

## Interagency TOD Council

### Maui County Issues and Opportunities 10/4/2016

#### **(1) your current efforts to create compact, walkable, mixed use communities and to direct growth to centers that are served by public transportation**

- The Maui Island Plan (2012) contains multiple goals, objectives, and policies toward using Smart Growth on this island. The enclosed portion of Chapter 6 directly deals with transportation and transit.
- Also a part of the plan is the enclosed map showing transit corridors. Some of these routes are along existing roadways, some indicate entirely new roads.
- We are starting the revisions to the community plans on Maui Island. There will be opportunities to target areas for higher densities and refine TOD policies as related to the particular community plan area.
- In the shorter term, the Maui Planning Department is currently looking into specific areas that could be up-zoned to higher densities. These areas would certainly be targets for transit improvements.
- Maui now has a Metropolitan Planning Organization (MPO) that will be involved in directing federal dollars to local transportation projects.
- Maui County has published a RFP to “audit” our zoning code and get recommendations on updating or replacing the code. A portion of the recommendations will be directed toward TOD.

#### **(2) Challenges and opportunities for the County in doing so**

Many of the implementing actions require either legislative changes or financial commitments. Our current council is relatively receptive, the public is very interested in changing the way we do things.

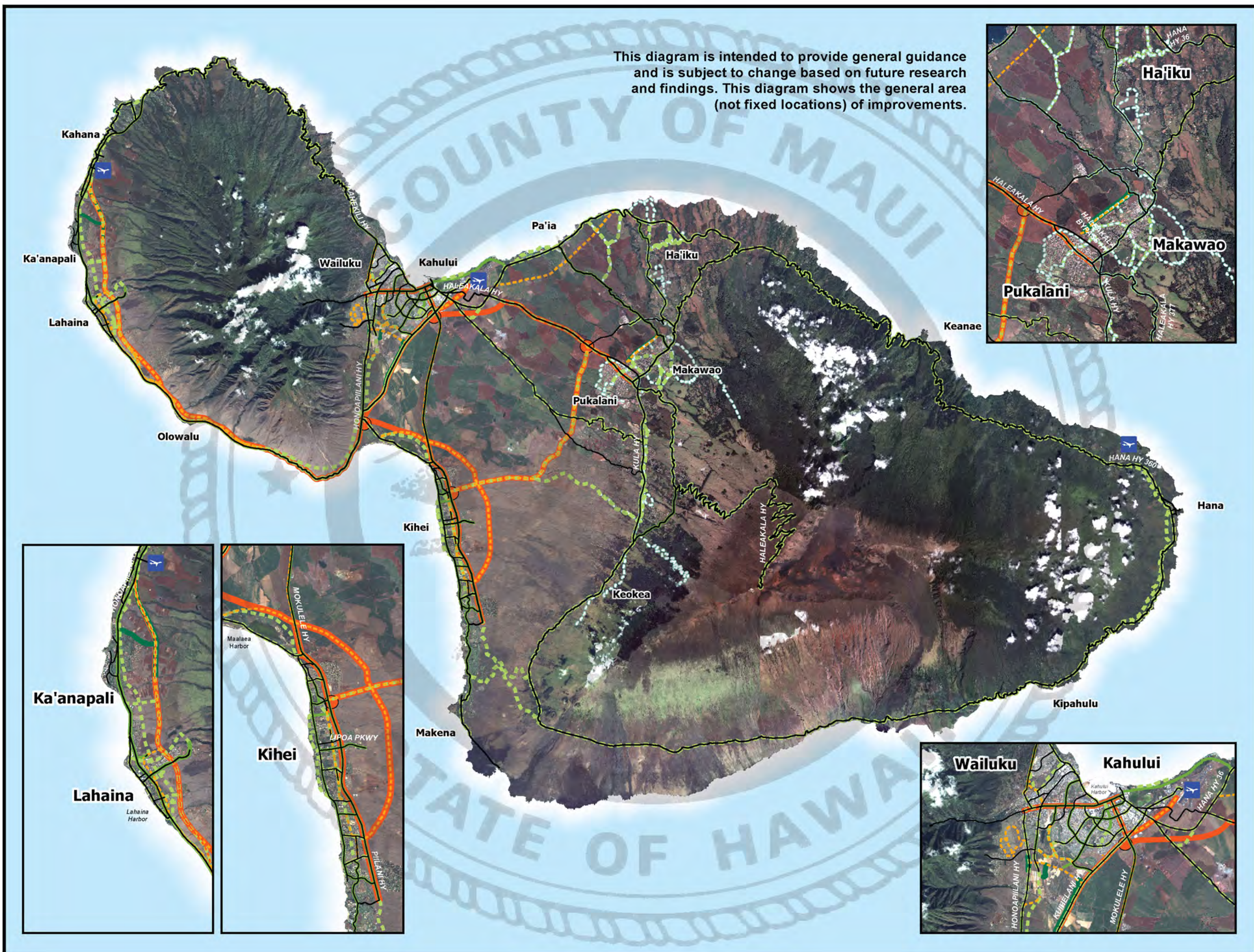
#### **(3) Your initial thoughts on how to tailor the concepts of TOD and smart growth to your county—its small towns and more rural settings.**

#### **(4) How the TOD Council could help to advance these efforts in your County.**

Help for Maui County could come in two ways:

- Financially - help us acquire the rights-of-way outlined in the map provided.
- Legislatively - either propose good legislation, or support local legislation. Local legislation could include changes to various codes or other legislative efforts such as comprehensive re-zoning.





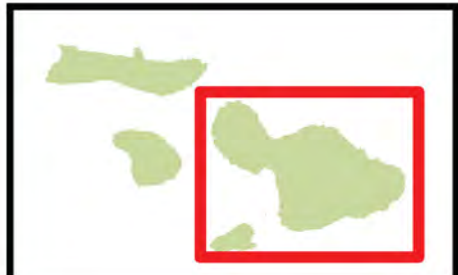
This diagram is intended to provide general guidance and is subject to change based on future research and findings. This diagram shows the general area (not fixed locations) of improvements.

# Regional Transportation Network

Island of Maui

## Legend

- Primary Road
- Secondary Road
- Bike Path
- Airport
- Proposed**
  - Conceptual Transit Station
  - Conceptual Transit Corridor
  - Lahaina Bypass
  - Road or Highway
  - Bike Path
  - Upcountry Greenways Plan
  - Maui Island Plan Greenways



0 1 2 3 4 5 6 Miles

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This is not a zoning map. Please contact the Planning Department for Zoning confirmation.

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### Diagram 6-1





*Hāna Highway is a major roadway infrastructure and gateway to central Maui.*

### TRANSPORTATION

*Streets and highways are currently the primary infrastructure supporting Maui's transportation system and play a major role in shaping settlement patterns. The quality of the roadway system affects various modes of travel including automobile, transit, bicycle, and pedestrian. The condition of Maui's roadway system also impacts the safety of all roadway users, the movement of goods and products, efficiency of emergency public services, and quality of life. This system experiences increasing demand associated with island growth and development. A key outcome, therefore, is to maintain, improve, and expand where necessary the existing roadway system, and expand multimodal transportation to improve traffic flow, safety, and efficiency.*

Maui's road network is comprised of both State and County roadways that provide connections between the island's major urban centers and circulation within communities. Major highway systems on the island include Honoapi'ilani and Kūihelani Highways, which connect Central and West Maui; Mokulele and Pi'ilani Highways, which connect Central and South Maui; Hāna Highway, which connects Central and East Maui; and Haleakalā and Kula Highways, which connect Central and Upcountry Maui.

According to the State Department of Transportation (DOT), the average daily traffic volumes indicate that Maui's most heavily-traveled roadways during the day are Honoapi'ilani Highway, Ka'ahumanu Avenue, and Hāna Highway.

### Existing Plans and Programs

The DOT has jurisdiction over State roadways while the County of Maui, Department of Public Works, Highways Division, has jurisdiction over County roadways. The primary program governing improvements to Maui's roadway network is the Hawai'i Statewide Transportation Improvement Program (STIP). The STIP provides a multi-year listing of State and County projects and identifies those projects slated for Federal funding. It is a multimodal transportation improvement program that is developed utilizing existing transportation plans. The STIP delineates funding categories including the Federal and local share of funding required for each project.

Maui's roadway network was assessed in the *Proposed Roadway Development Program*, Fehr & Peers and Kaku Associates, (2007). The purpose of this study was to provide a current and future (2030) capacity assessment of Maui's roadway network pursuant to proposed land use and development trends. This study was used as the primary source of information for this Transportation Section. See Diagram 6-2 for a depiction of existing and conceptual transportation options.

**Table 6 - 4: Proposed Highway Improvements**

|   |   |
|---|---|
| Up-Country - Kīhei Corridor                           |   |
| Honoapi'ilani Realignment-aka Lahaina By-Pass         | Wai'ale/Kūihelani Hwy Connector                 |
| Phase A Keawe St. to Lahainaluna Road                 | Lono Ave extension to Kūihelani Hwy             |
| Phase B Lahainaluna Road to Launiupoko                | Imi Kālā /Pihana extension (bridge)             |
| Phase C Keawe St. to Honokowai                        | Imi Kālā /Wai'ale -Mill St, extension           |
| Pali to Puamana Parkway-aka Honoapi'ilani Realignment | Paniolo Connector (Haleakalā Hwy - Baldwin Ave) |
| Mā'alaea to Ukumehame                                 |   |
| Keawe St. Extension                                   | Kahekili Hwy widening                           |
| Mill Street Extension (Aholo St. to Keawe)            | Maui Lani Parkway                               |
| Pā'ia By-Pass   | Kuikahi Drive Extension                         |
| Kīhei North-South Collector Road                      | Kehalani Collector Road                         |
| Kīhei Mauka By-Pass                                   | Kehalani Loop Road                              |
| Wai'ale Extension                                     |   |
| Kahului Airport                                       |   |

### CHALLENGES AND OPPORTUNITIES

Although the implementation of proposed roadway improvements will certainly help Maui's roadway network, traffic congestion will remain an important quality-of-life issue. The expansion of the roadway network should not be considered the only solution for addressing transportation and mobility on the island. The following issues present some essential factors in planning for an effective transportation and mobility system on Maui.

## Integration of Transportation and Land Use Planning

Research by the National Transportation Research Board, the EPA, as well as numerous Professional and peer-reviewed academic studies shows the creation of more compact communities reduces dependence on automobile travel – i.e. on vehicle miles traveled (VMT). Research suggests that increasing residential density can reduce household VMT by about 10 percent, and perhaps by as much as 25 percent when combined with higher employment concentrations, public transit improvements, mixed uses, and other demand management measures.<sup>2</sup> Furthermore, more compact mixed-use developments can help produce reductions in CO<sub>2</sub> emissions as well as energy consumption, both directly and indirectly. These reductions can mean improvements to air quality, healthier conditions for human beings and the surrounding natural environment.

Land use patterns have a significant effect on the costs of providing public infrastructure and services such as roads, water, solid waste collection, wastewater treatment, and school facilities. Numerous studies have demonstrated that the cost of providing public infrastructure and services tends to increase with low density and dispersed development, and can be reduced with higher density and compact development within or proximate to existing urban areas. A study by the Urban Land Institute in 1989, *The Costs of Alternative Development Patterns* by James Frank, demonstrated that the municipal capital costs per housing unit increased not only with lower density development, but also with the distance from urban employment and service centers. In Colorado, William Coyne found that “dispersed rural residential development costs county governments and schools \$1.65 in service expenditures for every dollar of tax revenue generated.”<sup>3</sup>

Integrating land use and transportation planning to create denser and more compact communities that are located closer to employment centers can have not only economic but also social and environmental benefits. Todd Litman of the Victoria Transport Policy Institute developed a summary of smart-growth benefits which are depicted in Table 6-5.<sup>4</sup>

**Table 6 - 5: Smart Growth Benefits**

| Economic  | Social   | Environmental                       |
|---|--|-------------------------------------|
| Reduced development costs   | Improved transit options and personal mobility | Greenspace and habitat preservation |
| Reduced public service costs  | Improved housing options                       | Reduced air pollution               |
| Reduced transportation costs  | Community cohesion                             | Increased energy efficiency         |
| More efficient transportation   | Preserves unique cultural resources            | Reduced ‘heat island’ effect        |
| Supports industries that depend on ‘high quality’ environments (tourism, farming, etc.) | Increased physical health and exercise         |                                     |

Many communities have been working on ways to create more livable and healthier communities by integrating land use and transportation planning and development. Compact smart-growth communities, the implementation of “complete streets” policies, and transit-oriented development projects can be found throughout the

<sup>2</sup> National Research Council of the National Academies (2009). *Driving and the Built Environment: The Effects of Compact Development on Motorized Travel, Energy use and CO<sub>2</sub> Emissions*. (Transportation Research Board, Washington, D.C.).

<sup>3</sup> Coyne, William (December 2003). *The Fiscal Cost of Sprawl: How Sprawl Contributes to Local Governments’ Budget Woes*. (Environment Colorado Research & Policy Center, Denver).

<sup>4</sup> Litman, Todd (2002). *Evaluating Transportation Land Use Impacts* (Victoria Transport Policy Institute, Victoria).

### ***Expansion of the Multi-Modal Transportation Network***

United States.

Mobility issues on Maui can be addressed by expanding transportation alternatives, including public transit, paratransit, human services transportation, biking, and pedestrian movement. The State's policy, as embodied in Act 54 (2009), favors complete streets – i.e., to reasonably accommodate convenient access and mobility for all users of the public highway, including pedestrians, bicyclists, transit users, motorists, and persons of all ages and abilities. A balanced multimodal transportation network provides mobility choices and contributes to an efficient network that meets varied needs of all uses, including those with mobility challenges. For environmental and sustainability reasons, a greater percentage of future transportation investment must shift away from the construction of additional roads and move towards the expansion of a public multimodal transportation network.

### ***Transportation Demand and System Management***

Transportation Demand Management (TDM) involves the implementation of plans or programs aimed at reducing the use of single-occupant vehicles. TDM strategies are primarily aimed at influencing the travel trends and options of weekday commuters. These strategies include supporting alternative travel modes and altering the time and amount of travel through programs and amenities such as guaranteed ride home programs, bicycle lockers, commuter benefits, telework, and alternative work schedules. Roadway and congestion pricing have also become increasingly common TDM and infrastructure financing strategies.

Transportation System Management (TSM) strategies increase the efficiency and effectiveness of existing and future roadway systems, without widening streets, through innovative technologies and effective prioritization of resource use. Strategies may include the use of intelligent transportation system (ITS-adaptive "Real-Time" Traffic Operations using: cameras and a centralized traffic management center to control traffic and incidents as they occur; changeable message signs along major roads to advise drivers of road problems). TSM strategies may also apply intersection modifications at signalized and nonsignalized intersections, restriping travel lanes, one-way couplets, installing pavement markers, and relocating transit stops. Such modifications in traffic operations are designed to increase the operational efficiency, safety, and capacity of the existing roadway system without corridor-wide street widening.

### ***Funding Road Improvements***

Transportation networks are inherently expensive to construct and maintain. Maui's roadways are primarily financed through Federal and County programs. In recent years, however, Federal funding has declined, resulting in increased pressure on the County to finance needed roadway network improvements. As Federal funding continues to wane, the County will need to explore alternative financing mechanisms to address transportation needs.

## **GOAL, OBJECTIVES, POLICIES, AND ACTIONS**

### **Goal:**

- 6.4** An interconnected, efficient, and well-maintained, multimodal transportation system.

## ***INFRASTRUCTURE AND PUBLIC FACILITIES***

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### **Objective:**

- 6.4.1** Provide for a more integrated island-wide transportation and land use planning program that reduces congestion and promotes more efficient (transit-friendly) land use patterns.

### **Policies:**

- 6.4.1.a** Plan for an integrated multi-modal transportation system comprised of public transit, bicycle, pedestrian, automobile, and other transportation modes.
- 6.4.1.b** Refocus transportation investment from the construction of additional roadways only for the automobile to the expansion of a multimodal transportation system.
- 6.4.1.c** Encourage the use of “complete streets” design methods.
- 6.4.1.d** Encourage employers to implement TDM strategies.

### **Implementing Actions:**

- 6.4.1-Action 1** Explore the benefits and costs of establishing a Metropolitan Planning Organization to serve Maui’s transportation needs.
- 6.4.1-Action 2** Develop and implement in a timely manner appropriate Transportation System Management(TSM) and Transportation Demand Management (TDM) programs in accordance with a Comprehensive Long Range Multimodal Plan.
- 6.4.1-Action 3** Study the feasibility of High Occupancy Vehicle (HOV) lanes within or adjacent to major arterials.
- 6.4.1-Action 4** Optimize traffic signal timing and coordination to reduce travel time and delay.
- 6.4.1-Action 5** Establish additional park-n-ride facilities in key locations.

### **Objective:**

- 6.4.2** Safe, interconnected transit, roadway, bicycle, equestrian, and pedestrian network.

### **Policies:**

- 6.4.2.a** Ensure transit-, roadway-, and pedestrian-facilities design and level-of-service standards respect the unique character of our communities.
- 6.4.2.b** Prioritize transportation improvements list to cost-effectively meet existing and future needs consistent with the MIP.
- 6.4.2.c** Require new development, where appropriate, to integrate sidewalks, pathways, bikeways, and transit infrastructure into new commercial and residential projects while enhancing community character.

## ***INFRASTRUCTURE AND PUBLIC FACILITIES***

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- 6.4.2.d** Identify and improve hazardous and substandard sections of roadways, drainage infrastructure, and bridges, provided that the historical integrity of the roads and bridges are protected.
- 6.4.2.e** Consider identification, acquisition where appropriate, and utilization of abandoned right-of-ways for bikeways, pedestrian pathways, and open-space networks.
- 6.4.2.f** Support the implementation of the *Central Maui Pedestrian & Bicycle Master Plan* (March 2012), when consistent with the MIP.

### **Implementing Actions:**

- 6.4.2-Action 1** Revise the subdivision ordinance to require developers, where appropriate, to integrate sidewalks, pathways, bikeways, and transit infrastructure into new commercial and residential projects, while enhancing community character.
- 6.4.2-Action 2** Implement the Upcountry Greenway Master Plan (2004), and other approved greenway plans, consistent with the MIP, and County and State transportation plans.
- 6.4.2-Action 3** Develop and adopt regulations to require developments to dedicate right-of-way consistent with State and County transportation plans prior to or as the phases of the developments become operational.
- 6.4.2-Action 4** Implement pedestrian and bikeway plans.

### **Objective:**

- 6.4.3** An island-wide, multimodal transportation system that respects and enhances the natural environment, scenic views, and each community's character.

### **Policies:**

- 6.4.3.a** Ensure that the roadway and transit alignments respect the natural environment and scenic views.
- 6.4.3.b** Ensure that roadways and transit systems in rural areas and small towns enhance community character.
- 6.4.3.c** Design all transit systems to respect visual corridors and Maui's character.

### **Implementing Actions:**

- 6.4.3-Action 1** Adopt and amend County regulations to incorporate design standards for roadways, transit, and pedestrian facilities that ensure protection of the natural environment and each community's sense of place.
- 6.4.3-Action 2** Develop, adopt, and regularly update the mapping of Scenic Corridor Protection standards that implement the recommendations of the Scenic Roadway Corridors Management Plan and Design Guidelines.



- 6.4.3-Action 3** Urge the State to relocate Honoapiʻilani Highway mauka between the Pali and Puamana, and develop a network of parks and open space on the makai side of the highway, in accordance with the Pali to Puamana Master Plan.



*Maui Bus use has grown and continues to see support, Kahului.*

## TRANSIT

*Transit is the newest component of Maui's public infrastructure system. Public transit has increased in importance on Maui in the last 15 years as traffic congestion has stimulated the need for alternative modes of transportation. Public transit was initiated on Maui in 1992 with two fixed routes servicing Central Maui, operated by Maui Economic Opportunity, Inc. (MEO). The current public transit system, which began as the Maui Bus in July of 2006, includes fixed-route, paratransit, and commuter programs. Also, human services transportation, under the County of Maui Department of Transportation (MDOT), includes rural shuttles, dialysis transportation, and a variety of social services transportation programs. Transit services are now integrated to provide for the combined needs of the general population as well as the needs for individuals who are mobility challenged.*

Public transit continues to expand in response to the changing transportation needs of the community. MDOT has taken an adaptive management approach to establishing public transit and has initiated positive steps towards addressing roadway congestion and mobility issues on the island. MDOT transit ridership statistics indicate that ridership is steadily increasing; this trend is expected to continue. While ridership was approximately 33,000 passenger boardings during the month of July 2006, ridership has increased to 225,954 passenger boardings in the month of August 2011.

### **Existing Plans and Programs**

MDOT is currently operating the transit program on the basis of MDOT's operations taking into consideration the *County of Maui Short Range Transit Plan (2006-2010) (SRTP)*, prepared by Urbitrans Associates, Inc.; the *Maui County Bus Stop Planning and Design Services*, prepared by the KFH Group; and Focus Maui Nui's goals and objectives. The SRTP contains planning, policy, and financial components that provide direction for implementing Maui's public transportation system. Federal policy, updated State Department of Transportation plans, and updated SRTP plans provide the basis for MDOT's transit policy throughout Maui.

### **Regional Analysis**

Long-range planning for Maui's transit needs requires an analysis of current and forecasted island population distribution, as well as identification of transit-dependent populations, employment centers, and major trip generators. Central, South, and West Maui will continue to demand more transit service based on their current and projected population and employment trends. Upcountry, although not a major employment center, possesses characteristics which make it an integral element of future island-wide transit planning. East Maui, being isolated and presenting unique transportation challenges, is currently being served by the human services component of the transportation system.

## **CHALLENGES AND OPPORTUNITIES**

### ***Accommodating Current and Future Transit Needs***

To accommodate Maui's needs, long-range transit planning must be integrated with land use decisions. The location of future transit operations is directly dependent on future development patterns. Major land use decisions must consider the potential implications for the mobility of residents, visitors, and individuals who are mobility challenged and plan for the beneficial integration of transit.

To encourage inter-modal transit, coordination must be achieved among bus service, rail, or other future transit modes, park-and-ride facilities, bike routes, and pedestrian paths. This should be accomplished while considering the special needs of each region on the island.

Since the visitor industry is a major contributor to Maui's roadway congestion, the industry must also be a significant player in the formulation of transportation solutions.

### ***Public Private Partnerships***

Many entities in the private sector benefit from the County transit services as alternative modes of transportation for customers and employees. The County should continue to partner with the private sector to support mass transit within the community and welcomes volunteers who will assist the MDOT in implementing infrastructure according to government standards. The private sector's involvement can vary from subsidizing commuter bus passes to the dedication of land for transit purposes. The funding of public transit programs and facilities continues to be an ongoing challenge. Reliable mechanisms for transit programs



## ***INFRASTRUCTURE AND PUBLIC FACILITIES***

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|---|---|
| <b><i>Transit Supportive Roadway Infrastructure</i></b> | <p>such as dedicated funding sources should be obtained to ensure that transit remains a viable transportation option for an increasing number of residents and visitors throughout the island.</p> <p>Providing adequate transit supportive roadway infrastructure is vital to the efficient operation of a transit service. Bus pullouts, waiting benches/shelters, and signs are key roadway infrastructure items that are needed to support transit. While retroactively adding this infrastructure to existing roadways is important, ensuring that new roadways and subdivisions adequately accommodate transit is also a vital step.</p> |
| <b><i>Main Public Transit Facility</i></b>              | <p>A key element of a successful public transit system is the presence of a main transit facility and connecting transit hubs. The County is currently utilizing the Queen Ka`ahumanu Shopping Center as a key transit hub. MDOT has entered into a license agreement to occupy its current premises at the Queen Ka`ahumanu Shopping Center, until the year 2020 and has implemented hub improvements. As Maui's ridership and system needs grow, the County should conduct a study to identify additional transit infrastructure needs.</p>   |
| <b><i>Transportation Corridors</i></b>                  | <p>It is essential for Maui's future transportation system to identify multimodal corridors that include transit and other alternative modes of transportation (e.g., rail, bikes, etc.). The County should conduct a study to identify future locations for transit corridors and stations, as well as take action to protect and preserve lands necessary for these facilities for future County use.</p>   |

### **GOAL, OBJECTIVES, POLICIES, AND ACTIONS**

#### **Goal:**

- 6.5** An island-wide transit system that addresses the needs of residents and visitors and contributes to healthy and livable communities.

#### **Objective:**

- 6.5.1** An integrated transit system that better serves all mobility needs of Maui's residents and visitors.

#### **Policies:**

- 6.5.1.a** Maximize access to public transit in town centers, commercial districts, and employment centers.
- 6.5.1.b** Expand regional and inter-regional transit services, where appropriate, in heavily traveled corridors and within communities.
- 6.5.1.c** Increase the frequency of current service, add additional bus routes as demand requires, and transition to nonpolluting transit vehicles, as funding permits.
- 6.5.1.d** Provide adequate transit infrastructure (e.g., bus pullouts, waiting benches and shelters, signs) along existing and future transit right-of-ways.

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- 6.5.1.e** Require new development where appropriate, to provide right-of-ways (ROWs) to accommodate transit circulation and support facilities.
- 6.5.1.f** Identify, protect, and preserve, or acquire corridors for future inter-community transit use, including but not limited to, rail and also multimodal use corridors.
- 6.5.1.g** Establish transit corridors by planning for and securing right-of-way when appropriate for alternative modes of transportation (such as rail and water ferry service).
- 6.5.1.h** Pursue improvements and upgrades to the existing transit system consistent with updated MDOT planning studies/transit plans (within the framework of comprehensive island-wide multimodal transportation plans).
- 6.5.1.i** Increase inter-agency coordination between the Department of Planning, State Department of Transportation, County Department of Public Works, and other applicable agencies.

### **Implementing Actions:**

- 6.5.1-Action 1** Amend the County subdivision and development regulations to require, where appropriate, transit-supportive roadway infrastructure.
- 6.5.1-Action 2** Develop and adopt an ordinance to require developments, if appropriate, to provide private shuttle services connecting to public transit or appropriate impact fees for transportation improvements.
- 6.5.1-Action 3** Prepare a study to:
  - (1) Prioritize transit corridors and stations;
  - (2) Develop an implementation program to preserve sites and ROWs for necessary facilities; and
  - (3) Identify alternative funding approaches including public-private partnerships.
- 6.5.1-Action 4** Regularly conduct transit system needs-assessment surveys to ensure community satisfaction, and provide opportunities for transit-system users to make suggestions on ways to improve services.
- 6.5.1-Action 5** Work with rental car agencies to consider expansion of their agencies into high population areas such as West and South Maui.
- 6.5.1-Action 6** Designate, map, and preserve, or develop corridors to support mass-transit solutions.

### **Objective:**

- 6.5.2** Plan for a more diversified and stable funding base to support transportation goals.

### **Policies:**

- 6.5.2.a** Support alternative methods and sources of funding transportation improvements (including impact fees, higher taxes, fare adjustments, dedicated sources of funding, and assessments).

- 6.5.2.b** Collaborate with public-private entities or nonprofit organizations to reduce public transit operational expenses.
- 6.5.2.c** Coordinate with appropriate Federal, State, and County agencies to fund transportation projects in areas where growth is anticipated.

### **Implementing Actions:**

- 6.5.2-Action 1** Conduct and implement technical studies to identify potential funding for ongoing maintenance and upgrades of transportation systems (transportation impact fees, community facilities districts, etc.).
- 6.5.2-Action 2** Establish alternative financing programs such as transportation impact fees, community facilities districts, transfer of development rights, or dedicated sources of funding.