

# 5 Implementation



Without effective implementation, plans, visions, and recommendations for alleviating congestion and mobility concerns in the Kapaa area are just words on a page. One of the key driving factors for the Kapaa Transportation Solutions project is providing a path forward for solutions that are both effective and implementable. Implementation not only requires funding commitments, it requires smart investments and the ability to monitor progress over time.

Chapter 5 addresses these issues through a closer look at the following topics:

- » Priority Projects for Implementation
- » Project Delivery Process
- » Projected Funding Sources
- » Funding Strategies for Priority Projects
- » Performance Measures and Targets



*Increasing transit service is a potential solution to reduce capacity needs*

## Priority Projects for Implementation

It is important to understand that the recommendations presented as part of this study are specifically geared to meeting the study purpose, goals and objectives. Many projects listed in Chapter 4 are important to achieving other goals for the County and the community.

To have a clear path forward for implementation of the Kapaa Transportation Solutions projects,

it is important to understand the benefits of different individual recommendations as described in Chapter 4. However, it is also important to understand collective benefits – what packages of projects are most beneficial to meeting the project purpose, goals, and objectives?

To assess collective benefits, the project team performed a transportation systems analysis – basically, an examination of multiple, individual improvement projects packaged together and analyzed as a single system. The purpose of a systems analysis is to view the transportation system as a unified whole and to evaluate it within the context of the existing land use, socioeconomic conditions, transportation demand, cost analyses, and performance.

The systems analysis can include individual projects located at opposite ends of the study area or within a concentrated hub; the key is to analyze a set of carefully selected projects together so that their cumulative benefits can be evaluated. How a particular improvement project performs in conjunction with another is an important factor in deciding which projects to consider for implementation.

For the Kapaa Transportation Solutions project, the systems analysis approach allows building upon combinations of potential local and regional projects. For instance, by addressing local congestion or circulation issues in downtown Kapaa, local traffic will improve and regional traffic will experience less congestion traveling through the study area.

The systems analysis included two different scenarios: Group A projects (potential projects that can be implemented within 5 years) and Group B projects (potential projects that will be implemented beyond 5 years). The analysis considered both fiscally constrained and unconstrained scenarios.

Projects for both groups were selected based on their collective benefits and being most beneficial to meeting the project purpose, goals, and objectives. Group A projects include the following:

- » ***Widening the Temporary Kapaa Bypass Road north of Oloheena Road*** – By providing one travel lane in the northbound direction, drivers will have an alternate northbound connection from downtown Kapaa to the north. (Project 6)
- » ***Widening Kuhio Highway between the Temporary Kapaa Bypass Road (southern terminus) and Kuamoo Road*** – This project would improve capacity by adding one southbound lane to the highway, and would improve intersection operations at Haleilio Road and Kuamoo Road. (Project 27)
- » ***Extending the right-turn lane from Kuamoo Road*** – By lengthening this lane to at least 650 feet, more right-turning vehicles would be able to move through the intersection without being blocked by left-turns. (Project 33)
- » ***Optimizing traffic signals on Kuhio Highway*** – Traffic signals at Kukui Street, Haleilio Road, and Kuamoo Road should be optimized to more efficiently serve northbound and southbound traffic on Kuhio Highway. (Project 17, 31, and 34)

The fiscally constrained Group B scenario includes:

- » ***Widening Kuhio Highway between Kuamoo Road and Kapule Highway*** – This project extends the 4-lane cross section of Kuhio Highway from the Wailua Bridge to Hanamaulu by adding one southbound lane. This project provides nearly 3 miles of capacity and eliminates the need for daily operations of the contraflow lane (an annual cost of \$1,165,000/year). (Project 38)

Additional projects included in an unconstrained Group B scenario are:

- » ***Terminate Hauaala Road at Kuhio Highway*** – This project takes advantage of the proposed fully two-way Temporary Kapaa Bypass Road. It reduces the volume of left-turns to and from Kuhio Highway, which improves traffic flow northbound and southbound, by creating a new direct bridge connection to the Temporary Kapaa Bypass Road. (Project 3)
- » ***Intersection improvements in downtown/historic Kapaa Town*** – Improving the Niu Street intersection with Kuhio Highway would relieve traffic at Lehua Street and at Kukui Street by giving vehicles another option to access the highway. Closing the east leg of Kukui Street would allow the intersection to shrink, making it easier for pedestrians to cross. (Projects 16 and 20)
- » ***Kapaa New Park*** – A new direct access from the park to the new Temporary Kapaa Bypass Road would improve circulation and relieve pressure from Kahau Road by providing an alternative access option. (Project 8)
- » ***Extend Pouli Road*** – This project improves and extends the existing Pouli Road from Waipouli Town Center to the Temporary Kapaa Bypass Road. This new connection allows local trips to move between Kapaa and Waipouli Town Center without having to use Kuhio Highway. (Project #23)
- » ***Extend Eggerking Road*** – Extending Eggerking Road to the Temporary Kapaa Bypass Road would improve access between Wailua and Kapaa. When combined with the Pouli Road extension, this project would operate as an alternative to Kuhio Highway and increase travel options between Wailua and Waipouli. (Project #24)

## PERFORMANCE CRITERIA

The Group A and Group B packages were evaluated based on the following two performance criteria, consistent with the purpose, goals, and objectives of the project:

1. ***Travel time*** – The time it takes a vehicle to travel from one end of the study area to the other. In the AM peak, travel times are most

critical in the southbound direction. Two primary travel paths are available – vehicles can either choose to drive on Kuhio Highway for the entire length between Kapaa Stream and Kapule Highway, or they can use the Temporary Kapaa Bypass Road for a portion of their southbound trip. In the PM peak, northbound travel times will be summarized. For northbound travel, there are two existing primary travel paths – vehicles can either choose to drive on Kuhio Highway for the entire length between Kapule Highway and Kapaa Stream or they can use a portion of the Temporary Kapaa Bypass Road for a portion of their trip. With the improvements included in Group A, the northbound trip on the Temporary Kapaa Bypass Road would be extended, as the roadway would no longer end for northbound travel at Olorena Road.

- 2. Person-throughput** – The number of people crossing a specific location within the study area during an identified timeframe, regardless of mode of travel. For example, although a Kauai Bus full of passengers crossing the Wailua Bridge is just one vehicle, it carries a greater person-throughput than one automobile or bicycle crossing the same location at the same time. Person-throughput will be measured at key locations entering and exiting the study area.

## PERFORMANCE RESULTS

The groups of projects were compared both to existing conditions, and projected future conditions in year 2020 without infrastructure improvements (the “No Action” scenario). For purposes of this analysis, the “No Action” scenario did not include the contraflow lane because it is not considered a sustainable solution due to the expense associated over time.

By the year 2020, growth in households and population is expected within the study area. Traffic operations within and through Kapaa and Wailua will worsen without roadway improvements. In the morning, southbound travel times into Lihue can be expected to

increase by approximately 75 percent (on Kuhio Highway) from just over 16 minutes today to nearly 29 minutes in 2020. Taking the Temporary Kapaa Bypass Road, a southbound trip during the morning peak will take over 35 minutes in the year 2020. The existing roundabout at Olorena Road and the Temporary Kapaa Bypass Road will be over capacity with high delay on both the eastbound and southbound approaches.

During the afternoon peak, northbound travel times on Kuhio Highway will increase by nearly 4 minutes between Kapule Highway and Mailihuna Road – from just over 24 minutes today to approximately 28 minutes in year 2020.

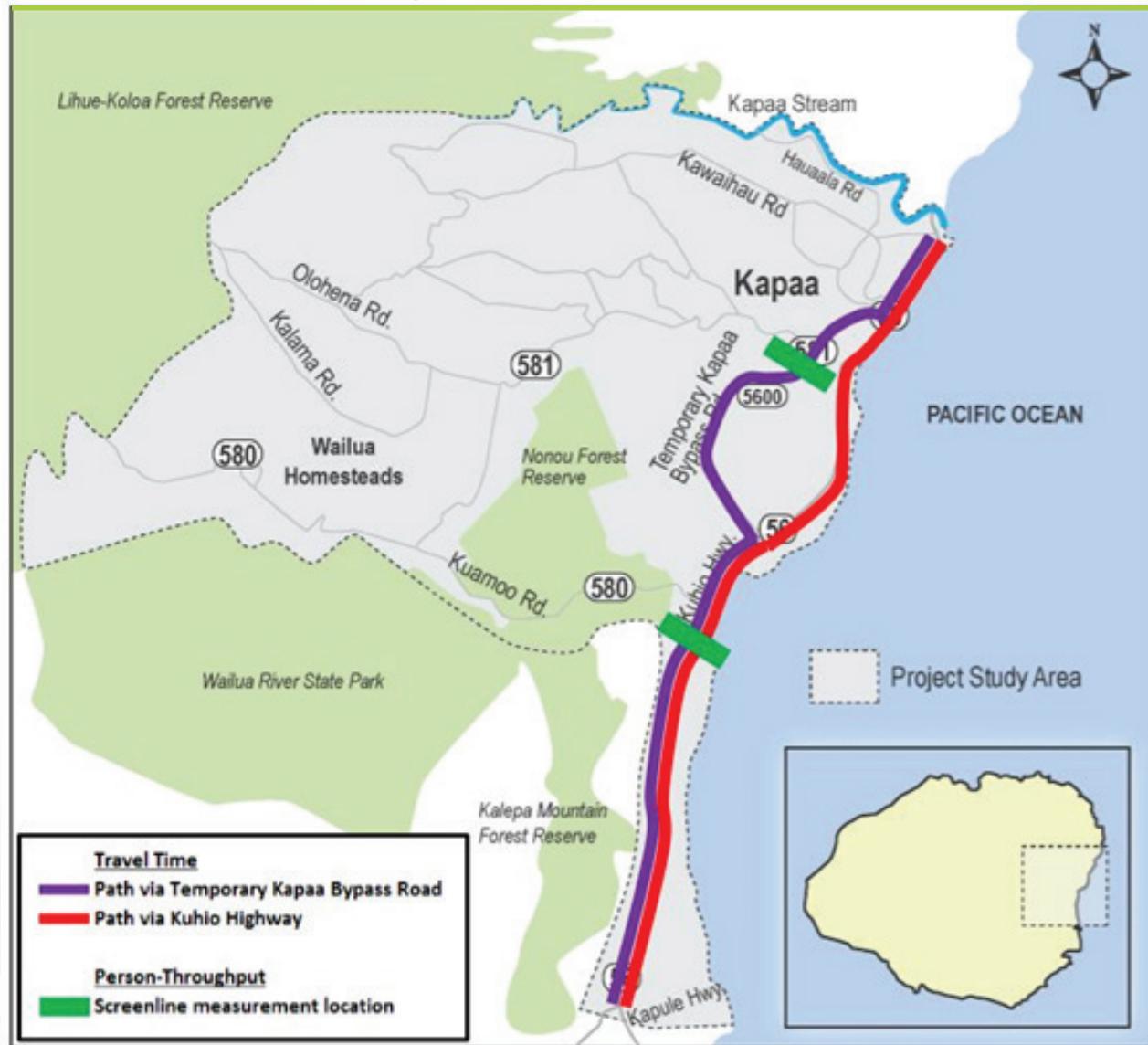
To alleviate travel times, the Group A package of improvement projects address current congestion in the peak direction near the Wailua River Bridge. Southbound travel times during the morning peak are expected to improve by over 5 minutes (driving on Kuhio Highway) and by over 10 minutes (driving on the Temporary Kapaa Bypass Road). The additional southbound lane, which is expected to begin at the southern Terminus of the Temporary Kapaa Bypass Road, will allow a free right-turn movement onto Kuhio Highway. This additional southbound lane will provide increased capacity through Haleilio Road and Kuamoo Road. Northbound travel times on Kuhio Highway during the afternoon peak are expected to improve by approximately 3 minutes.

Further improvements included in the Group B package of projects include the widening of Kuhio Highway to a 4-lane cross section between Kuamoo Road and Kapule Highway. This additional capacity will eliminate the current southbound bottleneck south of the Wailua River, thereby improving congestion and reducing travel time by nearly 8 minutes, compared to just the Group A projects. In addition, the annual funding (\$1,165,000) for the temporary contraflow lane will no longer be needed and can be used for much needed highway maintenance projects.

Some of the travel time results show a slight increase in travel time when looking at Group B (unconstrained) compared to Group B (constrained). While this may seem counterintuitive, the reason for the increase is because of the inclusion in Group B (unconstrained) of Project 3, which would create a new direct connection from Hauaala Road to the Temporary Kapaa Bypass Road. This attractive new roadway connection would improve access to and from the Kapaa Homesteads neighborhoods, and would increase the number of vehicles using the Temporary Kapaa Bypass Road (therefore increasing opportunities for delay at the Olohena Road roundabout).

**Exhibit 5-1** shows a map of the locations described for travel time and person-throughput calculations.

EXHIBIT 5-1. Travel Time and Person-Throughput Measurement Locations



**Exhibit 5-2** shows the anticipated year 2020 AM and PM travel times between Mailihuna Road and Kapule Highway, using either Kuhio Highway or the Temporary Kapaa Bypass Road, for Group A, Group B (constrained), and Group B (unconstrained), as well as if no projects were to be implemented.

**Exhibit 5-3** shows the anticipated year 2020 person through-put at key points of congestion (the Wailua River Bridge and Kapaa Roundabout) for Group A, Group B (constrained), and Group B (unconstrained), as well as if no projects were to be implemented.

EXHIBIT 5-2. Year 2020 AM and PM Travel Times in minutes (*Between Mailihuna Road and Kapule Highway*)

	No Action	Group A	Group B (constrained)	Group B
AM PEAK HOUR	Southbound - via Kuhio Highway	28.6	23.0	15.1
	Southbound - via Temporary Kapaa Bypass Road	35.4	24.7	16.3
	Northbound - via Kuhio Highway	15.6	14.9	14.7
	Northbound - via Temporary Kapaa Bypass Road	N/A	20.0	19.9
PM PEAK HOUR	Southbound - via Kuhio Highway	22.7	18.3	17.2
	Southbound - via Temporary Kapaa Bypass Road	20.0	18.7	18.2
	Northbound - via Kuhio Highway	27.7	24.1	23.6
	Northbound - via Temporary Kapaa Bypass Road	N/A	25.4	25.3

Note: Travel times are measured between study area limits via two different paths (Kuhio Highway or Temporary Kapaa Bypass Road).

EXHIBIT 5-3. Year 2020 Person Through-Put % Served (Kuhio Highway at Wailua River Bridge and Temporary Kapaa Bypass Road at Kapaa Roundabout)

	No Action	Group A	Group B (constrained)	Group B
AM PEAK HOUR	Kuhio Highway: Southbound at Wailua River Bridge	2013/2832 (71%)	2312/2832 (82%)	2502/2832 (88%)
	Kuhio Highway: Northbound at Wailua River Bridge	1046/1049 (100%)	1049/1049 (100%)	1049/1049 (100%)
	Temporary Kapaa Bypass Road: Southbound at Roundabout	854/1076 (79%)	1001/1356 (74%)	1006/1356 (74%)
	Temporary Kapaa Bypass Road: Northbound at Roundabout	N/A	100/105 (95%)	100/105 (95%)

	No Action	Group A	Group B (constrained)	Group B
AM PEAK HOUR	Kuhio Highway: Southbound at Wailua River Bridge	1352/1589 (85%)	1494/1589 (94%)	1539/1589 (97%)
	Kuhio Highway: Northbound at Wailua River Bridge	2638/2815 (94%)	2815/2815 (100%)	2805/2815 (100%)
	Temporary Kapaa Bypass Road: Southbound at Roundabout	540/705 (77%)	810/940 (86%)	835/940 (89%)
	Temporary Kapaa Bypass Road: Northbound at Roundabout	n/a	230/250 (92%)	240/250 (96%)

Note: Person-throughput is measured at sample locations where existing congestion/bottlenecks occur (Wailua River Bridge and Kapaa Roundabout).

## Priority Project Recommendations

Chapter 4 discussed a wide range of potential projects and how well they individually met the goals, objectives, and evaluation criteria. This chapter provides further analysis by grouping those projects to assess their collective benefits and results. Based on this transportation systems analysis, the Kapaa Transportation Solutions effort recommends for implementation the priority projects listed in **Exhibit 5-4** and shown on **Exhibit 5-5**. These are the projects that best meet the purpose, goals, and objectives of this effort in a financially constrained manner.

As stated earlier, while other projects included in Chapter 4 did not make the list of priority projects for this study based on study purpose, goals, and objectives, other projects included in Chapter 4 may be important for achieving other goals.

The priority list in this study does not imply that other projects in Chapter 4 should not be pursued. The County of Kauai, the State of Hawaii, or both may choose to pursue other projects listed in Chapter 4 to achieve other goals, such as implementing Safe Routes to School.

To establish a constrained list of projects, it is important to understand trade-offs and consider the needs of different users of the transportation system.

The projects are categorized by the following sets of transportation system users:

- » **Commuter** – Projects that primarily benefit commuters. These projects also often benefit freight movement.
- » **Local** – Projects that primarily benefit local users.
- » **Business** – Projects that primarily benefit the local business community.

## EXHIBIT 5-4. Priority Project Recommendations

Project Number	Project Type	Project Location	Project Description	Cost Estimate
6 (Group A)	Commuter Local	Temporary Kapaa Bypass Road, north of Olohepa Road	Add one lane in the northbound direction, including pedestrian and bicycle facilities. Improve the intersection at Kuhio Highway and the Temporary Kapaa Bypass Road (northern terminus).	\$22,560,000
27 (Group A)	Commuter Local	Kuhio Highway between Temporary Kapaa Bypass Road and Kuamoo Road	Add one southbound lane along Kuhio Highway with improvements at major intersections.	\$30,000,000*
33 (Group A)	Commuter Local	Kuhio Highway at Kuamoo Road	Provide shared left/right and right-only turn movements from Kuamoo Road approach during contraflow operations to improve queue/delay. Provide adequate right turn storage length.	\$613,000
17, 31, 34 (Group A)	Local	Kuhio Highway – Traffic Signal Optimization	Modify existing signal timing to optimize signal operation and reduce queueing length along Kuhio Highway at Kukui Street, Haleilio Road, and Kuamoo Road.	\$1,124,000
38 (Group B constrained)	Commuter	Kuhio Highway between Kuamoo Road and Kapule Highway	Add one southbound lane.	\$43,458,000
<b>SUBTOTAL COST (fiscally constrained):</b>				<b>\$67,750,000</b>
8 (Group B)	Local	Kapaa New Park	Create a direct access from Kapaa New Park to the Temporary Kapaa Bypass Road, including bicycle/pedestrian access between the existing park and proposed soccer park.	\$4,102,000
16, 20 (Group B)	Business	Intersection improvements in downtown/historic Kapaa Town	Improving the Niu Street intersection with Kuhio Highway would relieve traffic at Lehua Street and at Kukui Street by giving vehicles another option to access the highway. Closing the east leg of Kukui Street would allow the intersection to shrink, making it easier for pedestrians to cross.	\$642,000
3 (Group B)	Commuter Local	Hauaala Road at Kuhio Highway	Terminate the eastern end of Hauaala Road with a cul-de-sac. Create a new connection from Hauaala Road to the Temporary Kapaa Bypass Road. (This project should be complete after (or with) the Temporary Kapaa Bypass Road is widened for two-way travel – Project 6).	\$3,924,000
24 (Group B)	Business Local	Eggerking Road Extension	Extend Eggerking Road to connect with the Temporary Kapaa Bypass Road (combine with Project 23, if feasible).	\$6,453,000
23 (Group B)	Business Local	Pouli Road Extension	Improve Pouli Road and extend mauka to connect with the Temporary Kapaa Bypass Road (combined with Project 24, if feasible).	\$24,406,000

\* The funds for this project have already been obligated and are not included in the subtotal and total costs.

## EXHIBIT 5-5. Priority Project Locations



## Transit Recommendations

In addition to the recommended priority projects, it is important to recognize that transit is important to achieving several project goals. Specific project goals that would benefit from transit solutions include the following:

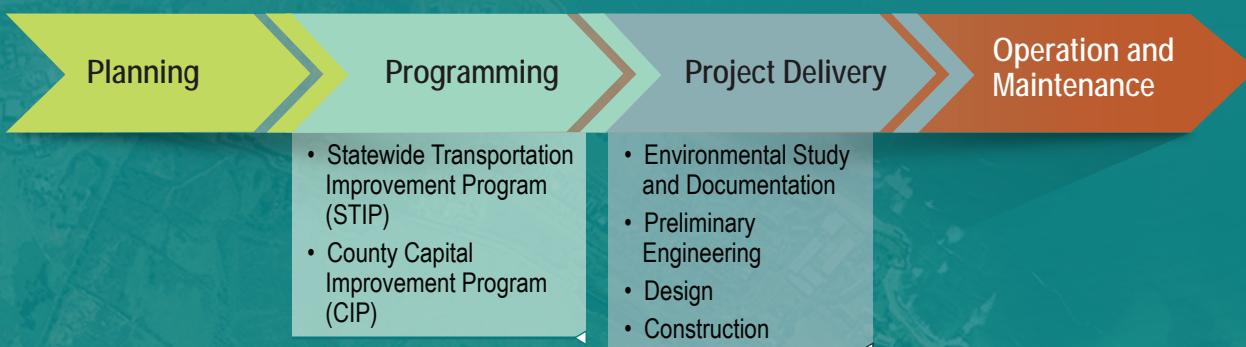
- » Developing transportation system projects that support the land use
- » Reducing congestion within Wailua and Kapaa
- » Promoting transit use
- » Preserving and enhancing Kauai's natural environment

Chapter 4 (**Exhibit 4-4**) includes a list of prioritized potential solutions related to transit and shuttle services, ranging from increases in service frequency to additional shuttle service. The priority list in this study does not imply that other projects in Chapter 4 should not be pursued. The County of Kauai, the State of Hawaii, or both may choose to pursue other projects listed in Chapter 4 to achieve other important goals.

## Project Delivery Process

The project delivery process is a key piece of the project life cycle. Project delivery occurs after planning and programming. Planning includes studies like this one. Programming includes identifying funding sources for a project and adding the project into the Statewide Transportation Improvement Program (STIP) or local budget. The STIP connects projects with specific funding programs and allocates funds to implement project solutions over a 4 year period. As projects are programmed and budgeted, they move into the project delivery stage.

EXHIBIT 5-6. Project Life Cycle



Project delivery includes preliminary engineering (environmental and early project design), design and plan development (final engineering), and bidding for construction. **Exhibit 5-6** illustrates the life cycle of a project. During the project delivery stage, a more thorough engineering analysis is conducted on a project's feasibility. During this time, the project will further evolve and may change or be refined from the initial higher-level analysis conducted in the planning stages.

The Kapaa Transportation Solutions are fiscally constrained, acknowledge the limited amount of transportation funds, and responsibly allocate or assign funds to priority projects. However, projects can get stuck moving from planning to project delivery or through project delivery, for a variety of reasons. Sometimes funding is not available. Sometimes the project has not been described clearly, and requires work to gain consensus or understanding. Sometimes a project requires environmental clearance. Sometimes a project requires right-of-way.

As discussed in Chapter 2, Goals and Objectives, the recommendations in the Kapaa Transportation Solutions were derived through application of evaluation criteria consistent with the purpose, goals, and objectives. Many of these criteria are related to mitigating project-delivery stumbling blocks, such as selecting projects that minimize right-of-way needs. The analysis required to apply the criteria also provides information that will simplify the environmental-review process

(such as inventorying wetlands, threatened and endangered species, cultural resources, and historic resources).

This environmental-resource information was mentioned in Chapter 3. By better connecting planning, environmental review, and project delivery for the recommendations of this effort, potential stumbling blocks and delays will be reduced.

## Context Sensitive Solutions

The Kapaa Transportation Solutions recommendations were developed using a context sensitive solutions (CSS) framework. According to FHWA, CSS is defined as:

*"a collaborative, interdisciplinary approach that involves all stakeholders in providing a transportation facility that fits its setting. It is an approach that leads to preserving and enhancing scenic, aesthetic, historic, community, and environmental resources, while improving or maintaining safety, mobility, and infrastructure conditions." (AASHTO/FHWA, 2007)*

The Kapaa Transportation Solutions project incorporated goals and objectives beyond traditional transportation-oriented goals and objectives to reflect the context of the Kapaa area, such as:

- » **Goal 12:** Maintain the rural character of the project area
- » **Goal 13:** Preserve and enhance Kauai's natural environment.

Goals 12 and 13 include objectives that relate to important values for Kauai, including limiting residential growth on agricultural lands in Wailua and Kapaa, providing transportation facilities that complement the rural character, minimizing impacts to the environment, and providing transportation facilities that complement the natural environment and enhance quality of life.

Goals 12 and 13 and their objectives – along with the other goals and objectives discussed in Chapter 2 - guided the development of Kapaa Transportation Solutions recommendations and provided a foundation for the performance measures and targets developed as part of

the process.

An important component of CSS is context sensitive design, or ensuring that design and construction of projects incorporate understanding of the natural and built environment as well as community and cultural aspects. FHWA identifies the following characteristics for context sensitive designs:

- » The project is in harmony with the community, and it preserves environmental, scenic, aesthetic, historic, and natural resource values of the area.
- » The project is a safe facility for all users and the community.
- » The project solves problems and satisfies the purpose and needs identified by a full range of stakeholders.
- » The project exceeds the expectations of both designers and stakeholders and is perceived as adding lasting value to the community as a whole.
- » The project involves efficient and effective use of resources (time, budget) of all involved parties.

As the Kapaa Transportation Solutions recommendations are implemented, the work will be done with a context-sensitive approach.

## Projected Funding Sources

This section discusses potential federal, state, and local (County of Kauai) funding sources for implementation of Kapaa Transportation Solutions recommendations. This section is consistent with information included in the *Federal-Aid Highways 2035 Transportation Plan for the District of Kauai* (HDOT, 2014).

Transportation funding in the State of Hawaii comes from a combination of federal, state, and local funds, and Hawaii, like many other states, does not have unlimited transportation funding to meet all the transportation needs.



Per HDOT policy (Memorandum 2.6453, dated December 8, 2007), an inflation rate must be used when developing financial plans that include projects funded by federal dollars in the STIP. The HDOT has developed a methodology that uses the average inflation rate as reported by Consumer Price Index data to estimate a constant inflation rate for all financial planning. Based on inflation data from 2003 to 2006, a constant inflation rate of 4 percent per year was calculated. The Highways Division Staff Services Office is responsible for validating and updating the inflation rate each budget cycle.

When adjusted for inflation, federal and state revenues available for all transportation projects – including operations and maintenance – between FY 2011 and FY 2035 would total approximately \$7.01 billion. However, this is for all transportation projects statewide. A specific breakdown for Kauai is discussed in the next sections along with more information on federal, state, and local funding sources.

## FEDERAL FUNDING

To present a conservative estimate of available federal funds, one can assume a constant average amount of approximately \$152 million annually for the State of Hawaii.

Federal funds come from the Highway Trust Fund and are raised primarily through the federal gas tax. Federal funding primarily is intended for the maintenance and construction of the federal highway system and for major arterials and collectors that feed into the highway system.

The adoption of MAP-21 in July 2012 changed federal funding methods for future fiscal years. MAP-21 changed the way program funding is distributed to individual states. Previously, core federal highway programs distributed funds to states using individual formulas. With new legislation, a proportional lump sum is distributed to states (based on 2012 distributions received under SAFETEA-LU), and states are able to distribute funds internally to their core programs, with flexibility to transfer funds from one program to another.

While investing in the transportation system could involve new facilities, MAP-21 guidance is largely focused on improving or enhancing current assets, and preserving and maintaining the condition of existing infrastructure.

The Highway Trust Fund, dependent upon the gas tax, has been decreasing for all states over the past few years as the vehicle fleet becomes more fuel efficient and per capita Vehicle Miles Traveled (VMT) continues to decrease nationwide. The Congressional Budget Office estimates that the Highway Trust Fund will not be able to sustain current levels of expenditure without additional funds.

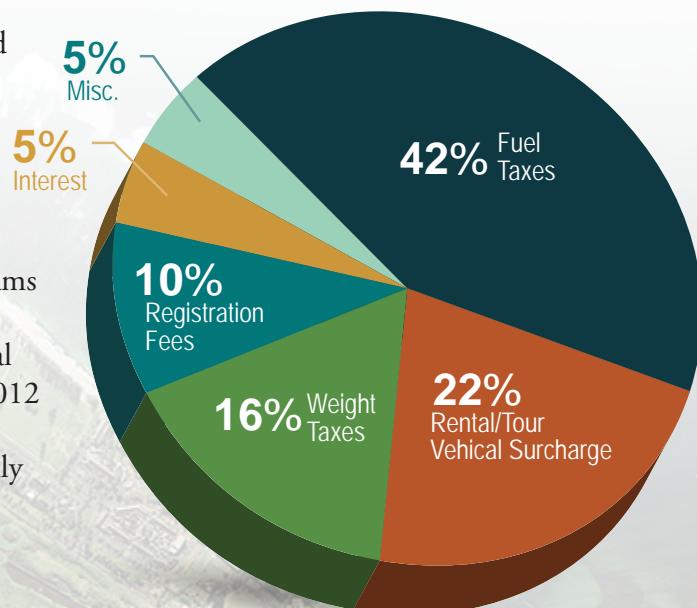
## STATE FUNDING

State funds come from the following six primary sources:

- » Highway fuel license tax
- » Vehicle registration fees
- » Weight taxes
- » Rental/tour vehicle surcharge
- » Interest
- » Miscellaneous

Over the past decade of transportation funding, more than 60 percent of all state revenues have been generated from fuel taxes and rental/tour vehicle surcharges. **Exhibit 5-7** represents the breakdown of revenues by sources (FY 2011).

**EXHIBIT 5-7. Fiscal Year 2011 Breakdown of Revenues by Source**



While federal funding is projected to remain constant, state funding revenues are expected to grow on an annual basis of approximately 1 percent per year.

## KAUAI DISTRICT FUNDING

According to the *Federal-Aid Highways 2035 Transportation Plan for the District of Kauai*, historically Kauai has received approximately 8 to 10 percent of the federal and state highway funds. Based on historical distributions, Kauai could expect to receive approximately \$630 million dollars for transportation projects between FY 2011 and FY 2035. The HDOT's goal is to program approximately \$40 million over the next 10 years to implement priority projects identified in this planning effort. This will be dependent on the priorities that emerge over the next 10 years as emergencies or other critical issues may arise.

STIP programming focuses on a short-term timeframe, and contributes to implementing the long-term vision for the transportation system identified in the *Federal-Aid Highways 2035 Transportation Plan for the District of Kauai*. The projects recommended in the Kapaa Transportation Solutions project must support the priorities and available funding identified in the *Federal-Aid Highways 2035 Transportation Plan for the District of Kauai*.

Based on historic spending, stakeholder values, needs, and plan goals, the *Federal-Aid Highways 2035 Transportation Plan for the District of Kauai* provides the future funding distribution by program for Kauai. This is also consistent with MAP-21 and is shown in **Exhibit 5-8**.

**EXHIBIT 5-8. Future Funding Distribution by Program**

Funding Program	Distribution Percentages
System Preservation	45%
Safety	18%
Capacity	25%
Congestion	10%
Other	2%
<b>TOTAL: 100%</b>	

## COUNTY FUNDING

The County of Kauai also has limited funding availability. The County has a 6-year Capital Improvement Program (CIP) in which it lists future capital investments. The County can use General Fund dollars and Highway Fund dollars for transportation projects. According to the County of Kauai, the funds outlined in **Exhibit 5-9** are allocated for FY 2013-2014 for the entire county – for ALL projects island-wide, not just transportation. This provides a basis of understanding of the level of funding available for potential Kapaa projects.

**EXHIBIT 5-9. County of Kauai FY 2013-14 Funding Allocation**

Name of Fund	Allocation Amount
Bikeway Fund	\$42,577
Bond Fund	\$40,481,351
Development Fund	\$35,568
<b>General Fund (CIP)</b>	\$2,634,945
<b>Highway Fund (CIP)</b>	\$739,592
Sewer Trust Fund	\$614,030
Special Trust Fund – Parks & Playgrounds	\$5,387,278
<b>TOTAL ALL FUNDS: \$49,935,341</b>	

Historically, the County of Kauai has spent approximately \$1 million to \$3 million in local funds each year for transportation-related projects island-wide. If this continues, approximately \$10 million to \$30 million could be anticipated for transportation improvements over the next 10 years. However, this is for all transportation projects (e.g., system preservation, new improvements, and bus infrastructure) island-wide, and not specifically for East Kauai. In addition, other critical priorities could emerge such as emergency repairs.

## Funding Strategies for Priority Projects

The total list of priority projects identified during the Kapaa Transportation Solutions effort will outstrip the availability of federal, state, and local funding. Federal, state, and local funding sources have not kept up with the demands for the transportation system.

The fuel tax, which is the largest contributor to the state's transportation budget, is levied based on fuel consumption and is subject to volatility in usage patterns. Consumption patterns can be impacted by improved vehicle efficiency and overall economic conditions. Other tax-based revenue streams are subject to legislative approval and are not modified on a regular basis to keep pace with increasing needs and costs.

Implementation of certain Kapaa projects may require a variety of methods and potential alternative revenue sources, such as the following:

### Mileage-based user fees

- » Drivers pay a fee based on the number of miles traveled on public roadways (private roadways would be excluded).
- » Mileage could be tracked through various methods, and prices set based on congestion, location of travel, type of road, or a flat fee per mile.
- » A number of states are implementing pilot programs to study this as a viable alternative to the gas tax.

### Special general excise tax on automotive parts and services

- » Taxes would be collected through the performance of specific services (such as vehicle inspections or repairs) and the sale of equipment related to motorized vehicles.

### General excise tax increase

- » A portion of revenue from an increase in the general sales tax could be allocated to transportation improvements and projects.
- » Needs to be approved by the legislature or appropriate council.

### Public/private partnerships

- » An agreement between a private entity and a public agency to deliver transportation projects may be made, typically with greater involvement and risk taken by the private entity.

### Impact fees on new development/right of way donations

- » Private developers pay a pre-determined fee per development unit. This fee is based on the number of vehicle trips expected to be generated by the potential development.

### Bicycle registration

- » A bicycle-licensing system could be developed, and user fees could be collected based on the type of bicycle registered. Fees could support maintenance and upkeep of bicycle lanes and shared roadways.

### Carbon tax/cap

- » A fee or tax could be imposed on producers of large amounts of carbon. These producers would pay a fee to offset their carbon production.

### Increase current funding sources

- » Because new sources of funding are difficult to identify, increasing the existing mechanisms – such as raising the rental/tour vehicle surcharge or vehicle weight tax – could generate additional revenue.

### Tolls

- » Drivers pay a fee each time a specific public roadway is used or a certain bridge is crossed. Toll fees may change based on the time of day. Tolling in Hawaii would require the legislature to change the current laws that prohibit toll charges.

### Grant anticipation borrowing

- » This strategy allows public agencies to borrow against anticipated future federal and/or state revenues to fund capital projects that require large upfront expenditures. Existing programs include Grant Anticipation Revenue Vehicle (GARVEE) bonds for highways and Grant Anticipation Note (GAN) bonds for transit.

## State infrastructure banks and other revolving loan funds

- » These are lending organizations initially funded with federal grants, state funds, or both, and operated at the state level. These funds leverage federal and state resources by lending rather than granting federal-aid funds, and can attract nonfederal public and private investment.

## Bonds

- » Bonds are issued by the state or other agency to finance assets with long useful lives (such as transportation projects). The administering entity issues bonds with a set return on investment, and investors purchase the bonds to help fund transportation projects. Bonds help smooth the impact of large expensive projects by providing upfront capital, and allowing the state or county to repay over a set amount of time.

## Land swaps and donated lands

- » This strategy recognizes that right-of-way costs can be a large portion of total transportation project costs. Working with land owners to either swap land for right-of-way or to donate land for a project could be a way to reduce project costs. Donated land could also be used as a local match to leverage federal funds.

## Transportation Investment Generating Economic Recovery (TIGER) grants

- » These are nationally competitive federal discretionary grants for investment in road, rail, transit, and ports to achieve national objectives. Since 2009, Congress has dedicated more than \$4.1 billion through this program.

## Community Development Block Grants

- » This program is administered through the U.S. Department of Housing and Urban Development (HUD), and provides annual grants on a formula basis to promote affordable housing, provide services to community members, and create jobs through the expansion and retention of businesses. This could be an option for the Lihue area.

## Safe Routes to School Grants

- » Since the passage of MAP-21, funding of

safe routes to school has been administered differently, depending on the state. The HDOT administers a program called SafeRoutes, which includes education and small grant awards for both infrastructure and non-infrastructure projects.

## U.S. Department of Defense and Federal Emergency Management Agency funding

- » Some projects may be eligible for U.S. Department of Defense (DOD) or Federal Emergency Management Agency (FEMA) funding, depending on the project's ability to meet DOD or FEMA objectives (for example, preparedness grants).

## Transit Grants

- » Transit projects may be eligible for a variety of programs/grants funded through the Federal Transit Administration (both Formula and Discretionary funds).

## Performance Measures and Targets

### DEFINING PERFORMANCE MEASURES AND TARGETS

**Performance Measures** are metrics used to assess progress toward meeting goals and objectives. Chapter 2 includes detailed information about the goals, objectives, and evaluation criteria used for this project. For the Kapaa Transportation Solutions project, the performance measures are a subset of the evaluation criteria, and will be used to evaluate the effectiveness of the Kapaa Transportation Solutions recommendations over time. The performance measures are consistent with the purpose of the project, the goals, and the objectives.

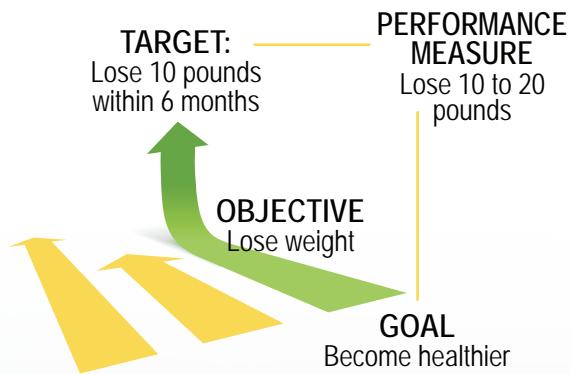
According to FHWA's Performance-Based Planning and Programming guidance, performance measures have five critical purposes:

1. **To clarify the definition of goals -** Performance measures are a tool that is used in converting broad goals into measurable objectives.
2. **To monitor or track performance over time** - Metrics are used to track performance on regular basis (such as yearly).

- 3. As a reference for target setting** - Metrics are used as the basis for selecting a target that is intended to be achieved.
- 4. As a basis for supporting policy and investment decisions by comparing alternative options** - Metrics are used as a basis for comparing alternative investments or policies in order to make decisions.
- 5. To assess the effectiveness of projects and strategies** - Metrics are what enable measurement to assess whether projects and strategies have worked to further goals.

**Targets** are specific levels of performance desired to be achieved within a specific timeframe. A target is an expression of a desired outcome. To understand the difference between a performance measure and a target, the following graphic shows how each is defined.

Targets are assessed over time, and can be altered to fit changes over time. For example, say a health professional checks in at 6 months with



the hypothetical person trying to lose weight. If the person has lost 5 pounds, not 10, it may be that the weight-loss method the person is using needs to be re-assessed, or perhaps that the target needs to be changed because it is unrealistic. If at 6 months the person has lost 10 pounds, the target can be changed to losing more weight, or perhaps to stabilizing weight loss. Targets work best when they are clear and specific, straightforward to measure, and monitored regularly.

## KAPAA TRANSPORTATION SOLUTIONS - PERFORMANCE MEASURES AND TARGETS

The foundation for the performance measures and targets selected as part of the Kapaa Transportation Solutions project includes the project purpose and the goals and objectives. The purpose of the Kapaa Transportation Solutions project is to develop nearer-term transportation solutions to address mobility and congestion needs for all modes of transportation in the Kapaa Area.

Past experience with other plans has shown that establishing too many performance measures and targets means they will not be monitored, because they are too data-intensive or time-intensive and staff has limited time and resources. Therefore, for the Kapaa Transportation Solutions project, the project team selected a small number of performance measures and targets that will be realistic to monitor over time and are most meaningful to understanding the effectiveness of implementation. The listed performance measures and targets are specifically for measuring the effectiveness of the study and the projects recommended in this study, consistent with the project purpose, goals, and objectives. Other performance measures and targets, such as those identified in County of Kauai Complete Streets reporting, can and should still be used for projects in the area as appropriate. **Exhibit 5-10** presents information on the performance measures and targets for the Kapaa Transportation Solutions project.

## EXHIBIT 5-10. Kapaa Transportation Solutions Performance Measures and Targets

Goals	Performance Measures	Targets	Discussion
Improve regional and local vehicular/freight capacity and reduce congestion through Wailua and Kapaa.	» Person-throughput	» Increase person-throughput by 5 to 10 percent in 5 years	The TAC and KAC recognized that person through-put is a key success factor for implementation of projects in the Kapaa Area.
Efficiently plan and implement effective mobility solutions within a short time frame (5 to 10 years).	» Number of solutions implemented within 5 years » Number of solutions implemented within 10 years	» 4 to 5 solutions in 5 years » 8 to 10 solutions in 10 years	This performance measure will help track and help ensure that the plan is actively being implemented in the short-term. The collective recommendations from the plan are meant to represent the most effective way of meeting the project goals and objectives regarding mobility.
Create a balanced, multimodal Complete Streets transportation network that provides options for and access for bicycles and pedestrians.  Promote transit use.	» Number of projects implemented that have bicycle and pedestrian facilities within 5 years » Weekday transit ridership	» 4 to 5 solutions in 5 years » Increase weekday transit ridership by 5 percent in 2 years	Increasing transportation choices and providing the necessary infrastructure will encourage the progress toward promotion of multimodal or non-infrastructure options for travel.
Improve safety of the community and maintain safe operations for all transportation modes.	» Number of traffic collisions involving serious injuries and fatalities.	» Zero fatalities	Although safety is a secondary goal for the project, it is important to monitor.
Maintain the rural character of the project area.  Preserve and enhance Kauai's natural environment.	» Address in East Kauai Community Plan 2035 » Projects implemented are consistent with the rural character of the project area and preserve and enhance Kauai's natural environment. » Annual gallons of motor fuel consumed in Kapaa-Wailua region	» Upon Plan completion » All projects recommended in this study are designed in ways that minimize environmental and community impacts » Reduce motor fuel consumption each year	Land use is an important component of the overall approach to managing congestion in the Kapaa Area. The East Kauai Community Plan 2035 should be consistent with the Kapaa Transportation Solutions project. Project design of recommendations should minimize impacts on the environment and rural character. Consumption of motor fuel is a way to measure impacts on the natural environment.

## MONITORING

Monitoring and reporting on the effectiveness of this plan will help the HDOT, the County of Kauai, and the public understand how the Kapaa Transportation Solutions project is progressing toward the purpose, goals, and objectives put forth in the Plan. The HDOT and County of Kauai are responsible for monitoring and reporting on the performance measures and targets identified in this plan, as shown in **Exhibit 5-11**.

Reporting is not meant to be arduous, but it is meant to provide information that can inform future actions. The report should include the following information:

- » Executive summary
- » Description of the projects or program implemented since the last report

- » Description of other external changes (for example, political, environmental, or socio-economic) since the last report
- » Performance measurement and results, including whether or not the transportation or land use system is meeting the targets
- » Recommendations regarding next steps (such as describing what was accomplished, what was learned, and what might need to be changed)

EXHIBIT 5-11. Performance Measures/Targets Monitoring and Recommended Reporting Schedule

Performance Measure	Responsible Agency	Recommended Reporting Schedule
Person-throughput	HDOT	
Number of solutions implemented within 5 years	HDOT County of Kauai	
Number of solutions implemented within 10 years	HDOT County of Kauai	» Every 5 years
Number of projects with bicycle and pedestrian facilities implemented within 5 years	HDOT County of Kauai	» Safety and transit ridership every 2 years
Weekday transit ridership	County of Kauai	
<b>Reduce the number of traffic collisions involving serious injuries and fatalities</b>	HDOT County of Kauai	» Gallons of motor fuel consumed every year
Complete East Kauai Community Plan 2035	County of Kauai	
Projects implemented are consistent with the rural character of the project area and preserve and enhance Kauai's natural environment	HDOT County of Kauai	
Annual gallons of motor fuel consumed in Kapaa-Wailua region	County of Kauai	

## CONCLUSION

Collectively, the priority projects for implementation, transit recommendations, and monitoring of performance measures and targets will help the Kapaa area - along with the Hawaii Department of Transportation and the County of Kauai - to meet the goals and objectives for Kapaa Transportation Solutions:

- » Developing transportation system projects that support the land use (businesses, parks, schools, etc.);
- » Improving regional vehicular/freight capacity and reducing congestion through Wailua and Kapaa;
- » Improving local vehicular/freight capacity and reducing congestion through Wailua and Kapaa;
- » Improving access and connectivity between the communities of Wailua, Waipouli, and Kapaa;
- » Efficiently planning and implementing effective mobility solutions within a short time frame (5 to 10 years);
- » Minimizing project costs;
- » Creating a balanced, multimodal “Complete Streets” transportation network that provides options for and access for bicyclists and pedestrians;
- » Improving safety of the community and maintaining safe operations for all transportation modes;
- » Promoting transit use;
- » Promoting the expansion of historic Kapaa’s economy through efficient and effective use of transportation facilities and amenities;
- » Minimizing impacts to right-of-way;
- » Maintaining the rural character of the project area; and
- » Preserving and enhancing Kauai’s natural environment.
- » The recommendations included in this study build upon a foundation of previous work to lay out a roadmap for implementation opportunities. Implementation of solutions will enhance the transportation system in the Kapaa area while remaining respectful of the people, the planet, and the place.