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F R O M: Yuki Lei K. Sugimura, Chair *YLS*
Multimodal Transportation Committee


SUBJECT: **TRANSMITTAL OF INFORMATIONAL DOCUMENT RELATING TO
AUDIT OF THE DEPARTMENT OF TRANSPORTATION** (MT-10(7))

The attached informational document pertains to Item 10(7) on the Committee's agenda.

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Attachment

County of Maui



Performance and Fiscal Audits of the Department of Transportation

March 22, 2018



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March 22, 2018

Mr. Mike White
Council Chairman
County of Maui
200 South High Street
Wailuku, Hawaii 96793

Re: Performance and Fiscal Audits of the Department of Transportation

Dear Chairman White:

The purpose of this report is to provide background information, an overview of the analyses, and a discussion of the procedures that we have performed to date with respect to this matter. This report summarizes the scope of the audit, objectives and questions considered, as well as the results of our analyses performed.

In the event that the County Council, the Department of Transportation, or any other party provides us with additional information, we reserve the right to evaluate the new information, and update our findings if necessary.

We very much appreciate the opportunity to work with the County. We look forward to discussing the contents of this report, and any additional areas of concerns that you may have. Please feel free to contact us at your convenience should you have any additional questions or concerns.

Sincerely,

RSM US LLP

Bill Eggert, Director
Risk Advisory Services

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A. Executive Summary

On January 22, 2018, RSM US LLP ("RSM," "we," "us" or "our") entered into a contract ("C6430") with the County of Maui ("County," "Maui," "you" or "your") to conduct a performance and fiscal audit of the County of Maui's Department of Transportation ("DOT" or the "Department") as authorized by Resolution 17-117.

Our analysis focused on all services, facilities, processes and service providers for the County's Fixed Route, Commuter, Paratransit and Human Services Transportation ("HST") programs. In evaluating the DOT, we identified several planning, facility and technology upgrades that are in development and would serve as a baseline for existing processes. In addition, the team identified several unique aspects of the transit system that were important factors considered throughout our analysis. These include:

- All of the Fixed Route services, in regard to this audit, will have automated passenger counter and automated vehicle location ("APC/AVL") capabilities. All Paratransit and HST services utilize EcoLane technology that provide all trip information.
- Commuter services (seven buses operating on four routes) is self-reporting.
- The DOT owns all of the buses for Fixed Route services, but the contractor, Roberts Hawaii ("Roberts"), operates the service and maintains and stores vehicles.
- Roberts has a monopoly on Fixed Route and Commuter contracted services, and Maui Economic Opportunity, Inc. ("MEO") has a monopoly on Paratransit contracted service. The Requests for Proposals ("RFPs") will act as future negotiations but will change when a future bus base is constructed on County-owned land, which is currently going through an environmental assessment ("EA").
- The central transportation hub for the Fixed Route services is currently located at the privately-owned Queen Kaahumanu Shopping Center in Kahului, Maui.

As a result of our audit fieldwork and procedures, we identified detailed observations and recommendations for the County's and DOT's management consideration that are presented in the Detailed Procedures and Results section of this report. However, the primary objective of this review was to provide the County with information to utilize in long-term decision making to improve the overall quality, reliability, effectiveness and efficiency of the DOT's programs. As such, we have highlighted the following key findings for the County's consideration, as a result of this review:

- The County or other responsible governing bodies over the DOT should establish clear program goals and objectives, and implement transit planning and fare policies that align with approved objectives. Without clearly established objectives and policies, performance measures may be ineffective at measuring performance and driving strategic change.
- The DOT's services, fleet and fares are consistent with peer agencies, with the exception of the Paratransit service monthly fare pass; this pass is inconsistent with most agency practices and may be abused by patrons.
- The DOT, with limited resources, has effectively overseen the primary service operations of each program; however, due to resource constraints, certain controls and monitoring mechanisms have not been implemented to effectively oversee contractor / grantee compliance and other measures of program performance. The DOT should further evaluate the cost benefit of implementing additional controls and monitoring processes to oversee contractors and grantees.

Sections B-E in the report describe in greater detail our specific scope, objectives, observations for each scope area, procedures performed and methodologies used to perform certain analyses, and our detailed findings with respect to our fieldwork.

B. Engagement Background

The County is comprised of three separate islands: Maui, Molokai and Lanai, with a combined population of approximately 165,000 residents. The County's population has grown over sixteen percent over the last ten years. In addition to its resident population, the County welcomes over 200,000 visitors monthly. The County estimates the de facto population at 215,439, which is thirty percent more than the resident population.

The Revised Charter of the County of Maui (1983) establishes the County's Director of Transportation's responsibility for the planning and implementation of all modes of transportation in the County, including those in the air, on water and on land; responsibility for planning and development of an efficient program to facilitate the rapid, safe and economical movement of people and goods in the County; and coordinating the County's transportation programs with other County departments, as well as state and federal government agencies.

In support of its responsibility, the DOT has established a mission "to oversee and support transportation systems that facilitate the movement of people throughout Maui County, including public transit, commuter, paratransit, human services transit, and air ambulance in a safe, efficient and cost-effective manner."

Public transportation is relied upon heavily on Maui, as demonstrated by the growth in ridership count from less than 200,000 passenger trips per year ten years ago, to approximately 2,500,000 per year recently. The increase in ridership also resulted in a rise in the number of buses needed to provide services. Aging and disabled resident populations are also currently increasing, translating to greater demands on the County's public transit system.

Public transportation is especially vital in more rural areas of the County, where distance and scattered populations make connections to work, school, and healthcare, social, recreational and educational opportunities crucial to the well-being of the community.

County-funded public transit services began in 2002 with five fixed routes financed by the DOT and one privately-funded fixed route. Services evolved over the following years, and the Maui Bus officially began operations in 2006 and currently consists of 13 bus routes.

Although ridership has grown, so have costs. General Fund subsidies for transportation grew from approximately \$1 million in 2002, when County-funded public transit began, to over \$6 million in Fiscal Year ("FY") 2018. Use of Highway Funds have increased from approximately \$4 million to \$11 million over the same period.

The Department supports four major programs: Administration, Public Transit (comprised of Fixed Route, Paratransit and Commuter Services), Human Services Transportation (seniors, youth, disabled, dialysis transportation, etc.) and Air Ambulance. The Fixed Route, Paratransit and Commuter Services are branded the "Maui Bus."

The Department has agreements for bus services with the following entities: A contract agreement with Roberts for the Fixed Route and Commuter Service programs. A contract agreement with MEO for the Paratransit program on Maui Island only and a grant agreement with MEO for the Human Services Transportation program. Registration is required for persons with disabilities to qualify for special rates for paratransit (Americans with Disabilities Act or "ADA") routes. Registration is required for all riders in the Human Services Transportation program.

Contracts are solicited through a Requests for Proposals ("RFP") process and awarded to manage and operate services for an initial term of one year, with four one-year options to renew the contract based on performance and Council funding. Historically, the County has opted to renew contracts up to the full allowable term.

The contracts with both Roberts and MEO will reach their five-year limit in FY 2018. The following five-year contracts and grant have been awarded to the same vendors for services to commence on July 1, 2018, the beginning of FY 2019.

Once contracts are issued, awardees are responsible for meeting all requirements specified in the RFP, including: management, personnel, training, dispatching, operations, facility, vehicle maintenance, fuel, insurance, recordkeeping and reporting, computer hardware and administrative software, telecommunications equipment and systems, and vehicles for driver relief and road calls.

In addition to managing and overseeing the contracts and grant, the Department is responsible for the development of service schedules, routes and public timetables. To assist with evaluating public transit operations, the Department performs onboard rider surveys. It also implemented a TransLoc application for smartphones to track the real-time locations and arrival times for Fixed Routes and minimize wait times for buses. The application also allows riders to submit feedback and receive announcements regarding route detours and service interruptions.

To fund and administer its programs, the Department uses a combination of appropriations from the General Fund and Highway Fund. The Department's FY 2017 and FY 2018 Council-appropriated budgets are highlighted below, along with actuals from the five prior fiscal years. The public transit contracts may include a maximum funding increase per annum of up to 5 percent, subject to funding availability and Council approval. The potential increases are not guaranteed. Other funding sources include State and Federal grants, some of which require a percentage of County matching funds.

Table 1: DOT Budget by Funding Source

Department Budget					
	Administration Program		Human Services Transportation	Public Transit Program*	
FY	General Fund	Highway Fund	General Fund - Grant to MEO	Highway Fund	Total**
2018 (Adopted)	\$1,194,759	\$400,000	\$6,180,013	\$10,860,015	\$19,307,002
2017 (Adopted)	\$1,496,103	\$400,000	\$6,180,013	\$10,365,515	\$19,113,846
2016 (Actual)	\$790,442	\$0	\$6,705,483	\$10,300,215	\$18,468,355
2015 (Actual)	\$830,446	\$440,875	\$6,000,440	\$9,877,021	\$17,820,997
2014 (Actual)	\$551,932	\$1,000,000	\$5,825,670	\$9,678,295	\$17,728,112
2013 (Actual)(Actual)	\$520,044	\$855,000	\$6,237,414	\$10,724,132	\$19,008,805
**Totals include \$672,215 appropriation each year for Air Ambulance Program					

Table 2: DOT Budget by Program

*Public Transit Program Budget – Highway Fund					
FY	Fixed Route	Paratransit	Commuter Service	Other Costs	Total
2018 (Adopted)	\$7,552,125	\$2,060,515	\$1,047,375	\$200,000	\$10,860,015
2017 (Adopted)	\$7,192,500	\$2,060,515	\$997,500	\$115,000	\$10,365,515
2016 (Actual)	\$7,192,500	\$2,000,500	\$997,500	\$109,715	\$10,300,215
2015 (Actual)	\$6,850,000	\$2,000,500	\$950,000	\$76,521	\$9,877,021
2014 (Actual)	\$6,850,000	\$2,279,657	\$950,000	-\$401,362	\$9,678,295

Fares are set by the County Council. One-way rates are \$2 for Fixed Route, Paratransit and Commuter routes. A daily pass is \$4 for Fixed Route and Paratransit routes. The cost for a monthly pass varies from \$25 for passengers ages 55 years and older (Fixed Route only) to \$45 for general boarding. Vendors collect fares and submit a monthly revenue collection report by route, and a consolidated revenue collection report as part of their quarterly reports. Human Services Transportation fares are not controlled by the County. MEO does not charge for their services, but does accept voluntary donations.

In preparing the Short-Range Transit Plan, the Department held informational meetings in Kihei, West Maui, Upcountry, and Central Maui in 2015 to obtain community input on the current public transit system and ideas for future services. While the clear majority of individuals present at the meetings were appreciative of the current services provided, the community requested more frequent services, expansion of service to new areas, added bus stops and shelters, and expansion of Paratransit routes outside the required three-fourths mile radius from the Fixed Route system. According to the Short-Range Transit Plan, the majority of Maui Bus customers surveyed are satisfied with the services they are receiving. Based on 1,110 responses received, over 85 percent of the passengers rated overall service quality as “excellent” or “good.”

Fixed Route service operates between 6:30 a.m. and 10 p.m. daily, depending on the route, including holidays. The County provides a minimum number of buses to Roberts and allows for the possible addition of vehicles, depending on County funding. Operations are governed by the Federal Transit Administration (“FTA”) and the County because buses are purchased using funds from both entities. All Fixed Route vehicles are required to be outfitted with a GPS tracking system to ensure on-time performance and help to identify bus locations. The Department has access to the GPS system and reporting.

Commuter service provides four service routes on Maui, contracted through Roberts to assist with work transportation needs of Maui residents to large employment centers on the island. The Department does not provide any vehicles under the Commuter service contract. Vehicles are coach-type buses with a minimum of 50 seats, with reasonable accommodations for ADA passengers.

The Department is responsible for providing Paratransit service for persons with disabilities or health conditions unable to use the Fixed Route service for accessibility reasons, within three-fourths of a mile of the fixed routes, pursuant to the ADA. There are 13 total Paratransit bus routes which mirror the services provided by the Fixed Route service. The Paratransit service requires a reservation and provides curb-to-curb service for qualified riders. Submission of an application is required to determine eligibility.

MEO uses a software program and all necessary hardware for scheduling and dispatching services to help develop an efficient route schedule. The current system being used is EcoLane, which also assists in complying with the National Transportation Database and FTA reporting. All information and reports gathered from the system are fully accessible to the Department for monitoring and reporting purposes.

Since the implementation of the software system, which also led to a consolidation of routes, complaints have ranged from longer call times to make a reservation, missed or delayed pick-ups and drop-offs, longer wait times for a pick-up, and the length of time riders remain on the bus before reaching their stop. Complaints have also been made in regard to a decrease in customer service and drivers who are unfamiliar with transit routes possibly due to high turnover or sick calls. The Department also instituted a policy that paratransit reservations had to be one hour apart and riders had to disembark the bus at their destination. The County provides a minimum number of buses to MEO and allows for the possible addition of vehicles, depending on County funding. Operations are governed by the FTA and the County since buses are purchased using funds from both entities.

The Human Services Transportation program provides transportation for youth, seniors, the disabled, persons in rural areas, persons with special needs, and non-emergency transportation services for kidney dialysis patients. Youth Transportation provides services to and from county-funded programs and facility locations for County youth ages nine to eighteen.

General Funds are granted to MEO, therefore, they do not have to comply with FTA rules, allowing their service to be more flexible. EcoLane software is used on all Human Services Transportation routes and allows for data gathering to report to the County. Similar to the Paratransit system, since the implementation of EcoLane, complaints with the software reservation system include missed or delayed pick-ups and drop-offs, a decrease in customer service, and an increase in the length of time elderly riders remain on the bus before reaching their stop (possibly due to a consolidation of routes). Issues with drivers who are unfamiliar with transit routes because of high turnover or sick calls have also been a concern.

Availability and Access to Critical Information and Key Personnel

During our review, the DOT, MEO and Roberts made certain key personnel and critical documents available to us for review. The information provided by interviews, in conjunction with our review of underlying documentation, provided us with the context to evaluate the Department's performance and fiscal position and the vendors' contract compliance, as outlined in the RFP's Audit Scope (No. RFP-17-176).

Engagement Limitations

We were not engaged to, nor did we complete a compilation, review, or financial statement audit, or provide any other type of assurance services. Should additional information and data become available, should we be asked to complete additional analyses, or should additional analyses be conducted, we reserve the right to consider any additional or new information and supplement our analyses and this report.

C. Engagement Scope and Objectives

The objective of this audit was to provide the Council and the Department with a management tool to identify long-term decision-making solutions to improve the cost-effectiveness, operational efficiency, and quality and reliability of program services to benefit the Department and the general public.

The scope of the audit was to conduct a performance and fiscal audit to review the Department's Fixed Route, Paratransit, Human Services Transportation, and Commuter Service transit programs. We performed the following procedures:

We reviewed the contracts and services provided by the Fixed Route, Paratransit, Human Services Transportation, and Commuter Services programs in order to determine whether duplicative services exist between programs, and if so, determine the cost-benefit and impact of eliminating duplication. Additionally, we reviewed all contract and grant agreements to determine whether services were being fully provided as required by the agreements, and to determine whether the Department regularly reviews all aspects of the agreements to confirm requirements are fully executed. We also assessed whether additional benchmarks or reporting requirements are needed in the agreements for the Department to more effectively monitor and/or provide oversight of contractors/grantees. We provided some suggestions to help the Department improve its vendor oversight.

Some specific areas we reviewed to determine the contractors' and grantee's contract compliance were: existing staffing levels to ensure all routes are meeting required pick-up and wait times as specified in the agreement; existing training for staff to meet customer service requirements; and assessing contract/grant costs to provide public transportation is comparable to municipalities of similar population sizes, services, and geographic challenges, to the extent possible.

We assessed whether the number and location of routes along with the number and size of vehicles are appropriate for the County's population and transportation needs. We reviewed the Department's methodology for maintaining current services and decision-making processes to expand services and assessed whether decisions are being made using best practices and consider revenue sources and costs. Finally, we reviewed the Department's funding sources and current fare structure in order to assess whether current fares and ridership subsidies are comparable to similarly sized transit agencies with similar programs, to the extent possible.

D. Summary of Procedures Performed

To achieve the scope of this review, we used various procedures throughout the audit. We were initially provided with a substantial amount of background information about the County's DOT and its existing programs. Our preliminary review included a detailed analysis of each of the contracts for the Paratransit, Commuter, and Fixed Route programs, as well as the HST program grant agreement provided by the County. We also obtained and reviewed the Maui Short Range Transit Plan (MSRTP), published in 2016, to enhance our understanding of the County's transit history, current conditions impacting the program, and the County's future transit considerations that resulted from the analyses and recommendations made in the MSRTP.

Prior to initiating on-site fieldwork, we obtained and analyzed supplemental information and data for all four programs in addition to the documentation initially provided by the County, including:

- Periodic operational and financial reports provided by vendors
- Program performance including: complaints and surveys, boardings and ridership, on-time performance, fleet inventory, route schedules, fare revenues, cost analyses, and others
- DOT documented policies and procedures governing transportation programs and vendor oversight

The preliminary documentation review facilitated our understanding of the County's transportation programs; however, due to the outsourced nature of all the programs, informational interviews were essential in understanding the DOT's processes and internal controls for monitoring contractors and grantees. We conducted process walkthroughs with the following key personnel from the DOT, who also served as our primary contacts during this engagement and provided us with the documents and information requested.

- Director of Transportation
- Deputy Director of Transportation
- Transportation Grants Administrative Officer
- Transportation Program Coordinator

We also conducted on-site process walkthroughs and informational interviews with the Roberts and MEO management teams located on Maui. We conducted interviews with the following personnel for each organization to confirm our understanding of certain processes and controls:

- MEO:
 - Chief Executive Officer
 - Transportation Director
- Roberts Hawaii:
 - Vice President of Contracts (located on Oahu)
 - General Manager
 - Operations Manager
 - Administrative Clerk

Subsequent to our walkthroughs and identification of preliminary observations, we evaluated on a risk-priority basis certain procedures and analyses to perform in alignment with the audit objectives. As such, we designed and performed supplemental audit procedures focused on the following objectives:

- Evaluating the design and operating effectiveness of certain DOT internal controls over monitoring contractors and grantees
- Evaluating contractor and grantee compliance with certain contract and grant agreement provisions
- Analyzing services provided under all programs and identifying any duplicate services
- Analyzing existing contract requirements and identifying opportunities for the County to enhance its practices for future RFPs, contracts and grant agreements.
- Analyzing the DOT's operational and financial performance, including a peer agency review, fixed route and commuter longitudinal cost and ridership study, and paratransit fare structure analysis

The primary focus of this audit was on the DOT's process and internal controls to monitor and oversee program performance, including contractor and grantee oversight. As such, we primarily designed our procedures to evaluate the DOT's internal controls and evaluate whether adequate controls were in place and designed effectively to mitigate the associated risk. To the extent the DOT had formal controls in place, we evaluated them on a sample-basis to determine whether they were operating as designed.

As we proceeded with our fieldwork, there were instances where the DOT had not implemented internal controls to monitor the contractor or grantee. Through informational interviews with the Department's director, we learned this was primarily due to staff resources constraints. For these instances, we designed limited testing procedures to evaluate contract compliance. These contract compliance procedures were performed using limited, non-statistical samples to provide insight for the County whether or not a contractor or grantee was complying with specific contract provisions at a point in time. In the event errors or deviations were identified during our compliance testing, we did not extend our sampling to assess the pervasiveness of certain errors.

In addition to the procedures outlined above, throughout our review, where applicable and feasible, we sought to benchmark the DOT against its peers. To perform peer analyses during the course of our work, we identified eighteen peer transit agencies with similar reporting characteristics to the County's DOT. We selected peers primarily based on service area population and urbanized area density using the National Transit Database ("NTD"). These variables capture the fundamentals of the core urban area and the scale to which the agency has extended its service area. We used data from 2014 because that was the most recent year of data available from all identified peer agencies.

The County of Maui Department of Transportation has a service area population of 78,110 with an urbanized area density of 3,354 residents per square mile, and the peer agencies identified with similar population and density of the service area are illustrated in Table 3 on the following page. Using population density as a benchmark for identifying peer agencies ensures that our analysis included similar geographic areas, but it is not possible to ensure all characteristics match.

We also identified other peer agencies that reflect Maui County's unique characteristics as an island with significant tourism. These include several Puerto Rican agencies, which share island geography, and the Cape Cod Regional Transit Authority, which has high seasonal tourist activity in addition to having service challenges due to its physical shape as a cape. The County of Kaua'i and the County of Hawaii were identified for their geographic similarity, while Redondo Beach was identified as having similar weather characteristics.

Table 3 lists some of the characteristics used for selecting peer agencies. Note that it reports population, square mileage, and density at two different geographic levels. The columns specified as “Service Area” represent the area with access to the agency’s services, while the columns specified as “Urbanized Area” give values for each entire urbanized area. To clarify further, the definition of a service area must include the area of three-fourths of a mile on each side of each fixed route for bus service and the area encompassing the origin to destination points wherever people can be picked up and dropped off for demand response service. Note that subsequent charts presented in the report may not include all identified peer agencies due to the availability and/or applicability of certain NTD data.

Table 3: Maui County and Peer Agency Characteristics (Source: NTD 2014)*

Agency Name	City	State	Service Area Sq. Miles	Service Area Pop	Urbanized Area Population	Urbanized Area Density	Urbanized Area Sq. Miles
Albany Transit System	Albany	GA	17	75,616	95,779	1,352	71
Bloomington Public Transportation Corporation	Bloomington	IN	21	80,405	108,657	2,426	45
Cambria County Transit Authority	Johnstown	PA	60	80,508	69,014	1,787	39
Cape Cod Regional Transit Authority	Hyannis	MA	394	221,049	246,695	890	277
Chapel Hill Transit	Chapel Hill	NC	62	80,218	347,602	1,913	182
City of Redondo Beach	Redondo Beach	CA	13	67,233	12,150,996	6,999	1,736
Connecticut Department of Transportation	New Britain	CT	13	73,941	924,859	1,792	516
County of Maui - Dept. of Transportation	Wailuku	HI	727	78,110	55,934	3,354	17
Decatur Public Transit System	Decatur	IL	53	81,337	93,863	1,586	59
Eau Claire Transit	Eau Claire	WI	28	74,601	102,852	1,491	69
County of Hawaii Mass Transit Agency	Hilo	HI	**	**	198,449*	49*	4,028*
Mid Mon Valley Transit Authority	Charleroi	PA	44	79,666	66,086	1,478	45
Municipality of Bayamon	Bayamon	PR	15	65,706	2,148,346	2,479	867
Municipality of Guaynabo	Guaynabo	PR	27	90,879	2,148,346	2,479	867
Municipality of Mayaguez	Mayaguez	PR	52	71,264	109,572	2,039	54
Municipality of Toa Baja	Toa Baja	PR	30	89,609	2,148,346	2,479	867
Nashua Transit System	Nashua	NH	32	86,933	226,400	1,242	182
Ozaukee County Transit Services	Port Washington	WI	235	86,389	1,376,476	2,523	546
County of Kaua'i	Lihue	HI	**	**	72,029*	116*	620*

* Indicates county-level data from 2016 Census estimates

** Indicates data absent from available data sources

Our detailed procedures and results, including specific observations and corresponding recommendations highlighted for the County and management’s consideration, are included in section E of the report. Each major scope item from the RFP is identified and presented with relevant results in an order that most effectively presents the detailed results of this audit. The scope areas presented are below and refer to the scope items identified in RFP-17-176:

1. Service Planning and Route Analysis (RFP Scope items §6.b.ii and §6.b.iv)
2. DOT Program Cost Analysis (Scope item §6.b.i.4)
3. DOT Funding Analysis (Scope item §6.b.v):
4. Duplicative Service Analysis (Scope item §6.b.i.1)
5. Contract Compliance, Agreement Analysis and DOT Internal Controls (Scope items §6.b.i.2-4)

E. Detailed Procedures and Results

1. Service Planning and Route Analysis (Scope items §6.b.ii and §6.b.iv)

Scope Objectives: The primary objectives of this scope item were to evaluate the DOT's methodology for service planning, including revenue and cost considerations, and whether existing services and fleets are appropriate for the County's population and transportation needs.

Detailed Results: To achieve this objective we evaluated it from two perspectives, the first of which was to focus on evaluating the DOT's existing policies and practices for service planning and benchmarking against transit best practices.

We obtained the DOT's "Fixed Route & Commuter Route Modifications/ Expansions/ Changes Policy." The policy was approved in May 2016 and indicates that the most recent Maui Short Range Transit Plan (MSRTP) provides the DOT a baseline for evaluating any service changes or modifications. In addition, the DOT incorporates input from surveys, community feedback, and other consideration and studies available. The DOT currently plans service based on available funding which is approved and allocated by the Maui County Council. In the event no additional funding is available, the DOT will only consider implementing cost-neutral modifications to service to promote service efficiency. Although the DOT has an established policy for Fixed Route and Commuter Service planning, the policy does not establish service standards, nor does it provide a governing framework or comprehensive methodology for monitoring performance and evaluating services changes.

The Transportation Research Board ("TRB") is a division of the National Research Council that promotes innovation and progress in transportation and provides research for transit through its Transit Cooperative Research Program ("TCRP"). TCRP's Report 88, "A Guidebook for Developing a Transit Performance-Measurement System," which was developed to help transit agencies align decisions with performance measures of effectiveness and efficiency, highlights the following steps as critical elements to an effective performance-measurement system (Transportation Research Board, 2003, p. 68):

1. Define goals and objectives;
2. Generate management support;
3. Identify internal users, stakeholders and constraints;
4. Select performance measures and develop consensus;
5. Test and implement the program;
6. Monitor and report performance;
7. Integrate results into agency decision-making; and
8. Review and update the program.

The report also emphasizes the strong correlation and overlap of the key steps, but it is clear that defined goals and objectives are critical inputs into the overall system. The DOT has implemented in certain discrete ways, elements of a performance-measurement system, but existing policies and procedures do not holistically account for key objectives nor do they measure against those performance considerations.

Observation 1.1: The DOT has not established clear programmatic goals and objectives nor implemented governing policies that establish service standards nor a comprehensive framework for monitoring performance and evaluating services changes. Without established program objectives, the DOT may not be able to effectively identify relevant performance measures and evaluate the appropriateness nor adequacy of its services and contemplated service changes.

Recommendation 1.1.a: We recommend that the DOT, in collaboration with the Maui County Council, seek to establish formal program objectives to govern overall program performance management and enhance its existing "Fixed Route & Commuter Route Modifications/ Expansions/ Changes Policy" to align with transit best practices and formalize its methods and/or policies for:

- Service standards by program, which should include but not be limited to service availability (ridership and coverage model) and customer service standards
- Service performance monitoring, including considerations for key operational and performance measures of service effectiveness and efficiency (e.g., subsidy per passenger trip, farebox recovery, passenger trips per revenue service hour, etc.)
- Establishing a methodology to evaluate existing service performance against standards and decision criteria for proposed service changes

Recommendation 1.1.b: In addition to the recommendation 1.1.a, we recommend that the DOT establish a separate Paratransit service program policy or incorporate Paratransit service into the County's broader transit planning policy. We recommend that the policy incorporate minimum ADA standards, as well as governing criteria for the program similar to those described above.

The second approach we took to achieve this scope item was to evaluate the County's existing service and fleet. We sought to understand the overall system and found that the existing Fixed Route Service essentially provides a skeleton transit service for the County's population, focusing on coverage and access. The routes operated are the minimum required to meet passenger demand with the maximum headways required to provide regular service. In reviewing the County's bus schedule, most routes operate with 1-hour headways (measurement of time between vehicles), with some routes at certain times of the day operating with 1.5 to 2-hour headways. This means that service is available during the hour but may be unattractive to choice riders as riders will need to plan around the schedule, which is also typical of peer systems.

Spare ratio is also a measure of fleet capacity, which is defined by the FTA as the number of spare vehicles divided by the vehicles required for annual maximum service and is usually expressed as a percentage. Maui County has 46.7% spare vehicles, with 30 vehicles available for service and only 16 vehicles operated in maximum service. This is the highest percentage when compared to peer agencies, as shown in Figure 1 on page 12. For commuter bus routes, Maui County has 30% spare vehicles, with seven vehicles operated in maximum service and 10 available for service. The three other peer agencies that offer commuter bus service all have 0% spare vehicles, as shown in Figure 2 on page 12. Based on our review of the fixed-route service levels and spare vehicle ratios, we conclude that the number of vehicles provided for fixed-route service is reflective of standard transit operations of peer agencies. The number of vehicles is adequate to serve the network and meets the demand for normal operations and shifts in demand due to cruise ships or special events. The size of these vehicles also is reflective of standard transit operations of peer agencies. Converting the fleet to smaller vehicles (under 40') would limit the ability of the DOT to provide capacity for demand spikes for cruise ships or other special events.

Figure 1: Percentage of Spare Vehicles for Fixed Route Bus Service (Source: NTD 2014)

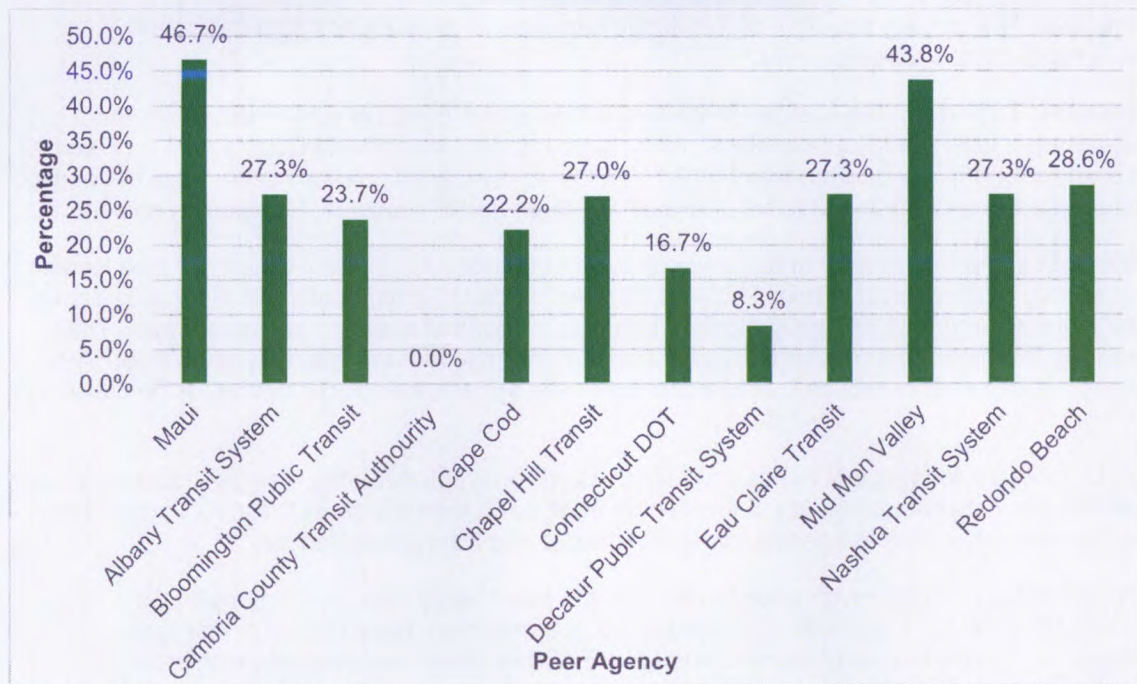
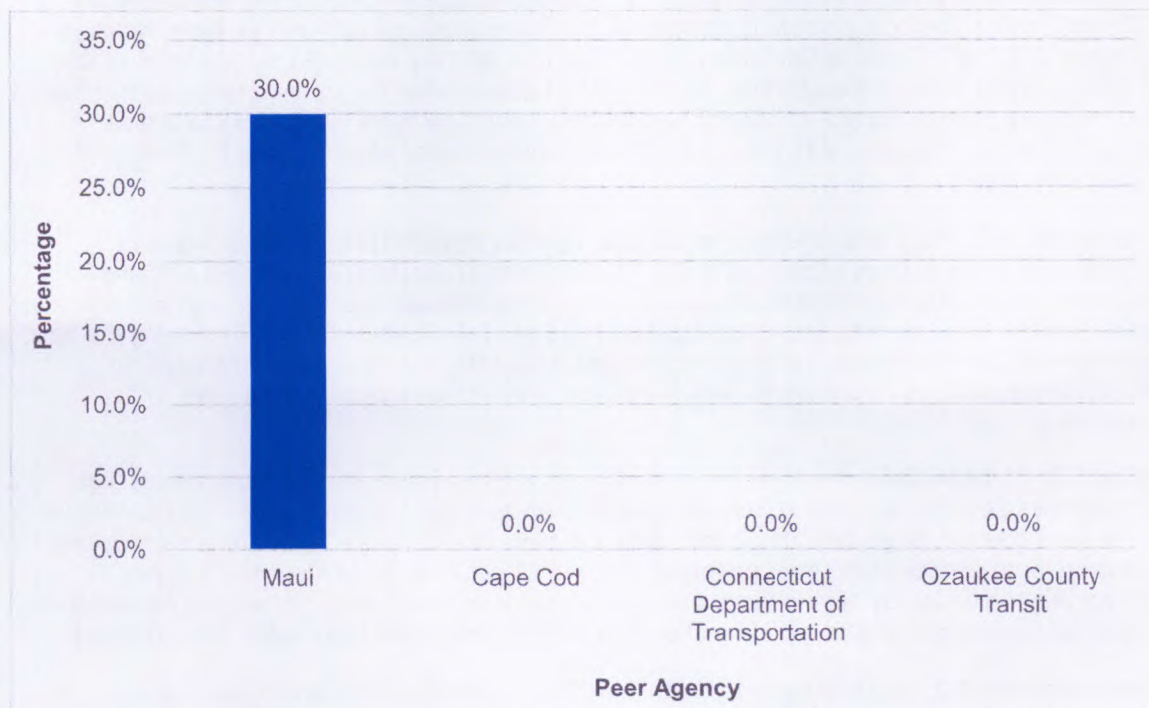


Figure 2: Percentage of Spare Vehicles for Commuter Bus Service (Source: NTD 2014)



2. DOT Cost Analysis (Scope item §6.b.i.4)

Scope Objective: The primary objective of this scope item was to evaluate program costs and benchmark against comparable agencies.

Detailed Results: To perform the cost benchmarking analysis, we looked at both Fixed Route and Paratransit services. For Fixed Route analysis, we obtained and reviewed Maui County data on Fixed Route costs and ridership per quarter from FY12-FY18 to identify overall program trends over the period. The detailed illustrations of our longitudinal analyses are illustrated in Appendix I, beginning on page 35.

Observation 2.1: In our longitudinal analysis we observed that ridership on Maui County's Fixed Route service has slightly declined overall from FY12-FY18, which is part of a national trend. Service changes made in the fourth Quarter of FY17 have affected ridership in terms of quarterly passenger trips. The service changes combined routes such that fewer transfers are needed; this naturally reduces one-way trips, but does not necessarily reduce overall ridership on the system, meaning that there is no cause for concern.

Figures 10-12 show the longitudinal trends in quarterly fixed-route bus ridership. The graphs show a trend of slight decline, per national trends. In the fourth quarter of 2017, the data show the introduction of the West Maui Islander and a drop in ridership of Napili Islander and Kaanapali Islander.

Recommendation 2.1: Although ridership decline is a trend being observed nationally, we recommend that the DOT evaluate potential factors that may have been related to changes in ridership and continue to monitor service changes, including route changes or fare changes for potential impacts on ridership.

Our longitudinal analysis also included fixed costs by service route and found that costs have remained stable throughout FY12-FY18. Each route has varying fixed costs per ride, which is a function of total fixed costs attributable to a single route divided by the number of rides taken on the route during the period. For most routes, the cost per ride is less than \$10. There are three outliers that have a cost per trip greater than \$15: Haiku/ Wailea Commuter, Kihei/ Kapalua, and the Kula Villager, the latter of which operates at the highest cost per trip of all fixed routes. The Lahaina Islander route consistently has had the highest total cost, though as of FY17 fourth Quarter, the new West Maui Islander route is also experiencing high costs. Figures 13-15 show the trends in cost per ride, while Figures 16-18 show the trends in quarterly costs.

We also compared 2014 Maui Bus operating expenses reported to the NTD for Fixed Route and Commuter services against those of peer agencies. We included in our analysis two cost efficiency measures which are intended to illustrate an agency's utilization of resources. For this, we used operating expenses per vehicle revenue mile and operating expenses per vehicle revenue hour (meaning the time the vehicle is available for service). The illustrations of our Fixed Route and Commuter Operating Expense comparisons are on pages 14-15, which resulted in the following observation and recommendation.

Observation 2.2: Compared to peer agencies, Maui County's Fixed Route service experiences high operating expenses per vehicle revenue hour and higher than average operating expenses per vehicle revenue mile (see figure 3, page 14). This is true although Maui County has a higher farebox recovery ratio for its fixed route services than peer agencies, earning \$1 per fixed route trip. Maui's higher operating cost may be driven by certain factors inherent to the island, including the geography which may lead to higher fuel costs, geographic isolation of certain service areas, and high traffic, among others.

Recommendation 2.2: As Maui considers implementing comprehensive service policies and performance objectives, we recommend that the DOT continue to monitor cost performance metrics for specific routes and evaluate their effectiveness and alignment with objectives.

Figure 3: Fixed Route Bus Operating Expenses per Unit of Service (Source: NTD 2014)



Figure 4: Fixed Route Commuter Bus Operating Expenses per Unit of Service (Source: NTD 2014)



For Paratransit services, we reviewed Paratransit operating expenses obtained from 2014 NTD data against those of peer agencies. We also used comparable cost measures to those used in the Fixed Route and Commuter analysis of operating expense per trip, efficiency measures of operating expense per vehicle revenue mile, and operating expense per vehicle revenue hour. Our detailed Paratransit program cost analysis is illustrated in figures 5 and 6 on the following pages and resulted in the following observation and recommendation:

Observation 2.3: When evaluating expenses by both revenue mile and revenue hour, Maui County's Paratransit service operating expenses are higher overall than most of its peer agencies. Maui's operating expense per vehicle revenue mile are \$9.02 and operating expenses per vehicle revenue hour are \$103.38. This is in contrast to operating expenses per passenger trip, where Maui has a lower than average cost when compared to peer agencies, \$20.64 per passenger trip. This information indicates that that Paratransit customers may be making shorter trips, reducing per trip costs, while still having higher than average operating expenses.

Higher operating expenses may be attributed to Maui County's unique geography as an island, leading to higher fuel costs, geographic isolation of certain areas, and high traffic. Peer island agencies like the County of Hawaii Mass Transit Agency and Kaua'i County both experience even higher operating expenses per revenue hour than Maui County. While it is difficult to attribute specific causes to these cost trends, fundamental geographic constraints likely play a major role.

Recommendation 2.3: We recommend that the DOT continue to review factors that may be contributing to high Paratransit program operating expenses per vehicle revenue mile and further explore performance measures to continuously monitor program efficiency and effectiveness.

Figure 5: Paratransit Operating Expenses Comparison (Source: NTD 2014)



Figure 6: Operating Expenses per One-way Paratransit Passenger Trip (Source: NTD 2014)



3. DOT Funding Analysis (Scope item §6.b.v)

Scope Objective: The primary objective of this scope item was to review and evaluate the DOT's funding sources and fare structure and determine if current subsidies are comparable to peer agencies.

Detailed Results: To perform this analysis we obtained and reviewed available DOT policies and procedures against best practices. We also obtained and reviewed existing fare structures and pricing against those of peer agencies. Current fares are outlined below as set by the Maui County Council. Fares have remained unchanged since the current fare structure went into effect on July 1, 2012.

Table 4: Maui Bus Fares as of January 31, 2018

Fare Type	Cost and Use
Cash Fare	\$2.00 – includes Fixed Route, Commuter and Paratransit
Daily Pass	\$4.00 – includes Fixed Route and Paratransit
Monthly Pass	
General	\$45.00 – includes Fixed Route, Commuter and Paratransit
Student	\$30.00 – includes Fixed Route and Paratransit
Senior (55 years and older)	\$25.00 – includes Fixed Route only
Person with disability	\$30.00 – includes Fixed Route only
Senior ADA Paratransit Pass	\$30.00 – includes Paratransit only

The 2016 MS RTP included multiple fare analyses, which highlighted that Maui Bus daily and monthly passes were disproportionately discounted compared to North American bus averages (*SSFM International with Weslin Consulting Services, Inc. and Pacific Cartography*, 2016, pp. 5-6). However, the most significant outlier in the fare analysis is the use of discounted passes (Daily, General and senior) for Maui Bus ADA Paratransit services.

To further understand the potential effects of the discounted passes on Paratransit service effectiveness, we analyzed certain indicators of economic performance, separate from those evaluated as part of the cost assessment. We compared the County's Paratransit fare revenue per one-way paratransit trip and paratransit farebox recovery ratio (fare revenue divided by total expenses) in relationship to peer agencies. Our results are illustrated in figures 7-9 below.

Figure 7: Paratransit Fare Revenue per One-way Paratransit Trip (Source: NTD 2014)

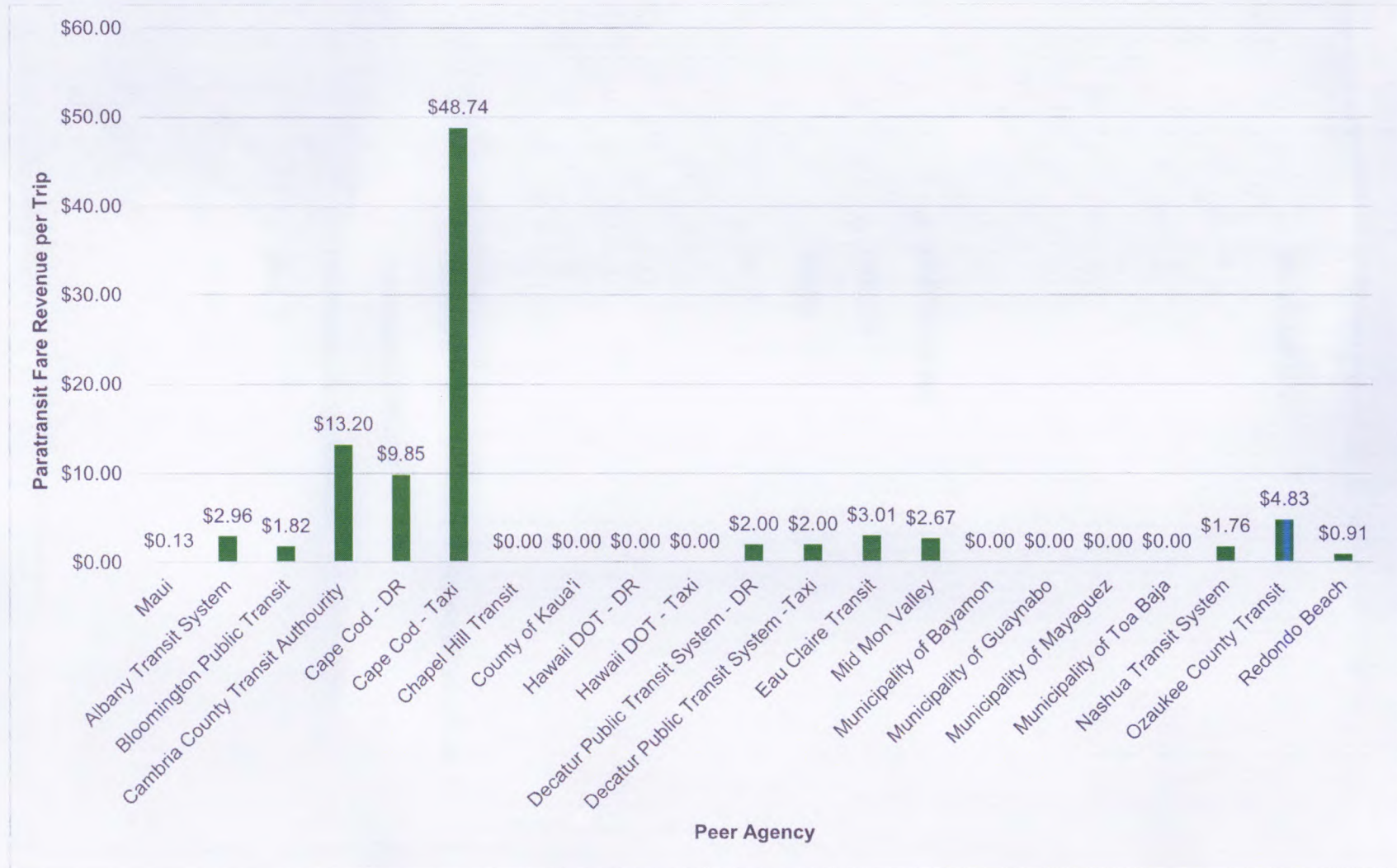


Figure 8: Paratransit Farebox Recovery Ratio (Source: NTD 2014)

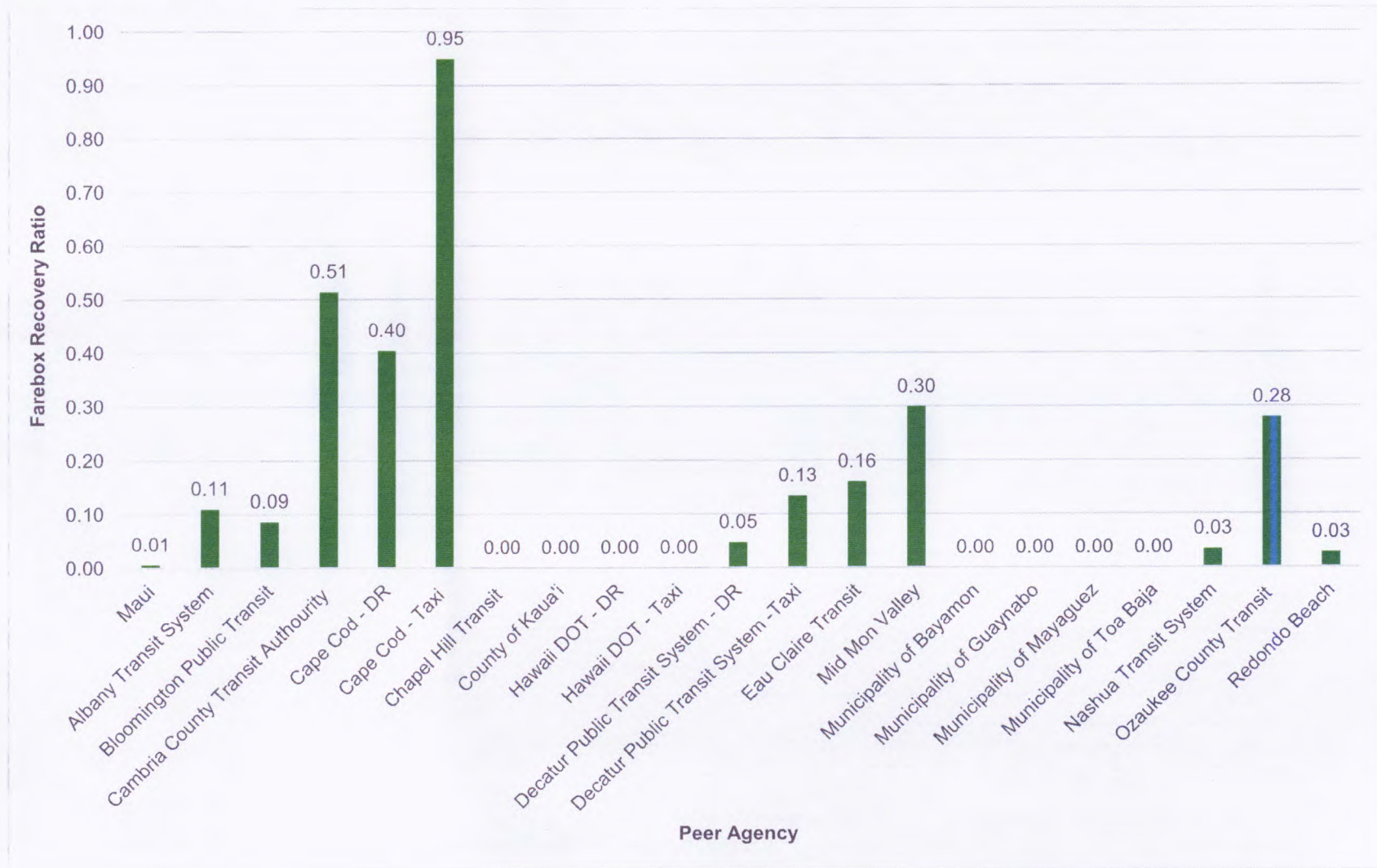
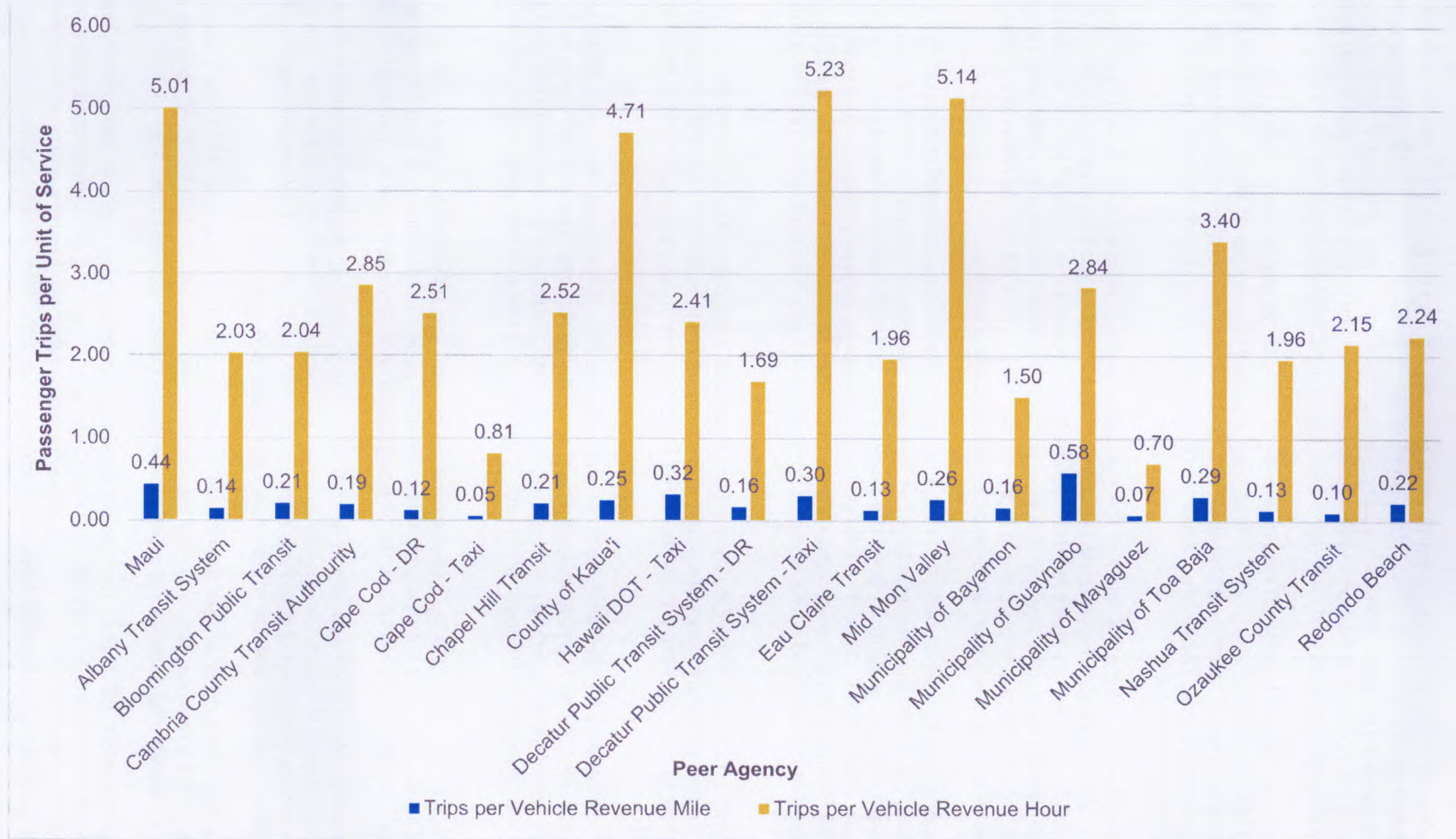


Figure 9: Paratransit Efficiency Metrics (Source: NTD 2014)



Note: County of Hawaii Mass Transit Agency's demand response service is excluded from this graph as its value of 13 trips per vehicle revenue hour appears to indicate a data quality issue.

Overall, we observed that the range of paratransit services offered by Maui DOT are in line with the services offered by peer agencies. The provision of ADA paratransit service and various human services transportation options fall within normal industry practice. We based this conclusion upon our analysis of the NTD peer agency demand-response service statistics, review of peer agency published information regarding paratransit services, and interviews with peer paratransit operators described in this section.

We also found the use of Paratransit services in the County to be higher than those of peer agencies, resulting in a low farebox recovery ratio of less than 1%. The County, as of 2014, was earning \$0.13 per one-way Paratransit trip. This means that the Paratransit program operates on a high subsidy per trip, as well as on a per-mile basis. These are measures of cost-effectiveness that indicate the County has an opportunity for improvement.

The low cost recovery is likely the result of the low-cost monthly Paratransit pass, which allows for unlimited use of the high-cost Paratransit services and may encourage frequent usage beyond what would be typically observed in agencies that required individual trips to be paid for. Of all peer agencies identified, only one other transit agency, the Albany Transit System, offers a monthly paratransit pass; it costs \$90 per month. Because this pass is more costly, Albany Transit System still earns a farebox recovery ratio of 0.11 and farebox revenue of \$2.96 per passenger trip.

Looking at agencies that operate in areas that may have comparable seasonal characteristics to the County of Maui, Redondo Beach earns \$0.91 in fares per paratransit trip with a farebox recovery ratio of 0.03 while Cape Cod earns \$9.85 in fares per paratransit (demand response versus taxi) trip, with a farebox recovery ratio of 0.4. Though Redondo Beach's farebox recovery ratio is comparable to Maui County's, both Redondo Beach and Cape Cod recover more fare revenue per paratransit trip. However, it should be noted that Cape Cod's fare revenue per paratransit trip is much higher than the average of \$4.47.

Paratransit single trip fares in the County are comparable to peer agencies, but there are some agencies that choose to offer paratransit as a free, fully-subsidized service. We have also observed other peer agencies choosing to implement paratransit fares based on distance, using either miles or zones for its fare structure.

We also noted that Maui's Paratransit services experiences high productivity, making 0.44 one-way paratransit trips per vehicle revenue mile and 5.01 one-way paratransit trips per vehicle revenue hour, higher than those of most reporting peer agencies. This data also supports the theory that Paratransit passengers are taking more frequent short trips, possibly as a result of the pass, than comparable agencies.

Observation 3.1: The County has not established a governing paratransit fare policy that is used to establish parameters around the system's fares, including specific fare structure and pricing, farebox recovery goals, or other considerations for fare alignment with strategic program policies and objectives.

Recommendation 3.1: We recommend that the County establish a governing fare policy that establishes overall principles and goals that can be used to inform fare structures, including pricing and payment options, and guide other aspects of the system and DOT management decisions related to budgeting, customer service, marketing, operations and planning.

Observation 3.2: Compared to peer agency NTD data reviewed in fiscal year 2014, the County's Paratransit trip had a high subsidy on a per trip and on a per mile basis, with \$0.13 of revenue per passenger trip. Paratransit farebox recovery for the same period was less than 1%.

Recommendation 3.2: Subsequent to establishing governing fare policies, we recommend that the DOT review the existing Paratransit monthly pass fare option and perform a comprehensive analysis of alternative fare structures, such as a zone-based or other tier-based system and implement fares that align with policy for desired farebox recovery or subsidy.

In addition to our data comparison of peer agencies, we also performed interviews with three peer agencies to understand their respective paratransit operations and to provide additional context for Maui's on-demand operations. The three interviews resulted in a range of strategic approaches for managing operations, and highlights from these interviews are described below for the County's consideration and review.

Chapel Hill Transit offers a fare-free fixed route and ADA paratransit service network. When the policy was introduced in 2001, their fare structure was onerous, which the agency identified as a cause of their relatively low farebox recovery ratio. The decision to go fare-free reflected their emphasis on environmental goals and social justice priorities in this university community. Chapel Hill does not receive special grants for human services transportation, as these are handled by a regional transit agency. Costs are controlled through policies such as minimum wait times between trips and limited hours of service.

The Cape Cod Regional Transit Authority offers a range of human services transportation and ADA paratransit services comparable to those in Maui County. The agency started using the same vehicles for all service types, leading to a significant reduction in their cost per ride. Paratransit costs decreased from \$35-\$40 per ride to consistently under \$20 per ride. Human services transportation costs decreased from \$45-\$50 per ride to around \$30 per ride. The agency also contracts with private taxi operators for rides that do not fit into a day's schedule, assigning each trip to the provider who can minimize cost.

Eau Claire Transit provides ADA paratransit and human services transportation through a contracted private operator. Human services programs are funded by the county for seniors and by special agencies for client transport. The operator is paid a flat rate per trip regardless of distance or trip type. Similar to Cape Cod, Eau Claire uses the same vehicles for human services transportation and ADA paratransit to lower costs and increase efficiency. Eau Claire also controls costs by promoting fixed-route options to paratransit customers and by checking customer eligibility through a contracted certification agency.

4. Duplicative Service Analysis (Scope item §6.b.i.1)

Scope Objective: The primary objectives of this scope item were to analyze the contracts and services provided for each program and to determine whether duplicate services exist between programs, and if so, the cost-benefit and impact of eliminating duplication.

Detailed Results: The first step in evaluating programs for duplicate services was to understand each of the programs offered by the County. First, we reviewed the Fixed Route and Commuter programs, focusing on service maps and schedules. Our qualitative review did not identify any significant duplication of services across these programs. Although the Commuter program may, at times, follow similar routes to Fixed Route services offered by the County, the Commuter routes offer limited-stop service during peak commute hours to employment centers on the island of Maui.

In addition to the Fixed Route and Commuter programs, there was considerable emphasis by the Council Chair to evaluate the potential for duplication of service between the Paratransit and HST grant-funded programs. Our initial analysis included a review of the HST Grant Agreement to identify each program, its specific service function, and the eligible user groups. The HST program currently provides services for ten programs, including:

1. Senior Services Transportation (20,168 trips in FY17):
 - Allows seniors 55 and older to participate in activities and events with Kaunoa Senior Services and throughout the community
2. Nutrition Program Transportation (18,530 trips in FY17)
 - Allows elderly and disabled clients the opportunity to participate in Kaunoa Senior Services' Congregate Nutrition program
3. Ka Lima O Maui, Easter Seals and ARC of Maui Transportation (13,027 trips in FY17):
 - Specialized transportation for identified clients with special needs who participate in program and employment/training activities at certain locations
4. Employment Transportation (15,581 trips in FY17):
 - Assists adults with special needs, and low income or economically challenged individuals get to and from work
5. Rural Shopping Shuttles (67,390 trips in FY17):
 - Curb-to-curb rides that stop at various medical, financial and shopping facilities primarily throughout the central corridor of the islands of Maui and Molokai
6. Youth Transportation Program (122,702 trips in FY17):
 - Provides rides for Maui County registered youth to and from public programs and facility locations that are important to youth ages nine to eighteen
7. Maui Adult Day Care (20,079 trips in FY17):
 - Provides rides to seniors and disabled individuals enrolled in one of the three daycare centers

8. Community Transportation Needs (1,716 trips in FY17):
 - Transportation service for seniors 55 and older, disabled, low income and other disadvantaged individuals to community events, including Maui County Special Fair
9. Ala Hou – On the Move Again (5,237 trips in FY17):
 - Transportation service for disabled individuals who need accessible transportation in areas of Maui County not serviced by the ADA Paratransit
10. Transportation for Dialysis Treatment (34,691 trips in FY17):
 - Non-emergency medical transportation service for kidney dialysis patients in Maui

With the HST programs defined within the grant agreement, we then evaluated each program for distinct user groups based on eligibility criteria. We first found that certain user groups (e.g., seniors over 55) were served across multiple programs, indicating there could be potential duplication of service. However, we further analyzed other components of each program including the specific purpose or geographic location served and found that, while certain distinct user groups may be eligible under multiple programs, each program provides a distinct service to the community. We also verified that MEO has implemented the use of a single, standardized HST application for all programs and has standard procedures in place for evaluating applicant eligibility for each program.

The Council Chair also requested further analysis for possible duplication of services between HST Dialysis and Paratransit services. The Transportation for Dialysis Treatment (“HST Dialysis” or “HSTD”) program provides non-emergency transportation to and from dialysis centers for patients who need life-sustaining dialysis treatment. The HST grant-funded services are provided at no charge to the riders.

In order to perform this analysis, we obtained trip reports for the HSTD and Paratransit programs from MEO for the month of October 2017. October is considered by the transit industry to be a “normal” month during which minimal irregular service is observed. Using these reports, we identified the total population that used HSTD or paratransit services to travel to and from dialysis centers. This population was segregated into three mutually exclusive subsets of riders:

1. HSTD-only riders: riders who used the HST Dialysis program to travel to and/or from a dialysis center
2. HSTD and Paratransit riders: riders who used both HSTD and Paratransit Services to travel to and/or from a dialysis center
3. Paratransit-only riders: riders who used only Paratransit Services to travel to and/or from a dialysis center

We then used available trip data to identify the number of individual trips each service was used to travel to a dialysis center in the period. The resulting counts enabled us to produce the results displayed below in tables 5 and 6.

Table 5: October 2017 Dialysis Trip Analysis

HST Dialysis Trips	Paratransit Dialysis Trips	Total Dialysis Center Trips	HSTD % of Total Trips	Paratransit % of Total
2697	115	2812	95.91%	4.09%

Table 6: October 2017 Dialysis Ridership Analysis

Dialysis Ridership Group	Number of Riders
HSTD-only Riders	125
Paratransit-only Riders	30
HSTD and Paratransit Riders	6
Total Dialysis Riders:	161

The Director of Transportation indicated anecdotally that dialysis patients could potentially qualify for ADA Paratransit services and may be existing clients. However, in October 2017, we identified 14 HSTD riders that had also taken a Paratransit trip in the period (14 riders, equates to 4% of total Paratransit program ridership), of which only six used Paratransit services for dialysis treatment. Paratransit riders, once deemed eligible, have the discretion to use the service for any purpose as long as it is in the confines of the program's service area.

In the scenario where a dual-eligible rider has the decision to select between HSTD and Paratransit service, there are a few considerations that the rider may take into account. First the rider may compare the cost of service, where the HST program is zero cost and the ADA paratransit program is \$2.00 per trip or eligible for payment with a fare pass. Additionally, the rider may require transportation to and from a location outside the Paratransit service boundary of three-fourths of a mile from the Fixed Route system—this could require the use of the HSTD program. Finally, the rider may also consider the experience and skillsets of the drivers who support the Dialysis program who have received specific training and skills for providing transportation services to dialysis patients.

Our duplicate service analysis was limited in scope to October 2017 data provided by DOT and MEO and included the following assumptions:

- The trip reports provided for our analysis were complete and accurate
- Trips without a pick-up or drop-off time were incomplete trips
- The list of dialysis centers identified through Google searches was complete
- The rate of dialysis trips and ridership groups are distributed consistently throughout the year and October 2017 is a representative month

Observation 4.1: Our duplicate service analysis did not result in any specific findings or indication that duplicate services exist or are pervasive across the County's transportation programs. We did observe that certain distinct rider groups who may be eligible for free grant-funded programs may also use the fixed route system for such needs, depending on the rider's ability and geography.

Recommendation 4.1: The County should continue to monitor programs, including an evaluation of the ongoing cost-benefit of a given program and its impact on the community. To the extent the County establishes governing transit planning policies, the County or DOT can evaluate performance against established criteria and inform future transit programming decisions.

5. DOT Internal Controls, Contract Compliance, and Agreement Analysis (Scope items §6.b.i.2-4)

Scope Objectives: The primary objectives of this scope item were to analyze the contracts and services provided for each program and determine whether services are being fully provided, including specific aspects of the agreement such as on-time performance and training. In addition, the scope required an analysis of the DOT's internal controls and mechanisms for monitoring performance of each program under the service contracts and HST grant agreement.

Detailed Results:

DOT Internal Controls: One of the primary goals of this review was to understand and evaluate the DOT's processes and internal controls for monitoring the contractors and grantees performance of the agreement terms and overall compliance. Our primary method for understanding existing processes at the DOT included inquiry with personnel and inspection of available documentation, reports and existing internal controls.

The DOT currently has six FTE positions, as well as two DOT-funded positions at the Maui Metropolitan Planning Organization ("Maui MPO"). The DOT, primarily driven by its small staff size, has focused on building collaborative, functional working relationships with MEO and Roberts to oversee each program. The DOT has established two primary policies for overseeing these programs:

- "Transportation Service Contract Monitoring Policy"
- "Transportation Service Grant Monitoring Policy"

The policies outline certain periodic processes and internal controls that are followed throughout the life of the contract. The contract oversight processes currently outlined in the policies are currently limited to:

- The receipt and review of monthly and quarterly reports by DOT personnel
- Approval of quarterly payments by the Director of Transportation
- Collection and submission of data by the DOT to the Maui County Council
- Ongoing Meetings, including:
 - Fixed Route and Commuter weekly meetings with the contractor
 - ADA Paratransit quarterly meetings with the contractor
 - Bi-monthly meeting with the Paratransit Advisory Council
 - Bi-monthly meetings with the Commission on Persons with Disabilities
 - Unannounced Weekly Site Visits of contractor baseyard and maintenance facilities

Through our inquiry and observations with personnel from DOT, Roberts and MEO, we found a highly collaborative and effective working relationship among the parties. In most cases, the DOT is focused on ensuring service for all programs is uninterrupted and meeting operational performance standards and customer needs. The DOT focuses on these items in real-time, on a daily basis, by monitoring certain readily available GPS data for Fixed Route and Commuter services, Daily Dispatch Reports provided by Roberts, as well as on-time performance exception reporting available for Paratransit and HST services. Certain DOT performance monitoring mechanisms that occur are on an as-needed or ad-hoc basis are typically constrained by available resources.

In our holistic assessment of the DOT's contractor monitoring, we found that independent contractor oversight is constrained by available DOT resources. NTD reporting, FTA triennial reviews and increased regulatory oversight on Maui DOT will likely increase staff demands at the DOT and vendor resources.

Observation 5.1 Service providers have established organizational policies that are presented as exhibits within contract proposals to indicate they meet provisions required. However, through informational interviews with the Director of the DOT, it was learned that resource constraints have limited the DOT's ability to implement certain best practice controls and monitoring mechanisms to effectively oversee contractor / grantee compliance and other measures of program performance or organizational risks.

Recommendation 5.1 We recommend that the DOT evaluate relevant contract and other program risks and, considering the potential cost benefit, implement additional controls and monitoring processes to oversee contractors and grantees to more effectively monitor contract compliance and minimize risks to the DOT.

Separate from our analysis of the holistic design of the DOT's contract monitoring, we also evaluated the design and operating effectiveness of key internal controls that the DOT had in place at the time of our review. The first control we evaluated was the quarterly Fare Revenue Reconciliation. The Fare Revenue Reconciliation is a quarterly process whereby the DOT reconciles fare revenues reported by both Roberts and MEO from cash fares received throughout the period to the check received by the same vendor at the end of the quarter. We obtained the FY18 second Quarter reconciliation report prepared by the Department and the supporting documentation provided by the two vendors. We reviewed the reconciliation and evaluated its design, including the data used to perform the reconciliation. We also verified mathematical calculations and verified source totals, including checks received by the vendors. The evidence we reviewed indicated that the fare revenue reconciliation was completed quarterly, but we identified the following observation related to the control's design which indicated that it may not be designed in a way to ensure it achieves the control objective that cash received reconciles to the fare revenues earned by the County.

Observation 5.2: The DOT's fare revenue reconciliation is not designed to include and reconcile all sources of fare revenues. Certain fare revenues earned by Roberts are not formally recorded and reported to the DOT, nor are they currently independently verified. As a result, the reconciliation for Roberts regularly results in unexplained variances, approximately \$20,000 (3% of total revenues received) each quarter.

Recommendation 5.2: We recommend that the DOT fully evaluate and identify all sources of fare revenue and explicitly require all forms of cash fare sales be supported by internal controls and procedures at the contractor or grantee. We further recommend that all fare revenues and distinct sources be reported to the DOT and independently verified to the extent possible. Finally, we recommend that the DOT establish criteria for evaluating reconciling items in the control to ensure that variances are reasonably explained.

The second key control we evaluated was the Quarterly Allotment Request ("QAR"). The QAR process is informed by the contract general terms which outline payment terms and timeline. As part of the ongoing process, contractors and grantees are required to submit a QAR which requires the contractor to certify that the work for which payment is requested was performed in accordance with the agreement. The QAR also requires approval by the Director of Transportation and is approved and paid by the Department of Finance. The QAR process for contracted services does not require any separate documentation. The HST grant program differs slightly in that the grantee currently provides a summary of expenditures by cost category and a narrative explanation of significant cost variances compared to the approved budget. We noted the following observation with respect to DOT's QAR process.

Observation 5.3 The County does not pay contractors or grantees on a reimbursement model and instead uses an advance payment and allotment model whereby quarterly payments are made to contractors and grantees, irrespective of costs incurred. As a result, the QAR, which is designed to ensure payments are authorized, is not consistently adhered to. In the instances we reviewed, the QAR was approved by the Director of Transportation but not dated, so we could not verify that DOT approval was received prior to payment.

Recommendation 5.3 We recommend the DOT evaluate its current advance payment model and the potential impact to contractors and grantees if a reimbursement model were implemented. At a minimum, we recommend that the DOT implement a control and retain evidence that documents the contractor certification of the QAR and the subsequent DOT approval prior to the disbursement of funds.

Through informational interviews with the Department and MEO, it was learned that the HST grant agreement used to allocate a specific budget to each HST program and MEO used to report costs by program. During this time, program budgets would be spent down at different rates throughout the fiscal year, so MEO would request permission from the Department to use budgets originally allocated to underutilized programs for over-utilized programs. Due to the onerous process of requesting approval for budget smoothing, the Department approved a single budget and allowed MEO to use the grant funds as needed for the various programs. This loosening of restrictions allowed MEO to use funds to service multiple programs at the same time. At the time the budget model changed, MEO subsequently changed its reporting and no longer reported costs at the program level. In evaluating this process, we considered best practices for fiscal and grant management, including the ability of the grantor (i.e., the County) to monitor and independently validate the costs incurred under the grant. Based on our evaluation, we identified the following observation related to the HST grant program.

Observation 5.4 HST Grant program expenditures are not monitored and reported at the individual program level, nor does MEO, the current grantee, provide detail support and evidence to the County for expenses incurred and reported under the HST grant program. As a result, the County does not independently validate the costs reported were actually incurred and allowable per the grant agreement.

Recommendation 5.4 We recommend that the DOT evaluate the HST grant requirements and program objectives and reinstitute its prior practice of requiring each HST grant program's expenditures be accounted for and reported separately to the DOT to allow visibility of program costs and performance measurement. We also recommend that the DOT require best practice documentation to substantiate costs reported by the grantee as part of its existing QAR process or any future process designed.

Another item we evaluated during our fieldwork was other sources of revenues to the DOT to offset some of the existing subsidy. Through this exercise we identified that the Dialysis program specifically identified a potential mechanism for revenues through Medicaid reimbursement for eligible patients using the Dialysis program. Although Medicaid funds were a potential source of revenue, we did not see them reported on the operating information provided by MEO in the quarterly report. In an informational interview with the Department, it was learned that MEO collects Medicaid reimbursement from eligible Medicaid HSTD riders and reinvests the funds in the program. Medicaid reimbursements during calendar year 2017 were less than \$2,000. Although the revenues are limited, we did identify the following observation for the HSTD program.

Observation 5.5 Certain dialysis patients using the HSTD grant-funded program may be eligible for Medicaid reimbursements. Eligible Medicaid riders and reimbursement eligible trips, including any revenues subsequently recovered by MEO, are not formally reported to the DOT.

Recommendation 5.5 We recommend that the DOT consider, in addition to recommendation 4.4, that the DOT require grantee reporting to align with all financial statement line items and include reported revenues, such as Medicaid, and that evidence be provided to substantiate that revenues received from MEO are used to offset program costs.

Another key element of the DOT's internal control processes is specific to the program performance operational and financial data information necessary for the DOT to perform contract oversight. Overall, the County has made significant strides implementing automated processes and data collection. As discussed in the executive summary, the Fixed Route system will have APC capability and automatic data capture. In addition, Paratransit and HST services are recorded in the EcoLane system, which is currently used by the DOT to independently monitor reliability and operational performance. Although the DOT does have access to certain program data, we did identify the following observations specific to the DOT's data needs for ongoing monitoring.

Observation 5.6 Commuter bus fleet ridership and revenues, as well as fares revenues not currently included in the fare revenue process, are manually reported by Roberts. Although Roberts has established internal controls and procedures for reporting these revenues and ridership, the DOT has not established a formal process to independently validate this information to ensure accuracy of reporting on an ongoing basis.

Recommendation 5.6 We recommend that the DOT implement certain controls or procedures to independently validate commuter ridership data reported by Roberts.

Observation 5.7 The DOT independently monitors reliability on a daily basis for Paratransit and HST service. However, DOT has not developed processes using the EcoLane system reporting or other readily available data to independently monitor contractor ridership, financials, and customer service performance on a daily basis.

Recommendation 5.7 We recommend that the DOT identify and implement certain controls or procedures to independently validate HST and Paratransit information by using EcoLane to its fullest capabilities. DOT will be the owner of the system starting next year and will have to learn the system thoroughly to support ongoing needs.

Separate from the current systems and technologies being implemented by the DOT and its contractors and vendors, such as EcoLane and APC/AVL capabilities, the County is significantly reliant on its contractors for manual cash processing and the subsequent reporting of fares. As such, the County is limited to the available mechanisms for validating fare revenues. As with all transit planning decisions there are pros and cons to technology. For example, electronic fare cards have a high cost which is sometimes offset by an issuance charge. Electronic fares also result in more complex proof of payment systems to verify fares. However, there are potential benefits to both customers and the agency the County may consider when contemplating the following observation and recommendations. One primary benefit to DOT would be the access and greater visibility to tracking ridership and the ability to evaluate the impacts of various fare initiatives.

Observation 5.8 The DOT currently uses cash fares or cash for passes on all programs, which requires manual cash handling and counting by the contractors and increases the risk of loss due to misappropriation of assets.

Recommendation 5.8 We recommend that the DOT further evaluate the cost-benefit of implementing electronic fares and fareboxes for the system, as well as potential benefits and adverse impacts to the overall program. We recommend that the DOT consult transit best practices and guidance available from public resources to understand the various benefits of electronic fare systems, including those which will provide more visibility to critical data that is not currently verifiable by the DOT.

Contract and Grant Compliance:

Each of the service contracts and agreements in effect for FY18 had multiple contract provisions that were not monitored as part of any ongoing control implemented by the DOT. Typically, we would evaluate internal monitoring controls, but to the extent controls were not in place, we selected a subset of contract provisions to validate contract compliance. Our testing focused on key provisions relating to prevailing wages, staff qualifications, program standards for service and maintenance, and vendor reporting. The results of our contract compliance procedures include the following observations.

The contract agreements – as stated in the RFP in the *Required Proposal Elements* section, subsection 3 – outline minimum prevailing wages for specific job types. We sampled five employees from each contract and used payroll records from December 2017 to verify whether prevailing wages were paid at that point in time. During the procedure, we learned through inquiry with the Department and MEO that there was a difference in interpretation of the contract language. MEO believed that the contract language meant that the wage schedule in effect during the execution of the contract was the standard in effect throughout the five-year contract period. The Department's interpretation was that the most recent wage schedule sets the wage standards.

Our payroll test procedure was meant to verify contract compliance. Therefore, our observation is based on the contractual requirement, not the legal requirement outlined on the Hawaii Revised Statutes ("HRS") 103-55, which specifies that non-profits are exempt from paying prevailing wages. The Department's intent and contract language both clearly indicate that MEO was expected to pay prevailing wages.

Observation 5.9 Certain employees at both Roberts and MEO were paid below the prevailing wage rates that were in effect at the time of the payroll period reviewed. We observed that this error could have resulted from the current FY18 contract language which does not clearly establish the requirement for contractors to continue to pay current "prevailing wages" throughout the life of the agreement to specific employee job classifications.

Recommendation 5.9 We recommend that the DOT complete a full analysis with its contractors and grantees to clearly identify the specific job classes that are intended to be included in this contract provision and corresponding employees and job roles at MEO and Roberts to identify if any further employees are paid below prevailing wage.

We also recommend that the DOT periodically monitor employee wages or require contractors to submit certified payrolls. We did observe that the DOT had enhanced the RFP language for the FY19 which specifically states that wages must increase to match current prevailing wages and not those stated at the time the contract was entered into.

The contract agreements – as stated in the RFP in the *Other Proposal Elements* section, subsection 1(g) – states that preventive maintenance and inspections must be completed within five hundred (500) miles of scheduled interval as approved by DOT. Additionally, daily pre and post vehicle inspection forms must be completed, in compliance with federal, state and county laws.

Observation 5.10 Preventative maintenance ("PM") schedules and inspections are required in each of the contracted services. Although we were unable to obtain an approved maintenance schedule, we did inspect evidence of PM completed through work orders provided to the DOT. In addition, we requested evidence of 20 Daily Vehicle Inspection Reports ("DVIR") from October 2017. All Fixed Route (5) and Paratransit (10) samples inspected were provided, but 2 out of 5 Commuter routes samples were not provided by Roberts by the completion of fieldwork. During our reporting phase, Roberts subsequently provided the two missing DVIRs noting that vehicle ID was incorrectly documented without the "C" indicating it was a Commuter bus and was subsequently filed incorrectly.

Recommendation 5.10 We recommend that the DOT in coordination with contractors, review training programs to ensure that drivers are adequately trained on the DVIR process and requirements and that documents are retained by the vendor. DOT may also consider incorporating periodic DVIR inspections into formal monitoring procedures that are developed as a result of recommendation 4.1. We also recommend that DOT require its contractors to formally establish PM schedules (as is required by the contract) and approve them on an annual basis. In doing so, the DOT may more readily monitor PM against plan and more easily identify potential issues.

We also performed multiple analyses to evaluate the key considerations for contract compliance analysis highlighted in the RFP relating to the adequacy of staffing levels and contractor staff training programs. In instances where the contract requires a specific employee requirement or staffing ratio (e.g., mechanic to bus), we independently verified those dedicated staff were in place and that minimum personnel ratios were met. We did not identify issues with respect to these procedures.

During our interviews, it was noted that attracting and retaining skilled employees was often difficult, but it had not directly impacted either contractor's ability to deliver quality service or miss a scheduled pull out. We also reviewed qualitative information available such as on-time performance for Paratransit and HST services between July and October 2017, which averaged 94% and 92%, respectively.

The existing Fixed Route and Commuter service contracts do not have formally established on-time performance standards. We did note that the FY19 RFP has established a 90% on-time performance for Fixed Route and Commuter programs. Roberts currently monitors fleet on-time performance using GPS and tracks how each route performs throughout the day, and any significant issues are investigated and remediated, as appropriate. This is also monitored by the DOT independently and on a regular basis.

In our meetings with MEO and Roberts, we evaluated and reviewed training programs available to employees, including minimum criteria for certain employee classifications. We also reviewed and inspected documented procedures, training manuals, and employee handbooks made available by MEO and Roberts. We inspected training status reports provided to the DOT, and also selected a section of drivers and mechanics and verified that minimum certifications were in place.

As part of our evaluation of qualified staffing, we selected a sample of drivers at Roberts and MEO and verified that drivers were adequately qualified by confirming they had undergone a background check, had acknowledged substance abuse policies, passed a drug test, and had an appropriate license and endorsement to perform their assigned duties. Our analysis of the qualified contractor personnel resulted in the following observation.

Observation 5.11 Four of eight drivers inspected at Roberts had criminal convictions identified on their background check. Although Roberts described internal processes for evaluating candidates, they do not have a policy that establishes disqualifying offenses or criteria for evaluating background checks. Upon further review, we also confirmed that the County had not established minimum standards in the contract.

Recommendation 5.11 We recommend that the DOT consider establishing a policy for minimum standards of contracted personnel, specifically related to disqualifying offenses for certain positions, and incorporate those requirements into future agreements. At a minimum, we recommend that the DOT require all contractors or grantees to have formal policies in place governing candidates with criminal backgrounds.

Contract and Agreement Benchmarking:

We evaluated the contract reporting requirements that are in effect for FY18 and compared those to the contracts for services beginning in FY19. Our goal was to identify any improvement opportunities that may add value to the DOT's monitoring and oversight processes. The majority of our observations related to considerations specific to the agreement are included throughout the detailed results section in the relevant area. As noted in prior sections, the DOT has made significant enhancements to the RFPs and contracts that were awarded for the FY19 service year. These RFPs more explicitly define and establish services to be performed, including key operational tasks that are required under each contract and performance penalties.

As noted in prior sections of this report, a contract establishes performance standards, but it is the DOT's responsibility to assess how to continually monitor future performance in both a cost-effective and risk-based method. Specifically, the DOT should continue to focus on enhancing contract provisions that protect the County and develop internal controls that facilitate effective monitoring.

Observation 5.12 Although the DOT has made enhancements to the FY19 transportation service contracts, the RFPs are not benchmarked against industry best practices on an annual basis.

Recommendation 5.12 We recommend that the DOT continue its progress to develop specific, detailed RFPs for its transit programs and that management research industry trends and best practices and incorporate lessons learned into future RFPs to better manage risk and ensure the County is receiving optimal service. In addition, we recommend that the DOT compare contract requirements to policy objective, as part of recommendation 1.1, to ensure contract requirements align with the County's strategic objectives and goals.

F. Summary

Our review of Maui County's transit service planning and routes determined that the current fixed-route transit network focuses on coverage and access. The number and size of vehicles are reflective of standard transit operations of peer agencies. We observed that the DOT has not established clear programmatic goals, objectives, and policies regarding transit service standards, performance monitoring, and evaluating service changes. The establishment of formal program objectives is recommended to govern overall performance monitoring and management.

We also examined Maui County's transit program costs and found them to be higher than peer agencies average per unit of Fixed Route transit and Paratransit service. However, the Fixed Route farebox recovery ratio was better than peer agencies and the Paratransit cost per passenger trip was lower than average, indicating other forms of efficiencies. We recommend the continued monitoring and evaluation of Fixed Route and Paratransit service costs. Additionally, we observed that fixed-route transit ridership declined slightly overall from FY12-FY18, which is part of a national trend but still merits evaluation to identify factors that may be related.

Studying the County's transit funding sources and fare structure yielded important observations focused on Paratransit fares. We observed that the County has no established paratransit fare policy, and recommend that they establish one that includes overall objectives and goals. We also observe that the County receives a low amount of fare revenue per Paratransit trip when compared with peer agencies. Reviewing the Paratransit monthly pass as part of a comprehensive analysis of alternative fare structures is recommended.

Additionally, we aimed to analyze the contracts and services provided for each program to determine whether duplicate services existed between programs, and if so, assess the cost-benefit impact of eliminating the duplications. We first sought to understand each program's purpose, route locations, service times, and targeted ridership population. With this information, we analyzed the programs for potential overlaps. Our review concluded that no significant duplication of services existed across these programs. The Council Chair requested further analysis for possible duplication of services between HST Dialysis (HSTD) and Paratransit services. Our analysis concluded that minimal overlap exists – only about 4% of dialysis trips are serviced by Paratransit. Our work led us to recommend that the County continue to monitor the programs' cost-benefit and its impact on the community, which will inform future transit programming decisions.

We also aimed to assess the DOT's internal controls, including those designed to monitor contract compliance. Although certain controls had been implemented, certain DOT performance monitoring mechanisms are not sufficiently formalized or effectively designed to mitigate potential adverse impacts. To the extent feasible, we recommend that the County consider the detailed recommendations provided throughout the report to enhance internal controls and more strategically manage risk associated with contracted transportation programs.

G. Appendix I – Longitudinal Analysis

Figure 10: Quarterly Fixed Route Ridership Trends Part 1 (Source: Maui County Cost per Passenger Breakdown FY12 – FY18)



Figure 11: Quarterly Fixed Route Ridership Trends Part 2 (Source: Maui County Cost per Passenger Breakdown FY12 – FY18)

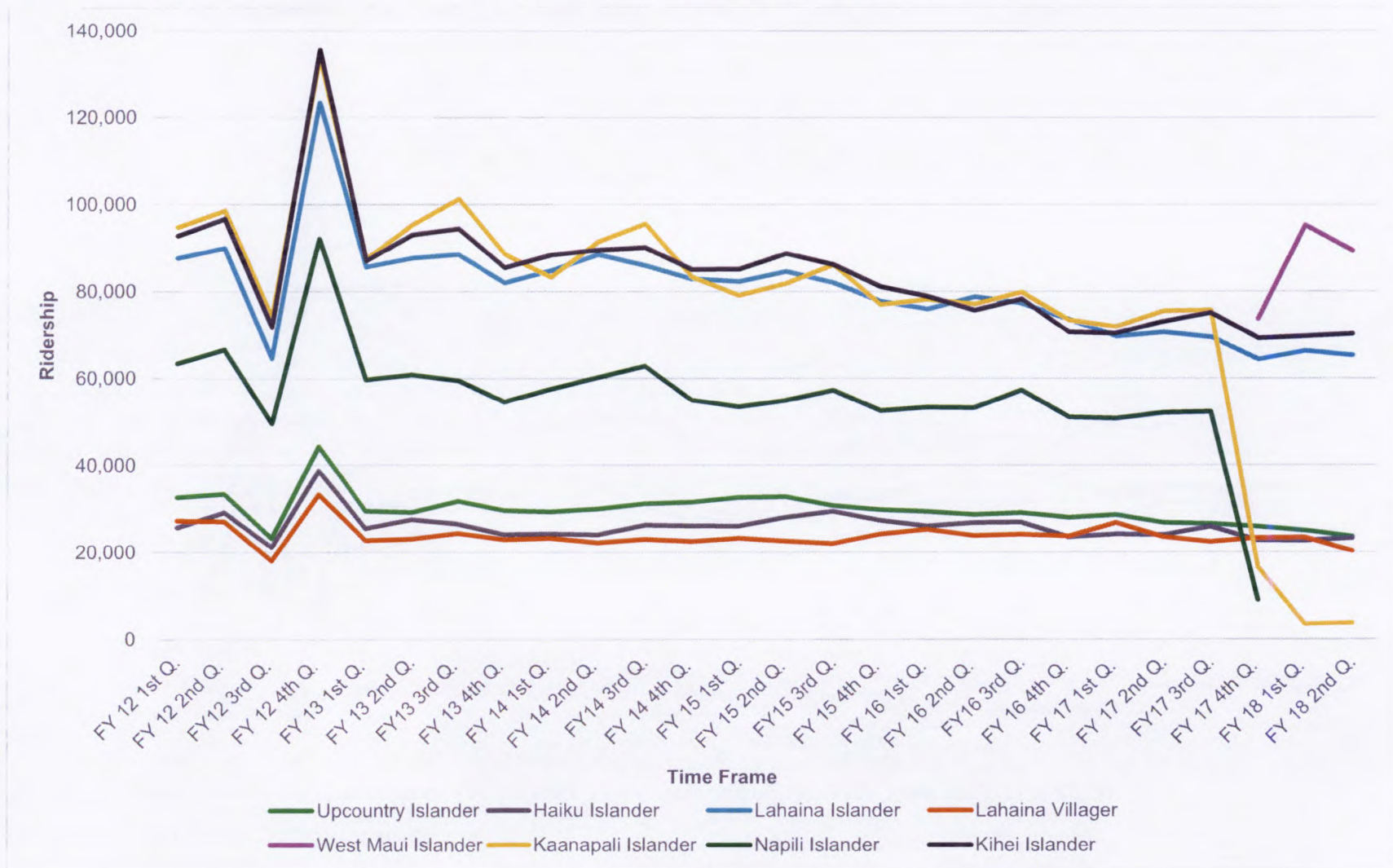


Figure 12: Quarterly Fixed Route Ridership Trends Part 3 (Source: Maui County Cost per Passenger Breakdown FY12 – FY18)

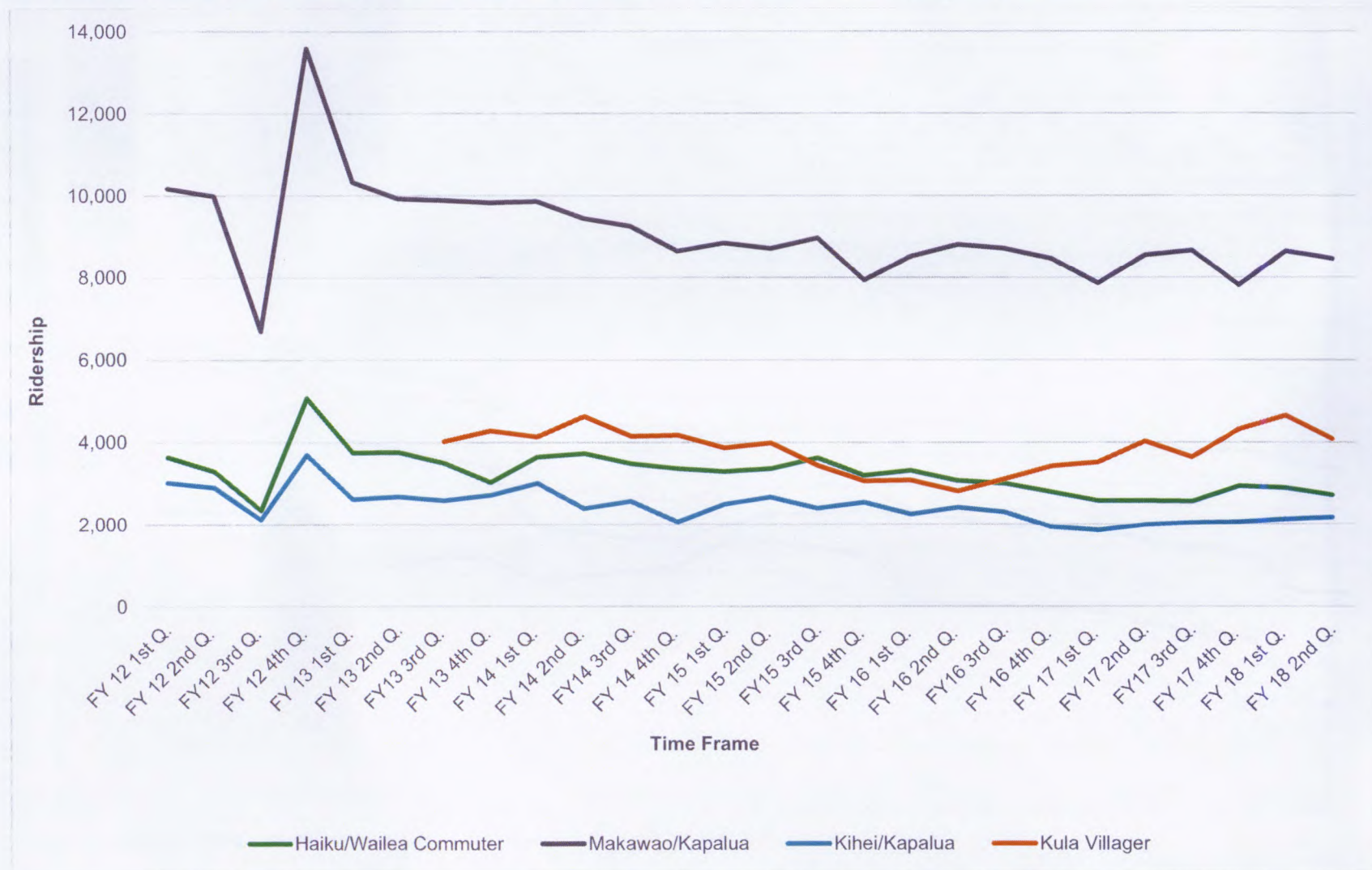


Figure 13: Quarterly Fixed Cost per Ride Part 1 (Source: Maui County Cost per Passenger Breakdown FY12 – FY18)

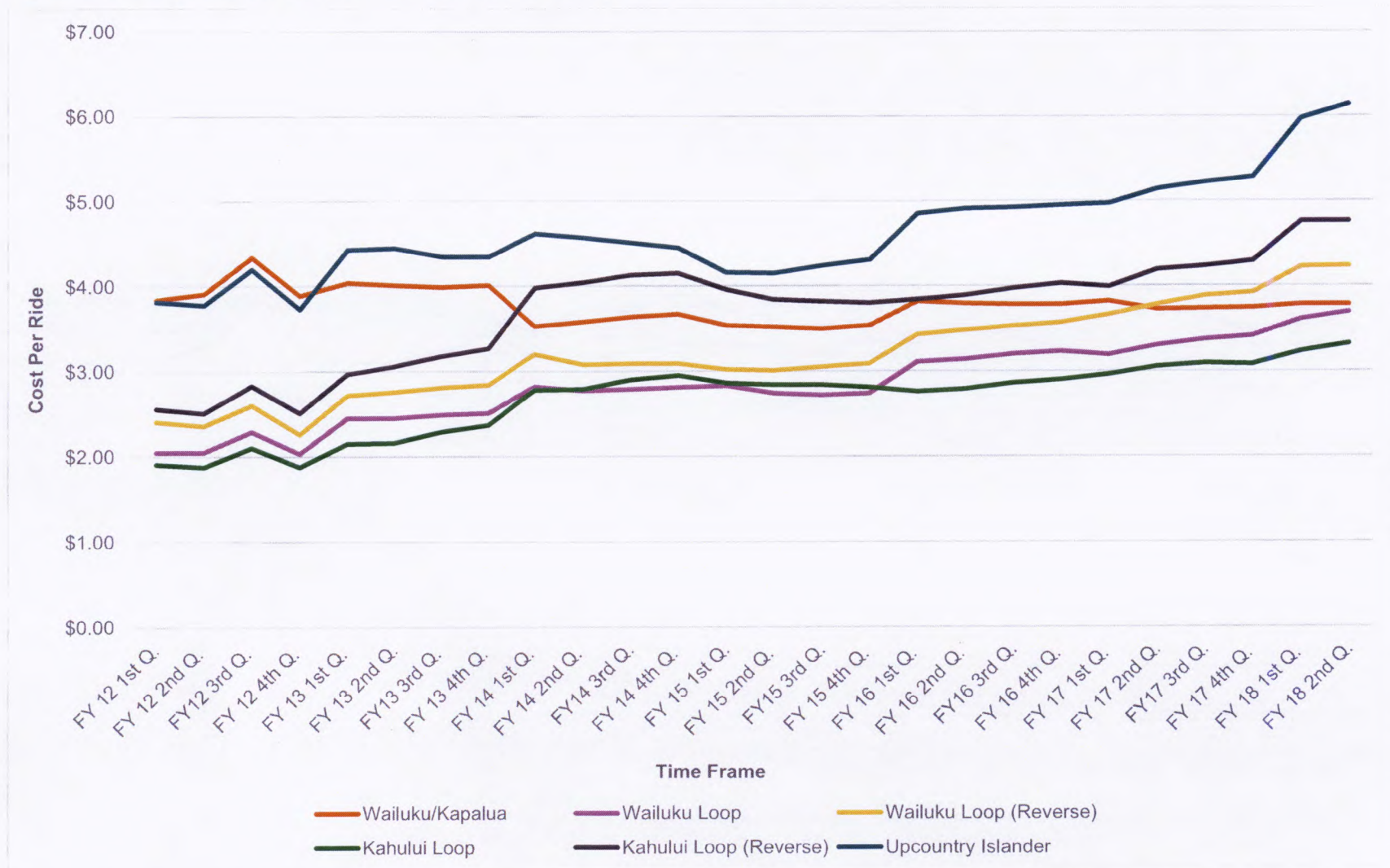


Figure 14: Quarterly Fixed Cost per Ride Part 2 (Source: Maui County Cost per Passenger Breakdown FY12 – FY18)

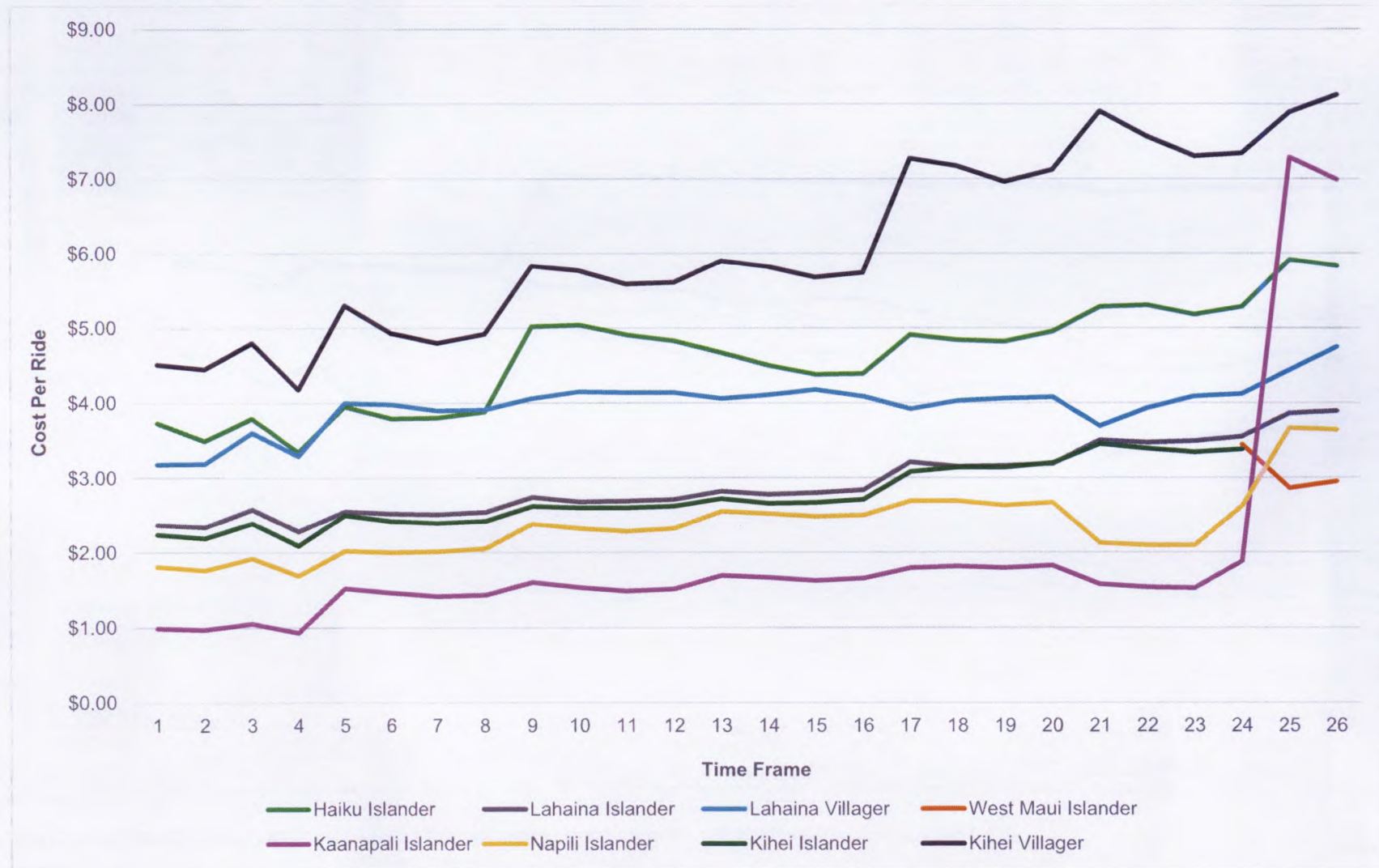


Figure 15: Quarterly Fixed Cost per Ride Part 3 (Source: Maui County Cost per Passenger Breakdown FY12 – FY18)

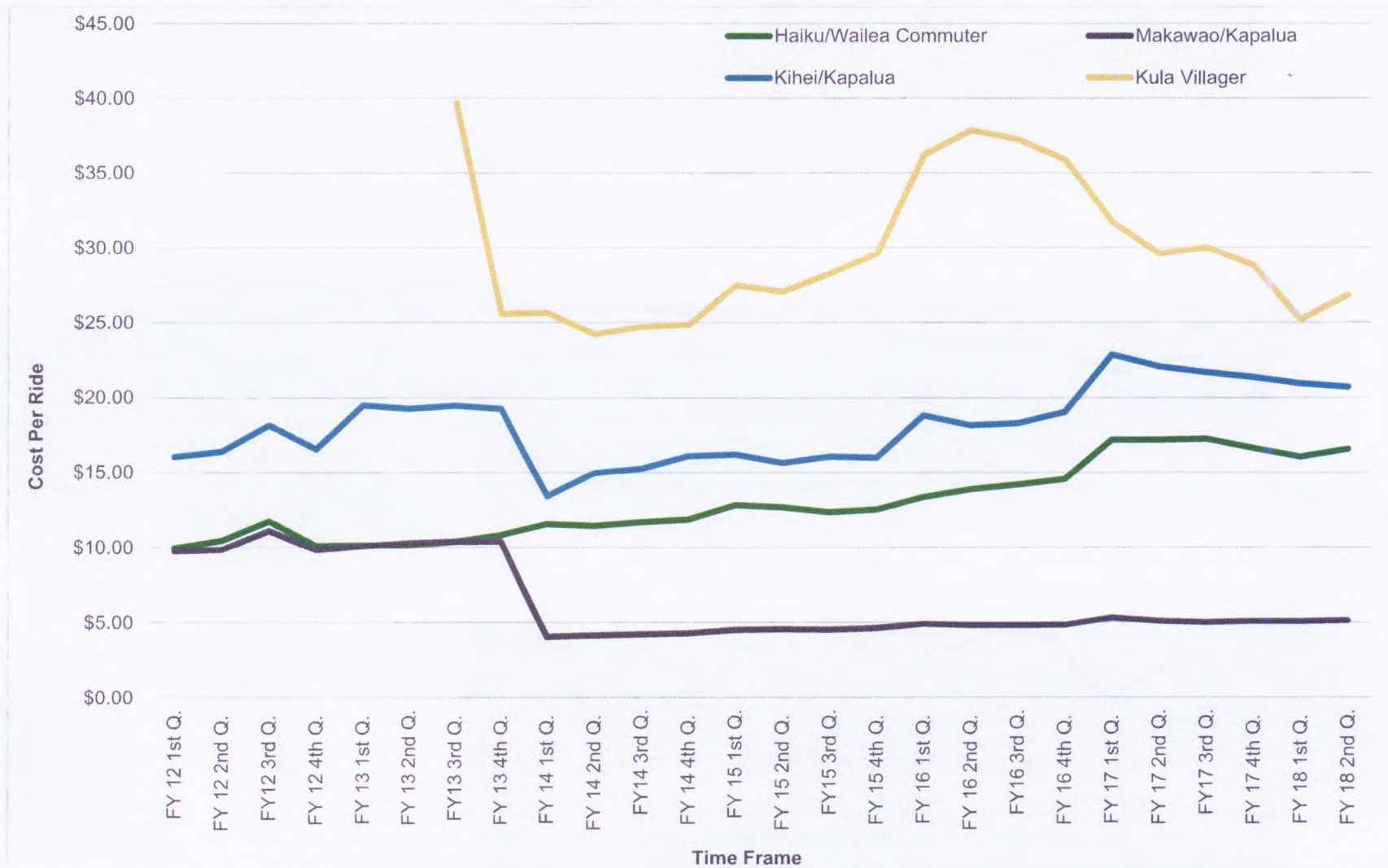


Figure 16: Quarterly Fixed Route Cost Trends Part 1 (Source: Maui County Cost per Passenger Breakdown FY12 – FY18)

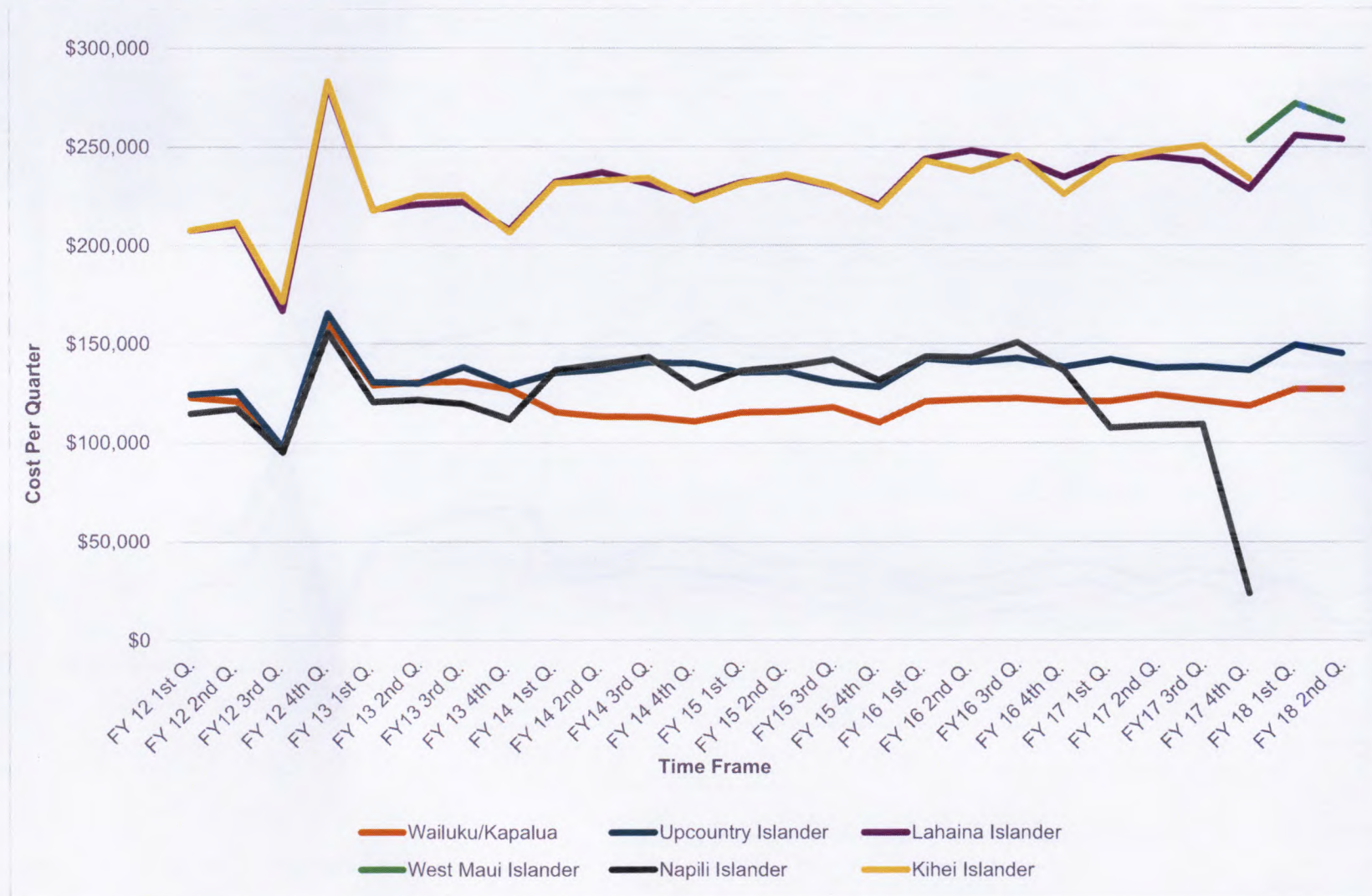


Figure 17: Quarterly Fixed Route Cost Trends Part 2 (Source: Maui County Cost per Passenger Breakdown FY12 – FY18)

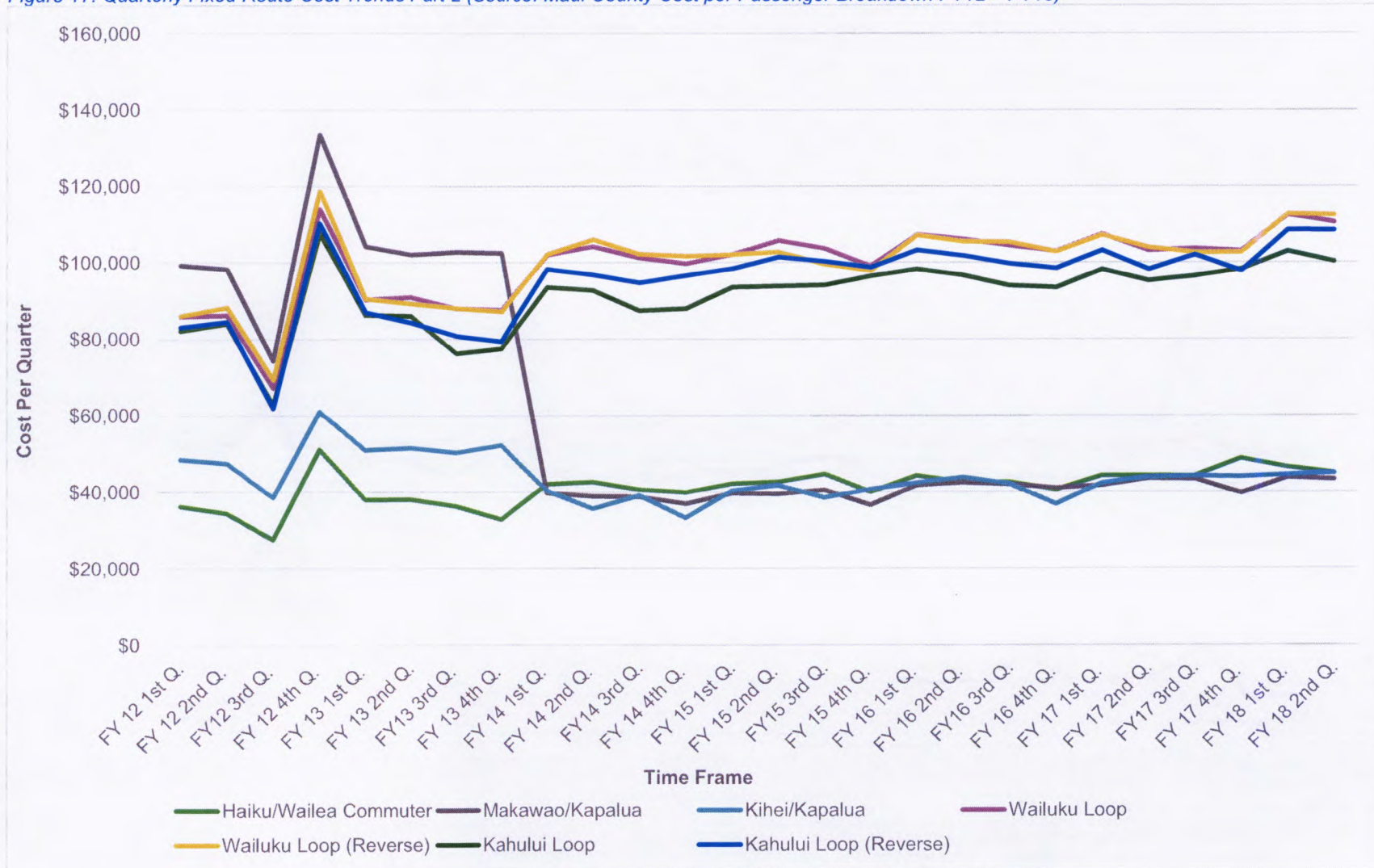


Figure 18: Quarterly Fixed Route Cost Trends Part 3 (Source: Maui County Cost per Passenger Breakdown FY12 – FY18)

