MICHAEL P. VICTORINO
Mayor

MICHELE CHOUTEAU MCLEAN, AICP
Director

JORDAN E. HART
Deputy Director

DEPARTMENT OF PLANNING
COUNTY OF MAUI
ONE MAIN PLAZA
2200 MAIN STREET, SUITE 315
WAILUKU, MAUI, HAWAII 96793
January 10, 2022

Honorable Michael P. Victorino, Mayor
County of Maui
200 South High Street
Wailuku, Hawaii 96793

APPROVED FOR TRANSMITTAL

Michael P Victorino 1/10/23
Mayor Date

For Transmittal to:

Honorable Yuki Lei Sugimura, Chair
Infrastructure and Transportation Committee
200 South High Street
Wailuku, Hawaii 96793

Dear Chair Sugimura:

SUBJECT: TRAFFIC IMPACT FEES (IT-22)

On November 19, 2021, the Department of Planning (Department) transmitted to your Committee a final Draft Report of the Traffic Impact Fee Study Addendum and a related proposed bill for an ordinance to establish traffic impact fees for Maui Island.

On November 29, 2021, your Committee received a presentation from contractor CDM Smith and discussed the Draft Report and proposed bill. Based on Committee discussion and testimony, CDM Smith made minor edits to the Draft Report; attached for your information, please find the Final Report of the Traffic Impact Fee Study Addendum for Maui Island.

We hope that this Final Report assists your Committee in considering the establishment of traffic impact fees for Maui Island. If you have any questions or need additional information, please feel free to contact me.

Sincerely,

MICHELE MCLEAN, AICP
Planning Director

Attachment
xc: Jordan Hart, Deputy Directory (pdf w/att.)
Rowena Dagdag-Andaya, Director of Public Works (pdf w/att.)
Lauren Armstrong, Executive Director, Maui MPO (pdf w/att.)
MCM:atw
S:\ALL\Michele\FY20 budget\Traffic Impact Fee Study\Council Transmittal 2.doc

FINAL REPORT

Traffic Impact Fee Study Addendum

Maui County Government

January 3, 2022

CDM Smith

Table of Contents

List of Figures

List of Tables

Appendices

Section 1

Executive Overview

Impact fees are one-time payments used to fund public improvements needed to accommodate growth attributable to new development. In the case of Maui County, the analysis documented in this report concerns transportation facility related improvements and the costs attributed to forecast growth in the 10-year period from the end of 2019 to the beginning of 2030. Maui County has hired CDM Smith to update the impact fee schedule developed in the 2013 Traffic Impact Fee Study for the 10-year period from 2011 to 2020. The purpose of this study is to determine and document equitable impact fee rates for new development on the Island of Maui based on a rational assessment of growth and an assessment of transportation needs over the next 10-year period.

Impact fees for Maui County are authorized pursuant to Part VIII, §46, subsections 141 through 148 and §246, subsections 121 through 127 of the State of Hawaii, Hawaii Revised Statutes. The basis for growth in this study is the travel demand update as documented in the September 2021, 2021 Maui Model Methodology Report, which describes the model base year update from 2012 to 2019, which involved updates to socioeconomic, highway network, and transit network inputs. The basis for costs of improvements used in the calculation of impact fees was taken from the 2019 Hele Mai Maui long range transportation plan (LRTP) developed by the Maui Metropolitan Planning Organization (MPO).

The impact fee schedule update was divided into three main tasks as follows:

- Review the 2013 reports and analyses, verify assumptions, and determine the schedule.
- Use Hele Mai Maui as the source of projects and construction cost estimates for the development of impact fees. Inflate estimated costs as appropriate to determine costs in year of construction dollars.
- Utilize the updated travel demand model to determine the areas contributing to traffic on new projects and what portion of that traffic is attributable to growth in each land use category within the impact fee horizon.

The impact fee schedules were developed building off of the methodology implemented in the 2013 Traffic Impact Fee Study. A new set of projects from the Hele Mai Maui LRTP was used to update the cost basis, calculation spreadsheets were updated, and new inputs were derived from the updated travel demand model.

This page intentionally left blank.

Section 2
Introduction

As stated in the executive overview, the purpose of this study is to determine and document equitable impact fee rates for new development on the Island of Maui based on a rational assessment of growth and an assessment of transportation needs over the next 10-year period. The following subsections highlight definitions of key terms, the established timeframe, previous impact fee studies in Maui, the legal authority for impact fees, and the components of the presented impact fee update.

2.1 Definitions

For the purposes of this report the following terms have been used:

Benefit Zone – a geographical area designated in 2013 Traffic Impact Fee Study in which impact fees collected must be spent.

Capital Costs – those costs identified to provide transportation facilities necessary to serve identified travel demand on the Island of Maui. These costs do not include non-capital, operating and maintenance costs of the transportation facilities.

Community Plan Areas – are planning subdivisions of Maui County of the Maui Island Plan and Community Plans as defined in Maui County Code Chapter 2.80B.

Development Unit – a standardized unit of measure applicable to a particular land use for the purpose of determining the relative size or intensity of a particular development. A development unit may include, but is not limited to, dwelling units, gross or net acres of development, employees, gross square feet of building area, students, seats, and beds.

Impact Fee – charges imposed on a developer by Maui County to fund all or a portion of the public facility capital improvement costs required by the development from which it is collected or the recoupment of costs of existing public facility capital improvements made in anticipation of the needs of a development.

Transportation System – Public ways providing for the movement of persons and goods including vehicles, transit, pedestrians, bicycles, and other non-motorized modes of transportation.

Land Development – Building activity or the making of any material change in the use of any structure or land that attracts or produces vehicular trips over and above that produced by the existing use of the land.

Land Use category – Type of land development characterized by its use for residential or non-residential purposes. Seven categories of land use have been designated as follows:

- Single-Family & Duplex Residential
- Multi-Family Residential

- Office
- Retail
- Industrial Development
- Visitor Accommodation
- Institutional, Public

2.2 Timeframe for Impact Fees

The analysis presented herein is based on forecast growth and the costs of transportation capital improvements attributed to that growth on a 10-year period defined as the year 2019 through 2030. The analysis period for Impact Fee calculations will be the 10-year period of 2019 year-end (pre-2020) to 2030 year beginning. Although not mandated in the State statutes, a 10-year time frame was considered to be a reasonable period for the forecasting of growth and costs of improvements attributable to that growth.

2.3 Previous Impact Fee Studies for Maui County

In November 2006, Kaku Associates prepared a transportation planning study titled "*Maui Island Traffic Impact Fee Report and Comprehensive Roadway Master Plan*" that utilized a travel demand forecasting model to forecast roadway traffic impacts based on population and employment forecasts and the island's forecast roadway network. The study did not include transit use as a separate mode of travel.

The report developed a list of capital improvement needs and costs and determined impact fee rates for five specific land use categories and for two alternative benefit zone structures that consisted of an Island-wide impact fee rate and impact fee rates for each of six community planning areas.

A subsequent, follow-up study was conducted by the firms of Fehr & Peers and Kaku Associates and presented in January 2007. The purpose of this study was essentially to provide a capacity assessment of existing and future (2030) roadways based on the capital plan and land use forecasts prepared in the original Kaku study of 2006.

Maui County determined that all the desired elements of the needs assessment and capital program were not included in the previous studies and in 2009 retained Wilbur Smith Associates (now CDM Smith) in association with Belt Collins Hawaii, Ltd. to prepare a detailed needs assessment and impact fee study that included transit and non-motorized transportation modes and an expanded set of land use categories using an updated travel demand modeling technique for the forecast of existing and future travel impacts on the Island. This study resulted in the 2013 reports, upon which the current study builds.

2.4 Authority for Maui County Impact Fees

As cited earlier, the authority for Maui County to adopt development impact fees is based on Hawaii State Statues, specifically Part VIII, §46, subsections 141 through 148 and §246, subsections 121 through 127 of the State of Hawaii, Hawaii Revised Statutes. In addition to this

authority, the County must codify the assessment and disbursement of impact fees in the Maui County Code.

This has been done in the past although the impact fee process has not been implemented. Current ordinances applicable to impact fees have been adopted for each of the defined Community Planning Areas as shown in **Table 1**.

Table 1. Community Plan Area Impact Fee Ordinances

Community Plan Area	Chapter	Ord. No.	Year
West Maui	14.62	#1755	1988
Kīhei-Makena	14.68	#1880	1989
Hāna	14.70	#3431	2007
Makawao-Pukalani-Kula	14.74	#3433	2007
Wailuku-Kahului	14.76	#3434	2007
Pā`ia-Ha`ikū	14.78	#3432	2007

2.5 Components of the Study

The process to determine impact fee rates and then resulting impact fees payable by any particular development is simple and can be illustrated as follows:

Total capital costs attributable to new development ÷ **Total number of new development units** = **IMPACT FEE RATE ($ per UNIT)**

Therefore, it is necessary to determine the attributable capital costs and new development forecast to occur in the 10-year period and the number of new development units forecast to occur during the period. Additionally, the distribution of these forecast costs and development units geographically is a necessary to develop impact fees for various benefit zone alternatives. The major components that affect the impact fee calculation are:

- Benefit Zone Alternatives,
- Travel Demand Forecasts, and
- Capital Costs.

Flowcharts depicting how the travel demand model and other resources were used to derive the necessary cost and development unit components are available in **Appendix D**.

As discussed at the kick-off meeting, summarized in the next subsection, the benefit zone alternatives remained the same as established in the 2013 Maui Traffic Impact Fee Study. The travel demand forecasts and capital costs were updated to incorporate up to date inputs and assumptions and to incorporate the transportation needs identified in the Hele Mai Maui Plan. These updates are discussed in detail in the upcoming sections of this report.

2.6 Kickoff Meeting and Review of Previous Report

The 2013 County of Maui Traffic Impact Fee Study report was reviewed to determine the portions that needed to be updated. The final product is this addendum that updates portions of the 2013 report. The report chapters and the required updates are summarized in **Table 2**.

Table 2. 2013 Maui Traffic Impact Fee Report Chapters and Required Updates

	2013 Report Chapter	Updates
1	Background Information and Data Gathering	None
2	Impact Fee Ordinance	None
3	Modeling	Refer to 2021 Maui Model Update
4 & 5	Needs Assessment	Update to rely on Hele Mai Maui Plan
6	Traffic Impact Fee Schedule	Update as needed for changes in modeling and needs
7	Administrative Tasks	None
8	Final Review of Impact Fee Ordinance	None
9	Final Report	Update as Addendum, primarily Chapter 6 Content

The Kickoff meeting defined the following impact fee assumptions:

1. The analysis period for Impact Fee calculations will be the 10-year period of 2019 year-end to 2030 year-beginning. The 2020 year was not used as the base year in view of the large drop off in travel during the peak Covid-19 period.

2. The 2013 study had three alternatives:

   - One (1) Island-wide Service Area with no differentiation between different areas of the Island. (NOTE: This may be the least equitable definition because there are significant differences in development potential between different areas of Maui, i.e. The west end of the island vs. the east end of the island.)
   - Six (6) Service Areas consisting of the Community Plan Areas defined by the six comprehensive plans that have been adopted over the years. These areas defined in the 2013 report and were adopted between 1988 and 2007.
   - Three (3) Service Areas that would be combinations of the six Community Plan Areas as defined in the 2013 Report.

Maui County directed CDM Smith to develop fee schedules for each of the three benefit zone alternatives. The 2013 County of Maui Traffic Impact Fee Study report describes these alternatives in more detail including an assessment of benefits and detriments of each approach. The six benefit zones are shown below in **Figure 1**.

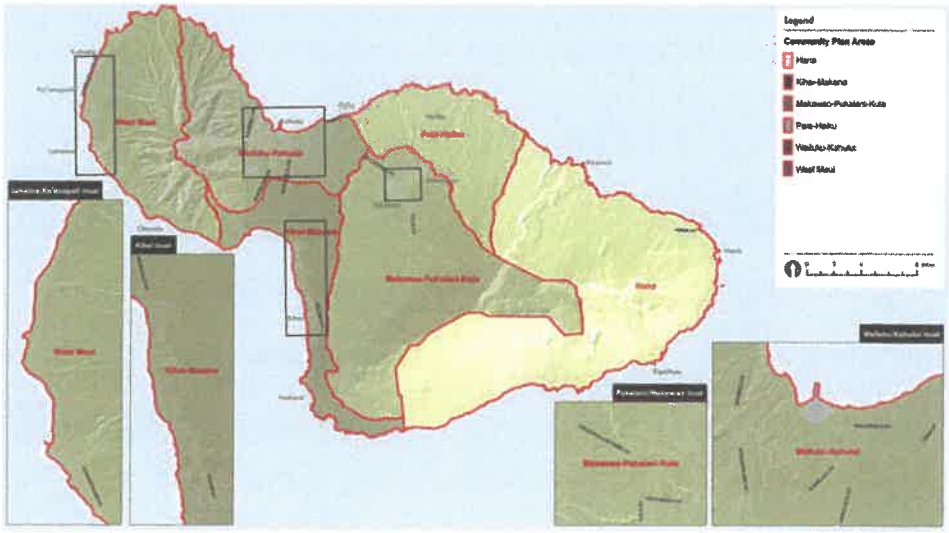

Figure 1
Community Plan Areas

The three aggregated benefit zones are shown below in **Figure 2**.

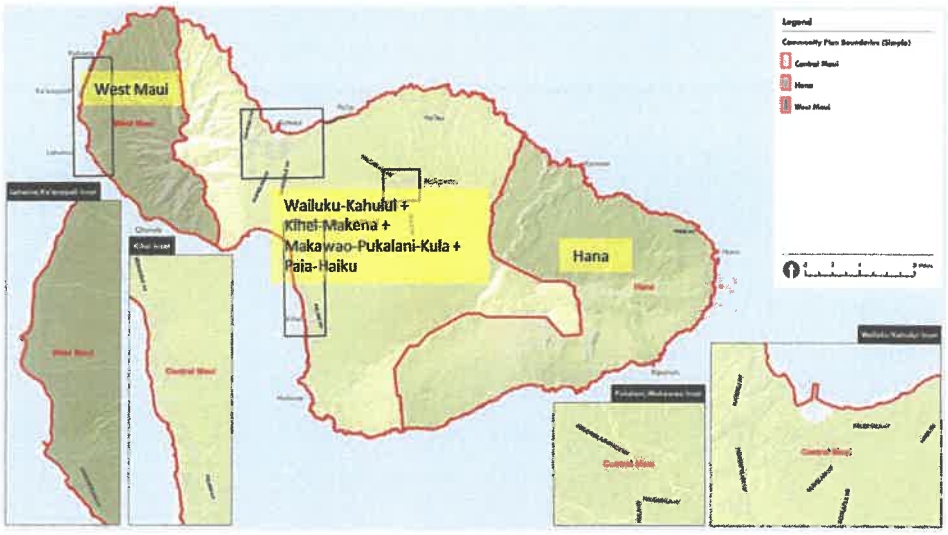

Figure 2
Combine Community Plan Areas

The Land Use Categories assessed for Impact Fees will consist of the seven land use (LU) categories defined in the 2013 report as follows:

- Single-Family and Duplex Residential
- Multi-Family Residential
- Office
- Retail

- Industrial
- Visitor Accommodations
- Institutional, Public

Maui County directed the consultant team to merge the Office and Retail categories based on the results of the previous study and increasing prevalence of mixed-use development.

Section 3
Travel Demand and Land Use Forecasts

Unlike the majority of impact fee analyses performed using trip generation rates based on forecast land use absorption by land use type, the Maui Impact Fee model is based on established trends in the growth (or decline) of socio-economic indicators represented by population and employment. These indicators have been distributed to Traffic Analysis Zones (TAZs), smaller geographic areas overlaid on a transportation network of roadways and transit routes. The travel demand model (TDM) calculates vehicle and transit trip productions and attractions, by trip purpose, between TAZs and assigns these trips to the network. The result of the model's output is then distributed to particular land use categories defined for the purposes of this study.

As previously cited, the basis for growth is the updated Maui MPO travel demand model as documented in the 2021 Maui Model Methodology Report. The following subsections provide a summary of the model update and the model outputs as used in the impact fee schedule updates.

3.1 Maui Travel Demand Model Update

The 2010 Maui Travel Demand Model was updated in a separate project under the auspices of the Maui MPO. The model's completion date was September 30, 2021. The 2021 model update (Base Year 2019) can be summarized as follows:

- The new model uses essentially the same methodology as the 2010 model;
- A new base year of 2019;
- Future years of 2025, 2030 and 2045;
- The TAZ file was updated with new base and future year socio-economic data;
- An updated base year network containing all of the projects between 2010 and 2019;
- Future year networks contain projects from the Hele Mai Maui LRTP;
- Teralytics Big Data was used in validation; and
- Conversion to TransCAD 8.0 with new programming and modeling features.

3.1.1 Base Year Network Update

As part of the scope, which overlapped with the TDM update, it was necessary to update the Maui MPO model network. The previous work had a model year of 2008 (base year) and the modeling work was completed in 2010. The new modeling effort had a base year of 2019 and the modeling work was recently completed on September 30, 2021.

The extent of the 2008 to 2019 base year network updates is illustrated in **Table 3** and **Figure 3.**

Table 3. Base Year Network Updates by Functional Class

Link Class	Description	Number of Updated Links (New and Modified)
5	Principal Arterial	25
6	Minor Arterial	3
7	Major Collector	42
8	Minor Collector	114
9	Local Road	117
99	Centroid Connector	78

Figure 3
Island-wide Network Updates

As an example of some of the roadways affected by the 2008 to 2019 network changes, **Figure 4** shows the network changes for the Kahului area.

Figure 4
Kahuli Base Year Network Updates

There were a total of 379 network changes. More detailed information on the network update can be found in the 2021 Maui Model Methodology Report.

3.1.2 Future Year Network

The Hel Mai Maui LRTP was used as the source for future transportation needs, which is covered more extensively in Chapter 4. **Figure 5** shows all the planned improvements in the Hele Mai Maui Plan. The projects in the Hel Mai Maui LRTP are categorized into seven project types (see Figure 5). Of the seven categories, Hele Mai Maui's "new connections" were the projects that could be modeled to determine their effects on travel conditions in future scenarios. These projects are listed in **Table 4**. The "new connections" were coded into the model as part of a master network. This allows the modeler to incorporate the future projects that are planned to be completed depending on the year that is being modeled. The projects were coded to be phased in as shown in **Table 4**, according to the near-term mid-term, and long-term designations provided in the Hele Mai Maui Plan, defined within the plan as 1-5, 6-11, and 12-20 years, respectively.

Figure 5
Hele Mai Maui Planned Projects
Source: Hele Mai Maui

Table 4. New Connections Projects

ID	Project Name	Phasing	Cost ($1,000 of 2019 dollars)	Community Plan Area	Modeling Year
C10	Honoapi'ilani Hwy Realignment (Ukumehame to Olowalu)	Near	$90,000	West Maui	2025
C11	Lahaina Bypass Phase 1C	Near	$75,000	West Maui	2025
C12	Pa'ia Relief Route	Mid	$120,000	Pā`ia-Ha`ikū/Wailuku-Kahului	2030
C18	Imi Kala Rd Extension -- Wailuku	Mid	$2,686	Wailuku-Kahului	2030
C2	Imi Kala Rd Extension -- Wai'ehu	Long	$27,482	Wailuku-Kahului	2040
C3	Lono Ave Extension	Mid	$6,800	Wailuku-Kahului	2030
C4	Wai'ale Rd Extension	Mid	$38,000	Wailuku-Kahului	2030
C5	Kihei North-South Collector Road -- Phase 1A	Near	$27,540	Kīhei-Mākena	2025
C6	Kihei North-South Collector Road -- Phase 2	Mid	$6,441	Kīhei-Mākena	2030
C7	Kihei North-South Collector Road -- Phase 1B	Mid	$17,338	Kīhei-Mākena	2030
C8	Kihei North-South Collector Road -- Phase 3	Long	$16,182	Kīhei-Mākena	2040

Source: Hele Mai Maui and Maui Travel Demand Model, documented in 2021 Maui Model Methodology Report

3.2 Forecast Travel Demand – Trip Purpose

For the purposes of developing impact fees for the 2019-2030 timeframe, the updated TDM results for the 2019 base year and 2030 year were utilized to assess traffic impacts attributable to new development. The model results (trip productions and trip attractions) were tabulated for each of the two periods by TAZ for the individual trip purposes defined by the model. These trip purposes and change in the number of daily trips between 2019 and 2030 are shown in the following **Table 5**.

Table 5. Increase in Trips by Trip Purpose

Trip Purpose	Change in No. of Daily Trips (2019-2030)
Home Based Work	+ 9,668
Home Based School	+ 4,626
Home Based Other	+ 26,621
Non-home Based	+ 16,114
Visitor	+ 28,371
Commercial Truck	+ 1,585
TOTAL	+ 86,986

Source: Maui Travel Demand Model, documented in 2021 Maui Model Methodology Report

Trip purposes are defined by the type of activity taking place at each end of the trip (home, work, school, etc.). Because most trips begin or end at home, many trip purposes are defined as "home based" (e.g., home based work, which would include trips from home to work and from work to home). Home based school are trips where one trip end is at home and the other trip end is at school. These include trips from home to school and school to home. Home based other trips account for trips that do not include work and school. These include trips from home to shopping (grocery store/mall), recreation (parks/sports complex), and other (post office/airport) and vice versa.

Non-home-based trips are trips with an origin and destination that do not include the home. An example is from work to the grocery store or from the gym to pick up children from school.

Visitor and truck trip purposes are self-explanatory and although origin and destination based, represent the described type of trip.

3.3 Forecast Travel Demand – Land Use Categories

3.3.1 Evaluated Land Uses by Category

The evaluated land use categories remain unchanged from the 2013 study:

- Residential
  - Single-Family or Duplex
  - Multi-Family
- Commercial
  - Office
  - Retail
- Industrial
- Visitor Accommodation
- Institutional-Public

However, based on the results of the previous study and increasing prevalence of mixed-use development, commercial land use types were desired to ultimately be assessed a single impact fee.

3.3.2 Conversion of Trips by Purpose to Trips by Land Use Category

The travel demand model as presented in the previously cited report, 2021 Maui Model Methodology Report, developed detailed data for the base year on non-residential employment by employment category; retail, service and other. Base year data included information from the 2019 American Community Survey (ACS), 2019 Longitudinal Employer Household Dynamics (LEHD) program, and the 2019 Hawai'i and Maui Data Books.

In the 2013 Maui Traffic Impact Fee Study, micro-level land use data from the State Department of Labor and Industrial Relations (DLIR) was used to develop a relationship between non-

residential land use types and the employment types represented in model inputs. **Table 6** shows the established relationships. Using the land use category of Office as an example, the table shows that this category represents 30.34 percent of the total Island employment and comprises 81 percent of the total service-type employment on the Island. Although this category has 30.34 percent of the total island employment, it utilizes only 15.9 percent of the total island's non-residential building area.

Table 6. Employment and Land Area of Defined Land Use Categories (Base Year)

NON-RESIDENTIAL LAND USE	PCTG. TOTAL EMPL by LU CATEGORY	PCTG. TOTAL EMPL by EMPL CATEGORY			PCTG. TOTAL LU AREA
		RETAIL	SERVICE	OTHER	
Office	30.34%	0.00%	81.00%	0.00%	15.90%
Retail	21.92%	100.00%	10.00%	9.00%	28.03%
Industrial	21.42%	0.00%	0.00%	44.00%	26.16%
Visitor Accommodation	18.82%	0.00%	0.00%	38.00%	22.99%
Institutional - Public	7.50%	0.00%	9.00%	9.00%	6.92%
TOTALS	100.00%	100.00%	100.00%	100.00%	100.00%

Source: CDM Smith

The 2013 Maui Traffic Impact Fee Study details how this data was used in coordination with trips by purpose in the Maui travel demand model to determine the relationship between land use category and trip purpose. **Table 7** summarizes this relationship. It should be noted that the relationship between trip purpose and non-residential is identical to that derived and used in 2013, however the residential distribution assumptions were updated to better reflect the housing mix on the island and typical differences in trip generation by housing type:

- Approximately 73% of homes in Maui are single-family, per the Hawai'i Housing Planning Study 2019 prepared for the Hawai'i Housing Finance and Development Corporation by SMS.
- Multi-family housing generates approximately 56% the number of trips per dwelling unit, per the Institute of Traffic Engineers Trip Generation Manual, 10th Edition.

Table 7. Distribution of Pct. Trips by Purpose to Trips by Land Use Category

LAND USE CATEGORY	ATTRACTIONS					PRODUCTIONS	
	HBW	HBNW	NHB	VISITOR	TRK	HBW	VISITOR
Office	27.0%	25.6%	35.2%	0.0%	6.7%	0.0%	0.0%
Retail	39.7%	43.0%	60.8%	0.0%	38.7%	0.0%	0.0%
Industrial	14.7%	0.0%	0.0%	0.0%	19.0%	0.0%	0.0%
Visitor Accommodation	12.7%	0.0%	0.0%	0.0%	16.4%	0.0%	100.0%
Institutional-Public	6.0%	2.8%	3.9%	0.0%	4.6%	0.0%	0.0%
Single-Family & Duplex Residential	0.0%	23.5%	0.0%	0.0%	12.0%	82.2%	0.0%
Multi-Family Residential	0.0%	5.1%	0.0%	0.0%	2.6%	17.8%	0.0%
TOTALS	100.0%	100.0%	100.0%	0.0%	100.0%	100.0%	100.0%

Source: CDM Smith

These percentages were used to calculate the distribution of daily vehicle trips by land use category as shown in **Table 8.** The total trips for each trip purpose produced by the model were factored by the percentage of trips for that purpose for each land use category. An adjustment factor of 0.9 was used to ensure that the total number of additional trips did not exceed that forecast by the model (as shown above in Table 5). An example of the calculation for the Office land use type is shown below:

Total trips attributable to Office land use category:

= [(0.270*HBW/A) + (0.256*HBNW/A) + (0.352*NHB/A) + (0.067*TRK/A) + (0.0*HBW/P) + (0.0*VISITOR/P)]*Adjustment Factor

= [(0.270*9,668) + (0.256*31,247) + (0.352*16,114) + (0.067*28,371) + (0.0*1,585) + (0.0*86,986)] * 0.9

= 2,610

where A and P represent the trip Attractions and Productions, respectively.

Table 8. Distribution of Trips by Land Use Category

	ATTRACTIONS						PRODUCTIONS			TRIPS BY LAND USE CATEGORY	ADJUSTED TRIPS BY LAND USE CATEGORY
	HBW	HBNW	NHB	VISITOR	TRK	TOTAL	HBW	VISITOR	TOTAL		
Vehicle Trips Change (2030-Base 2019)	9,668	31,247	16,114	28,371	1,585	86,986	9,668	28,371	38,038		0.900
LAND USE CATEGORY											
Commercial-Gen Office	2,610	7,999	5,672	0	106	16,388	0	0	0	16,388	14,749
Commercial-Retail	3,838	13,436	9,804	0	614	27,692	0	0	0	27,692	24,922
Industrial	1,421	0	0	0	301	1,722	0	0	0	1,722	1,550
Visitor Accommodation	1,228	0	0	0	260	1,488	0	28,371	28,371	29,859	26,872
Institutional-Public	580	875	628	0	73	2,156	0	0	0	2,156	1,941
Residential - Single-Family	0	7,347	0	0	190	7,537	7,948	0	7,948	15,485	13,936
Residential - Multi-Family	0	1,590	0	0	41	1,631	1,720	0	1,720	3,351	3,016
Total	9,677	31,247	16,104	0	1,585	58,614	9,668	28,371	38,039	96,653	86,986

Source: Maui Travel Demand Model, documented in 2021 Maui Model Methodology Report

In order to support the calculation of impact fees for the various benefit zone alternatives, it was necessary to repeat this calculation for each Community Plan Area and each combined Community Plan Area. The resulting trips by land use category for each benefit zone alternative is summarized in **Table 9**.

Table 9. Distribution of Trips by Land Use Category for each Benefit Zone Alternative

BENEFIT ZONE ALTERNATIVE	Single-Family & Duplex Residential	Multi-Family Residential	Office	Retail	Industrial	Visitor Accommodation	Institutional - Public	TOTAL
Island-wide - Alternative 1								
TOTALS	13,936	3,016	14,749	24,922	1,550	26,872	1,941	**86,986**
Individual Community Plan Areas - Alternative 2								
West Maui	2,575	557	3,861	6,499	408	14,657	509	29,066
Wailuku-Kahului	5,221	1,131	5,527	9,355	633	1,253	737	23,857
Kīhei-Mākena	2,537	549	2,955	4,986	311	10,535	389	22,262
Pā`ia-Ha`ikū	1,004	217	685	1,165	60	108	88	3,327
Makawao-Pukalani-Kula	2,361	511	1,396	2,370	104	154	175	7,071
Hāna	238	51	325	547	34	165	43	1,403
TOTALS	13,936	3,016	14,749	24,922	1,550	26,872	1,941	86,986
Combined Community Plan Areas - Alternative 3								
West Maui	2,575	557	3,861	6,499	408	14,657	509	29,066
Wailuku-Kahului + Kīhei-Mākena + Makawao-Pukalani-Kula + Pā`ia-Ha`ikū	11,123	2,408	10,563	17,876	1,108	12,050	1,389	56,517
Hāna	238	51	325	547	34	165	43	1,403
TOTALS	13,936	3,016	14,749	24,922	1,550	26,872	1,941	**86,986**

Source: Maui Travel Demand Model, documented in 2021 Maui Model Methodology Report

3.3.3 Transit Trips

The distribution of transit trips and growth in transit trips is also a result of the Maui Travel Demand Model. These results are used in the distribution of costs to Community Plan Areas and growth periods as discussed further in Section 4. The result is the identification of daily transit trip for the three periods of time for which model results were derived: Base (2019), Year 2030 and Year 2045 (Post 2030). The results are shown in **Table 10.**

Table 10. Transit Trips by Benefit Zone Alternative

	Total Daily Transit Person Trips		
BENEFIT ZONE ALTERNATIVE	Base (2019)	2030	Post-2030 (2045)
Island-wide - Alternative 1			
TOTALS	4,560	5,175	5,502
Individual Community Plan Areas - Alternative 2			
West Maui	1,084	1,507	1,576
Wailuku-Kahului	2,280	2,418	2,604
Kīhei-Mākena	1,171	1,228	1,299
Pā`ia-Ha`ikū	4	4	4
Makawao-Pukalani-Kula	21	18	19
Hāna	0	0	0
TOTALS	4,560	5,175	5,502
Combined Community Plan Areas - Alternative 3			
West Maui	1,084	1,507	1,576
Wailuku-Kahului + Kīhei-Mākena + Makawao-Pukalani-Kula + Pā`ia-Ha`ikū	3,476	3,668	3,926
Hāna	0	0	0
TOTALS	4,560	5,175	5,502

Source: Maui Travel Demand Model, documented in 2021 Maui Model Methodology Report

3.4 Forecast Land Use Absorption, 2019-2030

Land use absorption forecasts were based on forecast residential and employment growth and the characteristic of trip generation rate expressed in terms of "Trips per unit of development". For non-residential land use, the unit of development is "thousand square feet of building area" (KGSF). For residential land use the development unit is dwelling units (DU). Visitor Accommodation may take several forms including single-family, multi-family, and condominium units and has been assigned a development unit of "Visitor Unit" (VU) to recognize the potential differences. For non-residential development trip generation rates remained unchanged from the 2013 Maui Traffic Impact Fee Study. For residential and visitor accommodations land use, the number of new dwelling units and visitor units was taken directly from the developed future model year inputs documented in the 2021 Maui Model Methodology Report. New households were distributed between single-family and multi-family according to current housing mix per the Hawai'i Housing Planning Study 2019 prepared for the Hawai'i Housing Finance and Development Corporation by SMS. The resulting forecast land use absorption in each land use category are shown in **Table 11**. These data will serve as the denominator for the calculation of impact fee rates presented in the Section 5 of this report.

Table 11. Forecast Development by Land Use Category, 2019-2030

BENEFIT ZONE ALTERNATIVE	Single-Family Residential	Multi-Family Residential	Office	Retail	Industrial	Visitor Accommodation	Institutional - Public
	DU	DU	KGSF	KGSF	KGSF	VU	KGSF
Island-wide - Alternative 1							
Total Addn'l Devel. Units (2019-2030)	3,968	1,490	981	1,697	1,035	3,043	297
Individual Community Plan Areas - Alternative 2							
West Maui	733	275	257	443	273	1,660	78
Wailuku-Kahului	1,487	560	366	637	421	142	112
Kīhei-Mākena	722	271	197	340	208	1,193	60
Pā`ia-Ha`ikū	286	107	46	79	40	12	13
Makawao-Pukalani-Kula	672	252	93	161	70	17	27
Hāna	68	25	22	37	23	19	7
Total Addn'l Devel. Units (2019-2030)	3,968	1,490	981	1,697	1,035	3,043	297
Combined Community Plan Areas - Alternative 3							
West Maui	733	275	257	443	273	1,660	78
Wailuku-Kahului + Kīhei-Mākena + Makawao-Pukalani-Kula + Pā`ia-Ha`ikū	3,167	1,190	702	1,217	739	1,364	212
Hāna	68	25	22	37	23	19	7
Total Addn'l Devel. Units (2019-2030)	3,968	1,490	981	1,697	1,035	3,043	297

Section 4

Capital Program and Cost Basis

The transportation system needs and gross cost estimates used for this impact fee update were taken from the Hele Mai Maui Plan. This plan contains a suite of projects identified by the MPO as necessary to serve existing and future transportation deficiencies. This plan gathers projects from other planning efforts, as well as developing new projects as deemed necessary. The plan contains a project's purpose, cost estimate, term for construction (i.e., near-, mid-, or long-), and potential funding responsibilities (e.g., Federal, State, Local).

After the submission of the first draft of this report, Maui MPO staff reviewed the project list in **Appendix A** against their most up-to-date data reflecting changes since the plans initial publishing in December of 2019. This review led to updates to project elements including cost estimate, funding responsibilities, and anticipated construction year based.

4.1 Capital Program

Impact fees may only be collected to fund all or a portion of the public facility capital improvement costs required by a development. Therefore, it was necessary to select a subset of projects from the Hele Mai Maui Plan that serve future development and are not simply meeting existing needs or part of routine maintenance.

Each project in the Hele Mai Maui Plan is assigned to one of eight categories: Complete Streets, Intersection Improvements, Island-wide Programs, Maintenance Projects, Multi-Use Paths, New Connections, Safety Corridors, and Transit Improvements. Of these categories, Maintenance Projects were excluded as not relevant to impact fee assessment. Island-wide programs were included on a case-by-case basis, based on an assessment of whether new development contributed to the need for the program. Ultimately Island-wide Programs for Traffic Signal Modernization, Sidewalk Gaps, Traffic Operations and Improvements, and Bus Stop Siting, Upgrades and Maintenance were included. **Table 12** summarizes the cost of all projects within these categories.

Table 12. Summary of Cost by Project Type

Project Type	Near- & Mid-Term Projects		Long-Term Projects	
	Number	Cost 1,000s 2019 Dollars	Number	Cost 1,000s 2019 Dollars
New Connections	9	$383,805	2	$43,664
Multi-Use Paths	4	$22,967	3	$36,963
Intersection Improvements	20	$50,455	2	$5,034
Complete Streets	16	$89,187	1	$534
Safety Corridors	8	$86,193	1	$140,000
Transit Improvements	7	$63,000	1	$50,000
Traffic Signal Modernization Program	1	$35,000	0	$ -
Sidewalk Gap Program	1	$6,325	1	$4,675
Traffic Operations & Improvements Program	1	$11,500	1	$8,500
Bus Stop Siting, Upgrades, & Maintenance Program	1	$5,750	1	$4,250
TOTALS		$754,183		$293,619

The Hele Mai Maui Plan identifies a term for each project as follows:

- Near-Term: 1-5 years
- Mid-Term: 6-11 Years
- Long-Term: 12-20 years

Since, as stated previously, the horizon for the impact fee update is from 2019-2030 all long-term projects were excluded from consideration. Island-wide programs were not assessed a term because of their ongoing nature, so it was assumed that expenditures on these programs are even across the stated length of the program. The proportion of costs incurred during the impact fee horizon (near- and mid-term projects) and after the impact fee horizon are summarized in Table 12.

Additionally, it was necessary to inflate the costs (presented in 2019 dollars) to "year of construction" dollars in order to ensure that adequate funds would be collected to support construction costs. Various sources were reviewed to determine the best interest rate assumption. Ultimately the interest rate of 3.07% was used based on the Federal Highway Administration's National Highway Construction Cost Index (FHWA NHCCI)[1] form Q1 2010 through the latest available Q2 of 2020[2]. **Table 13** summarizes the inflated costs of the projects to be constructed within the impact fee horizon by category. The full list of impact fee projects is available in **Appendix A**.

[1] https://www.fhwa.dot.gov/policy/otps/nhcci/
[2] Note this range intentionally leaves out the first 7 years of the index's history when the index value was observed to be erratic.

Table 13. Impact Fee Project Costs Inflated to Construction Year Dollars

Project Type	Near- & Mid-Term Project Cost 1,000s Construction Year Dollars
New Connections	$470,996
Multi-Use Paths	$28,793
Intersection Improvements	$60,189
Complete Streets	$98,850
Safety Corridors	$105,394
Transit Improvements	$77,659
Traffic Signal Modernization Program	$41,969
Sidewalk Gap Program	$7,584
Traffic Operations & Improvements Program	$13,790
Bus Stop Siting, Upgrades, & Maintenance Program	$6,895
TOTALS	$912,118

Once the total capital program costs were identified it was necessary to divide this cost among several dimensions:

- Funding Agency: Impact fees could be used for local or state contributions, tracked separately per county request
- Growth Period: Impact fees can only be charged for the portion of project costs attributable to new development
- Geography: In order to estimate different impact fee schedules for the stated benefit zone alternatives, users of proposed projects need to be identified by origin and destination within the various benefit zone geographies

Additional information from the Hele Mai Maui Plan or data provided from the updated Maui MPO model were used to analyze how program costs break across each of these dimensions as described in the subsequent subsections.

4.2 Identification of Program Costs by Funding Agency

The Hele Mai Maui Plan indicates potential funding partners for each project within the plan's project listing. Potential funding sources include: Local, State, Federal, and Other. For the purposes of this study, per county request, impact fee amounts were desired for local and state portions of project costs separately. Federal funds were excluded from impact fee calculations and projects with "Other" funds indicated were included as a local component of the impact fees. Based on the combination of funding partners indicated in the Hele Mai Maui Plan, assumptions were made about the proportion of funding coming from the county and the state. These assumptions were reviewed and revised based on input from Maui MPO staff. **Table 14** summarizes the assumptions and resulting total cost for each entity. **Table 14** also shows that when considering State and Local funds only, the total capital program cost considered for the impact fee is approximately $300 million.

Table 14. Costs by Funding Agency

Identified Funding Source(s)	# of Projects	Cost 1,000s Construction Year Dollars	Local Portion		State Portion		Federal Portion	
			%	Cost	%	Cost	%	Cost
Federal	1	$27,814	20%	$5,563	0%	$0	80%	$22,251
State	1	$3,835	0%	$0	100%	$3,835	0%	$0
Local	16	$91,774	100%	$91,774	0%	$0	0%	$0
Local/ Other	3	$36,121	100%	$36,121	0%	$0	0%	$0
Federal/ State	12	$453,506	0%	$0	20%	$90,701	80%	$362,805
Federal/ Local	27	$194,650	20%	$38,930	0%	$0	80%	$155,720
State/ Local	2	$15,276	20%	$3,055	80%	$12,221	0%	$0
Federal/ Local/ Other	6	$89,142	20%	$17,828	0	$0	80%	$71,313
TOTAL	68	$912,118		$193,271	-	$106,757		$612,089
TOTAL PROGRAM COST CONSIDERED IN IMPACT FEE (STATE+ LOCAL):								**$ 300,028 Million**

4.3 Determination of Project Capacity Utilization

Impact Fees to be assessed to new development must include only those costs directly attributable to the new development. Therefore, only that portion of a facility's capacity attributable to the 10-year growth was used as the basis for calculation of Impact Fees.

For roadway projections with specific project locations (i.e., categories of New Connections, Intersection Improvements, Complete Streets, and Safety Corridors), capacity utilization was estimated by using the Travel Demand Model's level of service "D" capacity and tabulating the daily vehicle demand of each roadway link for the Base (2019) year and the year 2030. Then the percentage of the project's capacity utilized by the Base (2019) year, the 10-year period (2019-2030), and the future growth period (post-2030) was determined.

Selected link analyses were performed on the project network to properly distribute costs of a project to determine the following:

- The portion of each roadway's total traffic demand that would occur during the 10-year growth period, 2019-2030.
- The portion of each roadway's total traffic demand generated in each Community Plan area.

For transit and non-motorized projects with specific locations (i.e., categories Multi-Use Paths and Transit Improvements), the methodology relied on trip growth from the travel demand model and project location to determine the following:

- Community Plan area in which the project is located.
- The portion of new non-motorized or transit trips in 2030 compared to the base year of 2019 and post-2030 year (2045) within the Community Plan area of the project location.

For island-wide programs without a predetermined location (i.e., Traffic Signal Modernization Program, Sidewalk Gap Program, Traffic Operations & Improvements Program, and Bus Stop

Siting, Upgrades, & Maintenance Program), the methodology relied on trip growth and other proxy measures of density of the target infrastructure type to determine the following:

- The portion of new target travelers' trips in 2030 compared to the base year of 2019 and post-2030 year (2045).
- The portion of the target infrastructure or demand in each Community Plan area.

4.3.1 Growth Period Distribution

For roadway projects, each link of a project roadway was identified and its length (in miles), level of service "D" capacity, and 2019 and 2030 daily assigned volumes were tabulated. The percentage of each link's capacity utilized by the Base Year demand and the 10-year demand was calculated. The project (roadway) overall utilization was determined as a length-weighted average of the links comprising the defined project extent.

This is illustrated in **Table 15** for one of the projects included in the capital program. **Appendix B** shows each project and its distribution of capacity across the three periods: Base (pre-2020), 10-year (2020-2030), and post-2030.

In this example, the Imi Kala Rd Extension is a project consisting of 4 model links for a total length of 0.229 miles.

As can be seen in Table 15, the percentage of available capacity for each link has been distributed to the three traffic growth periods identified: pre-2020, the ten-year period (2020-2030) and the post-2030 period. Assigned capacity for the various links are each 16,800 vehicles-per-day with the pre-2020 and forecast 2030 assigned daily vehicle volumes shown. The percentage of each link's roadway capacity was calculated (i.e., Link 1 has an un-weighted percentage of 26.8 percent for the pre-2020 period and a weighted percentage of 6.3 percent). The subsequent calculations determine the following percentage of capacity distribution:

- Pre-2020 (Base Year): 35.2% of model capacity utilized by "existing" traffic.
- 2020-2030 (10-year): 4.4% of capacity utilized by traffic growth 2011-2020.
- Post-2030: 60.5% of capacity available for post-2020 growth.

For non-motorized projects, transit projects, and island-wide programs with no specific location the distribution was determined by evaluating target travelers (e.g., target travelers for the sidewalk gap program are non-motorized travelers, target travelers for a transit project in West Maui are West Maui transit travelers). For these projects, the post-2030 (2040 model) total target travelers' trips were taken as the capacity of the projects/programs and the percent attributable to the 10-year impact fee period were taken as the portion of post-2030 demand that is attributable to the incremental trip growth between 2020 and 2030.

Table 15. Example Portion of Project Capacity Attributable to Period Traffic Growth

Imi Kala Rd Extension -- Wailuku					2030		DISTRIBUTION - BY LINK Pct LOS D Capacity			DISTRIBUTION - BY PROJECT WEIGHTED % LOS D Capacity		
LINK NO.	LINK ID	Length (Mi.)	2019 Daily Volume	2030 Daily Volume	Capacity (v/c=1.0)	Capacity LOS D	Pre-2020	2020-2030	Post 2030	Pre-2020	2020-2030	Post 2030
1	6049	0.054	4,047	4,656	16,800	15,120	26.8%	4.0%	69.2%	6.3%	0.9%	16.3%
2	6050	0.027	4,047	4,656	16,800	15,120	26.8%	4.0%	69.2%	3.2%	0.5%	8.2%
3	6051	0.010	4,047	4,656	16,800	15,120	26.8%	4.0%	69.2%	1.2%	0.2%	3.0%
4	6052	0.138	6,157	6,847	16,800	15,120	40.7%	4.6%	54.7%	24.5%	2.8%	33.0%
	TOTAL:	**0.229**	**MI.**							**35.2%**	**4.4%**	**60.5%**

The resulting cost distribution is shown in **Table 16** and reflects that 5.5-percent of the total $300 million capital program, or $16,361,229 is attributable to growth forecasted to occur during the 10-year period, 2019-2030.

Table 16. Distribution of Program Cost by Growth Period

	Local		State		Total	
Period	Cost by Period	Pct. Total	Cost by Period	Pct. Total	Cost by Period	Pct. Total
BASE YEAR	$84,065,975	43.5%	$55,149,560	51.6%	$139,215,535	46.4%
2020-2030	$11,816,056	6.1%	$4,545,173	4.3%	$16,361,229	5.5%
POST 2030	$97,389,336	50.4%	$47,062,155	44.1%	$144,451,491	48.1%
TOTALS	$193,271,367	100.0%	$106,756,888	100.0%	$300,028,255	100.0%

4.3.2 Distribution by Community Plan Areas

In order to support the calculation of impact fees for the various benefit zone alternatives, it was necessary to determine how many of a project or program's users are originating or destine from within each of the benefit zone geographies (i.e., Community Plan area or combined Community Plan area). Any one particular roadway facility is likely to be utilized by traffic originating in a Community Plan area other than the Community Plan area in which the roadway is located. Therefore, selected link analyses were utilized to determine the relative percentage of each roadway's utilization by traffic from each of the six Community Plan areas.

For non-motorized and transit projects, it was assumed that, due to the shorter nature of trips made via these modes, that the project location could be taken as the source of all of the project's utilization. For the island-wide programs with no particular location, costs were distributed between the Community Plan areas based on proxy measures or by the distribution of target demand. For example, an estimate of number of signals per Community Plan area according to the updated Maui MPO model input of signal density was used as a proxy measure for the signal modernization program. For an additional example, the sidewalk gap program costs were distributed to Community Plan areas based on the updated Maui MPO model's estimated distribution of non-motorized demand (i.e., percent of total island-wide non-motorized trips attributable to each Community Plan area). **Table 17** summarizes the results of these calculations. The distribution percentages for all projects are found in **Appendix C** of this report.

Table 17. Distribution of Program Cost by Community Plan Area

BENEFIT ZONE ALTERNATIVE	LOCAL PROJECT COSTS ONLY	STATE PROJECT COSTS ONLY	TOTAL COSTS
Island-wide - Alternative 1			
TOTALS	$193,271,367	$106,756,888	$300,028,255
Individual Community Plan Areas - Alternative 2			
West Maui	$34,007,557	$26,446,479	$60,454,036
Wailuku-Kahului	$52,353,496	$31,655,763	$84,009,259
Kihei-Makena	$39,129,235	$9,829,797	$48,959,032
Paia-Haiku	$38,711,218	$33,229,075	$71,940,293
Makawao-Pukalani-Kula	$28,732,620	$4,269,953	$33,002,573
Hana	$337,241	$1,325,821	$1,663,062
TOTALS	$193,271,367	$106,756,888	$300,028,255
Combined Community Plan Areas - Alternative 3			
West Maui	$34,007,557	$26,446,479	$60,454,036
Wailuku-Kahului + Kihei-Makena + Makawao-Pukalani-Kula + Paia-Haiku	$158,926,569	$78,984,588	$237,911,157
Hana	$337,241	$1,325,821	$1,663,062
TOTALS	$193,271,367	$106,756,888	$300,028,255

4.4 Summary of Distribution of Costs by Agency, Growth Period, and Community Plan Area

Ultimately, the distribution of costs by agency, growth period, and community plan area are combined to determine the proportion of costs attributable to each agency within the impact fee growth period and within each benefit zone alternative geography. **Table 18** summarizes the division of costs across each of these dimensions. It is important to note that only the costs reflected in the 2019-2030 growth period are considered in the calculation of impact fees, this means that the total cost basis for the impact fees is $16.4 million.

Table 18. Distribution of Program Costs Across Agencies, Growth Periods, and Community Plan Areas

	Pre-2020			2020-2030			Post 2030			TOTAL		
BENEFIT ZONE ALTERNATIVE	LOCAL PROJECT COSTS ONLY	STATE PROJECT COSTS ONLY	TOTAL COSTS	LOCAL PROJECT COSTS ONLY	STATE PROJECT COSTS ONLY	TOTAL COSTS	LOCAL PROJECT COSTS ONLY	STATE PROJECT COSTS ONLY	TOTAL COSTS	LOCAL PROJECT COSTS ONLY	STATE PROJECT COSTS ONLY	TOTAL COSTS
Island-wide - Alternative 1												
TOTALS	$84,065,975	$55,149,560	$139,215,535	$11,816,056	$4,545,173	$16,361,229	$97,389,336	$47,062,155	$144,451,491	$193,271,367	$106,756,888	$300,028,255
Individual Community Plan Areas - Alternative 2												
West Maui	$18,736,782	$16,704,564	$35,441,346	$5,678,823	$1,467,591	$7,146,414	$9,591,952	$8,274,324	$17,866,276	$34,007,557	$26,446,479	$60,454,036
Wailuku-Kahului	$20,700,445	$23,515,395	$44,215,840	$2,388,407	$1,687,946	$4,076,353	$29,264,644	$6,452,422	$35,717,066	$52,353,496	$31,655,763	$84,009,259
Kihei-Makena	$24,103,133	$7,051,602	$31,154,735	$1,808,589	$544,291	$2,352,880	$13,217,513	$2,233,904	$15,451,417	$39,129,235	$9,829,797	$48,959,032
Paia-Haiku	$15,601,008	$3,923,529	$19,524,537	$1,393,231	$417,952	$1,811,183	$21,716,979	$28,887,594	$50,604,573	$38,711,218	$33,229,075	$71,940,293
Makawao-Pukalani-Kula	$4,851,985	$3,126,706	$7,978,691	$538,298	$329,742	$868,040	$23,342,337	$813,505	$24,155,842	$28,732,620	$4,269,953	$33,002,573
Hana	$72,622	$827,764	$900,386	$8,708	$97,651	$106,359	$255,911	$400,406	$656,317	$337,241	$1,325,821	$1,663,062
TOTALS	$84,065,975	$55,149,560	$139,215,535	$11,816,056	$4,545,173	$16,361,229	$97,389,336	$47,062,155	$144,451,491	$193,271,367	$106,756,888	$300,028,255
Combined Community Plan Areas - Alternative 3												
West Maui	$18,736,782	$16,704,564	$35,441,346	$5,678,823	$1,467,591	$7,146,414	$9,591,952	$8,274,324	$17,866,276	$34,007,557	$26,446,479	$60,454,036
Wailuku-Kahului + Kihei-Makena + Makawao-Pukalani-Kula + Paia-Haiku	$65,256,571	$37,617,232	$102,873,803	$6,128,525	$2,979,931	$9,108,456	$87,541,473	$38,387,425	$125,928,898	$158,926,569	$78,984,588	$237,911,157
Hana	$72,622	$827,764	$900,386	$8,708	$97,651	$106,359	$255,911	$400,406	$656,317	$337,241	$1,325,821	$1,663,062
TOTALS	$84,065,975	$55,149,560	$139,215,535	$11,816,056	$4,545,173	$16,361,229	$97,389,336	$47,062,155	$144,451,491	$193,271,367	$106,756,888	$300,028,255

Section 5
Calculation of Impact Fee Rate

The results of the impact fee calculations are organized as follows:

- There are three (3) Benefit Zone Alternatives:
  - Alternative #1 – Island-wide
  - Alternative #2 – Six individual Community Plan areas
  - Alternative #3 – Three combined Community Plan areas
- There are three separate funding sources, each with their own component of impact fee for each land use category defined for assessment.
  - Total Program
  - Local projects costs only
  - State projects costs only

The methodology to determine impact fee rates is straightforward; the capital cost element for the 10-year period (Table 18) will be divided by the number of 10-year period growth units determined (Table 11).

An example of the calculation for the Island-wide Benefit Zone alternative and the program costs for the local project costs only is shown in **Table 19.**

Impact fee schedules have been prepared to reflect the multiple alternatives evaluated. The schedules prepared include the following:

- Schedule A – Impact fees reflecting Total Program, Local, and State projects costs for an Island-wide benefit zone (Alternative 1) (**Table 20**).
- Schedule B – Multiple schedules reflecting Total Program, Local, and State projects costs for benefit zones consisting of individual Community Plan areas (Alternative 2) (**Table 21**).
- Schedule C – Multiple schedules for the combined benefit zones (Alternative 3) (**Table 22**).

It should be noted that rates are lower than 2013 rates due largely to the source of projects considered. The 2013 study developed projects to attain LOS D or better on all roadways in the present, then in 20 years. The current study relies only on the LRTP, so a higher proportion of future project costs are serving existing needs. In addition, the Hele Mai Maui Plan contains more lower cost multimodal and safety improvements.

Table 19. Example of Impact Fee Calculation for Local Component of Program Costs for Benefit Zone Alternative 1: Island-wide

ROW I.D.	SOURCE	MEASURE	Single-Family & Duplex Residential	Multi-Family Residential	Commercial (Office + Retail)	Industrial	Visitor Accommodation	Institutional - Public	Totals
[A]	From Table 11	Unit of Development	DU	DU	KGSF	KGSF	VU	KGSF	
[B]	From Table 18	Total Program Cost (2020-2030)							$11,816,056
[C]	From Table 9	Trips (2020-2030)	13,936	3,016	39,671	1,550	26,872	1,941	86,986
[D]	Calculated	Pct. Of Total Trips	16.02%	3.47%	45.61%	1.78%	30.89%	2.23%	100.00%
[E]	Calculated, [B]*[D]	Share of Total Program Cost	$1,892,932	$410,017	$5,389,303	$210,326	$3,649,980	$263,498	$11,816,056
[F]	From Table 11	No. New Development Units, 2020-2030	3,968	1,490	2,678	1,035	3,043	297	
[G]	Calculated, [E]/[F]	**Impact Fee Rate** ($/Unit of Development)	**$477.05** per DU	**$275.18** per DU	**$2,012.44** per KGSF	**$203.21** per KGSF	**$1,199.47** per VU	**$886.68** per KGSF	

Table 20. Schedule A – Island-wide Benefit Zone

IMPACT FEE COST AND LAND USE BASIS ***** ISLAND-WIDE ALTERNATIVE *****		Residential - SF	Residential - MF	Commercial (Office + Retail)	Industrial	Visitor Accommodation	Institutional - Public
		DU	DU	KGSF	KGSF	VU	KGSF
Local Project Costs	Impact Fee Rate	$477.05	$275.18	$2,012.44	$203.21	$1,199.47	$886.68
State Project Costs	Impact Fee Rate	$183.50	$105.85	$774.10	$78.17	$461.39	$341.27
Total Project Costs	Impact Fee Rate	$660.55	$381.03	$2,786.54	$281.38	$1,660.86	$1,227.95

Table 21. Schedule B – Individual Community Plan Area Benefit Zones

(Page 1 of 3)

IMPACT FEE COST AND LAND USE BASIS *** INDIVIDUAL COMMUNITY PLAN AREA ALTERNATIVE *** West Maui Community Plan Area SCHEDULE B-1		Residential - SF	Residential - MF	Commercial (Office + Retail)	Industrial	Visitor Accommodation	Institutional - Public
		DU	DU	KGSF	KGSF	VU	KGSF
Local Project Costs	Impact Fee Rate	$686.42	$396.48	$2,891.33	$291.22	$1,725.20	$1,274.09
State Project Costs	Impact Fee Rate	$177.39	$102.47	$747.21	$75.26	$445.85	$329.27
Total Project Costs	Impact Fee Rate	$863.81	$498.95	$3,638.55	$366.48	$2,171.05	$1,603.36

IMPACT FEE COST AND LAND USE BASIS *** INDIVIDUAL COMMUNITY PLAN AREA ALTERNATIVE *** Wailuku-Kahului Community Plan Area SCHEDULE B-2		Residential - SF	Residential - MF	Commercial (Office + Retail)	Industrial	Visitor Accommodation	Institutional - Public
		DU	DU	KGSF	KGSF	VU	KGSF
Local Project Costs	Impact Fee Rate	$351.43	$202.16	$1,485.43	$150.34	$883.04	$658.95
State Project Costs	Impact Fee Rate	$248.37	$142.87	$1,049.79	$106.25	$624.06	$465.70
Total Project Costs	Impact Fee Rate	$599.80	$345.03	$2,535.22	$256.59	$1,507.10	$1,124.64

Schedule B – Individual Community Plan Area Benefit Zones (Continued)

(Page 2 of 3)

IMPACT FEE COST AND LAND USE BASIS *** INDIVIDUAL COMMUNITY PLAN AREA ALTERNATIVE *** Kīhei-Makena Community Plan Area SCHEDULE B-3		Residential - SF	Residential - MF	Commercial (Office + Retail)	Industrial	Visitor Accommodation	Institutional - Public
		DU	DU	KGSF	KGSF	VU	KGSF
Local Project Costs	Impact Fee Rate	$285.57	$164.84	$1,201.35	$121.73	$717.37	$527.50
State Project Costs	Impact Fee Rate	$85.94	$49.61	$361.54	$36.63	$215.89	$158.75
Total Project Costs	Impact Fee Rate	$371.51	$214.45	$1,562.89	$158.37	$933.26	$686.25

IMPACT FEE COST AND LAND USE BASIS *** INDIVIDUAL COMMUNITY PLAN AREA ALTERNATIVE *** Pā`ia-Ha`ikū Community Plan Area SCHEDULE B-4		Residential - SF	Residential - MF	Commercial (Office + Retail)	Industrial	Visitor Accommodation	Institutional - Public
		DU	DU	KGSF	KGSF	VU	KGSF
Local Project Costs	Impact Fee Rate	$1,470.20	$848.96	$6,198.20	$626.95	$3,773.33	$2,840.08
State Project Costs	Impact Fee Rate	$441.04	$254.67	$1,859.38	$188.08	$1,131.92	$852.00
Total Project Costs	Impact Fee Rate	$1,911.24	$1,103.64	$8,057.58	$815.03	$4,905.25	$3,692.08

Schedule B – Individual Community Plan Area Benefit Zones (Continued)

(Page 3 of 3)

IMPACT FEE COST AND LAND USE BASIS *** INDIVIDUAL COMMUNITY PLAN AREA ALTERNATIVE *** Makawao-Pukalani-Kula Community Plan Area SCHEDULE B-5		Residential - SF	Residential - MF	Commercial (Office + Retail)	Industrial	Visitor Accommodation	Institutional - Public
		DU	DU	KGSF	KGSF	VU	KGSF
Local Project Costs	Impact Fee Rate	$267.47	$154.44	$1,128.73	$113.04	$690.29	$492.44
State Project Costs	Impact Fee Rate	$163.84	$94.60	$691.42	$69.24	$422.82	$301.67
Total Project Costs	Impact Fee Rate	$431.31	$249.04	$1,820.15	$182.29	$1,113.12	$794.11

IMPACT FEE COST AND LAND USE BASIS *** INDIVIDUAL COMMUNITY PLAN AREA ALTERNATIVE *** Hāna Community Plan Area SCHEDULE B-6		Residential - SF	Residential - MF	Commercial (Office + Retail)	Industrial	Visitor Accommodation	Institutional - Public
		DU	DU	KGSF	KGSF	VU	KGSF
Local Project Costs	Impact Fee Rate	$21.72	$12.68	$91.73	$9.17	$53.89	$38.00
State Project Costs	Impact Fee Rate	$243.56	$142.16	$1,028.64	$102.74	$604.42	$426.86
Total Project Costs	Impact Fee Rate	$265.28	$154.84	$1,120.37	$111.91	$658.32	$464.86

Table 22. Schedule C – Combined Community Plan Area Benefit Zones

(Page 1 of 2)

IMPACT FEE COST AND LAND USE BASIS *** COMBINED COMMUNITY PLAN AREA ALTERNATIVE *** West Maui Community Plan Area SCHEDULE C-1		Residential - SF	Residential - MF	Commercial (Office + Retail)	Industrial	Visitor Accommodation	Institutional - Public
		DU	DU	KGSF	KGSF	VU	KGSF
Local Project Costs	Impact Fee Rate	$686.42	$396.48	$2,891.33	$291.22	$1,725.20	$1,274.09
State Project Costs	Impact Fee Rate	$177.39	$102.47	$747.21	$75.26	$445.85	$329.27
Total Project Costs	Impact Fee Rate	$863.81	$498.95	$3,638.55	$366.48	$2,171.05	$1,603.36

IMPACT FEE COST AND LAND USE BASIS *** COMBINED COMMUNITY PLAN AREA ALTERNATIVE *** Wailuku-Kahului + Kīhei-Makena + Makawao-Pukalani-Kula + Pā`ia-Ha`ikū Combined Community Plan Areas SCHEDULE C-2		Residential - SF	Residential - MF	Commercial (Office + Retail)	Industrial	Visitor Accommodation	Institutional - Public
		DU	DU	KGSF	KGSF	VU	KGSF
Local Project Costs	Impact Fee Rate	$380.83	$219.39	$1,607.02	$162.54	$957.92	$711.14
State Project Costs	Impact Fee Rate	$185.18	$106.68	$781.40	$79.04	$465.78	$345.78
Total Project Costs	Impact Fee Rate	$566.01	$326.07	$2,388.42	$241.58	$1,423.70	$1,056.92

Schedule C – Combined Community Plan Area Benefit Zones (Continued)

(Page 2 of 2)

IMPACT FEE COST AND LAND USE BASIS *** COMBINED COMMUNITY PLAN AREA ALTERNATIVE *** Hāna Community Plan Area SCHEDULE C-3		Residential - SF	Residential - MF	Commercial (Office + Retail)	Industrial	Visitor Accommodation	Institutional - Public
		DU	DU	KGSF	KGSF	VU	KGSF
Local Project Costs	Impact Fee Rate	$21.72	$12.68	$91.73	$9.17	$53.89	$38.00
State Project Costs	Impact Fee Rate	$243.56	$142.16	$1,028.64	$102.74	$604.42	$426.86
Total Project Costs	Impact Fee Rate	$265.28	$154.84	$1,120.37	$111.91	$658.32	$464.86

Appendix A

Impact Fee Project List

This page intentionally left blank.

ID	Project Name	Project Type	Phasing	Cost ($1,000) [2019 Dollars]	Federal	State	Local	Other	Community Plan Area	Expected Construction Year	Cost ($1000) Inflated to Construction Year
C10	Honoapi'ilani Hwy Realignment (Ukumehame to Olowalu)	New Connections	Near	$90,000	x	x			West Maui	2024	$104,702
C11	Lahaina Bypass Phase 1C	New Connections	Near	$75,000	x	x			West Maui	2022	$82,128
C12	Pa'ia Relief Route	New Connections	Mid	$120,000	x	x			Pā`ia-Ha`ikū	2028	$157,567
C18	Imi Kala Rd Extension -- Wailuku	New Connections	Mid	$2,686	x		x	x	Wailuku-Kahului	2028	$3,527
C3	Lono Ave Extension	New Connections	Mid	$6,800	x		x		Wailuku-Kahului	2028	$8,929
C4	Wai'ale Rd Extension	New Connections	Mid	$38,000	x		x	x	Wailuku-Kahului	2028	$49,896
C5	Kihei North-South Collector Road -- Phase 1A	New Connections	Near	$27,540	x		x		Kīhei-Mākena	2025	$33,023
C6	Kihei North-South Collector Road -- Phase 2	New Connections	Mid	$6,441	x		x		Kīhei-Mākena	2028	$8,457
C7	Kihei North-South Collector Road -- Phase 1B	New Connections	Mid	$17,338	x		x		Kīhei-Mākena	2028	$22,766
G1	West Maui Greenway & Multi-Use Path -- Phase 1	Multi-Use Paths	Near	$1,750	x		x	x	West Maui	2022	$1,916
G2	West Maui Greenway & Multi-Use Path -- Phase 2	Multi-Use Paths	Mid	$5,743	x		x	x	West Maui	2028	$7,541
G7	Kihei Greenway & Multi-Use Path -- Phase 3	Multi-Use Paths	Near	$4,505	x		x		Kīhei-Mākena	2022	$4,933

ID	Project Name	Project Type	Phasing	Cost ($1,000) [2019 Dollars]	Federal	State	Local	Other	Community Plan Area	Expected Construction Year	Cost ($1000) Inflated to Construction Year
G8	Kihei Greenway & Multi-Use Path -- Phase 4	Multi-Use Paths	Mid	$10,969	x		x		Kīhei-Mākena	2028	$14,403
I10	Lipoa St & Liloa Dr Intersection Safety Analysis	Intersection Improvements	Mid	$2,517	x		x		Kīhei-Mākena	2028	$3,305
I13	Kulanihakoi St & South Kihei Rd Intersection Safety Analysis	Intersection Improvements	Mid	$2,517	x		x		Kīhei-Mākena	2028	$3,305
I14	Waine'e St & Lahainaluna Rd Intersection Safety Analysis	Intersection Improvements	Mid	$2,517	x		x		West Maui	2028	$3,305
I15	Central Maui Traffic Signal Upgrades (9 Locations)	Intersection Improvements	Near	$3,399	x		x		Wailuku-Kahului	2022	$3,722
I17	Mill St & Imi Kala Rd Intersection Improvements	Intersection Improvements	Near	$2,041	x		x		Wailuku-Kahului	2022	$2,235
I19	Eha St & Waena St Intersection Improvements	Intersection Improvements	Near	$2,517	x		x		Wailuku-Kahului	2022	$2,756
I2	Pu'unene Ave & Kamehameha Ave Intersection Safety Analysis	Intersection Improvements	Mid	$2,517	x	x			Wailuku-Kahului	2028	$3,305
I20	Mahaolu St & Kamehameha Ave Intersection Improvements	Intersection Improvements	Near	$2,517			x		Wailuku-Kahului	2022	$2,756
I25	Wai'ehu Beach Rd & Lower Main St Intersection Safety Analysis	Intersection Improvements	Mid	$2,517	x		x		Wailuku-Kahului	2028	$3,305

ID	Project Name	Project Type	Phasing	Cost ($1,000) [2019 Dollars]	Federal	State	Local	Other	Community Plan Area	Expected Construction Year	Cost ($1000) Inflated to Construction Year
I26	Papa Ave & Pu'unene Ave Intersection Safety Analysis	Intersection Improvements	Mid	$2,517	x		x		Wailuku-Kahului	2028	$3,305
I31	Kane St & Vevau St Intersection Safety Analysis	Intersection Improvements	Near	$2,517			x		Wailuku-Kahului	2022	$2,756
I33	Papa Ave & La'au St Intersection Improvements	Intersection Improvements	Near	$2,517			x		Wailuku-Kahului	2022	$2,756
I34	Ohukai Rd & South Kihei Rd Intersection Improvements	Intersection Improvements	Near	$2,517	x		x		Kīhei-Mākena	2022	$2,756
I35	Piilani Hwy & Kihei High School Crossing	Intersection Improvements	Near	$3,502		x			Kīhei-Mākena	2022	$3,835
I36	Wakea Ave & Kamehameha Ave Intersection Improvements	Intersection Improvements	Near	$2,993	x		x		Wailuku-Kahului	2022	$3,277
I44	Honoapi'ilani Hwy & Keawe St Intersection Safety Analysis	Intersection Improvements	Mid	$2,517	x	x			West Maui	2028	$3,305
I5	Papa Ave & Lono Ave Intersection Safety Analysis	Intersection Improvements	Mid	$2,517	x		x		Wailuku-Kahului	2028	$3,305
I6	Hansen Rd & Pulehu Rd Intersection Safety Analysis	Intersection Improvements	Near	$2,517	x		x		Wailuku-Kahului	2022	$2,756
I7	Old Haleakala Highway Signal Upgrade	Intersection Improvements	Near	$765	x	x			Makawao-Pukalani-Kula	2022	$838
I8	Piikea Rd & South Kihei Rd Intersection Safety Analysis	Intersection Improvements	Mid	$2,517	x		x		Kīhei-Mākena	2028	$3,305

ID	Project Name	Project Type	Phasing	Cost ($1,000) [2019 Dollars]	Federal	State	Local	Other	Community Plan Area	Expected Construction Year	Cost ($1000) Inflated to Construction Year
P1	Sidewalk Gap Program (20 Years)	Program		$11,000			x		Islandwide	2025	$7,584
P16	Traffic Signal Modernization (10 Years)	Program		$35,000	x	x			Islandwide	2025	$41,969
P20	Traffic Operations & Improvements Program (20 Years)	Program		$20,000	x	x			Islandwide	2025	$13,790
P3	Bus Stop Siting, Upgrades, & Maintenance Program (20 Years)	Program		$10,000	x		x		Islandwide	2025	$6,895
S1	Papa Ave Complete Street	Complete Streets	Near	$11,523			x		Wailuku-Kahului	2022	$12,618
S16	Dickenson St Improvements	Complete Streets	Mid	$1,077			x		West Maui	2028	$1,414
S17	Prison St Improvements	Complete Streets	Mid	$1,059			x		West Maui	2028	$1,391
S19	Lono Ave Improvements -- Phase 2	Safety Corridors	Mid	$5,851	x		x		Wailuku-Kahului	2028	$7,683
S2	Lower Honoapi'ilani Rd Improvements	Safety Corridors	Near	$25,400	x				West Maui	2022	$27,814
S20	Pu'unene Ave Improvements	Complete Streets	Near	$22,000	x	x			Wailuku-Kahului	2022	$24,091
S22	South Kihei Rd Improvements	Complete Streets	Near	$5,450	x		x		Kīhei-Mākena	2022	$5,968
S24	South Kihei Rd Sidewalk Improvements	Complete Streets	Near	$1,900			x		Kīhei-Mākena	2022	$2,081
S26	Kula Highway (Route 37) Safety Improvements	Safety Corridors	Near	$920	x	x			Makawao-Pukalani-Kula	2022	$1,007

ID	Project Name	Project Type	Phasing	Cost ($1,000) [2019 Dollars]	Federal	State	Local	Other	Community Plan Area	Expected Construction Year	Cost ($1000) Inflated to Construction Year
S28	Lono Ave Improvements -- Phase 1	Safety Corridors	Mid	$1,085	x		x		Wailuku-Kahului	2028	$1,425
S32	Ka'ahumanu Ave Transit & Multimodal Corridor	Transit Improvements	Near	$10,000		x	x		Wailuku-Kahului	2025	$11,991
S33	Ohukai Rd Sidewalk Improvements	Complete Streets	Near	$600			x		Kīhei-Mākena	2022	$657
S36	Makawao Ave & Makani Rd Improvements	Complete Streets	Near	$16,000	x		x		Makawao-Pukalani-Kula	2022	$17,521
S37	North Kihei Rd (Route 310) Safety Improvements	Safety Corridors	Near	$1,800	x	x			Kīhei-Mākena	2022	$1,971
S38	Olinda Rd & Pi'iholo Rd Safety Improvements	Safety Corridors	Mid	$34,400			x		Makawao-Pukalani-Kula	2028	$45,169
S4	Lower Main St Improvements	Complete Streets	Near	$4,077	x		x		Wailuku-Kahului	2024	$4,743
S49	Kamehameha Ave Sidewalk Improvements	Complete Streets	Near	$2,212			x		Wailuku-Kahului	2022	$2,422
S5	Kanaloa Ave & Mahalani St Improvements	Complete Streets	Near	$4,505	x		x		Wailuku-Kahului	2024	$5,241
S50	Keonekai Rd Sidewalk Improvements	Complete Streets	Near	$400			x		Kīhei-Mākena	2022	$438
S51	Kinipopo St Sidewalk Improvements	Complete Streets	Near	$119			x		Wailuku-Kahului	2022	$130
S52	Front St Pedestrian Esplanade	Complete Streets	Mid	$619			x		West Maui	2028	$813

ID	Project Name	Project Type	Phasing	Cost ($1,000) [2019 Dollars]	Federal	State	Local	Other	Community Plan Area	Expected Construction Year	Cost ($1000) Inflated to Construction Year
S53	Makawao Ave Safety Corridor -- Makani Rd to Haleakala Hwy	Safety Corridors	Mid	$9,159	x		x		Makawao-Pukalani-Kula	2028	$12,026
S6	Wai'ale Rd Complete Street	Complete Streets	Near	$17,199	x	x			Wailuku-Kahului	2022	$18,834
S8	Keawe St Improvements	Complete Streets	Near	$447			x		West Maui	2022	$489
S9	Holomua Rd Improvements	Safety Corridors	Near	$7,578			x		Pā`ia-Ha`ikū	2022	$8,298
T14	Kihei Transit & Multimodal Corridor	Transit Improvements	Mid	$10,000	x		x	x	Kīhei-Mākena/Wailuku-Kahului	2028	$13,131
T16	Lahaina Transit & Multimodal Corridor	Transit Improvements	Mid	$10,000	x		x	x	West Maui	2028	$13,131
T2	Kihei Transit Hub	Transit Improvements	Mid	$10,000			x	x	Kīhei-Mākena	2028	$13,131
T3	Lahaina Transit Hub	Transit Improvements	Near	$15,000			x	x	West Maui	2022	$16,426
T4	Paia Transit Hub	Transit Improvements	Mid	$5,000			x	x	Pā`ia-Ha`ikū	2028	$6,565
T9	Central Maui Transit Hub	Transit Improvements	Near	$3,000		x	x		Wailuku-Kahului	2022	$3,285

Appendix B

Growth Period Distribution

This page intentionally left blank.

ID	Project Name	BASE YEAR 2019	2020-2030	POST 2030
C10	Honoapi'ilani Hwy Realignment (Ukumehame to Olowalu)	67.1%	6.5%	26.4%
C11	Lahaina Bypass Phase 1C	57.8%	4.2%	38.0%
C12	Pa'ia Relief Route	7.8%	0.8%	91.4%
C18	Imi Kala Rd Extension -- Wailuku	35.2%	4.4%	60.5%
C3	Lono Ave Extension	28.6%	0.0%	71.4%
C4	Wai'ale Rd Extension	0.0%	0.0%	100.0%
C5	Kihei North-South Collector Road -- Phase 1A	16.1%	4.3%	79.6%
C6	Kihei North-South Collector Road -- Phase 2	24.6%	14.9%	60.5%
C7	Kihei North-South Collector Road -- Phase 1B	28.3%	2.6%	69.1%
G1	West Maui Greenway & Multi-Use Path -- Phase 1	94.3%	2.0%	3.7%
G2	West Maui Greenway & Multi-Use Path -- Phase 2	94.3%	2.0%	3.7%
G7	Kihei Greenway & Multi-Use Path -- Phase 3	93.1%	2.3%	4.6%
G8	Kihei Greenway & Multi-Use Path -- Phase 4	93.1%	2.3%	4.6%
I10	Lipoa St & Liloa Dr Intersection Safety Analysis	29.1%	10.1%	60.8%
I13	Kulanihakoi St & South Kihei Rd Intersection Safety Analysis	40.5%	4.1%	55.4%
I14	Waine'e St & Lahainaluna Rd Intersection Safety Analysis	22.3%	18.0%	59.7%
I15	Central Maui Traffic Signal Upgrades (9 Locations)	42.9%	4.1%	53.0%
I17	Mill St & Imi Kala Rd Intersection Improvements	32.2%	1.8%	66.0%
I19	Eha St & Waena St Intersection Improvements	7.8%	0.2%	92.0%
I2	Pu'unene Ave & Kamehameha Ave Intersection Safety Analysis	57.5%	4.0%	38.5%
I20	Mahaolu St & Kamehameha Ave Intersection Improvements	61.2%	7.0%	31.8%
I25	Wai'ehu Beach Rd & Lower Main St Intersection Safety Analysis	73.3%	8.1%	18.6%
I26	Papa Ave & Pu'unene Ave Intersection Safety Analysis	65.4%	2.5%	32.1%
I31	Kane St & Vevau St Intersection Safety Analysis	39.7%	8.7%	51.5%
I33	Papa Ave & La'au St Intersection Improvements	22.4%	7.3%	70.3%
I34	Ohukai Rd & South Kihei Rd Intersection Improvements	38.3%	4.5%	57.2%
I35	Piilani Hwy & Kihei High School Crossing	66.4%	3.5%	30.1%
I36	Wakea Ave & Kamehameha Ave Intersection Improvements	59.1%	7.7%	33.2%
I44	Honoapi'ilani Hwy & Keawe St Intersection Safety Analysis	52.9%	3.9%	43.2%
I5	Papa Ave & Lono Ave Intersection Safety Analysis	32.9%	5.4%	61.7%
I6	Hansen Rd & Pulehu Rd Intersection Safety Analysis	13.8%	2.7%	83.5%
I7	Old Haleakala Highway Signal Upgrade	41.6%	10.5%	47.9%
I8	Piikea Rd & South Kihei Rd Intersection Safety Analysis	51.3%	1.2%	47.5%
P1	Sidewalk Gap Program (20 Years)	83.3%	10.6%	6.1%
P16	Traffic Signal Modernization (10 Years)	83.3%	10.6%	6.1%
P20	Traffic Operations & Improvements Program (20 Years)	83.3%	10.6%	6.1%
P3	Bus Stop Siting, Upgrades, & Maintenance Program (20 Years)	83.3%	10.6%	6.1%
S1	Papa Ave Complete Street	43.1%	5.0%	51.9%
S16	Dickenson St Improvements	24.8%	2.5%	72.7%

ID	Project Name	BASE YEAR 2019	2020-2030	POST 2030
S17	Prison St Improvements	13.6%	1.4%	85.0%
S19	Lono Ave Improvements -- Phase 2	21.0%	0.9%	78.1%
S2	Lower Honoapi'ilani Rd Improvements	13.2%	0.7%	86.1%
S20	Pu'unene Ave Improvements	98.4%	0.5%	1.1%
S22	South Kihei Rd Improvements	45.9%	0.8%	53.3%
S24	South Kihei Rd Sidewalk Improvements	68.4%	6.4%	25.2%
S26	Kula Highway (Route 37) Safety Improvements	48.1%	8.5%	43.4%
S28	Lono Ave Improvements -- Phase 1	27.2%	0.0%	72.8%
S32	Ka'ahumanu Ave Transit & Multimodal Corridor	87.5%	5.3%	7.2%
S33	Ohukai Rd Sidewalk Improvements	7.8%	0.3%	91.9%
S36	Makawao Ave & Makani Rd Improvements	41.0%	4.3%	54.7%
S37	North Kihei Rd (Route 310) Safety Improvements	78.8%	8.9%	12.3%
S38	Olinda Rd & Pi'iholo Rd Safety Improvements	10.1%	1.1%	88.8%
S4	Lower Main St Improvements	41.8%	5.5%	52.7%
S49	Kamehameha Ave Sidewalk Improvements	42.7%	5.2%	52.2%
S5	Kanaloa Ave & Mahalani St Improvements	25.9%	2.5%	71.6%
S50	Keonekai Rd Sidewalk Improvements	15.7%	0.0%	84.3%
S51	Kinipopo St Sidewalk Improvements	26.5%	6.4%	67.2%
S52	Front St Pedestrian Esplanade	7.8%	5.4%	86.8%
S53	Makawao Ave Safety Corridor -- Makani Rd to Haleakala Hwy	50.5%	5.1%	44.3%
S6	Wai'ale Rd Complete Street	17.8%	3.4%	78.8%
S8	Keawe St Improvements	22.8%	3.1%	74.2%
S9	Holomua Rd Improvements	83.3%	10.6%	6.1%
T14	Kihei Transit & Multimodal Corridor	89.2%	4.8%	6.1%
T16	Lahaina Transit & Multimodal Corridor	68.8%	26.8%	4.4%
T2	Kihei Transit Hub	90.2%	4.4%	5.4%
T3	Lahaina Transit Hub	68.8%	26.8%	4.4%
T4	Paia Transit Hub	88.8%	3.0%	8.2%
T9	Central Maui Transit Hub	87.5%	5.3%	7.2%

Appendix C

Community Plan Area Distribution

This page intentionally left blank.

ID	Project Name	West Maui	Wailuku-Kahului	Kihei-Makena	Paia-Haiku	Makawao-Pukalani-Kula	Hana
C10	Honoapi'ilani Hwy Realignment (Ukumehame to Olowalu)	51%	26%	15%	3%	6%	1%
C11	Lahaina Bypass Phase 1C	79%	12%	6%	1%	2%	0%
C12	Pa'ia Relief Route	0%	0%	0%	99%	0%	1%
C18	Imi Kala Rd Extension -- Wailuku	3%	90%	7%	0%	0%	0%
C3	Lono Ave Extension	26%	64%	8%	1%	1%	0%
C4	Wai'ale Rd Extension	0%	100%	0%	0%	0%	0%
C5	Kihei North-South Collector Road -- Phase 1A	2%	13%	83%	1%	1%	0%
C6	Kihei North-South Collector Road -- Phase 2	0%	14%	81%	1%	4%	0%
C7	Kihei North-South Collector Road -- Phase 1B	2%	18%	76%	1%	3%	0%
G1	West Maui Greenway & Multi-Use Path -- Phase 1	100%	0%	0%	0%	0%	0%
G2	West Maui Greenway & Multi-Use Path -- Phase 2	100%	0%	0%	0%	0%	0%
G7	Kihei Greenway & Multi-Use Path -- Phase 3	0%	0%	100%	0%	0%	0%
G8	Kihei Greenway & Multi-Use Path -- Phase 4	0%	0%	100%	0%	0%	0%
I10	Lipoa St & Liloa Dr Intersection Safety Analysis	0%	12%	81%	2%	4%	0%
I13	Kulanihakoi St & South Kihei Rd Intersection Safety Analysis	7%	18%	73%	1%	1%	0%
I14	Waine'e St & Lahainaluna Rd Intersection Safety Analysis	100%	0%	0%	0%	0%	0%
I15	Central Maui Traffic Signal Upgrades (9 Locations)	1%	87%	5%	2%	4%	0%
I17	Mill St & Imi Kala Rd Intersection Improvements	2%	91%	6%	0%	0%	0%
I19	Eha St & Waena St Intersection Improvements	0%	100%	0%	0%	0%	0%
I2	Pu'unene Ave & Kamehameha Ave Intersection Safety Analysis	0%	80%	14%	2%	4%	0%
I20	Mahaolu St & Kamehameha Ave Intersection Improvements	4%	94%	2%	0%	0%	0%
I25	Wai'ehu Beach Rd & Lower Main St Intersection Safety Analysis	0%	88%	4%	2%	5%	0%

ID	Project Name	West Maui	Wailuku-Kahului	Kihei-Makena	Paia-Haiku	Makawao-Pukalani-Kula	Hana
I26	Papa Ave & Pu'unene Ave Intersection Safety Analysis	1%	67%	26%	2%	4%	0%
I31	Kane St & Vevau St Intersection Safety Analysis	1%	99%	0%	0%	0%	0%
I33	Papa Ave & La'au St Intersection Improvements	0%	72%	13%	5%	10%	0%
I34	Ohukai Rd & South Kihei Rd Intersection Improvements	8%	25%	64%	1%	2%	0%
I35	Piilani Hwy & Kihei High School Crossing	4%	26%	58%	3%	9%	0%
I36	Wakea Ave & Kamehameha Ave Intersection Improvements	0%	90%	5%	2%	3%	0%
I44	Honoapi'ilani Hwy & Keawe St Intersection Safety Analysis	87%	6%	4%	1%	2%	0%
I5	Papa Ave & Lono Ave Intersection Safety Analysis	7%	78%	8%	3%	5%	0%
I6	Hansen Rd & Pulehu Rd Intersection Safety Analysis	1%	14%	42%	14%	27%	2%
I7	Old Haleakala Highway Signal Upgrade	2%	28%	6%	4%	59%	1%
I8	Piikea Rd & South Kihei Rd Intersection Safety Analysis	6%	13%	80%	0%	1%	0%
P1	Sidewalk Gap Program (20 Years)	23%	53%	23%	0%	1%	0%
P16	Traffic Signal Modernization (10 Years)	16%	34%	15%	9%	18%	8%
P20	Traffic Operations & Improvements Program (20 Years)	18%	35%	20%	8%	15%	3%
P3	Bus Stop Siting, Upgrades, & Maintenance Program (20 Years)	29%	47%	24%	0%	0%	0%
S1	Papa Ave Complete Street	1%	87%	6%	2%	4%	0%
S16	Dickenson St Improvements	100%	0%	0%	0%	0%	0%
S17	Prison St Improvements	57%	20%	14%	3%	6%	1%
S19	Lono Ave Improvements -- Phase 2	6%	92%	1%	0%	0%	0%
S2	Lower Honoapi'ilani Rd Improvements	94%	3%	2%	0%	1%	0%
S20	Pu'unene Ave Improvements	1%	67%	26%	2%	4%	0%
S22	South Kihei Rd Improvements	5%	13%	81%	0%	1%	0%
S24	South Kihei Rd Sidewalk Improvements	7%	17%	75%	0%	1%	0%

ID	Project Name	West Maui	Wailuku-Kahului	Kihei-Makena	Paia-Haiku	Makawao-Pukalani-Kula	Hana
S26	Kula Highway (Route 37) Safety Improvements	1%	18%	7%	5%	61%	8%
S28	Lono Ave Improvements -- Phase 1	26%	64%	8%	1%	1%	0%
S32	Ka'ahumanu Ave Transit & Multimodal Corridor	0%	100%	0%	0%	0%	0%
S33	Ohukai Rd Sidewalk Improvements	0%	0%	99%	0%	1%	0%
S36	Makawao Ave & Makani Rd Improvements	1%	11%	3%	12%	73%	1%
S37	North Kihei Rd (Route 310) Safety Improvements	11%	33%	52%	1%	3%	0%
S38	Olinda Rd & Pi'iholo Rd Safety Improvements	0%	0%	0%	49%	50%	0%
S4	Lower Main St Improvements	0%	90%	2%	3%	5%	0%
S49	Kamehameha Ave Sidewalk Improvements	2%	86%	3%	3%	5%	0%
S5	Kanaloa Ave & Mahalani St Improvements	1%	88%	5%	2%	4%	0%
S50	Keonekai Rd Sidewalk Improvements	0%	0%	100%	0%	0%	0%
S51	Kinipopo St Sidewalk Improvements	0%	85%	0%	5%	9%	0%
S52	Front St Pedestrian Esplanade	93%	3%	2%	0%	1%	0%
S53	Makawao Ave Safety Corridor -- Makani Rd to Haleakala Hwy	1%	10%	2%	13%	73%	1%
S6	Wai'ale Rd Complete Street	4%	87%	7%	1%	2%	0%
S8	Keawe St Improvements	92%	4%	2%	0%	1%	0%
S9	Holomua Rd Improvements	0%	0%	0%	100%	0%	0%
T14	Kihei Transit & Multimodal Corridor	0%	38%	62%	0%	0%	0%
T16	Lahaina Transit & Multimodal Corridor	100%	0%	0%	0%	0%	0%
T2	Kihei Transit Hub	0%	0%	100%	0%	0%	0%
T3	Lahaina Transit Hub	100%	0%	0%	0%	0%	0%
T4	Paia Transit Hub	0%	0%	0%	100%	0%	0%
T9	Central Maui Transit Hub	0%	100%	0%	0%	0%	0%

Appendix D

Process Flowcharts

This page intentionally left blank.

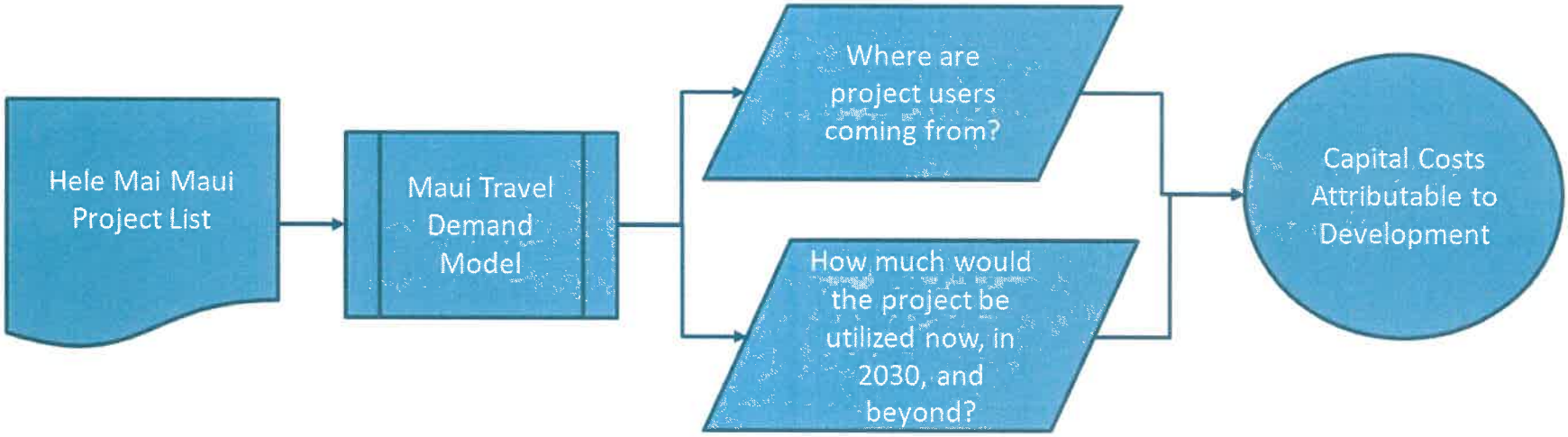

Figure D-1: Capital Cost Component Flowchart

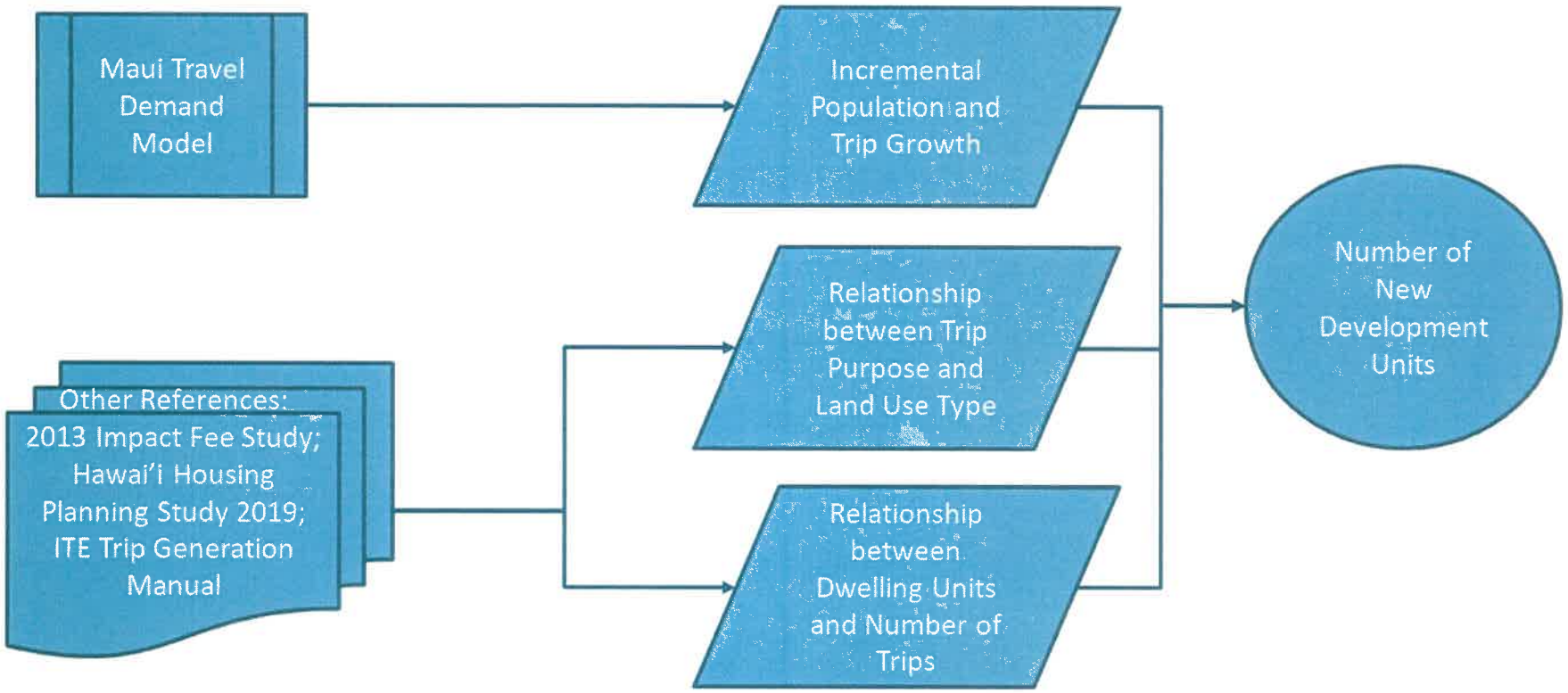

Figure D-2: Development Unit Component Flowchart

IT Committee

From: Michelle Santos <Michelle.Santos@co.maui.hi.us>
Sent: Tuesday, January 11, 2022 9:04 AM
To: IT Committee
Cc: Avis Teshima-Wong; Jordan Hart; Josiah Nishita; Kayla Ueshiro; Michele McLean; Sandy Baz; Stacy Takahashi; Tyson Miyake; Zeke Kalua
Subject: MT#9430 Traffic Impact Fees
Attachments: MT#9430-IT Committee.pdf

Michelle L. Santos

Office Operations Assistant
Office of the Mayor
County of Maui
200 S. High Street 9th Floor
Wailuku, HI 96793
phone: (808) 270-7855
fax: (808) 270-7870