



# **Greater Eureka Area Traffic Impact Fee (GEATIF)**

**For the County of Humboldt &  
The City of Eureka**

**March 2017**





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## CHAPERT 1. INTRODUCTION AND SUMMARY

### Introduction

This analysis provides the technical basis for establishing the required nexus between anticipated future development in the Greater Eureka Area and the need for certain improvements to the local transportation facilities.



Transportation Impact Fees (TIF) are one-time fees typically paid prior to the issuance of a building permit and imposed on development projects by local agencies responsible for regulating land use (Cities and Counties). As an applicant proposes a project, a project-specific traffic impact study may be necessary, as this document does not address specific impacts from a proposed development. In addition to fees and projects contemplated by this document, other on-site, fronting, and off-site improvements directly associated with future projects may be required. A project-specific traffic impact study will assess this.



To guide the widespread imposition of public facilities fees, the State Legislature adopted the Mitigation Fee Act (the Act) with Assembly Bill 1600 in 1987 and subsequent amendments. The Act, contained in California Government Code §§66000-66025, establishes requirements on local agencies for the imposition and administration of fee programs.



The specific tasks performed in preparing this analysis and their results are summarized in this section. The County of Humboldt and the City of Eureka (Agencies) have joined together to consider the adoption of the Greater Eureka Area Traffic Impact Fee (GEATIF).



In order to implement a traffic impact fee, both the City and the County will need to adopt an ordinance establishing the fee, as well as a Memorandum of Understanding outlining fee collection, how projects will be prioritized for funding, and responsibility for project execution.

### Fee Area



The GEATIF program encompasses the entirety of the City of Eureka and the surrounding area in unincorporated Humboldt County. The proposed fee area is shown in **Figure 1**. The fee area was selected as the area where development is likely to occur. The fee boundaries include the Eureka city limits, the City of Eureka Planning Area, the Humboldt Community Services District boundary, the Humboldt Community Services District sphere, and the Eureka Community Plan boundary. If any portion of a property is within the fee boundary area, then the entire parcel is subject to the fee.



The Martin Slough Interceptor (MSI) Project boundaries are included within the fee area. The MSI Environmental Impact Report required the adoption of impact fees and the adoption of the impact fee described in this document satisfies that requirement. The fee area proposed is larger than the Martin Slough area because it is intended to include all areas potentially subject to growth in the Greater Eureka Area in the next 20 years. Also, the peripheral areas contribute traffic volumes to the portions of the community where fee





projects are likely to occur. These peripheral areas are also included in the boundaries of the 1995 Eureka Community Plan, whose development was analyzed for use in the GEATIF.

The development of the GEATIF program involved the major tasks described below.



1. The existing deficiencies on the Greater Eureka Area streets and intersections were determined. This involved a comprehensive evaluation of the Greater Eureka Area by evaluating 33 intersections. Most of the existing street segments and intersections are not currently deficient, when measured against local existing level of service standards. The Eureka Community Plan (ECP), the City General Plan and local staff recommendations were utilized for determining study locations.



2. Future deficiencies on the street system were determined based on findings of the ECP. TJKM utilized the Humboldt County Travel Demand Model, which includes future land use conditions, to determine traffic volumes in 2035. A follow up level of service analysis was conducted to determine locations that required mitigation measures to correct future deficiencies and to bring the future deficient intersections and roadway segments to an acceptable level of service.



3. A list of projects needed to accommodate future traffic was determined. In addition to the projects identified as a result of technical analysis of the ECP, additional projects were identified by City and County staff to include in the GEATIF. Thirteen projects were identified for inclusion in the fee program.



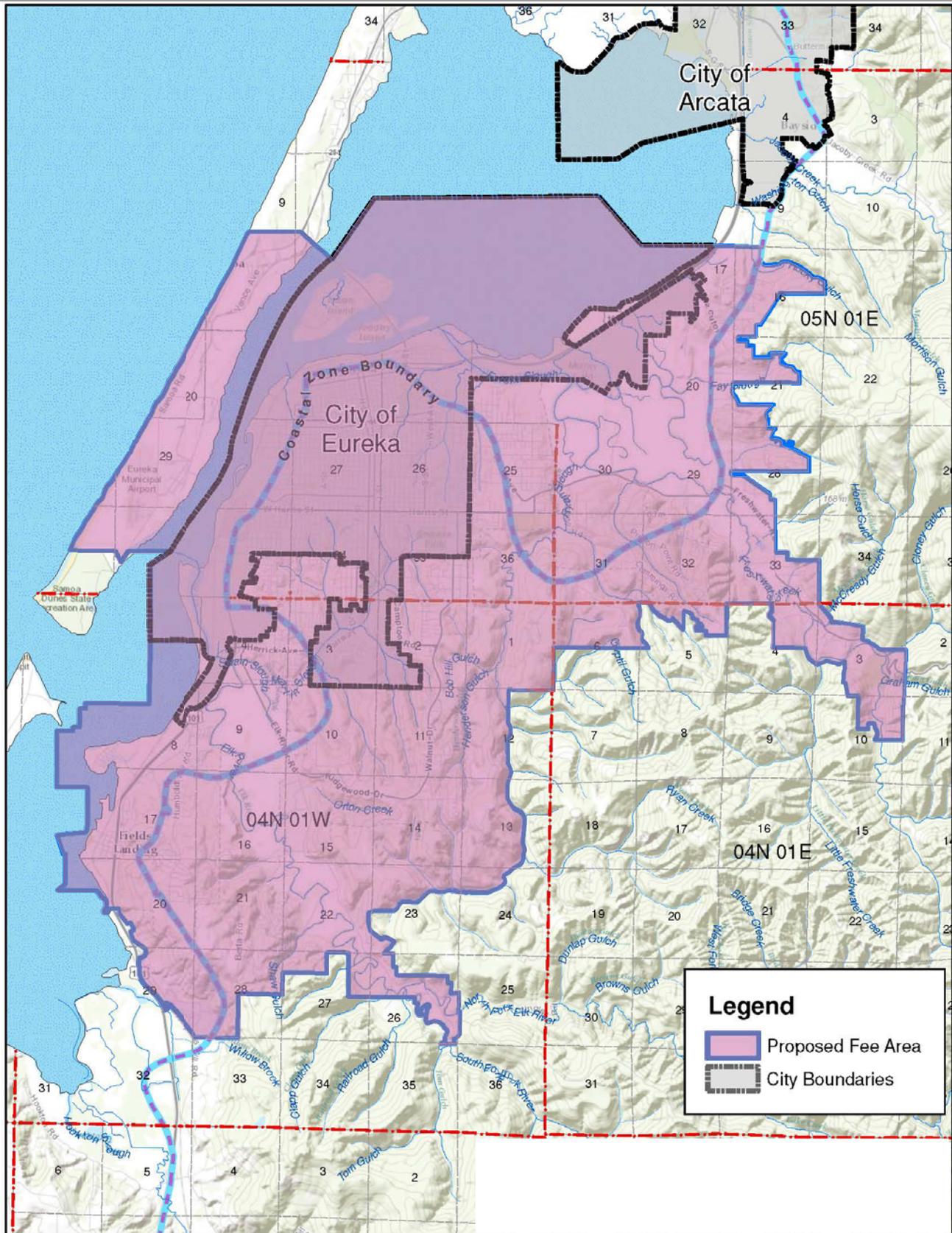
4. The project costs were determined by preparing engineering cost estimates based on conceptual designs of each project. The costs were further adjusted to cover costs associated with preliminary engineering and design of each project.
5. An estimate was prepared of the p.m. peak hour trip generation that will result from development of the expected future land uses within the fee area. The trips are based on development of parcels within the fee area as identified in the demand model, including single family homes, multi-family homes, and various categories of office, commercial and industrial uses. Trip generation rates from the Institute of Transportation Engineers *Trip Generation, 9<sup>th</sup> Edition*, were utilized. The p.m. peak hour was determined to be the most appropriate for the primary analysis period.
6. A cost per trip was calculated along with the corresponding GEATIF schedule of fees.



The schedule of fees includes fee categories for residential, commercial, office and other standard land uses.



# Fee Area





## Summary

### **Chapter 1 – Introduction and Summary**

### **Chapter 2 – Existing and Future Deficiencies and Peak Hour Trips**

The first step required for the GEATIF is the determination of existing and future deficiencies on streets and intersections within the study area. Developer fees cannot be used to correct existing deficiencies. Existing deficiencies were determined by evaluating if the level of service on the intersection or roadway meets the level of service standards. Intersection levels of service (LOS) were used as a basis to determine existing and future deficiencies and anticipated improvements required to achieve LOS standards.



The trip generation portion of the GEATIF program is based on the proposed changes in land use between 2015 and 2035. Land use files from the Humboldt County Travel Demand Model were used to determine the changes in land use and to determine the growth in trips over the 20-year period. It was calculated that there will be 3,916 new p.m. peak hour trips generated by 20-year growth.



### **Chapter 3 – Selection and Cost of Projects**

The recommended list of new transportation improvements to serve the Fee area was developed based on previous detailed studies conducted for the buildout of the Eureka Community Plan as described in Chapter 2. Projects were selected by initially determining deficient locations in 2035. Additional study locations were recommended by City and County staff members. Detailed cost estimates for each project were prepared by the firm of Omni-Means.



The recommend list of intersection improvement projects is indicated below. Costs and details of the individual projects are described in Chapter 3 of this report.



1. Fairway Drive and Lundblade Drive
2. Hemlock Street and Walnut Drive
3. Herrick Avenue and Elk River Road
4. Ridgewood Drive and Elk River Road
5. Walnut Drive and Campton Road
6. Myrtle Avenue and Hall Avenue
7. Hodgson Street and F Street
8. Harris Street and I Street
9. Buhne Street and E Street
10. Harris Street and Dolbeer Street
11. Hodgson Street and H Street
12. Wabash Avenue and E Street
13. Hodgson Street and Chester Street



The 13 projects have a total program cost of \$7,929,000.





#### **Chapter 4 – Program Costs and Fee Calculation**

The base fee per peak hour trip is calculated by dividing the total cost of the TIF program, \$8,087,000 by the total projected 3,916 new p.m. peak hour trips. The TIF requirement calculates to a cost of \$2,065 per p.m. peak hour trip. The proposed GEATIF fee schedule is as follows:

#### **Proposed Fee Schedule**

Land Use Category	Unit	Fee Amount
Single-Family Residential	Dwelling Unit	\$2,065
Multi-Family Residential	Dwelling Unit	\$1,280
Senior/Assisted Living	Room	\$516
General Retail	KSF <sup>1</sup>	\$3,056
Hotel	Room	\$1,280
Gasoline Service Station	Fueling Position	\$11,464
General Office	KSF	\$3,076
Medical/Dental Office	KSF	\$7,372
Industrial/Service Commercial	KSF	\$2,003
Warehouse/Distribution < 100 KSF	KSF	\$640
Warehouse/Distribution > 100 KSF	KSF	\$247
Mini-Storage	KSF	\$536
Other Uses	P.M. Trip	\$2,065

<sup>1</sup> KSF = Thousand square feet



#### **Chapter 5 – Alternative Fee Calculation**

This chapter shows how the fee calculation would change if the study area were reduced in size to only include the Martin Slough Interceptor Project area. Given that scenario, the total development potential would be lower. In this case, 12 of the 13 projects contemplated in this report would still be warranted, with partial funding of six of them. This would result in a cost per trip increase of about nine percent - from \$2,065 to \$2,249.



#### **Chapter 6 – Nexus Findings**

California legislation requires that charges on new developments bear a reasonable relationship to the needs created by, and the benefits accruing to, that development. California courts have long used that reasonableness standard or nexus to test to evaluate the constitutionality of exactions, including development fees. Based on the analysis included in the body of this report, it can be concluded that the future development and the need for their associated improvements meet or exceed the basic requirements set forth in Government Code sections beginning with 66000 to govern development fees.





The methodology of this report ensured that only the portions of the projects included in the GEATIF project list are necessitated by the growth in traffic between 2015 conditions and 2035 conditions from the travel demand model. Thus, there is a reasonable relationship between the proposed use of the GEATIF and the proposed land use development projects on which the fee will be imposed. In the same manner, there is a reasonable relationship between the need for facilities included in the GEATIF and the proposed land use development projects.



The nexus findings in this study also apply to the alternative fee area.





## CHAPTER 2. EXISTING AND FUTURE DEFICIENCIES AND PEAK HOUR TRIPS

### Existing and Future Deficiencies

The intersection and roadway LOS were used as a starting point for this determination. Where future deficiencies are anticipated, a determination of the improvements required to achieving proper LOS was conducted. These improvements potentially consist of upgrading signalized intersections or installing new traffic signals. The intersection LOS were used as a basis for this determination. **Table 1** shows the existing and future LOS for the study intersections within the fee area.



**Table 1: Existing and Future Levels of Service**

Intersection	City or County <sup>1</sup>	Exist. Signals?	Existing Conditions <sup>2</sup>				2035 Conditions			
			A.M. Peak Hour		P.M. Peak Hour		A.M. Peak Hour		P.M. Peak Hour	
			Delay <sup>3</sup> (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS
Fairway Drive & Lundblade Drive	City	No	16.0	C	14.0	B	<b>28.2</b>	<b>D</b>	<b>27.3</b>	<b>D</b>
Harris Street & Dolbeer Street	City	No	<b>30.4</b>	<b>D</b>	<b>68.0</b>	<b>F</b>	<b>&gt;120.0</b>	<b>F</b>	<b>&gt;120.0</b>	<b>F</b>
Harris Street & Harrison Avenue	City/Co.	Yes	15.0	B	17.2	B	17.8	B	25.6	C
Herrick Avenue & Elk River Road	Co.	No	<b>50.3</b>	<b>F</b>	<b>34.1</b>	<b>D</b>	<b>&gt;120.0</b>	<b>F</b>	<b>&gt;120.0</b>	<b>F</b>
Myrtle Avenue & Hall Avenue	Co.	No	12.9	B	12.6	B	21.3	C	<b>42.6</b>	<b>E</b>
Ridgewood Drive & Westgate Drive	Co.	No	9.8	A	9.4	A	13.3	B	14.2	B
Ridgewood Drive & Elk River Road	Co.	No	11.6	B	11.1	B	23.7	C	<b>27.7</b>	<b>D</b>
Walnut Drive & Campton Road	Co.	No	<b>37.2</b>	<b>E</b>	17.6	C	<b>69.3</b>	<b>F</b>	<b>77.8</b>	<b>F</b>
Hemlock Street & Walnut Drive	City/Co.	No	13.1	B	12.8	B	<b>50.7</b>	<b>F</b>	<b>&gt;120.0</b>	<b>F</b>
Buhne Street & H Street	City	Yes	6.5	A	7.9	A	7.4	A	8.3	A
Buhne Street & I Street	City	Yes	8.0	A	7.0	A	8.5	A	8.6	A
Buhne Street & S Street	City	Yes	12.7	B	11.8	B	17.7	B	27.7	C
Buhne Street & Harrison Street	City	Yes	10.4	B	10.6	B	26.5	C	31.3	C
Buhne Street & E Street	City	No	16.2	C	<b>33.1</b>	<b>D</b>	<b>33.0</b>	<b>D</b>	<b>91.0</b>	<b>F</b>
Hodgson Street & H Street	City	No	18.1	C	16.5	C	<b>130.4</b>	<b>F</b>	<b>&gt;120.0</b>	<b>F</b>
Hodgson Street & E Street	City	No	10.8	B	10.0	A	11.4	B	10.4	B
Hodgson Street & F Street	City	No	<b>29.4</b>	<b>D</b>	22.8	C	<b>87.9</b>	<b>F</b>	<b>&gt;120.0</b>	<b>F</b>
Hodgson Street & Chester Street	City	No	13.0	B	11.1	B	13.4	B	17.2	C
Manzanita Street & F Street	City	No	17.2	C	18.8	C	16.8	C	21.5	C
Manzanita Street & G Street	City	No	9.4	A	9.2	A	11.3	B	15.8	C





Intersection	City or County <sup>1</sup>	Exist. Signals?	Existing Conditions <sup>2</sup>				2035 Conditions			
			A.M. Peak Hour		P.M. Peak Hour		A.M. Peak Hour		P.M. Peak Hour	
			Delay <sup>3</sup> (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS
Myrtle Avenue & West Avenue	City	No	25.2	C	31.7	C	25.0	C	28.9	C
Harris Street & E Street	City	No	7.6	A	7.6	A	7.6	A	8.0	A
Harris Street & F Street	City	No	8.2	A	7.4	A	10.9	B	9.0	A
Harris Street & H Street	City	Yes	8.9	A	8.3	A	9.4	A	8.6	A
Harris Street & I Street	City	No	14.4	B	15.6	C	<b>&gt;120.0</b>	<b>F</b>	<b>&gt;120.0</b>	<b>F</b>
Harris Street & S Street	City	Yes	21.1	C	18.3	B	25.6	C	22.8	C
Wabash Avenue & E Street	City	No	13.1	B	<b>27.6</b>	<b>D</b>	19.1	C	<b>79.5</b>	<b>F</b>
Seventh Street & H Street	City	Yes	6.7	A	8.0	A	7.0	A	8.0	A
Seventh Street & I Street	City	Yes	7.1	A	7.4	A	7.8	A	7.6	A
Sixth Street & H Street	City	Yes	6.6	A	7.6	A	7.0	A	8.2	A
Sixth Street & I Street	City	Yes	6.8	A	7.0	A	7.2	A	7.5	A
Fourteenth Street & H Street	City	Yes	6.6	A	9.0	A	8.3	A	8.8	A
Fourteenth Street & I Street	City	Yes	7.8	A	7.3	A	8.9	A	8.5	A

Notes:

<sup>1</sup> Indicates if the project is located in the City of Eureka or in unincorporated Humboldt County

<sup>2</sup> Existing conditions as measured in 2008, 2014 or 2017

<sup>3</sup> Delay = Control Delay in Seconds/Vehicle, LOS = Level of Service

X.X (X.X) = Average Intersection Delay in seconds per vehicle (signalized)

Average Delay in seconds per vehicle for the worst minor approach (unsignalized)

**BOLD** denotes unacceptable LOS

**Shaded** indicates a GEATIF project



## Trip Generation

A key step in the fee development process is to determine the number of trips that will be generated over a 20-year period by the growth in local development within the fee area. To determine the land use growth, TJKM utilized the land use tables contained in the Humboldt County Travel Demand Model. The main purpose and use of this model is to develop future traffic volumes on all important streets within the area. The model evaluates trip generation by land use category including the existing and future number of households in hundreds of traffic analysis zones (TAZs) and the existing and future number of employees in the same TAZs. TJKM selected the TAZs that constitute the study area (fee area) for this report. The table below summarizes the land use growth, expressed in households and employees, within the fee area by the various land use categories. It also lists the growth in trips in each category after applying a p.m. peak hour trip rate factor based on the Institute of Transportation Engineers publication *Trip Generation, 9<sup>th</sup> Edition*.



**Table 2: Determination of 20-Year Trips**

Land Use Category	Employment, Jobs				Trips	
	2010	2040	30-Year Growth	20-Year Growth <sup>1</sup>	P.M. Peak Hour Trip Rate <sup>2</sup>	20-Year Trips
Retail	4,546	4,964	418	279	3.5	977
Service	8,723	9,452	729	486	2.0	972
Manufacturing	445	481	36	24	0.5	12
Government	1,925	2,042	117	77	2.5	193
Finance	1,061	1,123	62	41	5.4	221
Wholesale	741	779	38	25	0.5	13
Agriculture	326	326	0	0	-	-
Other	1,365	1,365	0	0	-	-
Healthcare	3,970	4,234	264	176	1.0	176
Sub Total	23,102	24,766	1,664	1,108	-	2,564
Households	20,035	22,064	2,029	1,352	1.0	1,352
Total growth in trips, 2015 to 2035						3,916

<sup>1</sup>30 year employment x 0.667

<sup>2</sup>Based on ITE's Trip Generation, 9<sup>th</sup> Edition



The Humboldt County Travel Demand Model has land use forecasts for 2010 and 2040. Since these are not the exact years needed for development of the GEATIF, TJKM assumed that there would be lineal growth during this 30-year time period. That information is contained in the column, "30-Year Growth." To obtain the growth that could be expected in the 20-year period between 2015 and 2035, two-thirds of the 30-year growth was utilized. In **Table 2**, the column "20-Year Growth" was used in this study. Note that 1,108 new jobs are expected in the 20-year period, along with 1,352 new dwelling units, or an average of about 68 dwelling units per year. By applying the trip generation rates to these jobs and homes, it was calculated that there would be 3,916 new p.m. peak hour trips each day.





### Future Development Projects

As an applicant proposes a project, a project-specific traffic impact study may be necessary, as this document does not address specific impacts from a proposed development. In addition to fees and projects contemplated by this document, other on-site, fronting, and off-site improvements directly associated with future projects may be required. A project-specific traffic impact study will assess this.





## CHAPTER 3. SELECTION AND COST OF PROJECTS

In this project, LOS conditions were evaluated at 33 intersections. Thirteen locations were selected to be included in the fee program. Those that were not selected usually involved locations that could be mitigated with low cost solutions or with measures that were not suitable for a development traffic impact fee.

**Table 3: Project List and Costs**

Project Location	Project Description	Cost
1. Fairway Drive & Lundblade Drive	New Signal	\$1,123,000
2. Hemlock Street & Walnut Drive	New Signal	\$513,000
3. Herrick Avenue & Elk River Road	New Signal	\$663,000
4. Ridgewood Drive & Elk River Road	New Signal	\$838,000
5. Walnut Drive & Campton Road	New Signal	\$545,000
6. Myrtle Avenue and Hall Avenue	New Signal	\$545,000
7. Hodgson Street & F Street	New Signal & Lanes	\$436,000
8. Harris Street & I Street	New Signal	\$409,000
9. Buhne Street & E Street	New Signal	\$545,000
10. Harris Street & Dolbeer Street	New Signal	\$545,000
11. Hodgson Street & H Street	New Signal	\$547,000
12. Wabash Street & E Street	New Signal	\$545,000
13. Hodgson Street & Chester Street	Intersection	\$675,000
<b>Total Costs</b>		<b>\$7,929,000</b>

Project cost estimates were prepared by Omni-Means. In addition to unit costs for individual components of the improvements, the preliminary cost estimates include lump sum estimates or percent markups for "soft costs" typically associated with capital projects including mobilization, planning and design, program management, and contingencies.

**Table 3** includes the total cost estimates for the 13 proposed GEATIF projects. The total amount is \$7,929,000. **Figure 2** shows the locations of all proposed projects. The individual projects are further described below.

**1. Fairway Drive and Lundblade Drive – Cost \$1,123,000:**

Even though this intersection is compromised by the narrow, sharply-curved approach on Lundblade Drive, it appears that a traffic signal will operate acceptably. The westbound left turn lane should have a protected left turn phase. The nearby hill crest will be lowered to improve sight distance at the intersection.

**2. Hemlock Street and Walnut Drive – Cost \$513,000:**

The problem at this intersection at the present is the heavy northbound right turn movement that has to stop and therefore is being delayed. A signal is warranted with other changes. The changes would reduce eastbound lanes to one shared through/right turn, and westbound would have a separate left turn lane and a through lane. Northbound right turns





would operate as an overlap with westbound left turns. Pedestrian phases would be provided for crossing both Walnut Drive and Hemlock Street. Northbound and eastbound right turn movements on red would be prohibited, and pedestrians would receive an advance "Walk" five seconds before vehicular traffic. These measures will work to minimize the potential right turn conflicts between vehicular and pedestrian traffic.



**3. Herrick Avenue and Elk River Road – Cost \$663,000:**

Installation of a traffic signal will be warranted to accommodate growth. Initially, a simple two-phase signal with a westbound left turn lane will result in an improved LOS B. Signalization of this intersection could be done in conjunction with signalization of Herrick Avenue and US 101 northbound and southbound ramps, which would be projects to be completed by Caltrans. A westbound left turn lane already exists on Herrick Avenue at Elk River Road. However, the following improvement is recommended to accommodate future traffic demand. In the future, the northbound Elk River Road approach should be widened to two lanes, with one right turn lane to the east and one left turn lane to the west. Additionally, an eastbound right turn lane from Herrick Avenue onto southbound Elk River Road should be constructed, necessitating widening on the south half of Herrick Avenue. The ultimate signal operation will have the eastbound right turn movement running as an overlap with northbound left turn movement and eastbound through movement. Additional improvements are needed on the northbound off ramp from US 101 at Herrick Avenue.



**4. Ridgewood Drive and Elk River Road – Cost \$838,000:**

Due to the 45 mph speeds and use of the rural warrant, a signal will be warranted at this intersection in the future. A left turn lane is needed for the main road on both Elk River Road and for Westgate Drive, which will not be part of the signal operation.



**5. Walnut Drive and Campton Road – Cost \$545,000:**

This location is expected to operate at unacceptable conditions. A traffic signal will be warranted at this location in the near future. However, when construction is imminent, a roundabout could be considered instead of a traffic signal to take advantage of the available right of way at the intersection. Roundabouts result in reduced speeds and improved traffic safety records at intersections but are frequently not feasible because of the increased initial costs. The current cost estimate for a roundabout is about \$1.6 million.



**6. Myrtle Avenue and Hall Avenue – Cost \$545,000:**

New traffic signals are proposed for this location. This location currently operates at LOS B but is expected to degrade to LOS E in the future. Protected left turns are likely to be installed serving both westbound and eastbound traffic.

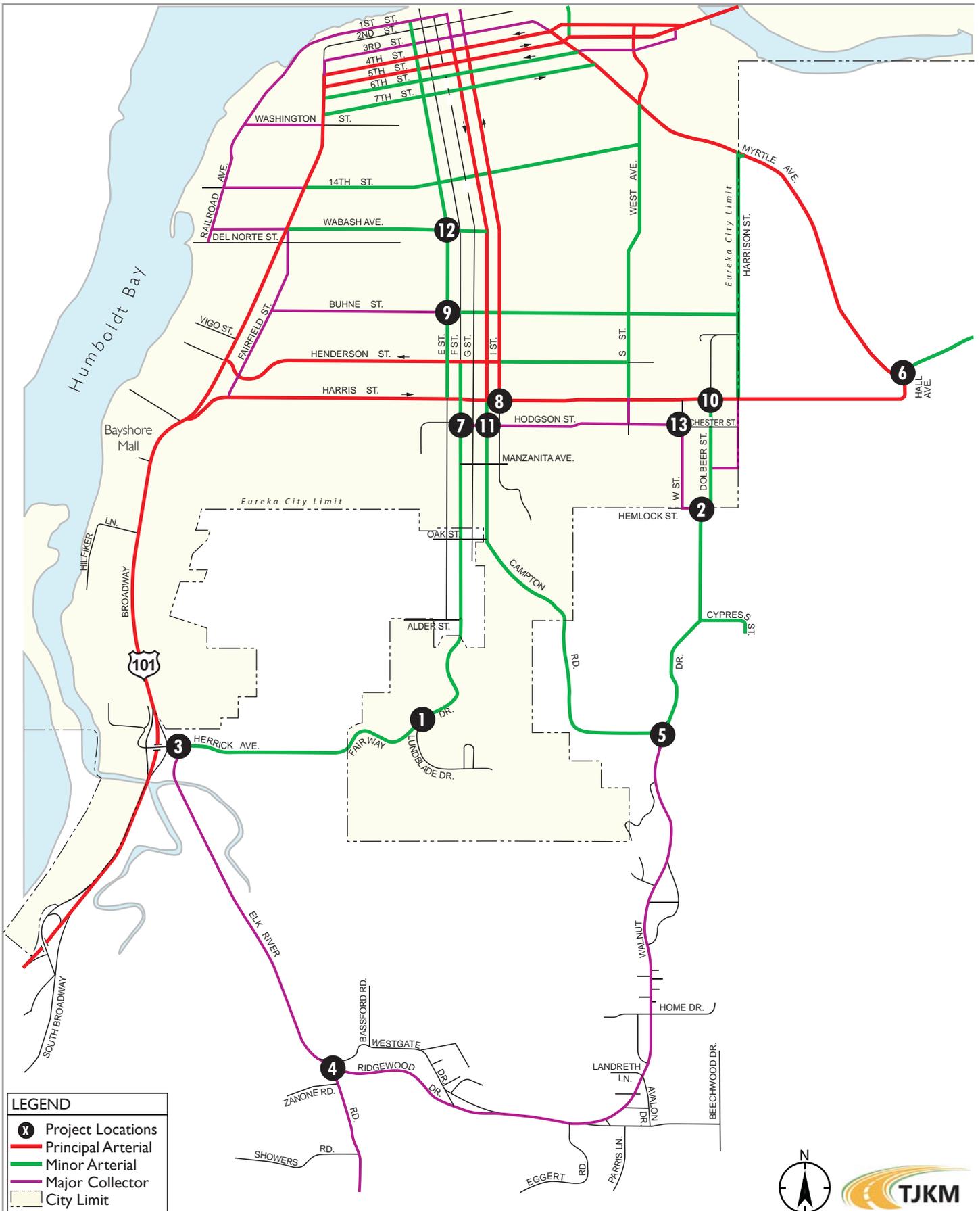


**7. Hodgson Street and F Street – Cost \$436,000:**

This is an off-set intersection with the east leg of Hodgson Street intersecting F Street approximately 80 feet south of the west leg of Hodgson Street. A signal is not warranted in the immediate future; simply striping westbound narrow (10 foot) right and left turn lanes would reduce the delay to LOS E. This is the most cost-effective near-term mitigation. When a signal is warranted, if operating as split phase for Hodgson Street, acceptable levels of service will be provided.



# GEATIF Project Locations



LEGEND	
	Project Locations
	Principal Arterial
	Minor Arterial
	Major Collector
	City Limit





**8. Harris Street and I Street – Cost \$409,000:**

A signal will be warranted at this intersection in the near future. The intersection currently operates at LOS C/D with existing volumes. Operation of the intersection is expected to improve to LOS A with installation of the traffic signal.



**9. Buhne Street and E Street – \$545,000:**

A signal will be warranted at this intersection in the future. The intersection is currently equipped with a four-way stop installation. The signalized intersection will likely be equipped with painted left turn lanes on all approaches, although design details will be determined in the future.



**10. Harris Street and Dolbeer Street – \$545,000:**

A signal will be warranted at this intersection in the near future. The intersection currently operates at LOS D/F with existing volumes. Operation of the intersection is expected to improve to LOS A with installation of the traffic signal. The intersection has unique vertical sight distance issues that may make installation of a signal difficult. As such, future analysis may yield alternate projects at or near the intersection that construct other types of improvements or divert traffic away from the intersection. The monies collected from the fee may be used for improvements at the intersection or for these alternative projects.



**11. Hodgson Street and H Street – \$547,000:**

This project would install new traffic signals at the intersection, replacing the existing two-way stop intersection at which Hodgson Street stops for H Street.



**12. Wabash Street and E Street – \$545,000:**

A signal will be warranted at this intersection in the future. The intersection is currently equipped with a four-way stop installation. The signalized intersection will likely be equipped with painted left turn lanes on some approaches, although design details will be determined in the future.



**13. Hodgson Street and Chester Street – \$675,000:**

The intersections of Chester Street/W Street and Hodgson Street/W Street are actually two closely spaced intersections. The center lines of Chester Street and Hodgson Street, two east-west streets are offset by approximately 50 feet, resulting in awkward movements for both east-west and north-south traffic. The plan is to align the two east-west streets, likely by relocating the east leg of the intersection northerly.





## CHAPTER 4. PROGRAM COSTS AND FEE CALCULATION

### Cost per Trip Estimate

**Table 4** presents a summary of the TIF improvement project costs; the projected future trips to be added by new development, and the resulting estimated TIF improvement cost per trip. The total cost of the TIF projects to be included is \$7,929,000.

The fee calculation is based on trip generation estimates in **Table 2** and the cost estimates of the TIF improvement projects. The cost per p.m. peak hour trip is calculated to be \$2,065, using a total TIF project cost of \$8,087,000 including the cost for administering the program, and 3,916 new p.m. peak hour trips. The TIF improvement project costs as well as the calculated new TIF cost per trip are shown in **Table 4**. TJKM is not aware of any other dedicated funding sources for any of the 13 projects, so no adjustment has been made for other funding sources.

**Table 5** presents the new schedule of fees. The land use categories in this fee schedule have been determined based on a range of expected development land use types.

**Table 4: 2017 Cost per Trip Estimate**

GEATIF Improvement Projects	2017 TIF Costs
All Projects	<b>\$7,929,000</b>
Plus Administrative Costs (2%)	<b>\$158,000</b>
<b>Total TIF Funding</b>	<b>\$8,087,000</b>
Total Peak Hour Trips Added by New Development	<b>3,916</b>
<b>TIF Cost Per Trip</b>	<b>\$2,065</b>





**Table 5: Calculations of Fees (per KSF<sup>1</sup> unless noted)**

Land Use Category	ITE Reference	Trip Rate <sup>2</sup>	Cost Per Trip	Fee Rate
Single Family/unit	Single Family Detached Housing (210)	1.00	\$2,065	\$2,065
Multi-family/unit	Apartment (220)	0.62	\$2,065	\$1,280
Senior/Assisted/unit	Senior Adult Housing - Attached (252)	0.25	\$2,065	\$516
General Retail	Shopping Center (820)	1.48 <sup>3</sup>	\$2,065	\$3,056
Hotel/Motel	Business Hotel (312)	0.62	\$2,065	\$1,280
Gasoline/Service Station (per fueling position)	Gasoline/Service Station (944)	5.552 <sup>3</sup>	\$2,065	\$11,464
General Office	General Office Building (710)	1.49	\$2,065	\$3,076
Medical/Dental Office	Medical-Dental Office Building (720)	3.57	\$2,065	\$7,372
Industrial/Service Commercial	Light Industrial (110)	0.97	\$2,065	\$2,003
Warehouse/Distribution ( < 100 KSF)	Warehousing (150)	0.31	\$2,065	\$640
Distribution ( > 100 KSF)	High Cube Warehouse (152)	0.12	\$2,065	\$247
Mini-Storage	Mini-Warehouse (151)	0.26	\$2,065	\$536
Other Uses	--	Unit	\$2,065	P.M. Trips

<sup>1</sup>KSF = Thousand square feet

<sup>2</sup>P.M. peak hour trip rate, based on ITE's Trip Generation, 9<sup>th</sup> Edition

<sup>3</sup>Based on 60% pass-by trips

**Other Factors in TIF**

Establishment of Final TIF Fee. The Agencies may decide not to levy the full fee that has been established as a part of this study. If so, the results will be reflected in an adjustment to this study.

Other Land Uses. The Agencies may decide to use the \$2,065 cost per p.m. peak hour trip rate to apply to other specific land uses not covered by **Table 4**. The latest edition of the Institute of Transportation Engineer's *Trip Generation* should be used as a source for p.m. peak hour trip rates.



## CHAPTER 5. ALTERNATIVE FEE CALCULATION

This chapter describes how the GEATIF would change if only the land use within the Martin Slough Interceptor Project boundaries were considered instead of the larger area depicted on **Figure 1**. TJKM used the Humboldt County Travel Demand Model to determine the land use growth within the Martin Slough boundaries, shown on the following pages. That information is contained in **Table 6**. The procedures used in developing this information are the same as those described on page 9 of this report.



**Table 6: Determination of 20-Year Trips – Martin Slough Area Only**

Land Use Category	Employment, Jobs				Trips	
	2010	2040	30-Year Growth	20-Year Growth <sup>1</sup>	P.M. Peak Hour Trip Rate <sup>2</sup>	20-Year Trips
Retail	4,494	4,790	296	197	3.5	690
Service	7,731	8,248	517	345	2.0	690
Manufacturing	426	426	0	0	0.5	0
Government	1,904	1,986	83	56	2.5	140
Finance	1,048	1,092	44	30	5.4	162
Wholesale	677	677	0	0	0.5	0
Agriculture	320	320	0	0	-	0
Other	1,194	1,194	0	0	-	0
Healthcare	3,956	4,143	187	125	1.0	125
Sub Total	21,750	22,876	1,127	753		1,807
Households	16,756	18,234	1,478	986	1.0	986
<b>Total growth in trips, 2015 to 2035</b>						<b>2,793</b>

<sup>1</sup>30 year employment x 0.667

<sup>2</sup>Based on ITE's Trip Generation, 9<sup>th</sup> Edition



It is noted that the 20-year growth in trips within the boundaries of the Martin Slough Interceptor area is 2,793 p.m. peak hour trips. The projects needed to support the 20-year growth in this case are reflected in Table 7. The list of 13 projects needed for the entire study area was evaluated as compared with the boundary of the Martin Slough Interceptor Project. In this review, it was noted that three of the study intersection are located outside the boundaries. Intersections in this category are Myrtle Avenue and Hall Avenue, Buhne Street and E Street, and Wabash Street and E Street. However, the increase in traffic from the two E Street projects is largely because of growth within the Martin Slough area. The Myrtle Avenue and Hall Avenue intersection was removed from the project list applicable to the Martin Slough Interceptor area.



In addition, there are four intersections that are outside of, but very close to, the boundary. Intersections in this category include Herrick Avenue and Elk River Road, Ridgewood Drive and Elk River Road, Harris Street and Dolbeer Street, and Hodgson Street and Chester Street. Seventy five percent of the cost of these projects was assigned as the responsibility of a potential Martin Slough Interceptor fee.





**Table 7** shows the revised project list and the costs applicable to a fee if only the Martin Slough area were considered.

**Table 7: Martin Slough Project List and Costs**

Project Location	Cost	% to Martin Slough	Cost to Martin Slough
1. Fairway Drive & Lundblade Drive	\$1,123,000	100	\$1,123,000
2. Hemlock Street & Walnut Drive	\$513,000	100	\$513,000
3. Herrick Avenue & Elk River Road	\$663,000	75	\$497,250
4. Ridgewood Drive & Elk River Rd.	\$838,000	75	\$628,500
5. Walnut Drive & Campton Road	\$545,000	100	\$545,000
6. Myrtle Avenue and Hall Avenue	\$545,000	0	--
7. Hodgson Street & F Street	\$436,000	100	\$436,000
8. Harris Street & I Street	\$409,000	100	\$409,000
9. Buhne Street & E Street	\$545,000	50	\$272,500
10. Harris Street & Dolbeer Street	\$545,000	75	\$408,750
11. Hodgson Street & H Street	\$547,000	100	\$547,000
12. Wabash Street & E Street	\$545,000	50	\$272,500
13. Hodgson Street & Chester St.	\$675,000	75	\$506,250
	\$7,929,000	--	<b>\$6,158,750</b>



It can be seen from Table 7 that the cost of the projects applicable to a potential fee within the Martin Slough Interceptor area totals \$6,158,750 using the adjustment criteria described above. The project list is reduced to 12 locations, two of which are projects which have a 50 percent Martin Slough responsibility and four of which have a 75 percent responsibility.



**Table 8: 2017 Cost per Trip Estimate for Martin Slough Interceptor Area**

GEATIF Improvement Projects	2016 TIF Costs
All Projects	<b>\$6,158,750</b>
Plus Administrative Costs (2%)	<b>\$123,175</b>
<b>Total TIF Funding</b>	<b>\$6,281,925</b>
Total Peak Hour Trips Added by New Development	<b>2,793</b>
<b>TIF Cost Per Trip</b>	<b>\$2,249</b>

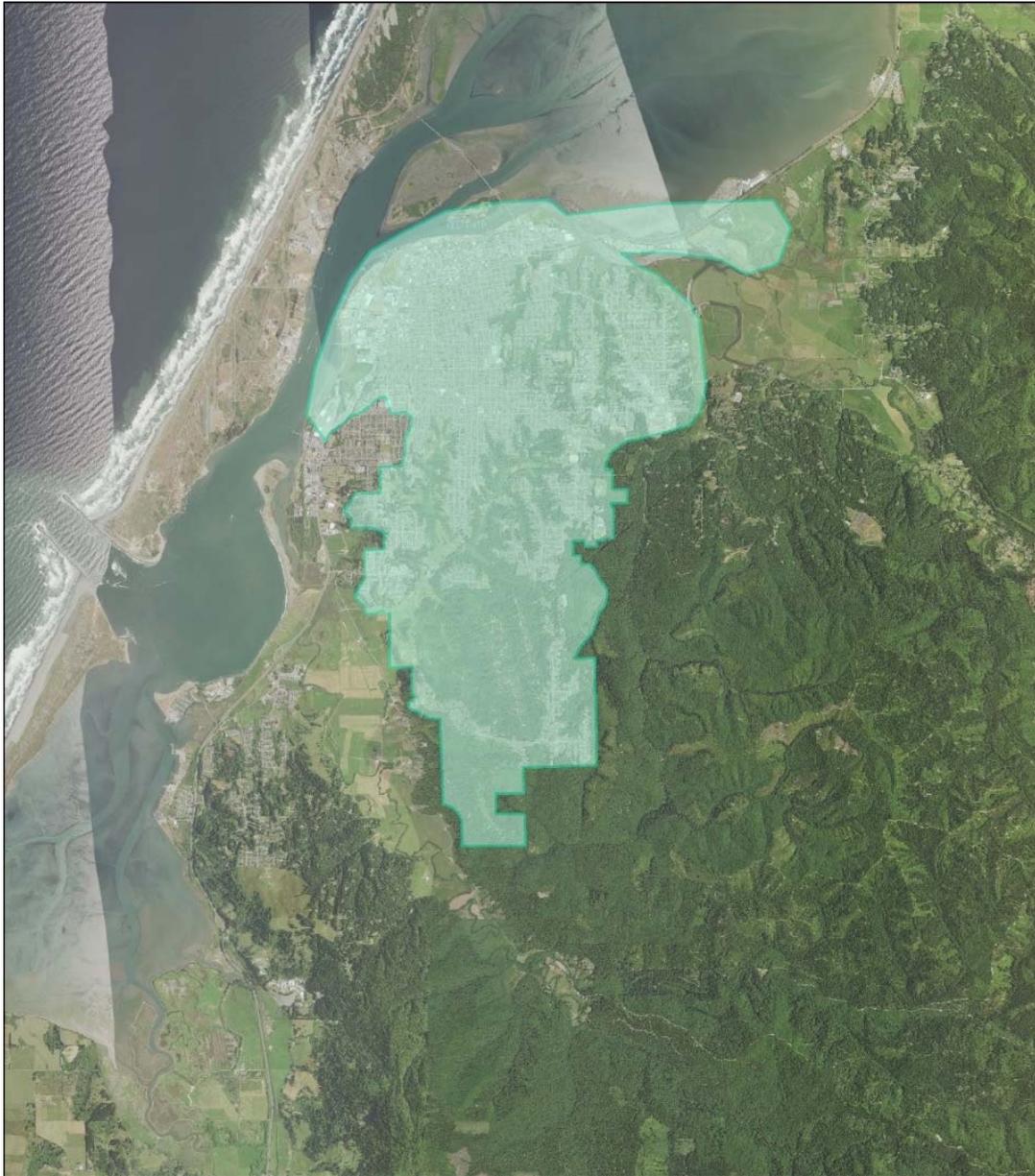


**Table 8** shows that the cost per trip in this scenario is \$2,249, compared with the cost per trip of \$2,065 using the larger study area. Thus, calculated fees using this reduced cost per trip would be nine percent greater than the fees presented in the fee schedule shown in Table 5. For example, the fee for a single family dwelling unit would increase to \$2,249; the fees for a general office building would increase from \$3,076 to \$3,351 per thousand square feet.





### Martin Slough Project Area





## CHAPTER 6. NEXUS FINDINGS

TIF's are one-time fees typically paid prior to the issuance of a building permit and imposed on development projects by local agencies responsible for regulating land use (Cities and Counties). To guide the widespread imposition of public facilities fees, the State Legislature adopted the Act with Assembly Bill 1600 in 1987 and subsequent amendments. The Act, contained in California Government Code §§66000-66025, establishes requirements on local agencies for the imposition and administration of fee programs. The Act requires local agencies to document five findings when adopting a fee.



The five statutory findings required for adoption of the maximum justified fee documented in this report are presented in this chapter and supported in detail by this report. All statutory references are to the Act.



### Purpose of the Fee

For the first finding, the Agencies must:

*Identify the purpose of the fee. (§66001(a)(1))*



This fee would be charged under the authority of proposed Section 3211-1 Purpose, of the County Code of Humboldt County, which establishes a GEATIF. According to the Code:

*"The Agencies find that the cumulative impact of all new development in the Greater Eureka Area will result in increased traffic. This increase in traffic may result in traffic volumes, which exceed the capacity of the existing circulation system to provide acceptable levels of service. To prevent these undesirable consequences, traffic improvements must be provided at a rate, which will accommodate the expected growth in the area. This anticipated development, including development currently approved or submitted for approval, cumulatively will generate a substantial increase over existing levels of traffic within the Area. In accordance with Sections 66000 through 66008 of the California Government Code, the GEATIF is established.*



*The Agencies also find that, in the absence of this chapter imposing a traffic impact fee, existing and future sources of revenue will be inadequate to fund a substantial portion of the circulation system improvements identified in various traffic studies. Accordingly, it is the intent of the Agencies to adopt by this chapter a fair and equitable method of securing some of the revenues necessary to fund the construction and implementation of improvements to the Area's circulation system sufficient to accommodate the traffic volumes generated by new development and preserve acceptable levels of service.*



*The proposed traffic development fee apportions the cost of the necessary traffic improvements and reconstruction among the different categories of new and existing users according to the reasonably estimated peak hour trip demand that each group of users places upon traffic improvements."*





This fee will further that policy by charging new or intensified development the fair share cost of transportation improvements needed to mitigate the transportation impacts created by that development.

### **Use of Fee Revenues**

For the second finding, the Agencies must:

*Identify the use to which the fee is to be put.*

If the use is financing public facilities, the facilities shall be identified. That identification may, but need not, be made by reference to a capital improvement plan as specified in Section 65403 or 66002, may be made in applicable general or specific plan requirements, or may be made in other public documents that identify the public facilities for which the fee is charged. (§66001(a)(2))

Detail on planned uses of fee revenues is contained in **Chapter 3** of this report.

### **Benefit Relationship**

For the third finding, the Agencies must:

*Determine how there is a reasonable relationship between the fee's use and the type of development project on which the fee is imposed. (§66001(a)(3))*

The Agencies have determined that the improvements listed in the report are necessary to support projected development in the Greater Eureka Area. Public facilities funded by the fee will provide a network of transportation infrastructure accessible to the additional residents and workers associated with new development. The benefit from planned improvements and facilities will result from the maintenance of acceptable levels of congestion. Thus, there is a reasonable relationship between the use of fee revenues and the residential and nonresidential types of new development that will pay the fee.

### **Burden Relationship**

For the fourth finding, the Agencies must:

*Determine how there is a reasonable relationship between the need for the public facility and the type of development project on which the fee is imposed. (§66001(a)(4))*

Residential dwelling units and building square footage are indicators of the demand for transportation facilities needed to accommodate growth. As new building square footage is created, the occupants of the new structures will place additional burdens on the transportation facilities. The need for the fee is based on traffic engineering studies assessing the impact of additional vehicle trips from new development as well as City and County policies governing the design of a transportation system needed to serve new growth areas. Traffic engineering and related data were also used to inform the scope of improvements included in the fee program. For transportation improvements needed to accommodate the development anticipated in the near term, the cost burden is fully allocated based on development anticipated in the near term. For transportation





improvements that are not immediately needed to accommodate near term development, but that will be needed to accommodate development in the longer term, the cost burden is allocated based on projections of new development. Thus, there is a reasonable relationship between the need for the planned improvements, the scope of the improvements, and the parcels that will pay the fee.



### **Proportionality**

For the fifth finding, the Agency must:

*Determine how there is a reasonable relationship between the amount of the fee and the cost of the public facility or portion of the public facility attributable to the development on which the fee is imposed. (§66001(b))*



There is a reasonable relationship between the transportation impact fee for a specific development project and the cost of the facilities attributable to that development based on the estimated vehicle trip demand the development will generate in the Greater Eureka Area. The total fee for a specific development is based on its planned square footage for nonresidential uses and the number of dwelling units for residential. Larger projects of a certain land use type will have a higher trip generation and pay a higher fee than smaller projects of the same land use type. Thus, the fee schedule ensures a reasonable relationship between the transportation impact fee for a specific development project and the cost of the facilities attributable to that project.



The nexus findings in this study also apply to the alternative fee area.





## STUDY PARTICIPANTS

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