florence Xing in 2015 at $36K. Five at $40k remaining including School St./Topper	$ 200,000
$ 5	Satellite Employee & Commuter Lots (from DSP) - 4 gateways to Downtown	Downtown Specific Plan/Lamorinda Traffic Improvement Program	Implement multi-modal traffic demand management measure to improve congested conditions through the downtown corridors.	$ 1,000,000
	Subtotal Pedestrian, Bicycle and Transit Projects			**$ 22,147,600**
	Roadway Projects			
$ 6	**Structural Improvements to Lafayette Principal Arterials**	**1998 Lamorinda Nexus Study**	**Correct degradation of roadway pavement and appurtenances resulting from increased vehicular loading and traffic index, including upgrades to meet current standards.**	
a	*Pleasant Hill Road - City Limit to SR 24 (6.0 lane miles)*			$ 3,000,000
b	*Moraga Road - City Limit to Mt. Diablo Blvd (4.7 lane miles)*			$ 2,350,000
c	*Mount Diablo Blvd - Happy Valley Rd to Brown Ave (3.6 lane Miles)*			$ 1,800,000
d	*Mt. Diablo Blvd. - Acalanes to Happy Valley (7.0 lane mile)*			$ 3,500,000
e	*Mt. Diablo Blvd. - Brown to PHR (3.9 lane miles)*			$ 1,950,000

f	*Acalanes Road - El Nido to City Limit (2.5 lane miles)*			$ 1,250,000
g	*Reliez Valley Road -Pleasant Hill Road to City Limit (4.6 lane miles)*			$ 2,300,000
h	*Reliez Station Road - Olympic Blvd to Glenside Drive (1.2 lane miles)*			$ 600,000
i	*St. Mary's Road - City Limit to Moraga Road (5.6 lane miles)*			$ 2,800,000
j	*Deer Hill Road - Happy Valley Road to Pleasant Hill Rd (4.6 lane miles)*			$ 2,300,000
k	*Olympic Boulevard -Reliez Station Road to City Limit (0.7 lane miles)*			$ 350,000
l	*Oak Hill Road -Mt. Diablo Blvd. to Deer Hill Road (1.0 lane mile)*			$ 500,000
m	*First St. -Mt. Diablo Blvd. to Deer Hill Road (.9 lane mile)*			$ 450,000
n	*Glenside Drive- Reliez Station Rd to St. Mary's Rd (1.25 lane miles)*			$ 625,000
o	*Pleasant Hill Road - SR-24 to Olympic Blvd.*			$ 1,650,000
p	*El Nido Ranch Road, city limit to U.H.V. (1.5 lane miles)*			$ 750,000
	Subtotal Structural Improvements to Lafayette Principal Arterials			**$ 26,175,000**
7	Deer Hill Rd/Brown Ave	Homes on Deer Hill SEIR	Signalize or roundabout	$ 1,000,000
8	Mount Diablo Blvd/Oak Hill Rd/Lafayette Circle East	Downtown Specific Plan	Restripe Oak Hill Road to provide four southbound lanes (2 LT, 1 TH, 1 RT)	$ 50,000
9	Deer Hill Rd/First St	Downtown Specific Plan	Widen Deer Hill Rd to add a second EB right-turn lane	$ 100,000
10	Deer Hill Rd/SR-24 WB Ramps/Laurel Dr	Downtown Specific Plan	Re-stripe Deer Hill Rd to add a third EB through lane	$ 50,000
11	Glenside Dr/Reliez Station Rd	Olympic/RSR Corridor Traffic Study	Signal	$ 300,000
12	Reliez Station Rd/Olympic Blvd	(Same as above)	Recommendations from Olympic-Reliez Station Corridor Study- Signal	$ 300,000
13	Oak Hill Rd/SR-24 EB Off-Ramp	Downtown Specific Plan	Signalize when warrants are met. Coordinate with EBMUD Aqueduct Pathway Study	$ 300,000
14	2020 Downtown Traffic Signal Upgrade	Downtown Corridor Signal Coordination Study	Upgrade and modernize signal controller and other hardware to improve traffic operations by allowing better traffic handling and management.	$ 2,800,000
15	2040 Downtown Traffic Signal Upgrade	(Same as above)	Upgrade signal timing and other operating parameters	$ 700,000
16	2020 Pleasant Hill Road Traffic Signal Upgrade	PHR Corridor Signal Coordination Study/Lamorinda Action Plan	Upgrade and modernize signal controller and other hardware to improve traffic operations by allowing better traffic handling and management.	$ 1,000,000
17	2040 Pleasant Hill Road Traffic Signal Upgrade	(Same as above)	Upgrade signal timing and other operating parameters	$ 250,000
18	Downtown Circulation Improvements - Mt. Diablo Blvd, Oak Hill Rd and Moraga Road	Lamorinda Traffic Improvement Program	Improve regional traffic circulation through the downtown "Y" connecting to SR 24.	$ 6,368,000
19	Deer Hill Road and Oak Hill Road Intersection Capacity and Circulation Improvements	Lafayette Master CIP	Install modern roundabout to increase capacity.	$ 1,500,000
20	~~Pleasant Hill Road/Olympic Boulevard Intersection Improvements~~	Olympic/RSR Corridor Traffic Study	~~Install modern roundabout to increase capacity.~~	~~$ 2,000,000~~
21	Deer Hill/Happy Valley Rd Capacity and Safety Improvements	Downtown Specific Plan	Install modern roundabout to increase capacity.	$ 1,500,000
22	Downtown Bypass Study and Preliminary Engineering	Lamorinda Action Plan	On-going PDA Planning Grant for Downtown Congestion-Relief Study	$ 30,000,000
23	Mt. Diablo Actions to Discourage Manage Diversion from SR 24	Lamorinda Action Plan	Hidden Valley Road, El Nido Ranch Road, Mt. Diablo Blvd., Pleasant Hill Road, Camino Diablo,	$ 2,800,000
	Subtotal Roadway Projects			**$ 77,193,000**
	Grand Total for Lafayette Projects			**$ 99,340,600**

#	Item	Source	Description	Total Costs 2014$
	Moraga			
	Pedestrian, Bicycle and Transit Projects			
1	Canyon Road Bicycle Improvements (County to Constance)	CIP-32	Implement recommendations from adopted 2004 Moraga Bicycle and Pedestrian Plan - improve bicycle facilities along Canyon Road	$ 570,000
2	Moraga Center Ped & Bike Improvements	CIP-34	Construct new sidewalks and pedestrian path facilities to close critical gaps, install bike facilities and streetscape improvements along streets in Moraga Center Specific.	$ 810,000
3	Moraga Way Bicycle and Pedestrian Improvements	CIP-36	Implement recommendations from adopted 2004 Moraga Bicycle and Pedestrian Plan - improve bicycle and pedestrian facilities along Moraga Way	$ 106,000
4	Rheem Blvd Bike & Pedestrian (Moraga Rd to St. Mary's Rd)	CIP-37	Implement recommendations from adopted 2004 Moraga Bicycle and Pedestrian Plan - Develop bicycle and pedestrian improvements west of St. Mary's Rd.	$ 259,000
5	Rheem Blvd Bike Route Improvements (Orinda to Moraga Rd)	CIP-38	Implement recommendations from adopted 2004 Moraga Bicycle and Pedestrian Plan - Improve striping and signage for bike route along Rheem Boulevard.	$ 44,000
6	Municipal Wayfinding Signage Program	CIP-49	Develop a comprehensive vehicular, pedestrian, bicycle wayfinding signage program.	$ 175,000
7	Livable Moraga Road - Corridor Plan and Improvements	CIP-42	Improve bicycle, pedestrian, and vehicular safety and mobility along Moraga Road between the Moraga Center and Campolindo High School.	$ 10,086,000
8	Transit Center or Park and Ride Facilities	Moraga Center Specific Plan	Develop new transit center or park and ride facilities to meet the needs for current and future commuters.	$ 2,675,200
	Subtotal Pedestrian, Bicycle and Transit Projects			**$ 14,725,200**
	Roadway Projects			
9	Rheem Boulevard Landslide Repair/Repaving	CIP-45	Repair the landslide below Rheem Boulevard between St. Mary's Road and Moraga Road, and repave as required.	$ 1,606,365
10	Rheem Blvd/St. Mary's and Bollinger/St. Mary's Road Roundabouts	CIP-50	Construct new roundabout at intersection of Rheem Boulevard and St. Mary's Road and relocate trail to create safer pedestrian and bicycle crossing.	$ 7,025,000
11	Signal Upgrades	2014 Asset Management Plan	Install new hardware and software to upgrade traffic signals at all major intersections	$ 3,660,000
12	**Moraga Principal Arterials Structural Improvements**	**1998 Lamorinda Nexus Study**	**Pavement structural improvements to handle increased traffic loads on Moraga Rd., Moraga Way, Canyon Road, St. Mary's Road, Camino Pablo and Rheem Blvd. Cost based on per lane mile estimate of $570,240**	
a	*Moraga Road*			$ 2,782,771
b	*Moraga Way*			$ 610,157
c	*St. Mary's Road*			$ 838,253
d	*Canyon Road*			$ 1,180,397
e	*Rheem Boulevard*			$ 1,328,659
f	*Camino Pablo*			$ 969,408
	Subtotal Structural Improvements			**$ 7,709,645**
13	**Utilities Undergrounding**	**2002 General Plan; 1995 Undergrounding Committee Priority Recommendations**	**Underground utilities to reduce the possibility of road closures from downed power lines or other damage to utilities equipment**	
a	*Canyon Rd – North of Sanders Drive to Southern Town limits*			$ 1,482,650
b	*Moraga Rd – Alta Mesa to Country Club Dr*			$ 1,144,000
c	*Moraga Rd – Devin Dr to St. Mary's Rd*			$ 2,993,900
d	*Moraga Rd – Ascot Dr to Devin Dr*			$ 785,200
e	*Moraga Rd – Northern Town limits to North of Hansen Ct*			$ 2,160,600
f	*St. Mary's Rd – East of Stafford Dr to Commons Park East Parking Lot*			$ 2,040,350
g	*St. Mary's Rd – Town limits to Rheem Blvd*			$ 1,166,750
h	*Rheem Blvd – Western Town limits to 329 Rheem Blvd*			$ 2,866,500
i	*Rheem Blvd – Via Barcelona to St. Mary's Rd*			$ 3,187,600
	Subtotal Utilities Undergrounding			**$ 17,827,550**
	Subtotal Roadway Projects			**$ 37,828,560**
	GRAND TOTAL for Moraga Projects			**$ 52,553,760**

Orinda

#	Item	Source	Description	Total Costs 2014$
	Pedestrian, Bicycle and Transit Projects			
1	Improve Pedestrian Access at Bus Stops	1998 Fee Program	Sidewalks and trails improvements	$ 38,208
2	Bicycle Safety Improvements - Crossroads	1998 Fee Program	Bicycle Safety Improvements	$ 103,480
3	Miner Road Pedestrian Bridge	CIP	Construct new Ped. Bridge over San Pablo Creek at Miner Rd.	$ 185,000
4	Camino Pablo Pathway Rehabilitation	CIP	Rehabilitate existing Ped. Path along Camino Pablo from Miner Rd. to Bear Creek Rd.	$ 1,000,000
5	School Safety Improvement Projects	CIP	Misc. projects to provide safe access to schools	$ 75,600
6	Annual Bicycle, Trails and Walkway Program	CIP	Projects from the Bikeways, Trails and Walkways Plan	$ 242,014
7	Miner Road Widening for bicycle route/pedestrian use	CIP	Widen shoulders to accommodate bicycles and pedestrians	$ 2,000,000
8	Glorietta Blvd Bike Route – more pavement width for bicycles to travel to Lafayette, incorporate other safety improvements as well	CIP	More pavement width for bicycles to travel to Lafayette, incorporate other safety improvements as well	$ 1,500,000
9	Ivy Drive Sidewalk entire length on one side	CIP	Provide sidewalk	$ 1,500,000
10	Coral Drive Sidewalk entire length on one side	CIP	Provide sidewalk	$ 500,000
11	Camino Sobrante walkway from Orinda Way to Lake Cascade	CIP	Provide sidewalk or roadway widening	$ 750,000
12	Brookwood Road walkway west of Camino Pablo	CIP	Provide sidewalk or roadway widening	$ 750,000
13	Don Gabriel walkway from La Cresta to Valley View near Del Ray Elementary	CIP	Provide sidewalk or roadway widening	$ 150,000
	Subtotal Pedestrian, Bicycle and Transit Projects			**$ 8,794,302**
	Roadway Projects			
14	Signal Coordination	1998 Lamorinda Nexus S	Traffic Signal Improvements on Camino Pablo and Moraga Way	$ 63,680
15	Happy Valley Road Safety Improvements	1998 Lamorinda Nexus S	Install guard rail and slide stabilization	$ 955,200
16	Santa Maria 3rd WB Lane at Camino Pablo	1998 Lamorinda Nexus S	Reconfigure to three lanes for westbound Santa Maria	$ 241,984
17	Traffic Safety Improvements - Calming	1998 Lamorinda Nexus S	Traffic Calming Projects	$ 262,680
18	Moraga Way/Stein Way intersection improvements – currently an unfunded CIP project – already on the old list	CIP	Install traffic signal and turn lanes from Moraga Way	$ 750,000
19	Rheem Blvd/Glorietta Blvd intersection improvements – currently an unfunded CIP project – on the list of potential intersections	CIP	Install traffic signal and turn lanes	$ 500,000
20	Moraga Way/Camino Encinas signage/signal improvements – been recently discussed by the public, looking for better directional signage for vehicles on northbound Moraga Way approaching downtown trying to get to Hwy 24 EB on-ramp on Bryant.	CIP	Signage/signal improvements for better directional signage for vehicles on northbound Moraga Way	$ 750,000
21	Downtown wayfinding signage from Theatre Square to Orinda Village	CIP	Provide directional signage	$ 200,000
22	Miner Road Bridge retrofit/replacement – more local matching funds	CIP	Replace existing bridge over San Pablo Creek	$ 1,250,000
23	Direct Connection from Moraga Way and Camino Pablo to Eastbound SR 24	Action Plan	Reconfigure the existing SR 24/Camino Pablo interchange	$ 40,000,000
24	Auxiliary lane on eastbound SR-24 Gateway on-ramp to Brookwood and continue completion of improvements to eastbound Brookwood off-ramp	Action Plan	Construct additional eastbound lane	$ 20,000,000
25	Undergrounding Utilities and Replace Piping on Moraga Way and Camino Pablo	Action Plan	Bury existing overhead utilities	$ 12,500,000
	Subtotal Roadway Projects			**$ 77,473,544**
	Grand Total for Orinda Project			**$ 86,267,846**

Appendix B
Decision Criteria for Determining the Local Share of Fee Program Projects

Appendix B Decision Criteria for Determining the Local Share of Fee Program Projects

<table>
<tr><td rowspan="5">Project would improve the vehicular capacity or quality of service on a major arterial</td><td rowspan="2">Yes</td><td rowspan="2">Project is on a Route of Regional Significance or an Interjurisdictional Route</td><td>Yes</td><td>40%</td></tr>
<tr><td>No</td><td>60%</td></tr>
<tr><td rowspan="3">No</td><td rowspan="3">Project would improve multi-modal access to a PDA or BART Station</td><td>Yes</td><td>60%</td></tr>
<tr><td rowspan="2">No</td><td rowspan="2">Project would reduce vehicular demand on a major arterial by improving transit, bicycle or pedestrian opportunities</td><td>Yes</td><td>75%</td></tr>
<tr><td>No</td><td>100%</td></tr>
</table>

Percentages to the far right indicate percent of project costs considered to be local based on responses to the criteria for that project.

Appendix C
Formula to Calculate Regional Allocation Percentages

Appendix C - Formula to Calculate Regional Allocation Percentages

Expected Fees Returned to $City_i$ | Local Share of Fees Collected in $City_i$ | $City_i$ Share of Regional (Non-Local) Fees | Sum of Fees Not Local

$$TF*PGT_i = LS_i*TF*PDUE_i + SR_i*\Sigma ((1-LS_i)*TF*PDUE_i)$$

$$TF*PGT_i - LS_i*TF*PDUE_i = SR_i*\Sigma ((I-LS_i) * TF*PDUE_i)$$

$$\frac{\cancel{TF}*PGT_i - LS_i*\cancel{TF}*PDUE_i}{\Sigma ((1-LS_i) * \cancel{TF} * PDUE_i)} = SRi$$

$$\frac{PGT_i - LS_i*PDUE_i}{\Sigma ((1-LS_i) * PDUE_i)} = SRi$$

SR_i = Share of Regional (Non-Local) Fees Returned to $City_i$

TF = Total Fees Collected

PGT_i = Percent of Lamorinda Growth Travel (VMT) in $City_i$

LS_i = Share of Transportation Project Costs in $City_i$ that are kept as Local

$PDUE_i$ = Percent of Lamorinda Growth DUEs in $City_i$

DUEs = Dwelling Unit Equivalents