HNL Connect

Honolulu Transportation Demand Management (TDM) Plan

June 2023

HNL Connect

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Honolulu Transportation Demand Management Plan

Department of Transportation Services

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Executive Summary

The City and County of Honolulu (City), along with the Oʻahu Metropolitan Planning Organization (OahuMPO), have delivered a Transportation Demand Management (TDM) Plan for Honolulu. This document, the *Honolulu TDM Plan*, provides City overarching goals for TDM delivery, outlines existing conditions, explores best practices, and provides recommendations for a fully functioning TDM program. The program, *HNL Connect*, will be operated by the City Department of Transportation Services (DTS) and will serve residents, visitors, and employees across the island.

The development of the TDM Plan, and the *HNL Connect* program scope, resulted from a collaborative planning effort involving an interdepartmental team of City staff, stakeholders from the State of Hawaiʻi, the OahuMPO, and a variety of non-governmental organizations. Recommendations for the *HNL Connect* program establishment and implementation have also been informed by market research of Honolulu residents, and identification of best practices in comparable cities and regions.

Theme	Goal
 **1. Environment**	Improve energy efficiency and mitigate vehicle emissions by supporting and encouraging active and shared modes of travel and reducing travel through telecommuting and other measures.
 **2. Equity**	Apply context-sensitive and community-driven solutions to enhance connectivity and bolster reliable, safe, and affordable multimodal transport access for vulnerable communities.
 **3. Land Use and Development**	Ensure that land uses are integrated within a multimodal transport network through adoption of policies and with stakeholder support.
 **4. Long-term Resilience**	Operate a revenue generating and self-sustainable TDM program with regular data collection and transparent reporting to the public.

TDM in Honolulu

TDM is the use of strategies to inform and encourage travelers to maximize the efficiency of our transportation systems. This leads to improved mobility, reduced congestion, and lower vehicle emissions[1]. It is a cost-effective approach to improving transportation by maximizing mobility choices that meet and exceed traveler needs.

Historically, there has been a notable amount of TDM implementation across the island including the Complete Streets policy, Safe Routes to School, and a Restricted Parking Zone (RPZ) pilot. While these efforts did not constitute a formal TDM program, they helped set the foundation for the *HNL Connect* program that is detailed in this Plan.

HNL Connect: the Honolulu TDM Program

In order to leverage TDM productively in Honolulu, it is important that the TDM Plan go beyond traditional high-level recommendations, and focus on actionable recommendations that the City can implement directly. *HNL Connect* is the program and brand under which all TDM will be implemented. The program will be managed directly by DTS staff with other City departments and partner engagement.

In the first five years of delivery, *HNL Connect* will deliver six 'primary strategies' and provide support to a variety of additional initiatives across Honolulu. Aligning with its work, the program will maintain broad public communication through social media, and regularly evaluate its impact through regular monitoring and reporting.

The six 'primary strategies' and four 'support strategies' that *HNL Connect* will deliver are summarized below.

Primary Strategies	Support Strategies
Annual Travel Challenge – a week-long travel contest incentivizing travel by sustainable modes	**Parking pricing management –** supporting efforts to manage parking pricing encouraging the use of sustainable modes
Targeted marketing – an annual marketing campaign encouraging sustainable travel choices	**TDM education –** supporting the provision of TDM fluency training to public officials, business owners, and the public
Restricted Parking Zone (RPZ) Program - encouraging travelers to use more sustainable options than driving alone to certain destination neighborhoods	**Citywide Multimodal Efforts** – promotion of first- and last-mile travel options
Vanpool subsidy provision – encouraging vanpool usage by providing up to $500 per vanpool per month	**Carpool matching** – support for carpool matching, currently managed at the statewide level
Developer TDM Reporting - formal processes for new projects to encourage site-based TDM delivery	
TDM program for City employees - TDM strategies and incentives provided directly to City employees	

Contents

1. Introduction

TDM in Honolulu

What is TDM?

Transportation Demand Management (TDM) uses strategies to inform and encourage travelers to maximize the efficiency of our transportation system. This leads to improved mobility, reduced congestion, and lower vehicle emissions.[2] It is a cost-effective approach to improving transportation by maximizing mobility choices that meet and exceed traveler needs.

Why TDM in Honolulu?

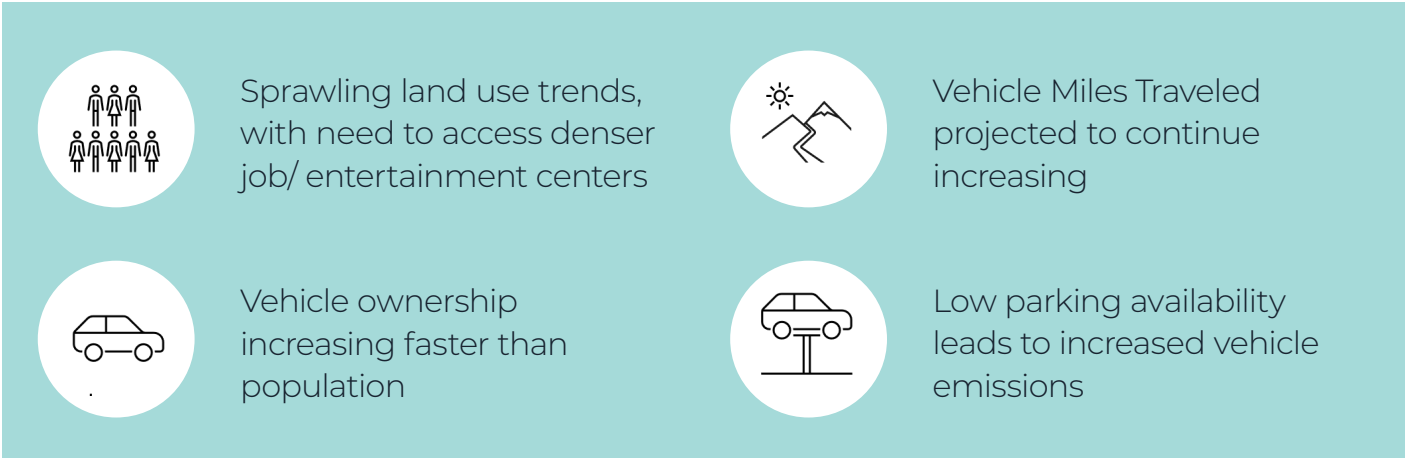
The island of Oʻahu, home to the City and County of Honolulu, is over 600 square miles (the majority is not urbanized and designated for agriculture and conservation) and has a population of roughly one million people. The most populous city in Hawaiʻi, Honolulu, has a relatively low population density of 1,664 people per square mile. These population dynamics, combined with tourism impacts, available land for housing, and a concentration of jobs in the south-southeast side of the island, have led to a lack of affordable housing near job centers and a car dependency. The result has been a self-reinforcing cycle of declining public transportation speed and unreliable travel times on the island, further and further from Honolulu's urban core.

In the 21 years leading up to 2021 the population of Oʻahu grew by 14%[3] while car ownership increased by 25%.[4] Oʻahu, has arguably too many cars, and by traffic engineering standards, not enough space along most roadway segments to efficiently move or store current levels of single-occupant use. Similarly, drivers often struggle to find parking in popular areas. Many of them show above 85% occupancy. This leads to additional congestion and increased vehicle emissions as cars drive in circles to look for parking.

The 2045 Oʻahu Regional Transportation Plan (ORTP) projects insignificant changes in mode share by 2045 without encouragement from transportation interventions like Complete Streets and TDM (see Figure 2). Given anticipated population growth and sustained rates of SOV travel, the 2045 ORTP implies an *increase* in vehicle miles traveled (VMT), travel times, and in vehicle greenhouse gas (GHG) and volatile organic compounds (VOC) emissions.

This Plan is meant to address negative impacts to long-term environmental quality and equity in Honolulu. As Honolulu strives to stay on top of increasing car ownership and congested roadways, influencing traveler behavior and encouraging a shift away from drive-alone travel through TDM will be crucial.

Figure 1 TDM need in Honolulu



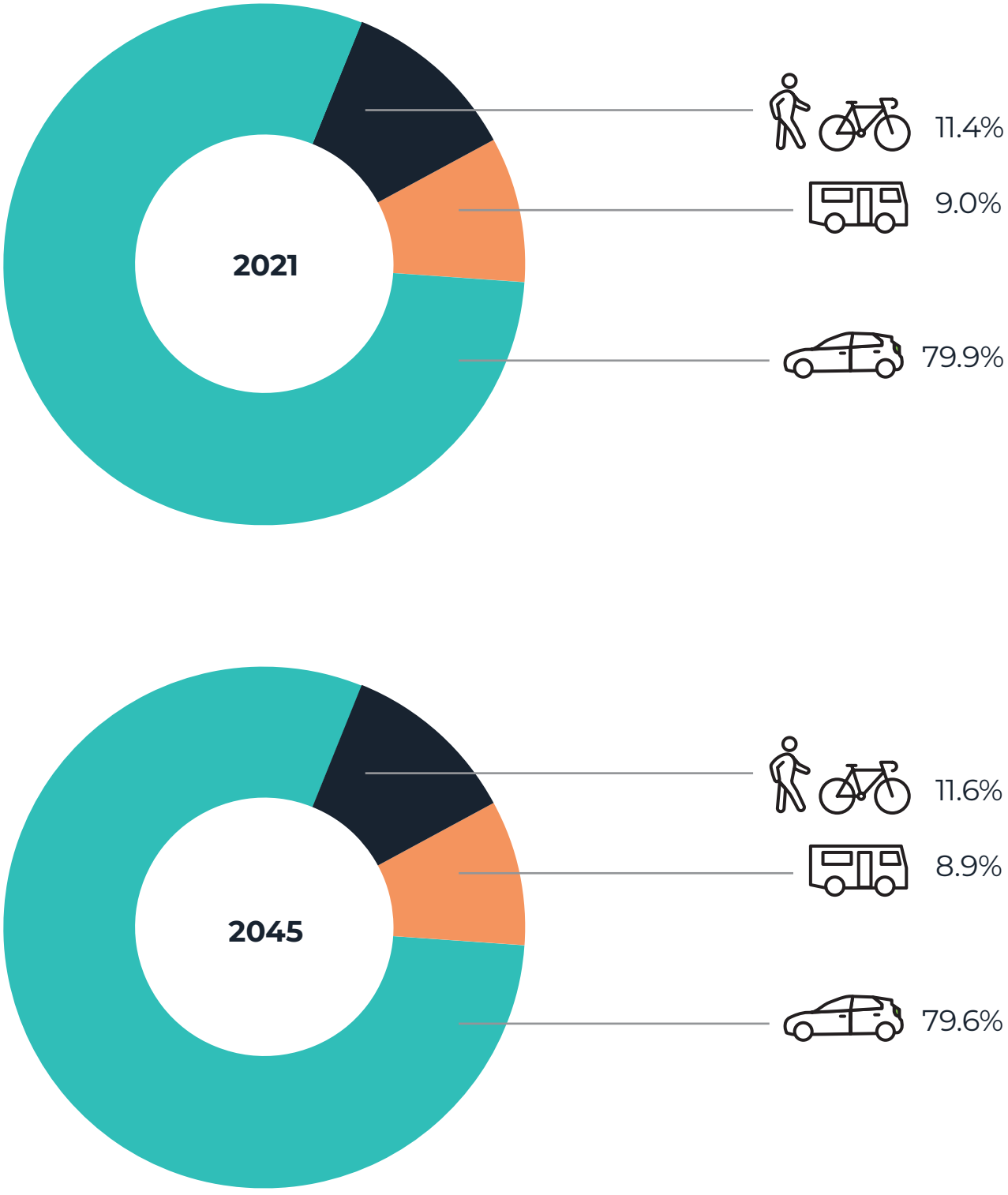


Figure 2 Mode Share in Honolulu (source: Adapted from 2045 ORTP)

Policy context

Rather than 'starting from scratch' or 'building out' of the issues described, the City is leveraging the current range of TDM-related programming and policy that exists today. These programs and policies are being implemented across the public and private sectors on both broad (up to statewide) and specific (site-based) scales. There are a number of plans and policies that support TDM principles, and conversely, which the recommended TDM policies and strategies in this Plan support. The implementation recommendations in the TDM Plan will be complementary to the existing efforts, including targeted recommendations to resource key gaps or needs, and support existing related efforts. The unique aspects of this Plan fill the voids on the road to sustainability (e.g., parking strategies and vanpool subsidies), and therefore minimize the duplication of efforts. TDM-related policies and programs addressed outside of this Plan include but are not limited to:

- Climate Action Plan (2020-2025)
- Energy Conservation and Emissions Reduction Plan for City Transportation Systems (EERPT)
- Oʻahu Regional Transportation Plan (ORTP) 2050
- Honolulu Complete Streets Law (ROH 14-18)
- Oʻahu Pedestrian Plan (2022)
- Oʻahu Bike Plan (2019)
- Vision Zero Action Plan (forthcoming)
- Honolulu Strategic Transit Plan (forthcoming)
- Oʻahu Mobility Hub Study (forthcoming)
- Hawaiʻi State Transportation Plan (forthcoming)
- Statewide Transportation Demand Forecasting Model
- Oʻahu General Plan (2021)
- Neighborhood Transit-Oriented Development (TOD) Plans
- Bikeshare Organizational Study (2014)

Descriptions of each effort and its relation to the TDM Plan is included in **Appendix A.**

The Honolulu TDM Plan

The Honolulu TDM Plan (TDM Plan) has been developed by the City and County of Honolulu (the City) to support its broader goals and regional objectives relating to climate change, active transportation, health, and equity.

How to use this document

Planning and implementing TDM effectively will require the involvement of City staff as well as a range of stakeholders in Honolulu. This Plan recommends action primarily for the City, but may also inform decision-making for other TDM stakeholders. The purpose of this document is to serve as a framework and guide to implementing the formal TDM program in Honolulu, *HNL Connect*. This Plan identifies roles and responsibilities, estimates resourcing implications, and provides justification as to why each TDM strategy was selected for Honolulu. Additionally, this document helps provide visibility and transparency to the public regarding the TDM Plan process and desired outcomes.

The Plan document is organized into five chapters:

1. Introduction

provides an introduction to TDM as a public service and suite of sustainability approaches, and explains why the TDM Plan was created

2. Plan Development Approach

outlines the process undertaken by the City and project team in developing the TDM Plan.

3. Program Detail

introduces the HNL Connect program and provides an overview of its elements. This chapter describes program management, implementation roles and responsibilities, and monitoring requirements

4. Action Plan: Strategy Implementation

provides a more detailed description of each TDM element or strategy to be implemented through the HNL Connect program.

5. Taking TDM into the Future

outlines near-term actions or 'next steps' as the City moves toward program implementation.

Vision and Strategic Priorities

Through the early TDM Plan development process, the City developed a vision and set of priorities and goals for TDM delivery in Honolulu. The Vision Statement was co-created with City staff, elected officials, and local stakeholders:

"All travelers in the City and County of Honolulu have access to, and are empowered to choose effective, sustainable, and affordable multimodal transportation options that reduce stress on the transportation network."

Stemming from the Vision Statement, the TDM Plan consists of four strategic priorities, divided into four key themes, each of which has been connected to targeted goals (see Figure 3). Chapter 3 of this document outlines how these goals relate to additional measurable and actionable Key Performance Indicators (KPIs) and the metrics tied to each of the recommended TDM strategies. They are described in more detail in Section 3.6 of this document.


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Figure 3. TDM Plan Strategic Priorities and Goals

1. Environment

Improve energy efficiency and mitigate vehicle emissions by supporting and encouraging active and shared modes of travel and reducing travel through telecommuting and other measures.

Goals

- Increase sustainable mode share
- Decrease vehicle miles traveled (VMT)
- Increase awareness of alternative transportation modes

2. Equity

Apply context-sensitive and community-driven solutions to enhance connectivity and bolster reliable, safe, and affordable multimodal transport access for vulnerable communities.

Goals

- Increase accessibility
- Reduce travel cost burden

3. Land Use and Development

Ensure that land uses are integrated within a multimodal transport network through adoption of policies and with stakeholder support.

Goals

- Increase parking return on investment
- Maximize efficiency of parking assets

4. Long-term Resilience

Operate a revenue generating and self-sustainable TDM program with regular data collection and transparent reporting to the public.

Goals

- Increase TDM reporting
- Manage a self-sustaining TDM program

HNL Connect: The Honolulu TDM Program

In alignment with the *Long-Term Program Resilience* priority, the key product of the TDM Plan process was the establishment of the *HNL Connect* TDM program. *HNL Connect* will be managed directly by DTS staff, but will engage with other City departments as needed. The TDM Plan sets out basic guidelines for *HNL Connect* such as processes for regular communication and impact reporting. It also provides detailed descriptions of the main TDM strategies that will be directly ('primary strategies') or indirectly ('support strategies') supported by *HNL Connect*, including:

Primary Strategies

- **Annual travel challenge**– A promotional, week-long contest hosted annually, that will allow the public to compete for and win prizes and incentives for traveling by sustainable modes.
- **Targeted marketing** – An annual marketing campaign will be tailored to encourage sustainable travel mode choice by a unique target group, or promote a sustainable mode of travel (e.g., bikeshare).
- **Restricted Parking Zone (RPZ) program** – Expanded from its current 'pilot' state, RPZ permit revenue will subsidize Mobility Wallets for residents who choose not to purchase a parking permit, encouraging the use of more sustainable travel to certain neighborhoods destinations.

- **Vanpool subsidy provision** – To encourage an increase in vanpool usage, the City will offer subsidies to vanpool riders and drivers.
- **Developer TDM reporting** – Formal processes for new projects across the City will encourage site-based TDM delivery as a complement to the *HNL Connect* program.
- **TDM program for City employees** - A program of TDM strategies and incentives provided directly to City employees will ensure more targeted TDM delivery for over 8,500 commuters.

Support Strategies

- **Parking pricing management** – Supporting the establishment of an equitable parking pricing scheme that will encourage the use of sustainable modes, optimize off-street parking utilization, improve roadway safety and reduce congestion and emissions related to vehicle circling.
- **TDM education –** Supporting delivery of TDM education will increase conceptual knowledge and fluency training for public officials, business owners, and the general public.
- **Citywide Multimodal Efforts** - Entrepreneurial public-sector and private-sector delivery of Microtransit and Micromobility services**,** both of which support first- and last-mile travel, will be supported to make the use of public transit more effective.
- **Carpool matching –** Carpool matching will be facilitated through HIRideshare, currently managed at the statewide level.

2. Plan Development Approach


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Approach Overview

The TDM Plan team approached Plan development in four phases, as defined below and captured in Figure 4.

1. **Background Assessment** – A review of on-island existing conditions related to TDM, and a comprehensive look at best practices more broadly. This phase also included the bulk of the stakeholder outreach, consisting of interviews, the establishment of a project Steering Committee, and an island-wide market research survey.
2. **Identification of Strategic Priorities and Goals** – Establishment of Strategic Priorities and Goals to frame forthcoming TDM decision-making and continual work in Honolulu, along with program level objectives related to outputs, actions, and inputs
3. **Strategy Evaluation** – Identification of a range of potential TDM strategies to be considered for Honolulu, and evaluation of strategies against the established goals and feasibility metrics. This phase concluded with the refinement of these potential strategies into a formalized set of appropriate strategies for delivery in Honolulu.
4. **Action Plan Development** – Creation of a detailed action plan for TDM delivery in Honolulu, primarily through the establishment of *HNL Connect*. This phase also involved the development of supportive material that will ultimately accompany the TDM Plan.

Figure 4. TDM Plan Approach[5]

Phase 1: Background Assessment

This initial phase of Plan development consisted of gathering in-depth knowledge of TDM-related policies and practices in Honolulu in order to establish an understanding of the types of strategies and programs that would have the most impact locally. Key methods employed included an existing policy and planning review, cataloguing of existing TDM delivery, market research analysis, and extensive stakeholder outreach. The TDM Plan team also worked alongside the team leading the Honolulu Transit Comprehensive Operations Analysis (COA) project, to identify some of the challenges associated with the current utilization of City parking infrastructure.

Existing Conditions

The review of existing conditions pertinent to TDM included an assessment of land use and land use trends, the socio-economic characteristics of Honolulu and Oʻahu, transportation and prevailing travel behavior, and the current state of TDM in Honolulu.

While no formal TDM program, plan, or policy existed for the general public in Honolulu prior to this Plan, a notable number of TDM-related initiatives have been implemented across the island. Some examples include the Complete Streets Policy, Safe Routes to School (SRTS), a Restricted Parking Zones (RPZ) pilot, and the (forthcoming) Vision Zero Action Plan.

Many institutions also offer the sale of monthly transit passes, and on average, monthly pass users pay almost 20% less per trip than the individual ride fare. Through such cost-saving incentives, the HOLO card program provides encouragement to ride transit, and supports the reduction of the travel cost burden for Honolulu's transit riders. These efforts, amongst others, have helped to set the stage for a more aggressive and comprehensive TDM program in Honolulu.

Key challenges to TDM implementation on the island include (see Figure 5):

- Sprawling land use trends: over the past 40 years residential development in Honolulu has happened primarily in suburban areas. Although the City has experienced urban growth, population density of urban areas is still relatively low[6]. This provides challenges in managing VMT and emissions, as it is more likely that suburban residents need to travel to the urban core for work or entertainment.
- Large numbers of service-industry employees: the service industry tends to have variable travel habits that are harder to serve with fixed route pre-timed service. Individuals with variable schedules are also more difficult to reach when marketing or providing education for TDM services.
- An underpriced public parking product: Honolulu's City-owned monthly parking rates are cheaper than the market supports in all neighborhoods. In some, such as Kukui Plaza and Hale Pauahi, City parking monthly rates are priced at less than 50% of market rate.[7] This encourages residents and visitors to drive to their destination with less consideration for the cost of parking.

Additionally, the TDM programming that does exist has not been consistently monitored to determine the impact of specific interventions. It is challenging to determine the impact of the TDM measures in place and the associated work being done.

The full Existing Conditions report can be found in **Appendix B.**

Figure 5 TDM challenges in Honolulu

Best Practices

A Best Practices case study of TDM programs across the globe identified key takeaways for consideration in developing *HNL Connect*. Case studies relevant to Honolulu were selected to ensure that potential lessons learned would be appropriate for the local context. A total of six case studies were presented.[8] Key considerations that were identified in the Best Practices Report are summarized to the right:

- **TDM Program Structure** – Program structure matters. Would developers and/or employers be required to implement TDM (e.g., through an ordinance or similar regulation) or would they be encouraged to voluntarily participate, with incentives.
- **Performance Targets** – Program-wide Key Performance Indicators (KPIs) and strategy-specific metrics should reflect program goals. TDM Plan KPIs should be attainable and measurable. Program metrics should be trackable over time.
- **Audience** – The identification of the program's target audience(s) should consider program scale (including associated implications not only for the magnitude of intended TDM impacts, but also for funding and administration) and how implementation would affect the target audience(s) in various implementation timeframes.
- **Funding and Administration**

– Dedicated funding sources are essential for sustained TDM implementation and effective monitoring and enforcement of TDM measures. Some TDM measures (e.g., new parking pricing models and innovative revenue collection) can be dedicated sources of TDM program funding.

- **Monitoring and Reporting** – TDM program tools/materials (e.g., applications and monitoring reports) should be standardized to consistently monitor both KPIs and strategy-specific metrics, and mitigate the administrative burden on City staff, as well as the target audience(s). Instruments such as surveys are commonly used and effective at capturing and tracking travel mode share.
- **Stakeholder Support** – Education and guidance are essential in helping the target audience(s) of TDM understand what is expected of them and will ensure that they have the appropriate resources to successfully comply with requirements.

The Best Practices case study review resulted in six key considerations to guide the development of Honolulu's TDM Plan:

- Overall program goals or strategic priorities should demonstrate clear value to employers, developers, and others across the island.
- Targets should be attainable, measurable, and trackable over time.
- Audience and scale should be considered when defining program strategies.
- A dedicated funding source will likely be needed to provide sustained support and implementation, as well as effective monitoring and enforcement.
- For any established development requirements, the City should consider mitigating administrative burden on developers and City staff.
- Education for employers and developers, who can deliver their own site-based programs, is critical.

The full Best Practices report can be found in **Appendix C.**

Stakeholder Engagement

Stakeholder outreach and coordination was conducted throughout the TDM Plan's development. Primary engagement activities included:

- Interviews with key stakeholders
- Steering Committee meetings
- A market research survey

Each of the engagement activities is further summarized to the right:

Interviews

Seven interviews were carried out with government agency representatives, transportation specialists, and hotel property owners/managers from the following organizations:

- Bikeshare Hawai'i
- City and County of Honolulu Department of Planning and Permitting (2 interviews)
- Marriott Kyo-ya Hotels
- OahuMPO
- Sheraton Kyo-ya Hotels
- Ulupono Initiative

The interviews were designed to gain an understanding of the interviewees' familiarity with TDM, and focused on topics related to existing TDM efforts, related policies and programs, broader goals and objectives, and gaps and opportunities to TDM delivery in Honolulu.

Steering Committee

A Steering Committee was established to provide input throughout TDM Plan development. The Committee was comprised of members from various City departments, local community-based organizations, and partner agencies (e.g., the State, OahuMPO). Key contributions of the Committee included:

- Offering diverse perspectives regarding TDM issues
- Supporting the identification of the vision and desired outcomes
- Providing insights on transportation challenges
- Serving as TDM program champions

Market Research Survey

A market research survey was conducted in order to better understand Oʻahu residents' transportation behaviors and attitudes toward sustainable modes of transportation. Island-wide outreach was conducted through email and telephone in Fall 2021.

Participants included residents 18 and over.[9] The survey was comprised of questions falling into seven general categories:

- Household location and composition
- Travel characteristics
- Employment
- Vehicles in household
- Perceptions on various modes of travel
- Travel mode influencers
- Demographics (age, income, gender, ethnicity, origin, education)

The analysis provided insights into the barriers, motivations, and attitudes towards various modes of travel. In addition to other stakeholder input and the Background Assessment, the findings from the market research survey informed the prioritization of the TDM measures included in the TDM Plan. Key findings from the market research survey included the following:

- The majority (66%) of respondents were categorized as 'heavy drivers', using their vehicles five to seven days a week, on average;
- Finding parking in residential areas is challenging for approximately 25% of Oʻahu drivers;
- Those who live in the urban core are more open to adopting more sustainable travel modes;
- The top five most important travel mode influencers were: saving time, ability to carry items/cargo, saving money, air conditioning/ climate control, and privacy; and
- The majority (62%) of respondents indicated they would be more willing to use metered street parking if they could pay using credit/ debit cards.

The full Market Research Report can be found in **Appendix D.**


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Parking Pricing Consideration

Research has shown that there are powerful relationships between parking management strategies (such as parking pricing), personal travel behavior, and GHG emissions. Parking pricing is often used as a tool to discourage drive-alone travel, increase reliability, and reduce vehicle travel due to circling in search of available parking. Some of the benefits of parking pricing include:

The price of parking influences drivers' choices to seek alternative solutions to driving. Parking is expensive to build (a free-standing garage space in Hawai'i can cost up to $57,000[10]); therefore, it is sensible for the City to consider utilizing TDM and other methods to decrease the demand for parking, rather than build more. Increasing parking pricing requires consensus and when done sensibly and equitably, can generate revenue to further support TDM initiatives and the multimodal network, increasing access to key destinations for everyone.

When considering the design of a TDM program in Honolulu, it was critical to review the City's parking inventory to gain an understanding of how it might encourage or discourage drive-alone travel. The City currently manages over 3,100 on-street metered parking spaces, including approximately 1,800 Smart Meters (which allow for payment via phone or credit card) and 1,300 coin-based meters. It is worth noting that the City will soon be transitioning from coin-based meters to Smart Meters.

In Summer 2022, the City conducted a review of their managed parking inventory as part of the Honolulu Transit COA design process and ahead of the expiration of the current parking management vendor contracts. The review revealed the City, as of 2023, is spending just under $11 million on parking maintenance and operation annually, and generating only $6.7 million in revenue. In short, the City is *losing* over $4.75 million annually (see Figure 6).

The City's COA Consultant Team identified that parking in City-owned facilities is currently priced anywhere between 15% and 80% below the market rate seen in privately-owned garages. Three different pricing scenarios (low/medium/high levels of intervention) were explored to project the impacts of potential parking pricing increases. They found that the 'mid-level' scenario, which would bring the City-owned parking inventory in line with island market rates, would generate 40-60% more revenue. It was also estimated that this scenario could decrease automobile travel by 0.8% and increase transit and active (bike and pedestrian) travel by 1.3% and 1.2%, respectively. This represents thousands of trips per day taken through an active transportation mode.

This approach would result in significant environmental benefits such as lower carbon emissions and space requirements. As shown in Figure 7, the average personal vehicle emits almost nine ounces of carbon dioxide per person miles traveled and requires over 104 square feet of space per occupant.[11] Reducing the demand for parking and increasing the efficient use of existing parking infrastructure will enable land to be used in a way that offers more impactful societal benefits (e.g., green space/urban parks, bicycle and pedestrian infrastructure, affordable housing, etc.).

Observed Honolulu Customer Payment Preference

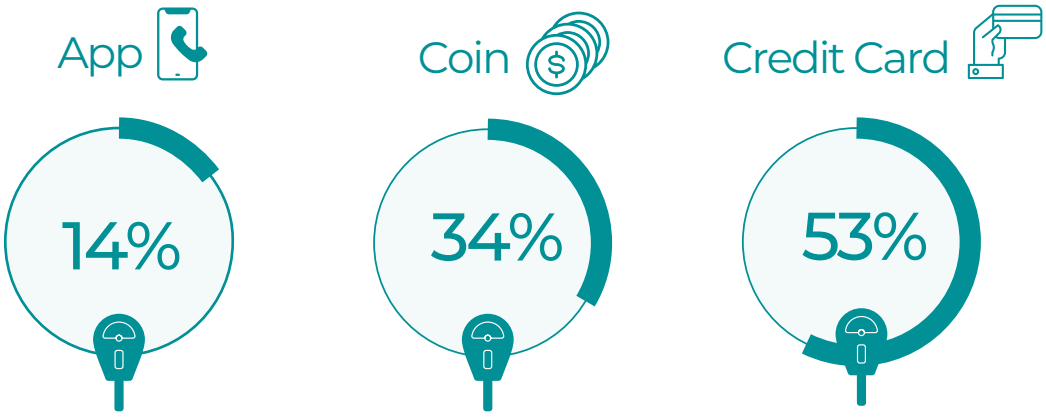
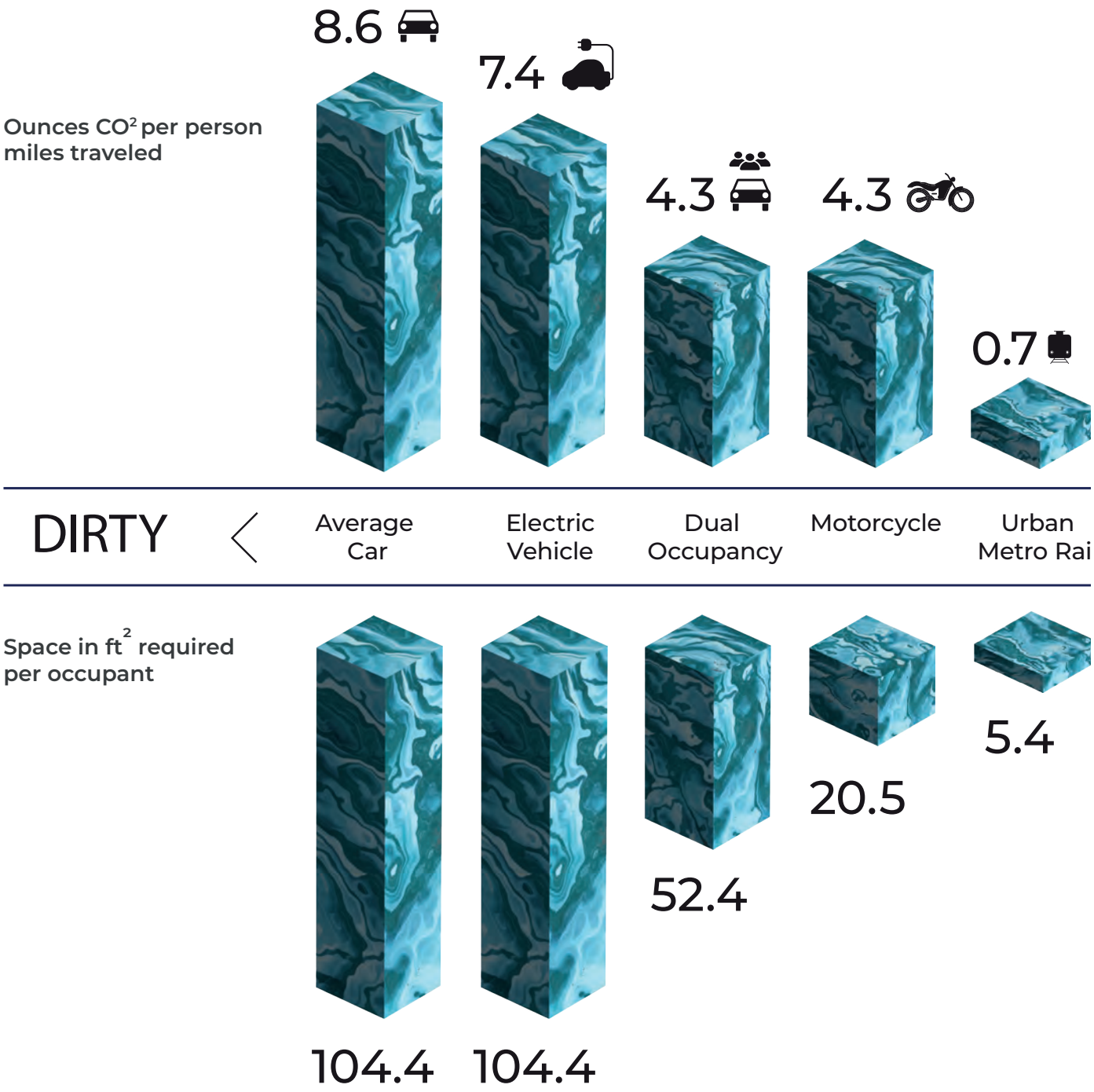
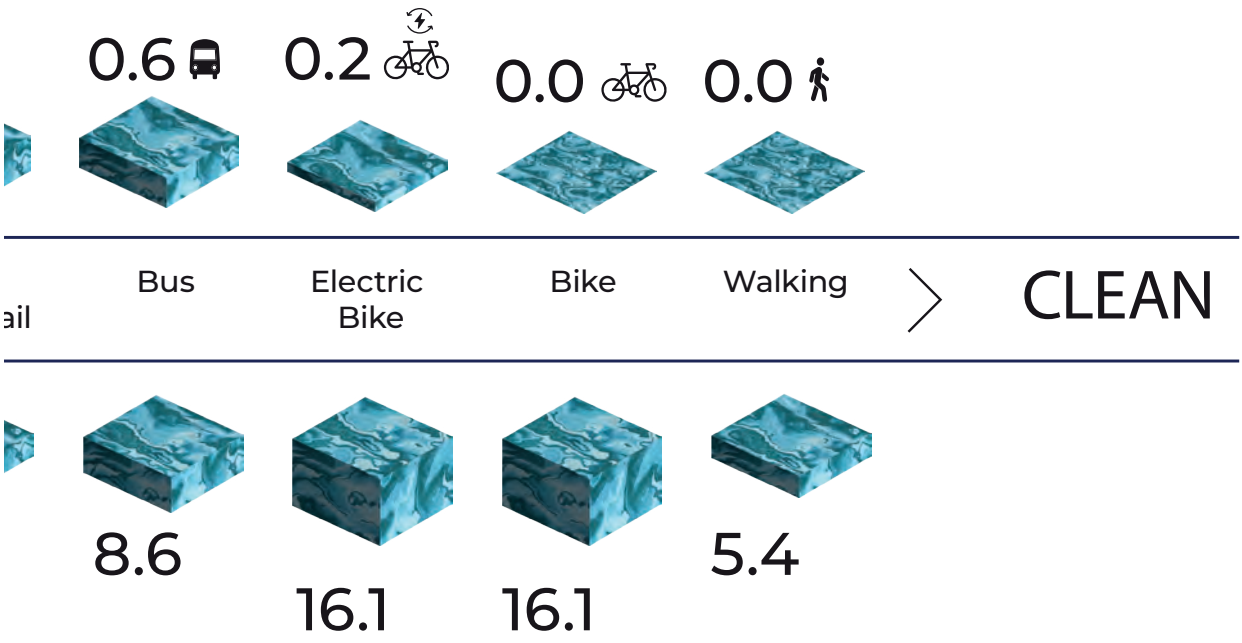


Figure 7. Carbon Emissions and Space Requirements by Mode (source: Adapted from 2021 Right-of-Way Widths for Planned Street Improvements)

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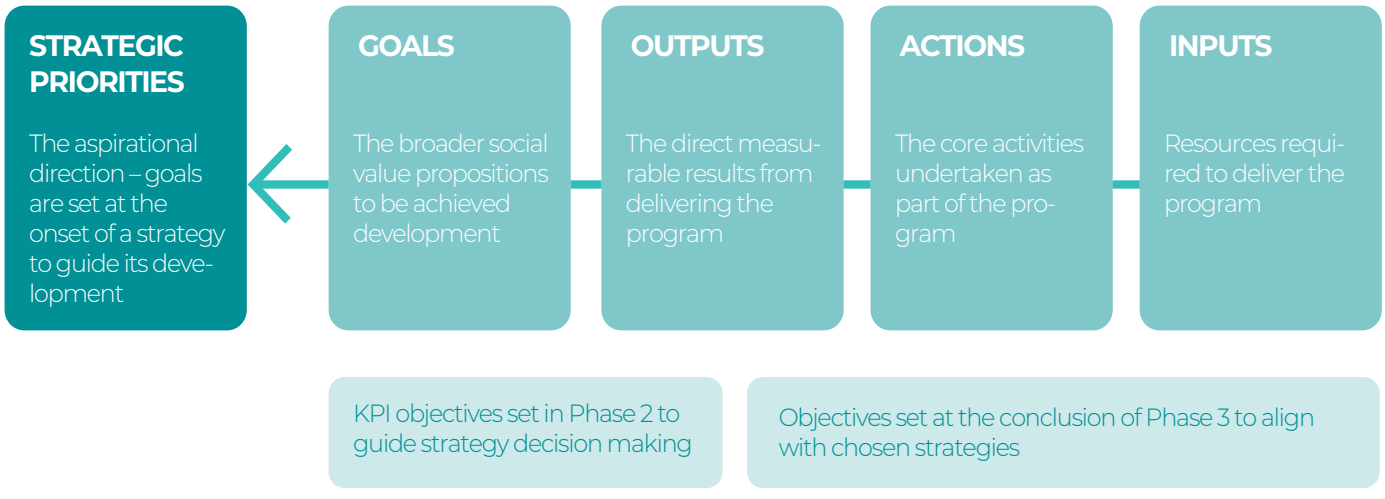
Phase 2: Goals and Objectives Identification

The TDM Program's goals and objectives were developed based on the logic framework depicted in Figure 8.

The logic framework is a strategic framework that breaks down a strategy, program, or project into discrete elements and allows each element to be evaluated alone, as well as part of a holistic strategy, program, or project.

The Strategic Priorities set the aspirational direction for the *HNL Connect* program, and were established early on in the TDM Plan development process. Further, goals were defined in order to guide strategy decision-making. The Strategic Priorities and Goals, in addition to the Background Assessment and stakeholder input, guided the prioritization and selection of *HNL Connect* strategies. The process for the prioritization and selection of the strategies is further described in the following section.

Figure 8. Logic Framework



Phase 3: Strategy Evaluation

Following the development of the goals and outcome-based objectives, a comprehensive 'long list' of over 70 potential TDM strategies was compiled. The strategies consisted of infrastructure, policy/plan, service provision, and TDM programs and support measures.

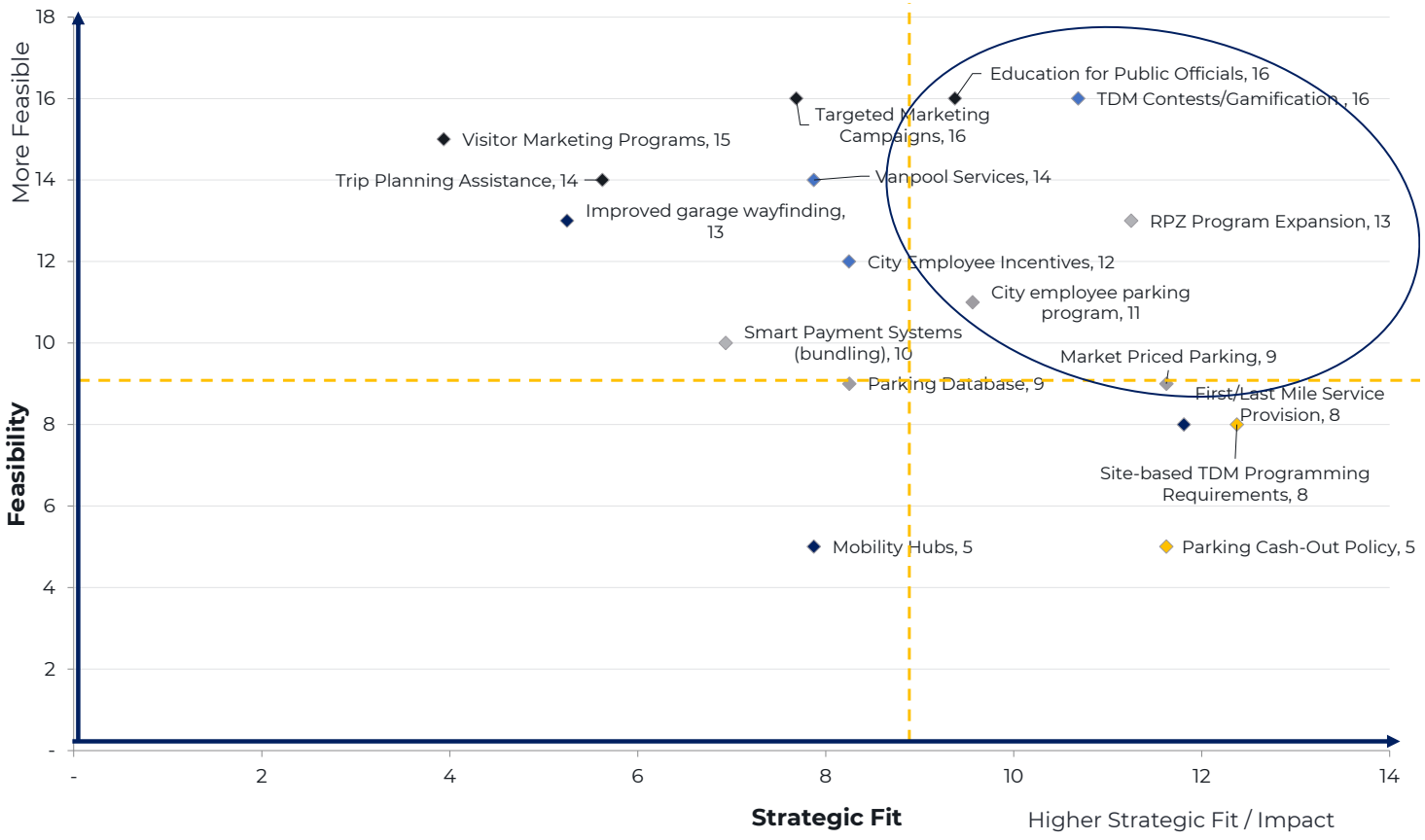
Key insights from the Background Assessment phase helped to inform the identification of relevant strategies for further consideration.

Sixteen of these 70+ strategies were retained for further evaluation and consideration.

The measures were further evaluated through the lens of critical success factors, objectives, constraints, and dependencies in order to prioritize the strategies with the best strategic fit, impact, and feasibility for successful implementation in Honolulu. Figure 9 summarizes the evaluation approach, where each strategy was evaluated and scored based on its strategic fit and alignment with the four program goals, and its feasibility.

The project team and Steering Committee then provided further feedback and discussion to ultimately identify the final list of Primary and Support strategies that would be formalized in the TDM Plan (outlined above in section 1.2.3 and in Chapter 4).

Figure 9. Mapping Feasibility vs. Strategic Fit



Phase 4: Action Plan Development

Once the strategies were determined, the team developed an Action Plan to guide the implementation of the strategies themselves. The Action Plan (provided in Chapter 3) describes funding sources and staffing requirements for the *HNL Connect* program. It also provides detailed implementation guidelines for each strategy, highlighting processes, recommended partnerships, and metric collection processes.

Although not directly included in the Action Plan text, the following items were also developed:

- Detailed brand guidelines for the *HNL Connect* program;
- A social media guide, tracking list, and sample content;
- Draft Administrative Rules for the Restricted Parking Zone (RPZ) program;
- Tools to support the developer TDM Plan reporting process (including a developer handbook, notification letter templates, and an internal tracking and reporting tool);
- Educational material such as one-pagers for the general public and for agencies to utilize to further TDM education more broadly; and
- Supportive material to be used within the City Employee TDM program.

These items were developed to advance existing TDM programs (e.g., the RPZ program) during the Plan's development, and to ensure that *HNL Connect* has the necessary supporting resources for an expeditious launch and implementation.

3. Program Detail


KEEP AREA BETWEEN
CARS CLEAR

Program Overview

TDM initiatives managed by the City will fall directly under the *HNL Connect* program umbrella. The City will also support and monitor other TDM initiatives envisioned by *HNL Connect* that will be implemented in the private sector and non-profit arenas, and by the general public. *HNL Connect* includes an outward-facing brand intended to identify what events, activities, and efforts the program recognizes as TDM, and call out where the program is a sponsor or partner. The branding is also intended to be present as the City communicates on social media and other online platforms, implements TDM strategies, and presents annual reports of TDM program impacts.

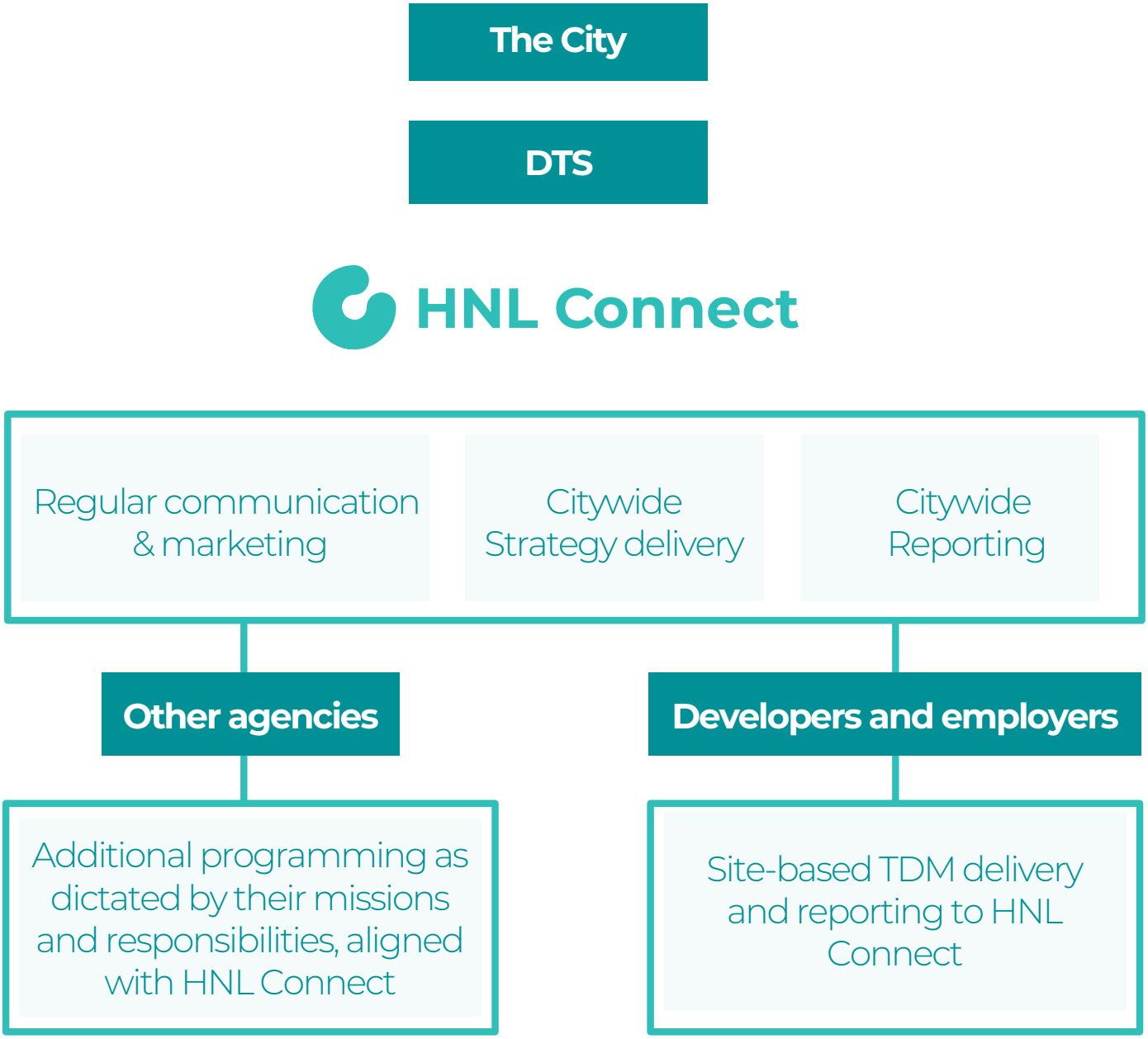
This chapter defines the broad roles, responsibilities, and processes that are required to maintain the *HNL Connect* program. Chapter 4 provides a detailed review of each of the strategies that will be implemented through *HNL Connect*.

TDM Program Administration and Ownership

As is depicted in Figure 10, the *HNL Connect* program will be led by the Department of Transportation Services (DTS). DTS is responsible for the multimodal movement of people and goods on various city transportation systems. The Department's goal is to provide increased safety for all users of the transportation systems and increased quality of life for residents. This is done by providing a balance between travel modes such as private vehicles, transit, bicycles, and walking.[12]

DTS staff, responsible for overall program delivery, will coordinate with other departments as needed, and will coordinate with developers and employers who will provide their own on-site TDM programs.

Figure 10. ***HNL Connect*** Program Structure



Staffing and Funding

The following sub-sections describe the planned resourcing (funding and staffing) for *HNL Connect*. Collectively, the program will be funded through federal, state, and local funding, and staffed by the City.

Federal Highway Administration (FHWA) Funding

Beginning in Fiscal Year 2024, the City will allocate $1 million annually (80% FHWA funding, 20% local match) to execute *HNL Connect*. These funds will cover the major operations of the program described in the following sections. This funding will support the purchase of TDM technology tools including, but not limited to, monitoring, compliance, and information-sharing platforms, and the provision of incentives and subsidies for more sustainable transportation choices such as transit, ridesharing, and active transportation.

City and County of Honolulu Staffing

In addition to the FHWA funds that will support operation and maintenance of the strategies identified below, the City, through the Department of Transportation Services (DTS), will support the program directly through provision of a *HNL Connect* Program Manager. The Program Manager is responsible for maintaining the various sub-programs directly supported by the City, managing consultant contracts, and enabling cross-departmental coordination.

Branding

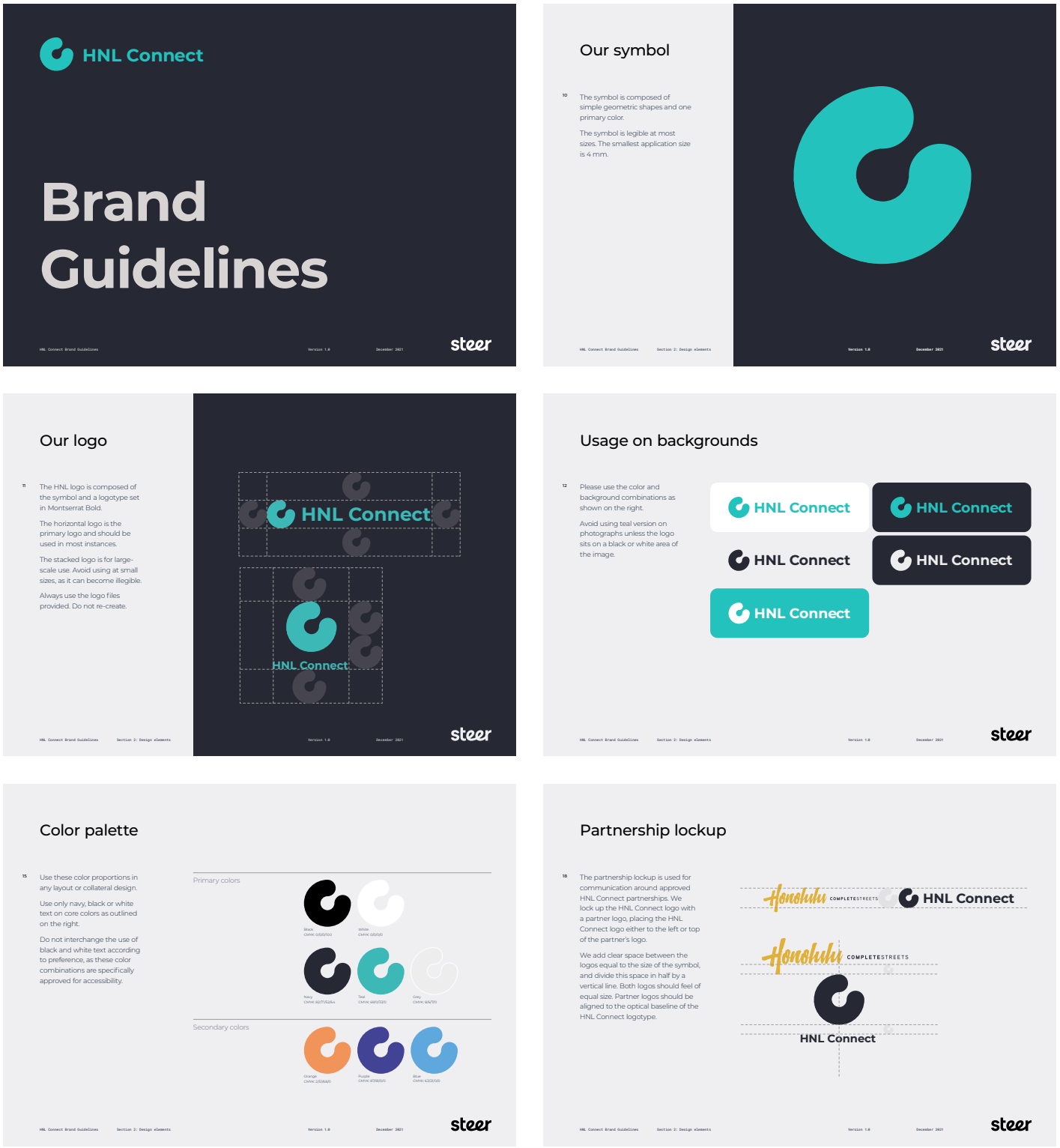
The *HNL Connect* brand was developed to invoke connection and alignment, encouraging Honolulu's residents, employees, and visitors to travel more efficiently. An excerpt from the *HNL Connect* Brand Guidelines is provided in Figure 11.

Brand guidelines for *HNL Connect*, along with a set of logo and iconography assets, have been provided to ensure the City is able to maintain brand integrity as it implements *HNL Connect*.

Brand values include:

- **Empathy**: Being human and appreciating other individuals' humanity. Being considerate and understanding.
- **Service**: Getting a chance to save other peoples' time. Making things simpler for others; planning ahead of time and anticipating needs.
- **Focused**: It's a never-ending process of getting better at what you're doing. Acting with intention and mindfulness.
- **Inviting**: A team player approach; being open for the pass. Providing welcoming experiences to our customers.
- **Cooperation**: Taking the interests of all into account. Seeing ourselves as part of the community.
- **Engaging**: Engaging the responsibilities with passion, presence, and inspiration. Supporting others in doing the same.

Figure 11: HNL Connect Brand Guidelines



Ongoing Communication

The *HNL Connect* program will maintain an online presence through regular updates to the City's Complete Streets (CS) website, as well as social media posts.

Website Communication

The City's CS website has an embedded page dedicated to TDM. It currently houses information about the TDM Plan project, as well as links to reports, memos, and educational material.

As the *HNL Connect* program is implemented, the website will continue to be maintained, and can be used as a location for:

- Flyers and event notices
- Links to strategy or partnering program-based resources
- Guidance for developers
- Annual program reports

Transportation Demand Management Plan Factsheet

Purpose of the TDM Plan

The City and County of Honolulu is currently developing a Transportation Demand Management (TDM) Plan to improve transportation choices, reduce vehicle miles traveled, and to increase walking, bicycling, rideshare and transit use on the island.

The purpose of the TDM Plan is to help achieve the City and County's transportation, environmental, economic, health and equity goals in line with its existing policies.

Did you know?

- 97% of working-age residents on Oahu have access to transit
- 44% of households have access to one or no cars (10% of which have access to no cars)
- 67% of commuters drive alone to work
- The vehicle economy costs the island $14.3 billion annually
- TDM is successful! The Oahu Vanpool program has reduced 2.5 million commuter miles and 1.9 million lbs of CO2 emissions

Honolulu COMPLETESTREETS

What will the plan do?

- Create a plan for Honolulu that is guided by targets and evaluation measures.
- Develop and implement strategies that reduce demand on the road network and shift trips to walking, bicycling, rideshare, and transit use.
- Enhance awareness of TDM and encourage sustainable travel behaviors through marketing and education.

What is TDM?

TDM consists of a toolkit of strategies, policies, and programs to better manage transportation needs. Strategies that reduce, re-mode, re-time, and/or re-route trips can:

- Reduce congestion by managing travel demand with supply
- Reduce energy emissions by supporting more efficient and sustainable modes of travel
- Increase land dedication for non-parking uses, such as housing and mixed-use development
- Improve public safety, health outcomes, equity, and supporting livability

Examples of TDM on Oahu

Oahu Vanpool Incentive Program

Blue Planet Foundation's Oahu Commute Challenge

Residential Restricted Parking Zone pilots

University of Hawaii at Manoa's Commuter Program

Biki Employer Plans for employee bikeshare

This plan was funded in part through grants from the Federal Highway Administration and Federal Transit Administration, U.S. Department of Transportation. The views and opinions of the agency expressed herein do not necessarily state or reflect those of the U.S. Department of Transportation.

Social Media Communication

To avoid saturation across a multitude of City-run social media accounts, the *HNL Connect* brand and messaging will be shared through the pre-existing CS and DTS accounts on the following platforms:

- Instagram: **@hnl.completestreets**
- Facebook: **Honolulu Complete Streets**
- Twitter: **@hnldts**

Currently, the cadence for posts on the CS Instagram account is one post per week, on average. The Transportation HNL Twitter page currently has more activity with more than three Tweets per week, on average. The Honolulu CS Facebook page currently posts about twice a week, on average.

It is recommended that *HNL Connect*-branded content be posted about once per week (in addition to CS-related content) on Instagram, Facebook, and Twitter. Post content will fall under two categories

- **News posts** – provide the City with the opportunity to post about policy changes, promotions, upcoming meetings, and more in order to raise awareness. News posts are typically time-bound and intended to be posted ahead of or within a few days of an event or change.
- **Information posts** – are not time-bound and can be developed in advance and posted regularly to ensure brand recognition upkeep, provide useful information and education about multimodal travel, and educate the public about transportation systems that are already running.

The City will maintain the *HNL Connect* Social Media Guide which provides more detail on social media post design and content, and on alignment between *HNL Connect* and other City brands.

Monitoring and Evaluation

TDM Data Collection, Compliance Reporting and Monitoring, and Information-Sharing

The ongoing implementation and evolution of *HNL Connect* will lean on an evidence-based approach, informed by the regular collection and analysis of data at both the citywide and site level.

Monitoring and evaluation of the program will be comprised of qualitative and quantitative data collected by the City, the private sector, and the public. Table 2 summarizes the primary tools that will be leveraged to assess the impact and success of the *HNL Connect* program. More information about data collection for each strategy is outlined in Chapter 4.

Table 2. HNL Connect Monitoring and Evaluation Tools

TDM Software Platform	**Annual Travel Challenge** – the software platform will facilitate the creation of the 'backend' of the Annual Travel Challenge, including the creation of the customized challenges, collection of participant-provided data, and supporting ongoing communication with participants through built-in notification and communication tools. Data points, such as the total number of participants in the annual challenge and the number of recorded trips by mode, are examples of the type of participant-provided data that the software will be able to track. **Vanpool Subsidy Provision** – the platform will allow for robust vanpool management functions. *HNL Connect* will likely use the platform to support the distribution of subsidies to eligible participants. **City Employee TDM/Parking Program** – the software platform will streamline the delivery of City commuter services and the associated data collection through distribution of electronic surveys and advanced data analysis and subsidy distribution directly to City employees.
Complete Streets Social Media Accounts	**Targeted Marketing** – the City's Instagram, Facebook, and Twitter accounts will not only be used for ongoing TDM marketing and engagement, but also for the annual targeted marketing campaigns that will be specific to a unique group or travel mode. Examples of campaign-specific data points that *HNL Connect* will track include the subscriber growth rate per campaign, and engagement metrics such as the total number of likes, comments, and shares published during the campaign period.

Developer TDM Plan Tracker	**Developer TDM Reporting** – The City will track the Developer TDM program through an excel-based tool that will provide insights into what sites across the city are participating, what strategies they are implementing, and who is in compliance. It will also track responses to the online Travel Behavior Survey received by individual commuters.
Annual Travel Behavior Survey	**Developer TDM Reporting** – The City will prepare an electronic travel survey for property owners to distribute to their tenants and employees in order to identify how people are typically traveling to/from their site. This helps both the City and site-based Transportation Coordinators understand where programs or strategies might be adjusted to best support non-SOV travel, and allows for the calculation of VMT contributed by individual users at the site level.
Annual TDM Plan Status Report	**Developer TDM Reporting** – The Annual TDM Plan Status report will outline the strategies originally included on the TDM Strategies Plan, and will confirm whether they are being delivered as agreed. The report will also allow the City to understand where new strategies have been implemented by properties.
RPZ Program Tracker	**RPZ Program Management** – The City's RPZ Program tracker will serve as a centralized repository for the administrative elements of the RPZ program. Data points that the tracker will include are RPZ locations, neighborhoods which have expressed interest in the program, the total number of RPZ permits and associated revenue, as well as the total number of mobility wallets funded through RPZ permit sales.
Strategy-Specific Results Reports	**All *HNL Connect* 'Primary' Strategies** – A strategy-specific results report will be prepared for the six *HNL Connect* 'primary strategies.' These reports will include monthly activity trackers and quarterly summaries describing the status of each strategy. These reports will serve as key inputs to the *HNL Connect* Annual Report (described in the following section).
Island-wide Reporting Sources	Various State departments such as the Department of Business, Economic Development & Tourism Context and the Department of Transportation provide island-wide data. *HNL Connect* will include island-wide data in an Annual Report to allow the program outcomes to be presented in context of island-wide trends. It is expected that the program will report on: • Vehicle Miles Traveled (and associated emission-related metrics) • Mode share • Parking utilization • Transit ridership and bikeshare usage

Annual Reporting

Ongoing monitoring of *HNL Connect* will include input and performance-related information generated from the implementation of each of the TDM strategies. This is done in order to prepare an annual *HNL Connect* Program Report ("Annual Report"). The Annual Report, to be released in December each year, will summarize the strategic outcomes of the program. The summary will include progress toward program-wide KPIs and strategy-specific metrics, and qualitative data describing the status of each of the initiatives (e.g., key accomplishments and next steps). The target audience for the Annual Report will be decision-makers and the public.

The first Annual Report will be released in February 2025, and report on progress in calendar year 2024. This initial Annual Report will serve as the baseline to which future reports will be compared. It will be essential to maintain a useful and replicable set of KPIs, metrics, and reporting methods that promote consistency in quantitative metrics and qualitative content. A high-level outline of the Annual Report is summarized in Table 3.

Table 3. Annual TDM Program Report Outline

Topic	Key Content
Background	Definition of TDM Why the *HNL Connect* TDM Program was established *HNL Connect* Program goals Relationship to broader City initiatives/goals Summary of the report's purpose and structure
Monitoring TDM Strategies	Summary of each TDM strategy, description of key activities and accomplishments for the past year Table of associated strategy-specific metrics, and review of change from previous year to demonstrate progress toward targets Standalone report of developer activity (see subsection 4.3.1)
Monitoring TDM Impact	Summary table of progress toward program-wide KPIs and island-wide progress Summary of performance metrics (graphs, charts) Descriptive, qualitative analysis on strategies' progress
Conclusion and Next Steps	Summary of findings or conclusions about the year in TDM (overall and strategy by strategy), recommendations for strategy implementation adjustments, and/or issues and opportunities to address going forward

Objectives and Targets

The Logic Framework

The Logic Framework was developed in the 1960s by the United States Agency for International Development (USAID) to improve processes for identifying key elements of, and structuring a monitoring process for, their projects. It has since been adopted internationally and across a variety of industries.[13] The Logic Framework provides a joint review of overall program impact through outcome-based objectives and detailed objectives. It is designed for each of the *HNL Connect* program's TDM strategies and allows the City to identify where strategies can clearly demonstrate their impact, as well as where those ties may be less apparent. These instances may indicate a lack of data or highlight areas where there are opportunities to evolve within the program.

The Logic Framework includes the following elements:

- **Inputs**: The resources required to operate the program. In this case, programmatic inputs highlight budget and staff time for each of the TDM strategies.
- **Actions**: The work that the *HNL Connect* team will undertake in order to implement each strategy.
- **Outputs**: Measurable accomplishments from each strategy. It is expected that most outputs in the form of metric values will quantify the results of the actions identified.
- **Outcomes (Goals)**: Directly tied to stated objectives of the program. Outcomes Goals generally demonstrate wider benefits.

The Logic Framework is helpful in addressing the following questions (see Figure 13):

- What **inputs** are required to implement each strategy and the *HNL Connect* program overall?
- What **actions** are being taken to achieve current program goals and desired outcomes by the *HNL Connect* team? Are they aligned to these intended achievements?
- What measurement **outputs** have been recorded? What do they communicate about the overall success of each strategy?
- What are the current project or program goals and desired **outcomes**? Were they achieved?

Establishing targets along the logic chain ensures that the *HNL Connect* program will be able to pivot or make adjustments as required. For example, if the program is receiving the intended number of click-throughs on their e-newsletter, but are not receiving the intended number of engagements or shares to demonstrate broader awareness, it may mean content should be adjusted or that the initial output-based target is too low. Upon evaluating their metrics each year, the *HNL Connect* program will review the appropriateness of their targets and adjust accordingly.

Figure 13. Logic Framework Summary

INPUTS	ACTIONS	OUTPUTS	GOALS
Resources required to deliver the program Example: Time and budget spent on design and distribution of targeted marketing campaign e-newsletter	The core activities undertaken as part of the program Example: Design and distribution of targeted marketing campaign e-newsletter	The direct measurable results from delivering the program Example: Click-throughs in targeted marketing campaign e-newsletter	The broader social value propositions to be achieved Example: Increased awareness of alternative transportation modes

Figure 14. KPIs and Metrics Hierarchy

KPIs and Metrics

KPI and metric targets for each goal and subsequent objective have been established based on a variety of factors, such as previous programmatic data collected by the City and their partners and use of the Trip Reduction Impacts of Mobility Management Strategies (TRIMMS©) model.

Utilizing the logic framework as a guide, the *HNL Connect* program will collect and report on three categories of data annually (see Figure 14):

- **Program-wide KPIs** demonstrate broad program-wide progress toward the *HNL Connect* goals. Annual reporting will demonstrate the cumulative progress of the Strategy KPIs (described below).
- **Strategy KPIs** have been established where tangible and measurable outcomes from each strategy can demonstrate progress toward program-wide KPIs. Annual reporting will include data points collected from strategy implementation, and may involve calculation or extrapolation (for example, estimating VMT based on reported travel mode and typical trip distance).
- **Strategy-specific metrics** include key 'action,' 'output', and 'input'-based objectives that have been developed for each strategy. Annual reporting on these metrics helps to identify whether there may be opportunities to strengthen program delivery in order to make better progress toward Strategy and Program-wide KPIs.

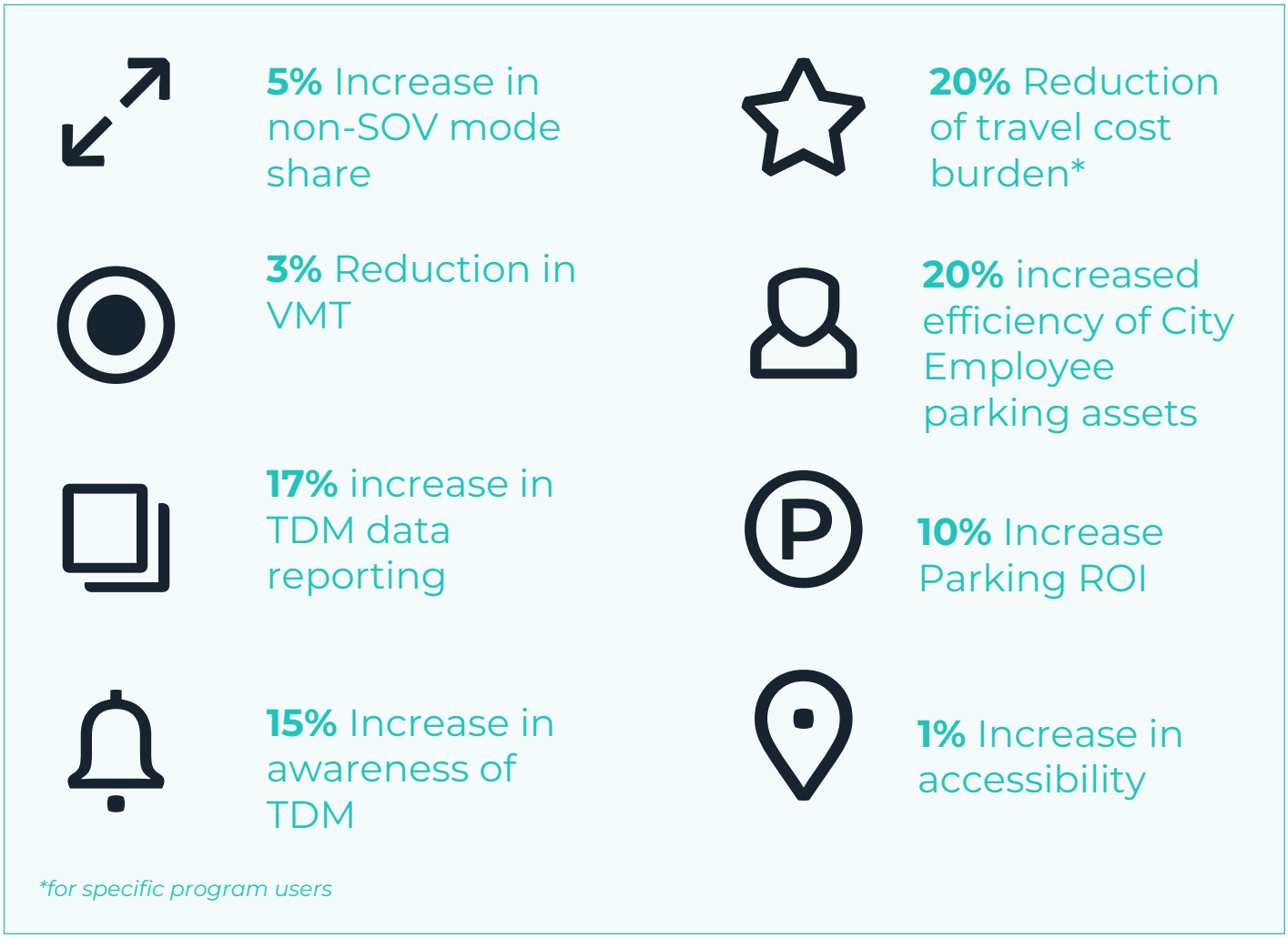
Program-wide KPIs have been presented in Figure 15. Strategy KPIs and Strategy-specific metrics are detailed within each strategy description in Chapter 4. A full table of program metrics can be found in the Appendix.

Establishing a baseline

As *HNL Connect* consists of all new or expanded programs, overall program and strategy objectives are based on percent change or growth over an established baseline.

That baseline will be established through the program's first Annual Report, set to be produced in January 2025. All Annual Reports will provide quantitative data tied to each of the established or current objectives, and Annual Reports beginning in January 2026 (describing calendar year 2025) will also detail change over the 2024 baseline numbers.

Figure 15. Program-wide KPIs and targets



Island-wide Progress

Many of the goals associated with the Plan and *HNL Connect* are also influenced by factors outside of TDM delivery. For example, island-wide VMT depends on overall trends such as car ownership, infrastructure progress, land use, and the state of the economy. While TDM provisions will influence VMT, it is unlikely to be the sole factor in its annual change.

While the KPIs and metrics described above are designed specifically to review the impact that *HNL Connect* will have toward each goal, it is important to view that in the context of island-wide progress. The *HNL Connect* Annual reports will also include the Island-wide metrics identified in Table 4.

The *HNL Connect* program will also continue to monitor whether additional island-wide metrics might be beneficial to report, and if not already in existence, will work with the City to identify means of collecting relevant metrics.

For each island-wide metric, *HNL Connect* will report on the difference between the change experienced annually, and the change in the related program-wide KPI. This dual reporting will allow the City to understand the program's impact toward broad island-wide goals relative to factors outside of its purview.

Table 4. Island-wide Metrics for Annual Report

***HNL Connect* Goal**	**ISland-wide Metric**	**Data Source**
Increase sustainable mode share	Island-wide non-SOV mode-share	US Census Bureau - American Community Survey (ACS)
Decrease Vehicle Miles Traveled (VMT)	Island-wide Vehicle Miles Traveled	Department of Business, Economic Development & Tourism - State Data Book, VMT for Honolulu County
Reduce travel cost burden	Percent of cost of living related to transportation	State of Hawai'i - Housing and Transportation (H+T) Index
Increase parking Return on Investment (ROI)	Annual City parking budget vs. parking revenue	City budgets
Maximize efficiency of parking assets	Parking utilization rates	Parking garage and meter technology

Additional Data Tools

While the preceding program is intended to demonstrate clear linkages between the *HNL Connect* program and its direct impact through measurable KPIs, there are other methods and tools that can be used to generate 'metadata' related to TDM and broader outcomes of trip and VMT reduction. This data is helpful as a method of inference to corroborate or disprove TDM reporting through KPIs. Such tools include, but are not limited to, online trip logging and anonymized/ aggregated travel pattern monitoring.

TDM Software Platforms

TDM Software Platforms provide a platform for travelers to indicate (through web or mobile apps) how and where they have traveled, allowing employers or agencies to keep track of individual trip-level data. These tools tend to result in accurate data in smaller group-level settings (such as through an individual employer who can generally verify travel mode in exchange for high-level rewards) or over smaller periods of time (where less long-term effort is required to provide correct data).

It is anticipated that the *HNL Connect* program will use a tool like this to:

- Facilitate the Annual Travel Challenge
- Support vanpool subsidy administration
- Track participation and travel habits for City employees

Such tools sometimes have challenges associated with long-term use over large geographies with less oversight, as participants receive less encouragement to track their trips on a daily basis, or set up automatic tracking without maintaining the habits they have selected on the platform. While the City may decide to allow the general public to log trips throughout the year, it is not recommended that a trip logging tool be utilized as a primary data source outside of the two more specific identified uses highlighted above.

Travel Pattern Data Providers

There are a number of data vendors who offer tools that utilize anonymized and aggregated data from smartphones and navigation devices to display travel networks, routes, and volume across North America. They allow agencies to access information about travellers (typically by a percentage or ratio of total travellers) based on set geographic locations at specific times, showing where high volumes originate, and which travel mode sites are accessed.

Travel habits are influenced by many factors beyond just TDM, so even if data was compared before and after a TDM strategy was implemented, it would likely be difficult for these tools to demonstrate the impact of the TDM strategy directly, particularly when viewing travel habits citywide. Still, the level of granularity accessible through these tools may be useful in demonstrating the impact of TDM strategies in more discreet cases (for example, looking at travel modes for employees accessing a large employer site during the Annual Travel Challenge week). As the *HNL Connect* program evolves, the City may wish to explore how such tools might support future TDM monitoring and reporting needs.

4. Action Plan: Strategy Implementation


Honolulu COMPLETE STREETS
RESTRICTED PARKING
ZONE A
015754

Strategy Overview

The *HNL Connect* TDM strategies fall into two major categories:

- **Primary Strategies:** these strategies will be the main focus of the program, making up roughly 80% of program time and budget. For the public and those who interact with each strategy, they will be branded with the *HNL Connect* look and feel, helping to raise awareness for the program overall. Primary strategies fall under two sub-categories:
  - *HNL Connect*-Managed: These strategies fall under the sole discretion of the City's DTS and the *HNL Connect* team
  - *HNL Connect*-Partnered: These strategies still fall under the *HNL Connect* brand umbrella and will be largely staffed by DTS and the *HNL Connect* team. They also require specific and regular collaboration with other City entities or departments.
- **Support Strategies:** these strategies describe efforts that are already planned or underway in Honolulu through key partners such as other City departments, state agencies, and non-governmental organizations. The DTS and the *HNL Connect* team will provide support for those agencies through activities such as:
  - Participating in meetings and committees
  - Promoting events or activities through the *HNL Connect* communication channels
  - Providing TDM-specific tools to support outside education or information-sharing efforts

Figure 16 outlines the overall program structure, and Figure 17 lists all of the TDM strategies by category.

Figure 16. HNL Connect Strategy Typologies

Figure 17. HNL Connect Strategies

HNL Connect-Managed Strategies

The following TDM strategies will be fully managed by the *HNL Connect* program. Dedicated staff time and budget will be allocated to each of the strategies described on the following pages.


UILA! POWER UP, HONOLULU!
3501
22 ALAPAI TC
VIA KAKAAKO

Annual Travel Challenge

The Travel Challenge is intended to encourage individuals, especially those who do not use sustainable modes, to try one or more of them over a short period of time, normally a week or a month. The primary goal is to convince individuals who drive alone to use an alternate transportation mode such as biking, walking, carpool, or transit.

Typically, travel challenges require individuals to register on a platform, make or join a team, and log their trips each time they use a mode other than SOV as they compete for awards. Challenges may be specific to one mode, or could include multiple modes, including automobile as part of the journey. To encourage participation, all participants may be eligible to receive awards as part of an overall VMT reduction effort, and top performers earn prizes such as local business gift cards or giveaways.

In Honolulu, the Annual Travel Challenge will build off the success of the Oʻahu Commute Challenge, last presented in 2020 by the Blue Planet Foundation. The findings from the 2020 Challenge indicate that challenges like these in Honolulu encourage the use of sustainable modes of transportation. The 2020 Challenge was able to solicit participation from 140 commuters, 107 of whom indicated their participation as the reason they tried a new mode for the first time. Most of the participants (89%) indicated they would continue to use sustainable modes after the month-long challenge was complete.

Moving forward, for at least one week each May an official island-wide challenge administered by the City and the *HNL Connect* program, in collaboration with the Blue Planet Foundation, will encourage residents to log non-drive-alone commutes and non-leisure trips. This aligns with national Bike to Work activities. Teams, organized by employers or social groups, will compete for the most points by logging non-SOV trips.

While the Annual Travel Challenge welcomes and encourages employers who are already successful in generating excitement for TDM, it will be open to the public and anyone interested in participating.

The Challenge, held in person and virtually, will provide opportunities for additional engagement activities such as:

- Attending events at employer or residential sites to promote the Challenge and increase participation from individuals at sites where teams are set up;
- Producing, promoting, and hosting 'Marquee' style events such as a 'rush hour race', where a driver, transit rider, and cyclist all compete to reach a certain destination during rush hour. This generates media attention and raises the public profile of sustainable travel options;
- Facilitating a 'Travel buddy' system, partnering veteran cyclists or transit riders with those who are new and need encouragement or feel safer with a partner; and
- Producing, promoting, and hosting 'Wrap up' award ceremonies or happy hour events to celebrate the Challenge participants.

Five Year Work Plan

The *HNL Connect* team will be responsible for managing the island-wide challenge, likely partnering with Blue Planet Foundation. Additional non-governmental partners for the Challenge may include, but are not limited to, the Ulupono Initiative, Hawaiʻi Bicycling League, Bikeshare Hawaiʻi, and Love to Ride. Besides the City, government agencies on Oʻahu may include the Hawaiʻi Department of Transportation (HDOT) and the OahuMPO.

Key activities will include:

- **Developing a strategy for the Annual Challenge,** including roles/responsibilities, timeline, budget, branding the challenge name, and the platform/mechanism for participants to log trips
- **Partnering with local businesses** on the supply of the prize offerings, determining prize thresholds and levels appropriate to the size of teams in the competition.
- **Developing supporting promotional materials,** including flyers and posters, social media content, and content for the Complete Streets and TDM websites
- **Summarizing challenge outcomes**, including a report on the Challenge outcomes, based on established KPIs and associated metrics.

KPIs, Metrics and Targets

On an annual basis, the *HNL Connect* team will obtain the following metrics in connection with each Challenge KPI (see Table 5). The metrics collected in the first year (2024) will establish a baseline upon which future year objectives will be compared, in order to effectively evaluate successes and areas for improvement. Preliminary targets are identified in Table 5, though the *HNL Connect* team may need to adjust targets annually.

3% Increase in non-SOV mode share

3% Reduction in VMT

5% Increase in TDM reporting

Table 5. Travel Challenge Annual Metrics

Inputs		Actions		Outputs
Metric	**Target**	**Metric**	**Target**	**Metric**
City staff time spent	150 hours	Number of communication material (social posts, newsletters, etc.)	1% increase	Number of challenge participants
Strategy budget	$170,000	Number of on-site events held	1% increase	Number of trips logged
				Number of non-vehicle miles recorded

Outcomes (Goals)

Target	KPI	Target	Source
2% increase	**Increase in non-SOV mode share:** Challenge participants who indicate they are 'likely' or 'very likely' to increase use of sustainable mode	3% increase	Survey at conclusion of Annual Travel Challenge
2% increase	**Increase in TDM Reporting**: Participating sites	5% increase	Travel Platform
2% increase	**Reduction in VMT**: Report average trip length for challenge participants who indicate they are 'likely' or 'very likely' to increase use of sustainable mode	3% increase[14]	Survey at conclusion of Annual Travel Challenge

Targeted Marketing Campaigns

Local attitudes towards, and knowledge of, sustainable modes have a significant impact on travel behavior. Effective TDM programs are geographically-focused making targeted marketing a crucial part of TDM implementation. The most successful TDM marketing initiatives involve a wide range of community partners, such as public officials, community organizations, and sustainable transportation mode advocates.

Targeted TDM marketing campaigns also include understanding the types of transportation services individuals desire, identifying the barriers to sustainable modes, and promoting available local travel choices.

There are limits to what marketing can accomplish on its own, but the benefits of targeted marketing include increased local public support for TDM strategies, and the increased effectiveness of TDM efforts (i.e., reduced vehicular travel). Such marketing campaigns are frequently implemented alongside other TDM measures, or designed around specific audiences who are more likely to be receptive.

HNL Connect will implement one Targeted Marketing Campaign annually. Each campaign will be unique, with a specific focus on an area, audience, or mode of travel. The goals of the Campaign will be to increase awareness of, and interest in, TDM services/ programming, and to increase the use of sustainable transportation modes amongst Honolulu residents and visitors.

The *Honolulu Transportation Demand Management Study Market Research Report* (2022) provides valuable information on the groups of individuals in Honolulu who are most likely to change their behavior. These groups are described in Table 6 and will set the baseline for the priority target segments for the first 5 years of the TDM Plan's implementation.

Table 6. Honolulu Target Audiences

Groups of Interest	Factors Identified in Market Research Survey
Urban Honolulu dwellers/ renters	· Have challenges finding parking where they live · Would do without a personal vehicle if they could · Like to travel by walking
Millennials/ Gen Z who do not live with parents	· Reducing the use of personal vehicles · vehicles would make them feel good · Have challenges finding parking where they live · Would rather bike than take the bus
Transplants who are currently attending Hawai'i colleges	· Reducing the use of personal vehicles would make them feel good · Have challenges finding parking where they live · Would do without a personal vehicle if they could · Like to travel by streetcar/trolley · car and walking · Feel a moral obligation to reduce GHG emissions
Single-vehicle households	· Have challenges finding parking where they live · Like to travel by streetcar/trolley car and walking · Feel a moral obligation to reduce GHG emissions
Cultural organizations geared towards Native Hawaiians	· Like to travel by bicycle, streetcar/trolley car and walking · Feel a moral obligation to reduce GHG emissions · This ethnic group was more open to sustainable modes of transportation vs. Japanese and Filipinos and were similar to Caucasians

Outreach Channel(s)	Mode(s) to Promote
• Social media • Promotional • events	TheBus, walking
• Social media • Promotional • events	Bicycle, bikeshare, carpool
• Social media • Through colleges • Promotional • events on campus or at college events	TheBus, carpool, walking
• Social media • Through large employers • Promotional events focused on economic development (i.e., job fairs, financial seminars)	TheBus, carpool, walking
• Social media • Through Native Hawaiian organizations/clubs (i.e., Council for Native Hawaiian Advancement, hula halau)	Bicycle, bikeshare, TheBus, walking

Five-Year Work Plan

HNL Connect will design, produce, and push out one Targeted Marketing Campaign per year, likely in the fall season. The team may choose to align a campaign with other complementary activities (such as the opening of a new transit route or Biki pass product).

Key activities will include the following:

- **Developing strategy and messaging**: The team will establish a campaign plan, including roles/responsibilities, timeline, budget allocation, and core messages and narratives
- **Creating outreach materials and content**: The Campaign effort will use the *HNL Connect* brand assets and create other branded materials such as flyers and promotional products and/or prizes. Content may be placed at transit stations and on transit vehicles, such as decals with QR codes linking to the campaign webpage, or traditional print flyers. In addition, digital content will be developed for social media posts and the TDM web page.
- **Executing campaign outreach**: The Campaign will be conducted through social media posts, deploying content on various other media platforms including the local press and transit system, hosting informational booths at employer events or popular local and tourist destinations, and disseminationing hard-copy content at target locations.
- **Evaluating campaign success**: developing a report summarizing the campaign and key outcomes based on established metrics. The metrics should remain consistent from year to year. The metrics from the first year will establish a baseline upon which future year outcomes will be compared. This is in order to effectively compare successes and areas for improvement.

Potential local partners for this strategy include the business community, which in the last five years has focused on the climate crisis and ways to mitigate impacts. For example, 'Environment' is one of the Honolulu Chamber of Commerce *4HI Campaign* four key vision areas. In general, it is expected that the Chamber will be a key resource to *HNL Connect*, connecting with businesses for program partnership and support. There are over 2,000 member companies representing over 200,000 employees across Honolulu.

KPIs, Metrics and Targets

On an annual basis, the *HNL Connect* team will obtain the following metrics in connection with each Targeted Marketing Campaign KPI (see Table 7). The metrics collected in the first year (2024) will establish a baseline upon which future year objectives will be compared in order to effectively compare successes and areas for improvement. Preliminary targets are identified in Table 7, though the team may need to adjust targets annually.

10% Increase in TDM awareness

Table 7. Targeted Marketing Campaign Annual Metrics

Inputs		Actions		Outputs
Metric	**Target**	**Metric**	**Target**	**Metric**
City staff time spent	60 hours	Number of materials distributed (including social media posts, flyers, events, etc. - to vary by campaign)	3% increase	Number of social media channel subscribers
Strategy budget	$175,000			

	Outcomes (Goals)		
Target	**KPI**	**Target**	**Source**
3% increase	**Increase in TDM awareness**: Total engagements with Targeted Marketing Campaigns	10% increase	Mediums TBD based on individual campaigns

Vanpool Subsidy Provision

A vanpool consists of a group of 5 to 15 people who commute to and from work in a van or SUV. Vanpooling is often employed for longer commutes (10 miles or more each way), due to its nature of a one-stop pickup and drop-off structure. Vanpools generally use rented vans, often supplied by employers, non-profit organizations, or government agencies. This strategy tends to have a lower cost than public transit for long commutes, per rider, as it does not require a paid driver and avoids potentially empty backhauls. Vanpooling is particularly effective in areas not well-served by public transit as the rendezvous point is typically closer than the nearest transit station/stop for all participants. Vanpooling requires an organizational structure to address vehicle ownership, expense recovery, and liability issues.

In 2016, Honolulu launched the Oʻahu Vanpool Program. The Program subsidized the cost of monthly vanpool use for riders and drivers across the island. Vanpool riders and drivers could sign up for the incentive program and receive up to $500 for each vanpool. The Program was operated by private vendors who contracted with the City and the subsidies were provided by the City. As of March 2021, the Vanpool Program had 57 active vanpools. Its annual environmental impact included about 2.5 million commuter miles reduced. This represented a savings of over 150,000 trips, and roughly 1.9 million lbs. of CO2 emissions reduced. The farebox recovery ratio was 118%, considerably higher than that of TheBus (11.4%). As is evident from these statistics, vanpool is a successful sustainable mode of transportation on Honolulu. Moreover, public agencies may report vanpool data to the National Transit Database (NTD) to earn additional federal transit funds in future years. However, the current contract for vanpool subsidy provision expired in 2021 and has not been renewed.

Five-Year Work Plan

HNL Connect will re-introduce an expanded vanpool subsidy program, in coordination with the City Strategic Transit Plan, and manage it with a $500 vanpool subsidy per month.

Key activities will include:

- **Establishing partnership(s)** with one or more vanpool vendors and privately organized groups;
- **Increasing vanpool participation** by working with vendors and neighborhood associations to promote the vanpool subsidy program, recruit riders and drivers, and establish more vanpools;
- **Reporting to the NTD** by compiling ridership and mileage data for vanpool trips and providing it to the NTD for future access to Section 5307 federal funds; and
- **Evaluating program success** by developing a report summarizing the program and key outcomes, based on established KPIs and metrics. The metrics from the first year will establish a baseline upon which future year outcomes will be compared. This is done in order to effectively compare successes and areas for improvement.

KPIs, Metrics and Targets

On an annual basis, the *HNL Connect* team will obtain the following metrics in connection with each Vanpool Program KPI (see Table 8). The metrics collected in the first year (2024) will establish a baseline upon which future year objectives will be compared. This is done in order to effectively compare successes and areas for improvement. Preliminary targets are identified in Table 8, though the team may need to adjust targets annually.

1.5% Increase in non-SOV mode share

3% Reduction in VMT

1% Increase in accessibility

5% Reduction in travel cost burden*

3% Increase in TDM reporting

Table 8. Vanpool Subsidy Provision Annual Metrics

Inputs		Actions		Outputs
Metric	**Target**	**Metric**	**Target**	**Metric**
City staff time spent	200 hours	Number of vanpools receiving subsidy	5% increase	Number of vanpool riders/ drivers
Strategy budget	$400,000			

Outcomes

Target	Metric (KPIs)	Target	Source
2% increase	**Increase in non-SOV mode share**: Vanpool trips	1.5% increase	Vanpool trips recorded through subsidy program
	Reduction in VMT: Reported average daily VMT	3% reduction	Total vanpool rider [x] route length for each participating vanpool
	Increase in accessibility: Vanpool routes originating within .5 miles of Title 6 (TVI)/ Environmental Justive (EJ) designated block groups	1% increase	Vanpool provider data listing geographic start/end of vanpool routes
	Reduction in travel cost burden: $ distributed to vanpool riders overall	5% increase	Total money distributed through vanpool program
	Increase in TDM reporting: Number of destinations receiving vanpool subsidies	3% increase	Number of worksites registered for vanpool program

Restricted Parking Zone (RPZ) Program

RPZ programs reserve on-street parking spaces within designated geographic areas for residential vehicle owners. As envisioned, residents will be entitled to purchase a specific number of long-term parking permits per household. The proceeds will incentivize transit by offering subsidies for those RPZ residents who opt out of the program due to transit dependency or not having a vehicle. By making it more difficult for non-residents to park in public spaces, RPZ programs discourage drive-alone travel to these areas.

In 2017, the City instituted a pilot RPZ in Kalihi Valley that impacted about 198 addresses and 230 on-street parking spaces. In that case, permits were issued to participating residents free of charge. The pilot allowed the City to identify administrative/operational issues, such as notification and need for one-day 'event permits' when residents host gatherings. Ultimately, the pilot resulted in an average 70% occupancy of available on-street parking, down from 91% prior to its launch. Over 98% of the 171 residents who provided feedback on the program supported extending it.

City staff and City Council have since taken steps to support the formalization of the RPZ program beyond its pilot phase. There is a process currently under development for neighborhoods to become designated as an RPZ area and for residents who do not purchase permits to access a 'Mobility Wallet' with free stored value toward transit or bikeshare. At the time of this Plan, the Bill to authorize the City RPZ program has been introduced, and through the development of the Plan, the City and project team have drafted an Administrative Rules document that will accompany the Bill. That document outlines key elements of the RPZ program including:

- **Permit application process and limits**:
  - RPZ permits will be valid for no more than one year. Permit holders may apply for a new permit at the end of the calendar year.
  - Application will take place online on the department website. Applicants must provide proof of residency, as well as proof that their vehicle registration matches the applicant's dwelling unit address in order to be eligible for an RPZ permit or a Mobility Wallet.

- Applications that do not fulfill the above requirements will be rejected. Successful applications will be notified by email and/or USPS and applicants will be required to pay the fee in order to receive their permit.
- Households are limited on the number of permits they can hold at a time.
- As residents move in and out of RPZ areas, departing residents must turn in their permit, or pass along to the new resident to turn in and renew with their license plate number.
- Permit fees will increase with each additional permit received per household (as specified in the Ordinance)

- **Permit design and display requirements**:
  - Permits will consist of decals for residents, which must be affixed to their rear windshield, and hang tags for visitors (the design for the decal is shown in Figure 18).
  - Resident permits will include license plate numbers so enforcement officials can confirm the decal is in the correct vehicle.
  - The permit color will change each calendar year, so enforcement officials can confirm permits are up to date.

- **Enforcement**:
  - Public spaces in RPZ areas will be designated for no parking for vehicles without the appropriate RPZ permit during specific times. Time limits will be determined on a case-by-case basis by DTS and the Director.
  - Vehicles illegally parked in an RPZ space will be subject to fine.
  - Sharing of permits between vehicles is not allowed.

- **Mobility Wallet**:
  - Mobility wallets, consisting of city payment cards with credit toward transit or other sustainable travel modes, will be provided to residents of eligible dwelling units who choose not to purchase a parking permit.

Five-Year Work Plan

Once the RPZ program has been established outside of its pilot phase, the *HNL Connect* program will be responsible for maintaining it.

Key activities will include:

- Providing education and information to the public about the RPZ program
- Working with neighborhood groups to establish new RPZs
- Managing permit and Mobility Wallet sales and distribution
- Providing customer service to permit and Mobility Wallet holders

KPIs, Metrics and Targets

On annual basis, the *HNL Connect* team will obtain the following metrics in connection with each RPZ Program KPI (see Table 9). The metrics collected in the first year (2024) will establish a baseline upon which future year objectives will be compared. This is done in order to effectively compare successes and areas for improvement. Preliminary targets are identified in Table 9, though the team may need to adjust targets annually.

1.5% Increase in non-SOV mode share

10% Reduction in travel cost burden*

10% Increase in parking ROI


S KING
145
1B HAWAII KAI
LIMITED STOPS
WJN 760
NISSAN
HYBRID
WJV 016
RAV4
TZN 150

Table 9. RPZ Program Annual Metrics

Inputs		Actions		Outputs
Metric	**Target**	**Metric**	**Target**	**Metric**
City staff time spent	Managed outside of HNL Connect hours	Number of RPZs established	5% increase	Number of permits provided
Strategy budget	$20,000			

	Outcomes		
Target	**KPIs**	**Target**	**Source**
10% increase	**Increase in parking ROI:** RPZ revenue	10% increase	Revenue collected through purchase of RPZ permits
	Increase in non-SOV mode share: Transit trips	1.5% increase	Trips recorded through Mobility Wallet HOLO Cards
	Reduction in travel cost burden: $ distributed to Mobility Wallet recipients	10% increase	Number of mobility wallets distributed [x] mobility wallet value

HNL Connect-Partnered Strategies

The implementation of the following TDM strategies will be delivered collaboratively by City departments and the *HNL Connect* team.


915
53
HELP PREVENT INJURIES ONBOARD TheBus
SUDDEN STOPS BY TheBus CAUSE ONBOARD INJURIES
PASS TheBus WITH CAUTION
Follow TheBus at a safe distance
Mahalo for driving with Aloha!
ATTENTION:
THIS BUS IS MONITORED BY SURVEILLANCE EQUIPMENT.
HAWAII
BUS 915
ALOHA STATE
www.thebus.org
08 23

Developer TDM Reporting

The Transportation Impact Assessment (TIA) Guide provides guidance on the scope of study required when evaluating impacts of new development projects. The TIA Guide sets requirements for developer assessment, City evaluation, and reporting based on the number of *net new peak-hour trips* projects are expected to generate:

- Projects assessed to generate less than 50 net new peak hour trips are not required to do any TDM reporting.
- Projects assessed to generate **50 or more** net new peak hour trips must provide a *TDM Strategies Plan*, defining the TDM strategies they are committing to on site. This plan is required in order to obtain building permits.
- Projects projected to generate **100 or more** net new peak hour trips are also required to provide the City with an update on progress towards executing their TDM strategies annually, through *Ongoing Compliance Reports*. These updates are required for the first five years the project is occupied.[15]

Through the TDM Plan development process, the project team has produced guidance tools to support City (a joint effort between multiple departments) maintenance of a database of developer TDM reports and travel behavior information. The tools formalize a set of strategies developers may choose in order to have their TDM Strategies Plans approved (Table 10).

Following the receipt of their Certificate of Occupancy, projects that are required to provide ongoing reporting will fill out a form annually to indicate which strategies they have continued to undertake, and how much participation they have been able to generate. They will also distribute a City online travel survey to residents and employees who utilize their sites on a daily basis. This survey will allow the City to monitor developer-directed TDM and broader TOD travel behavior across larger project sites.

Table 10. Developer TDM Strategies

Base Strategies *All required for all projects*	**Primary Strategies** At least two (2) required for all projects	**Secondary Strategies** *At least two (2) required for all projects*	**Parking Strategies** *Bike parking as required and at least one (1) other required for projects with vehicle parking*
Designate an on-site transportation coordinator Include information about TDM program in lease agreements	• Provide bike share passes for all residents/tenants • Provide free or subsidized bus passes for all residents/tenants • Provide a Guaranteed Ride Home program to residents/tenants • Provide shuttle service to access site • Provide vanpool or carpool subsidies to residents/ tenants	• Provide a web/ intranet page dedicated to transportation options • Support carpool matching among residents/tenants • Provide information about transportation in new tenant/new hire packets • Provide raffles or contests to encourage non-single occupancy vehicle travel • Host on-site events dedicated to transportation options	• Shared parking strategy • Parking cash-out program • Unbundled parking • Reserved parking • Space(s) for carshare • Short and long-term bicycle parking that is secure and convenient

Five-Year Work Plan

DTS and *HNL Connect* will be responsible for upholding developer requirements, in partnership with the Department of Planning and Permitting (DPP)'s Building Division (BD). A breakdown of responsibilities is included in Figure 19.

Key activities will include:

- Reviewing and approving initial TDM Strategies Plans that accompany TIA submissions
- Maintaining list of 'required' projects and their reporting status
- Notifying project managers/on-site transportation coordinators who are expected to provide Annual Compliance Reports of their requirements
- Reviewing and approving Annual Compliance Reports
- Maintaining a database of strategies used and travel habits from the online survey
- Acting as a resource for developers who have questions about the process or about their TDM requirements
- Providing an annual metrics report

KPIs, Metrics and Targets

On an annual basis, the *HNL Connect* team will obtain the following metrics in connection with established Developer TDM KPIs (see Table 11). The metrics collected in the first year (2024) will establish a baseline upon which future year objectives will be compared. This is done in order to effectively compare successes and areas for improvement. Preliminary targets are identified in Table 11, though the team may need to adjust targets annually.

1% Increase in non-SOV mode share

2.5% Reduction in VMT

10% Reduction in travel cost burden*

10% Increase in TDM reporting

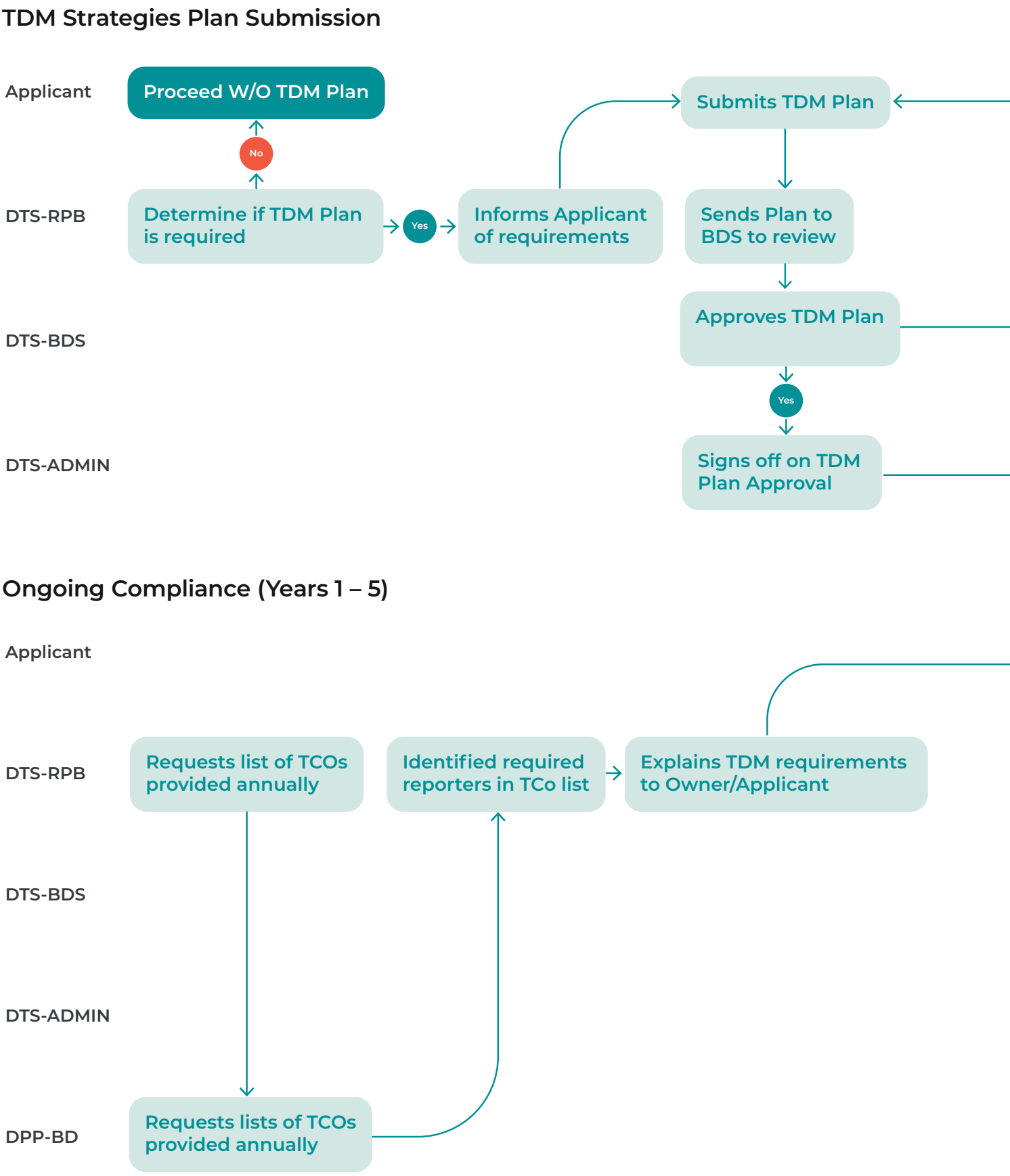
Table 11. Developer TDM Reporting Annual Metrics

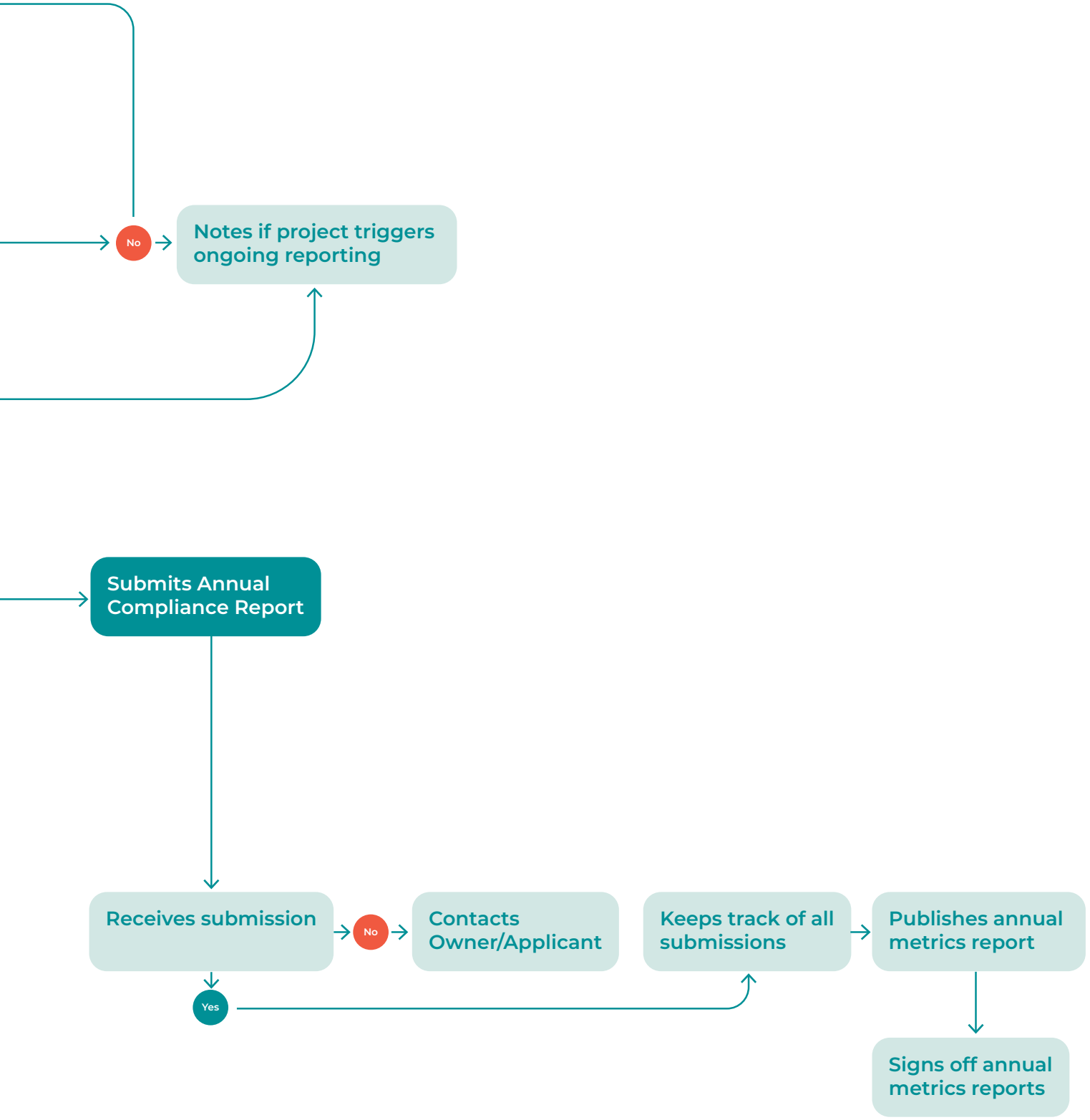
Inputs		Actions		Outputs
Metric	**Target**	**Metric**	**Target**	**Metric**
City staff time spent	104 hours	Number of TDM Strategies Plans approved	2% increase	Number of participants in developer TDM programs (on average)
Strategy budget	$40,000	Number of Ongoing Compliance Reports approved	2% increase	Number of Biki passes and HOLO cards purchased

Outcomes

Target	KPIs	Target	Source
2% increase	**Increase in non-SOV mode share**: Reported mode share	1% increase	Non-SOV mode share reported in Annual Compliance Report Survey
2% increase	**Increase in TDM reporting**: Annual Compliance Report survey responses	10% increase	Number of survey responses
	Reduction in travel cost burden: $ value distributed through bike and transit subsidies	10% increase	Number of subsidy participants [x] subsidy value
	Reduction in VMT: Reported average daily VMT	2.5% reduction	Reported trip length [x] reported average daily vehicle miles in Annual Compliance Report survey

Figure 19. Developer TDM Reporting - City Responsibilities




No
Notes if project triggers ongoing reporting
Submits Annual Compliance Report
Receives submission
No
Contacts Owner/Applicant
Yes
Keeps track of all submissions
Publishes annual metrics report
Signs off annual metrics reports

City Employee TDM/ Parking Program

The City currently faces the following key issues, which the City Employee TDM Program will help to address:

- Growing workforce with expectation to fill 2,100+ vacant positions.
- High vacancy and turnover rates among City personnel.
- Lack of incentives for sustainable transportation options for City staff.
- Inequitable distribution of current transportation benefits (subsidies have only been available for parking and no other modes).

The City Employee TDM (CETDM) Program has been designed as part of the City Energy and Emission Reduction Plan (EERP). The CETDM Program is viewed as a set of strategies and supporting policies targeting City staff, which maximize their alternative travel choices including the mode of transportation, the route they take, and the time they travel.

Reducing drive-alone trips is a central output of CETDM that supports various City goals such as reducing emissions, reducing congestion, alleviating parking pressure, enhancing employee recruitment and retention through attractive work-life balance, and leading by example as a major employer in the downtown area. TDM also enables the City to use its assets, including land and parking facilities, more efficiently and productively, thereby addressing access needs for its growing workforce.

The CETDM Program includes City employee strategies (existing and new) and community-wide TDM program strategies that the City can leverage for the benefit of employees. These include:

- Incentives (e.g., free bus passes, free/subsidized Biki passes, etc.)
- Policies (e.g., telecommuting and compressed work week)
- Programming (e.g., Guaranteed Ride Home), and
- Infrastructure (e.g., multimodal access facilities such as DIY bike repair stations and end-of-trip facilities)

Five-Year Work Plan
Upon the implementation of the CETDM Program, the *HNL Connect* team will provide ongoing support through the provision of TDM training and onboarding for new City employees. Key activities will include:

- Supporting program roll-out (including development of informational pieces for staff describing the new program);
- Developing informational content about the program, to be hosted on the internal staff intranet;
- Maintaining and collaborating with an online platform vendor to facilitate subsidy provision and travel behavior data collection;
- Providing as-needed support to individual staff as they decide what TDM option works best for them; and
- Maintaining databased related to program participation and travel habits.

KPIs, Metrics and Targets

On an annual basis, the *HNL Connect* team will obtain the following metrics in connection with the CETDM Program (see Table 12). The metrics collected in the first year (2024) will establish a baseline upon which future year objectives will be compared. This is done in order to effectively compare successes and areas for improvement. Preliminary targets are identified in Table 12, though the team may need to adjust targets annually.

1% Increase in non-SOV mode share

2% Reduction in VMT

5% Increase in TDM reporting

20% Increase in parking efficiency*

Table 12. CETDM Program Annual Metrics

Inputs		Actions		Outputs
Metric	**Target**	**Metric**	**Target**	**Metric**
City staff time spent	350 hours	Number of employees reached during trainings	1% increase	Number of employees enrolled in TDM benefits
Strategy budget	$100,000			Employee survey participation rate

	Outcomes		
Target	**KPIs**	**Target**	**Source**
2% increase	**Increase in non-SOV mode share:** Reported mode share	1% increase	Non-SOV mode share reported in Annual City Travel Survey
3% increase	**Reduction in VMT:** Reported average daily VMT	2% reduction	Reported trip length [x] reported average daily vehicle miles in Citywide survey
	Increase in TDM reporting: City employees receiving transit subsidy	5% increase	Number of employees who received a transit subsidy [x] transit subsidy value
	Increase in parking efficiency: Number of individuals on parking permit waitlist	20% decrease	Number of individuals on wait list

Support Strategies

TDM Support Strategies refer to those strategies that have been identified as priorities for delivery in Honolulu, but are expected to be carried out primarily by partnering agencies, organizations or City departments. The subsections below outline the importance of each strategy, and define the *HNL Connect* role in supporting their implementation.


CITY AND COUNTY OF

Parking Pricing

Parking pricing, as a TDM-supporting parking management policy, has proven to be an extremely influential tool in determining travel behavior. In principle, higher parking prices discourage drive-alone travel and encourage travelers to experiment with different modes. Beyond that, more intricate parking pricing tools or systems can support improved accessibility, optimize parking demand versus capacity, and combined with technology, the reduction of added VMT and vehicle emissions from 'circling' - the act of trolling for free parking spaces on City streets and in City parking facilities.

The City will be replacing outdated coin-based parking meter technology. As outlined in subsection 2.2.4, the City is also considering future adjustments to the pricing structure of city-owned public parking spaces, primarily to address the current parking revenue-cost deficit. This study explored additional parking strategies to reduce VMT, including:

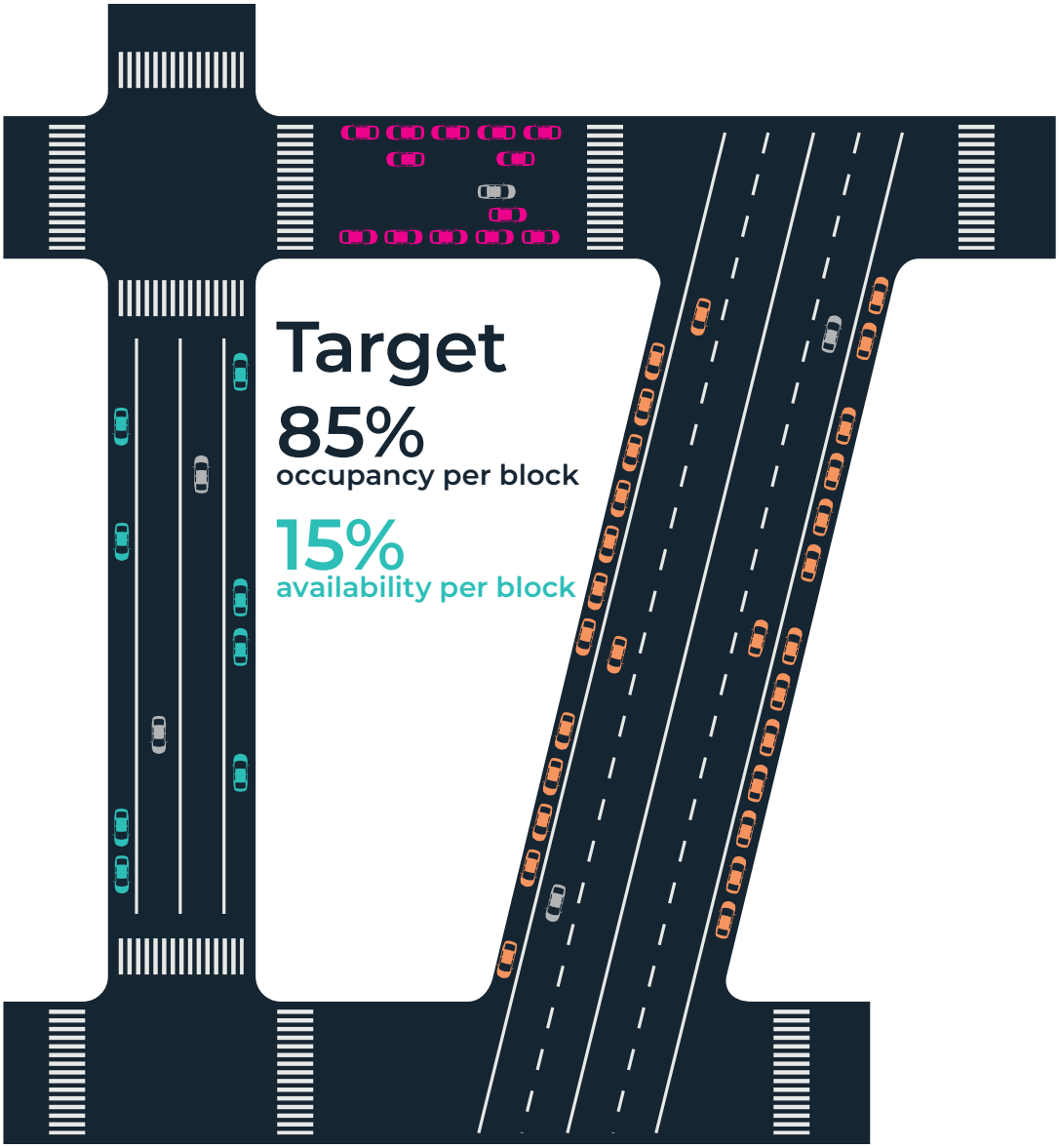
- **Smart payment systems**, including integration with HOLO card and similar technology, to allow for vehicle use for first/last mile trips, while encouraging travelers to also use transit.
- **Income-eligible discounts**, providing a reduction in all parking costs to individuals approved for HOLO card's Low Income Transit Fare Program with HOLO card payment. This would allow for a multi-modal approach to the provision of transportation subsidies in Honolulu.

- **Dynamic parking pricing,** allowing the City to control prices in its parking facilities and on-street spaces through temporal and demand-based adjustments, encouraging drivers to park further away or seek other modes and, therefore, maintaining availability and minimizing circling across the system. Figure 20 provides a visual representation of the impact of dynamic pricing.
- **A parking database**[16] beginning in summer 2023, buildings subject to the Better Buildings Benchmarking Program will share information about the number of parking spaces or parking area on their sites, along with data about location, and primary use.[17] This referencing system can be leveraged with parking utilization information to prevent the over-supply of parking, and ultimately may help demonstrate the construction cost savings of TDM practices.
- **Parking mobile app**, which would allow users to pay for parking on their mobile devices and provide information about parking occupancy and cost. This would help drivers understand ahead of time (pre-trip or en-route) where they are most likely to be able to park within their preferred price range.
- **Parking maximums** establish an upper limit on the number of parking spaces that new development is permitted to construct. In December 2020, Honolulu adopted Ordinance 20-41 which eliminates the minimum parking requirement for new homes and businesses in areas that are well-served by transit and lowers minimums in other areas.[18] While the elimination of parking minimums is certainly a step in the right direction to update outdated parking and land use regulations, precedent has shown that developers often provide an abundance of parking. Some cities have adopted strategies and laws, such as parking maximums, and have right-sized their requirements in concert with TDM requirements.

There is a range of potential benefits that managed parking may offer. For example, strategies which reduce parking utilization rates make it easier to find a space. This helps support a balanced system and reduces wasted time 'circling', as well as reducing the associated VMT and vehicle emissions. Keeping spaces open also allows individuals with limited physical mobility to park closer to their destination, having a positive impact from an equity perspective. Managed parking may also reduce instances of double-parking and other traffic safety issues, particularly since the Covid-19 Pandemic has resulted in more delivery-based uses and more competition for curb space. Benefits like this contribute positively to the user-friendliness of the overall system.

As the City moves forward with parking pricing policy and technology changes, *HNL Connect* involvement will include the Project Manager and other City staff. Staff will be available to provide data and support to policy makers at meetings and committees. *HNL Connect* can also use social media posts and direct engagement with program partners to share information about parking programs.

Figure 20. Dynamic Parking Ideal Occupancy



Progressive parking

If block/lot is too full, increase the price
If block/lot is too empty, lower the price
If block/lot is just right, keep the same price

Parking utilization

0%	75%	90%	100%
Lower price	No change	Raise price	

TDM Education

Generating buy-in and support for TDM at the highest levels of leadership can support its longevity. Educating public officials, such as electees, business owners, and executive-level employees, will help ensure TDM across the island is sufficiently resourced and that decision-makers can make informed judgments on how to shape and implement TDM programming.

While *HNL Connect* can provide its own education, Oʻahu is rich with agencies and organizations whose missions align with TDM. These entities possess deep connections and established educational outlets across the island. *HNL Connect* will work to support partner agencies by providing them with the tools they need to expertly incorporate TDM education into their existing educational programming.

To accompany the TDM Plan, a one-page information sheet on TDM was created. This tool makes the distinction between TDM as an educational and incentivization tool and the more efficient use of transportation infrastructure that TDM supports.

As *HNL Connect* progresses, the team will continue to liaise with partners to provide tailored information or material for their educational platforms. Materials may include:

- Engaging content for brief (1-3 minute) videos focused on TDM strategies and/or *HNL Connect*
- Presentation material for legislative briefings, listening sessions, and other workshops
- Webinar content or presentations
- Print and digital collateral
- Social media posts
- Content to be included in news media op-eds

Citywide Multimodal Efforts (Microtransit and Micromobility)

In coordination with the Honolulu Transit Comprehensive Operations Analysis and the development of the Strategic Transit Plan, the City continues to explore opportunities to promote multimodal travel through microtransit and micromobility:

- **Microtransit** provides riders with on-demand transportation without the constraints of fixed routes or schedules. In Honolulu, microtransit could serve low-traffic and low-density areas in lieu of under-performing bus routes that have a relatively higher cost per rider[19]. Microtransit service would complement existing transit service on the island, and be integrated with the HOLO fare payment system[20]. In 2021, the City developed a white paper to explore how microtransit pilots might be implemented.
- **Micromobility** encompasses a range of lightweight, typically electric or human-powered vehicles such as e-scooters, bicycles (including e-bikes), and mopeds that are generally designed to provide quick and convenient transportation around highly populated urban areas. Micromobility options are typically used for shorter distances, or first-mile/last-mile (FMLM) connections. Many cities face a FMLM challenge, with many not able to live or work within walking distance of transit. Currently, bikeshare is the primary form of micromobility in Honolulu and is managed by Bikeshare Hawai'i (more commonly known as Biki), which is a 501(c)(3) non-profit organization operating under a public-private-non-profit model.

The *HNL Connect* team will coordinate with the development and implementation of the City Strategic Transit Plan and remain apprised of private-sector micromobility and microtransit projects offerings throughout Honolulu. This coordination may take the form of participating in technical advisory committees or assuming other support roles. As pilots or projects move forward, *HNL Connect* can support these efforts through promotion of microtransit and micromobility options on social media channels. This can be done through formal targeted marketing or less formal outreach through social media posts.

Carpool Matching

The Hawai'i Department of Transportation (HDOT) designates rideshare programs as "the least expensive way to reduce rush hour traffic congestion." Housed within the Highways Division Traffic Branch, HDOT has a Transportation Demand Management Office that provides a variety of programs and services aimed at encouraging shared rides.

HNL Connect can support HDOT rideshare programs by marketing available statewide services to Honolulu employees and residents through the HNL Connect social media platform.

5. Taking TDM into the Future

Next Steps

The Opportunity

An estimated 64% of commuters in Honolulu drive alone to work, while 14% carpool, 10% use sustainable modes (walking, cycling, and transit) and 11% work from home. With the average personal vehicle emitting almost 9 ounces of carbon dioxide per person miles travelled, this quickly generates significant air pollution in Honolulu. Approximately 30-50% of trips made by people driving alone in Honolulu are under 3 miles, which presents a key opportunity for TDM to help shift the needle. Shifting travel behavior to more sustainable modes, through the implementation of the strategies outlined in this plan, will support broader efforts to reduce GHG emissions, with the goal of ultimately achieving carbon neutrality by 2045.

Near-Term Priorities

Commencing in 2024, the City will allocate $1 million annually to deliver *HNL Connect*. This represents the largest TDM investment by the City to date. These funds will cover the major operations of the program, including the purchase and subsequent maintenance of supporting technology tools and platforms, and the provision of incentives and subsidies for travelers who use alternative modes of transportation. Table 13 summarizes *HNL Connect* near-term priorities.

Tracking Progress

The implementation of the full suite of TDM strategies contained in this plan will help fill the voids on the road to sustainability. To be transparent about whether or not *HNL Connect* is achieving the intended objectives and targets, the City will publish an Annual Report. The Annual Report will summarize *HNL Connect* strategy performance, through consistent reporting on KPIs and associated metrics, and with qualitative data describing the status of each of the initiatives (i.e., key accomplishments and next steps). The Annual Report will be released each year in February, providing a review of the previous year. The first Annual Report will be presented in February 2025.

Initiative/ Program	Description
Branding and marketing media mentions	Establishing greater brand awareness of *HNL Connect* as ***the*** TDM program in Honolulu will set the foundation for the roll-out of the program's strategies. Following introductory media posts, *HNL Connect* should establish a regular cadence of ongoing communication through a combination of information and news-based content.
TDM communications (e.g., newsletter/flyer/blog)	Coordination with partner agencies and organizations on TDM issues offers many benefits, including promoting visibility of TDM initiatives, consistency in messaging, and supporting efficiency by reducing the potential for duplicative efforts. As such, *HNL Connect* should consider establishing regular opportunities to connect with partner staff on TDM issues. To start, the program may choose to establish a TDM blog, or distribute a TDM newsletter to partner agencies and organizations.
Reintroduction of vanpool subsidy program	The proven historic success of vanpool in Honolulu demonstrates that the expansion of the vanpool subsidy program is a low-barrier strategy, with the potential for significant impacts in VMT reduction. As such, it is recommended that *HNL Connect* prioritize the program's re-instatement by re-establishing partnerships with one or more vanpool vendors and promoting the program amongst City employees and the broader commuting population.
Free transit for City employees	City employee badges are now able to be loaded with the HOLO application and used as a HOLO card, offering a more seamless experience for staff who use transit. Establishing a process to analyze aggregated HOLO card usage data should be prioritized as it will allow *HNL Connect* to better understand employee transit ridership trends and offer additional insight to employee travel behavior and VMT reduction.
RPZ expansion	Given the recent introduction of the Bill that would formalize the RPZ program, it is recommended that *HNL Connect* launch an awareness campaign through its social media platforms. The platforms would share information on how the formalized RPZ program would work and the program's benefits. Establishing the associated tools to effectively manage the RPZ program should also be initiated in the short-term so *HNL Connect* can quickly shift focus to RPZ expansion efforts, pending the Bill's approval.

Collaboratively Advancing a Wider Vision

Successfully addressing and managing congestion and reducing GHG emissions requires a multi-pronged approach and diverse "toolkit" of strategies. In addition to TDM, some of these strategies include land use and growth management, public transit and active transportation improvements, and operational enhancements (e.g., transit signal priority, management of goods movement, etc.).

The implementation of transit-oriented development (TOD) will help reduce urban sprawl across surrounding agricultural lands and open areas, in addition to encouraging livable and walkable neighborhoods and increasing transit ridership. Key elements of TOD that are supportive of congestion and GHG emissions reductions include:

- **Destinations** – coordination between land use and transportation (e.g., focused growth along existing and planned frequent transit corridors);
- **Distance** – implementation of a fine-grained street network that supports multiple modes;
- **Design** – incorporation of people-centered design approaches (e.g., reduced minimum off-street parking requirements, multi-modal streets, and public spaces);
- **Density** – concentration and intensification of land uses near frequent transit;
- **Diversity** – planning and implementing a mix of land uses and housing types (including affordable housing); and
- **Demand Management** – implementing TDM measures to discourage unnecessary driving.

The 2050 ORTP will lay out the path forward for the city's transportation system, guiding investment in bike, walk, and transit infrastructure, as well as a greater emphasis on land use and transportation integration.

TDM marketing, education, services, and policies will leverage these advances in TOD and multi-modal implementation by promoting increasing public awareness of the benefits to using sustainable modes, offering engaging opportunities and incentives for the public to try and continue to use sustainable modes, as well as support the development community in implementing TDM at the site-level.

The City will continue to seek opportunities to expand TDM delivery across the island through additional funding opportunities and expanded partnerships.

Conclusion

Honolulu has experienced a significant increase in the level of drive-alone travel over several decades. This has contributed to increased travel times, vehicle emissions, and road safety challenges. This all negatively impacts the quality of life and has harmful environmental impacts. As the City strives to address the impacts of increased car ownership and congested roadways, influencing behavior change and encouraging a shift away from drive-alone travel through TDM is essential.

The development of the TDM Plan and *HNL Connect* resulted from a 3- year effort involving an inter-departmental team of City staff, stakeholders from the State of Hawai'i, OahuMPO, and a variety of non-governmental organizations. With a focus on the first five years of delivery (2024-2029), the *HNL Connect* program will deliver the six 'primary strategies', and four 'supporting strategies' described in the Plan.

HNL Connect was created with flexibility in mind, enabling the program to support new TDM-related initiatives as they arise, as sustainable transportation technologies emerge or evolve, and as transportation options develop or expand across Honolulu. The Plan should be updated accordingly and at least once every

6. Appendices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Appendix A TDM Related Plans and Policies

Plan/ Policy	Relevance
O'ahu General Plan (2021)	The General Plan for the City and County of Honolulu establishes policy guidance for O'ahu. Other community development plans, policy plans, and regulations are required to be consisted with the General Plan. The General Plan sets the long-term vision for the community's physical, social, cultural, economic, and environmental future. A key focus area of the General Plan is transportation, with 15 policies addressing issues such as multi-modal travel options, emissions, safety, traffic congestion, and vehicle electrification.
Neighborhood Transit-Oriented Development (TOD) Plans	The City and County is advancing efforts to ensure that development and growth in the rail corridor is aligned with the vision and goals established for each rail station community. To this end, neighborhood TOD plans were developed to guide new development and support improved accessibility in and around station areas. Each of these plans is context-sensitive to its respective neighborhood and was developed through engagement with the community.
Climate Action Plan (2020-2025)	The O'ahu Climate Action Plan (CAP) includes nine climate strategies and 47 actions for the City to advance through and beyond 2025, in order to significantly reduce greenhouse gas (GHG) emissions by 45% (by 2025, relative to 2015 levels). A key contributor of GHG emissions is ground transportation (cars, motorcycles, off-road vehicles, trucks, buses, etc.), which accounts for one-fifth of total island-wide emissions.[1] There are two key TDM-related strategies in the CAP: • CAP Strategy 2 seeks to enable and provide multiple modes of green transportation, and • CAP Strategy 3 aims to encourage mode shift through parking efficiency.
Energy Conservation and Emissions Reduction Plan for City transportation systems (EERPT)	Section 6-1703. (g) of the Revised Charter of the City & County of Honolulu (2017) mandates the preparation of an Energy Conservation and Emissions Reduction Plan for City transportation systems (EERPT), including methods to meet state greenhouse gas reduction and clean energy goals. The EERPT includes the identification of recent travel demand trends and progress on related actions in the 2020-2025 Climate Action Plan, as well as the development of non-point source emissions targets and the identification/refinement of emission mitigation strategies. With a planning horizon of thirty (30) years, the EERPT will be reviewed and revised every five (5) years, and approved for consistency with the General Plan and sustainable community plans by the Planning Commission.

[1] City and County of Honolulu. (2020). *Climate Action Plan*. Retrieved from https://static1.squarespace.com/static/5e3885654a153a6ef84e6c9c/t/6080c33e91bbf23a20b74159/1619051381131/2020-2025+Climate+Action+Plan.pdf

O‘ahu Regional Transportation Plan (ORTP) 2050	Led by OahuMPO with support from participating agencies including the City, the ORTP will guide the overall development of transportation on O‘ahu. Updated every 5 years, the ORTP presents the long-term vision of the transportation system, and identifies projects that will help to achieve that vision. Key goals identified in the ORTP that will advance TDM include investment in bike, walk, and transit infrastructure, as well as a greater emphasis on land use and transportation integration (e.g., transit-oriented development policies).
Honolulu Complete Streets Law (ROH 14-18)	Honolulu’s Complete Streets Ordinance was established to ensure a comprehensive multimodal planning, design, and construction approach to the city’s transportation systems. A key goal of the Complete Streets Ordinance is to ensure safe mobility and sustainable, ‘active transportation’ for users of all ages and abilities.
O‘ahu Pedestrian Plan (2022)	The O‘ahu Pedestrian Plan is the island’s long-term action plan to create safe and accessible streets that allow all to travel comfortably by walking. A primary goal of the Plan is pedestrian safety. High Pedestrian Injury Corridors and High Pedestrian Injury Intersections/Crossings are thereby identified for prioritized safety and infrastructure improvements in order to support walking and multimodal travel.
O‘ahu Bike Plan (2019)	The O‘ahu Bike Plan outlines goals as well as specific projects, policies and programs that will encourage, promote, and hopefully increase bicycle ridership, including the continued development of an expanded network of safe, comfortable bikeways for users of all ages and abilities. As with the Pedestrian Plan, the Bike Plan is an essential component of O‘ahu’s Complete Streets commitment.
Bikeshare Organizational Study (2014)	The 2014 Bikeshare Organizational Study established the blueprint for implementing bikeshare in Honolulu. It analyzed various organizational structures, developed an initial phase system plan, identified capital and operating costs of the initial phase system plan, developed a funding strategy to meet capital and operating costs, and provided an implementation strategy for bikeshare in the local context.
Vision Zero Action Plan (forthcoming)	The City is currently underway with the development of a Vision Zero Action Plan containing a multi-pronged strategy aimed at eliminating all fatalities and minimizing serious injuries on roadways by 2035. In concert with Complete Streets Vision Zero aims to expand safe, healthy, and equitable transportation options for everyone.
Honolulu Strategic Transit Plan (forthcoming)	To result from the Honolulu Transit Comprehensive Operations Analysis (COA), the Zero Emissions Bus Transition Plan, and other planning efforts for O‘ahu transportation, the Strategic Transit Plan is being created through a data-driven analysis of traveler behavior and needs, as well as the physical and financial performance of the existing bus system network. The Plan will identify and specify changes to service, vehicles, and support facilities, and recommend associated policies to implement a future public transit system that is attractive, comfortable, safe, convenient, integrated and competitive with the automobile mode, energy-efficient, and financially sustainable.

Oʻahu Mobility Hub Study (forthcoming)	Led by the State of Hawaiʻi Office of Energy and Sustainability, the Study aims to establish a typology for 'mobility hubs', and identify candidate new mobility hub locations or existing mobility hub enhancements, leveraging surplus State- owned facilities and lands, in coordination with the Honolulu Rail Transit Project and Honolulu Strategic Transit Plan.
Hawaiʻi State Transportation Plan (HSTP)	The HSTP establishes the framework for transportation planning decisions in the State of Hawaiʻi. It is coordinated in consultation with the planning, transportation and public works departments in each county, the Oʻahu Metropolitan Planning Organization (OahuMPO), and modal divisions of the Hawaii Department of Transportation (HDOT). The last HSTP was completed in 2011, and HDOT is in the process of updating the Plan for 2045.
Statewide Transportation Demand Forecasting Model	The State is currently developing a scope to develop a model to better monitor and predict trans-Pacific and inter-island travel, and through the establishment of visitor data collection methods potentially influence visitor mode choice and travel behavior.

Appendix B Existing Conditions Report

Existing Conditions Report

City & County of Honolulu
Honolulu Transportation Demand Management Plan

HNL Connect

Report
June 2021

Honolulu Transportation Demand Management Plan

Existing Conditions Report

Department of Transportation Services

Chris Clark
Chief, Transportation Performance and Development Division

Max Kalhammer
Infrastructure Planner, Transportation Performance and Development Division

Contents

1 Introduction

Purpose

This report provides an overview of existing conditions of land use, transportation, and transportation demand management (TDM) in the City and County of Honolulu. It will serve as a reference document to inform the development of a TDM plan on the island. The wide range of transportation services and infrastructure, from the upcoming Honolulu Rail Transit to paratransit to rideshare, as well as the uniqueness of the land use patterns and demographics, point to a need to fully understand the current conditions before creating a long-range TDM plan.

TDM is defined as the application of strategies and policies to help people make their transportation decisions using infrastructure in place for transit, ridesharing, walking, biking, and telework in order to reduce or redistribute travel demand. At its most basic level, it is a program of information, encouragement, education and incentives provided by local or regional organizations to help people know about the variety of non-single occupancy vehicle (SOV) transportation options they have.

The TDM Plan will be the first of its kind on a regional scale. It will include legislative changes, enabling policies, a website, marketing support and education materials, and stakeholder engagement. Key objectives of the TDM Plan include developing targets, strategies and evaluation measures; reducing vehicle miles traveled (VMT); and reducing single-occupancy vehicle (SOV) mode share.

For the purposes of this report, Steer conducted a literature review of existing transportation plans as well as an analysis of demographic, travel behavior and land use patterns. Steer also looked at recent news articles regarding new transportation initiatives and has also conducted interviews with key stakeholders in the public and private sectors.

The organization of the report is as follows:

- Section 1, Introduction: introduces the purpose of the report and its key findings.
- Section 2, Social and economic characteristics: provides information about the social and economic characteristics of the residents, including population/density, age distribution, income, educational attainment, race/ethnicity, housing, and employment.
- Section 3, Land Use: provides an overview of land use patterns and future developments.

- **Section 4, Transportation**: provides an overview of the existing transportation services as well as future transportation projects, including the long-awaited Honolulu Rail Transit.
- **Section 5, Travel Behavior and Transportation Demand Management**: provides an overview of travel patterns pre- and post-COVID, any existing TDM programs and policies at the employer, local, and regional levels.
- **Section 6, Conclusion**: summarizes findings and provides next steps as well as a SWOT analysis.

It is important to note that, while Section 5 may be the only section that refers to specifically defined "Transportation Demand Management" programming in Honolulu, the topics explored in Sections 1 through 4 are just as crucial in identifying the types of programming and strategy that will ultimately be most successful in changing travel behavior of residents and visitors.

Key Findings

Through the Existing Conditions Review, three major conclusions will help shape the future of the TDM Plan and program in Honolulu:

1. The audience for a TDM program in Honolulu will need to consider both the traditional peak hour commuters traveling to large employment hubs (mostly government and private sector workers), as well as commuters who work non-traditional hours and travel throughout the island for work.
2. While no formal TDM program, plan, or policy exists currently across the island, there is a good deal of TDM implementation across the island already, such as the Commuter Benefits Program, a Vision Zero and Complete Streets policy, Safe Routes to School, and a Restricted Parking Zones (RPZ) pilot, which can help lay the groundwork for future programming.
3. Current TDM programming, however, does not make use of impact measurement or consistent monitoring, so it is difficult to determine the impact of the work being done currently. Future TDM programming will need to prioritize structures that require information and monitoring.

2 Social and Economic Characteristics

Demographics

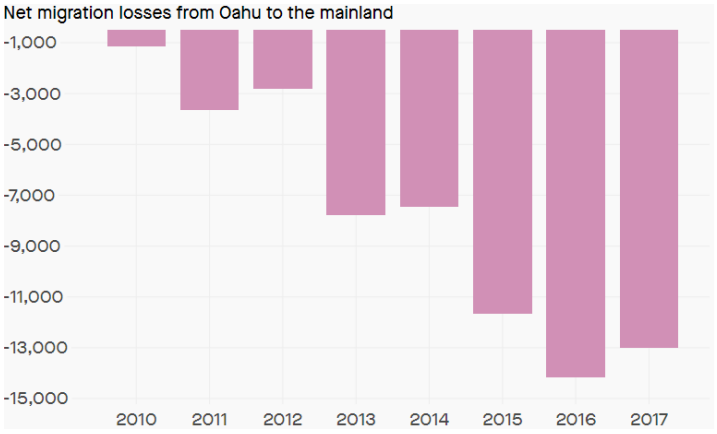
The narrative below details demographic information on Oahu'. It is important to consider demographics when developing TDM strategy and programming, as information about target audiences can help provide an understanding of travel barriers and motivations, and can help to best predict the types of strategies that might be most successful in changing travel behavior.

Population/Density

The population of Oahu is 980,080 according to 2019 Census estimates. Oahu's population comprises 69% of the state's entire population. The population is split evenly between male and female. There are 316,456 households in the US, with an average of 3 people per household.

While the population has grown steadily by a couple thousand every year, it has experienced a slight decline since 2016. From 2010 to 2018, Oahu lost nearly 7,500 more people annually to continental USA than it gained. Economists attribute this population decline to push factors such as Oahu's high cost of living and stagnant wages, and to pull factors such as better jobs and salaries.

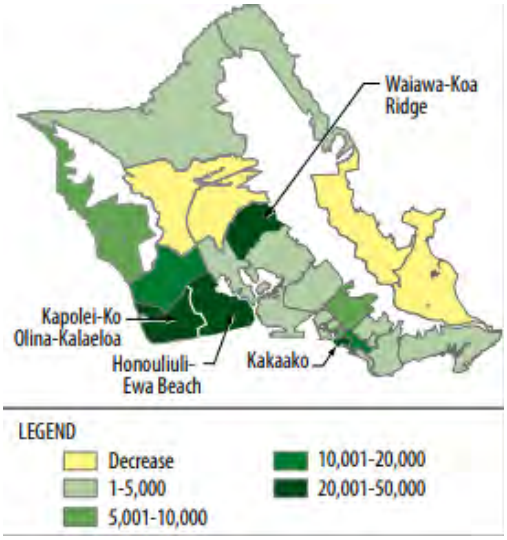
Figure 1. Net migration losses from Oahu to the mainland, 2010-2017



Source: The Atlas

Oahu has a population density of 1,636 people per square mile, making it the fourth most dense city in the country. Some areas of Oahu are expected to grow more than others; by 2035, the Kapolei-Ko Olina-Kalaeloa, Kakaako, Waiawa-Koa Ridge, and Honouliuli-Ewa Beach areas are expected to grow by over 20,000 residents, while parts of Central Oahu and the Windward Coast, including Kaneohe and Kailua, will see a projected decrease.

Figure 2. Population Growth 2007 to 2035



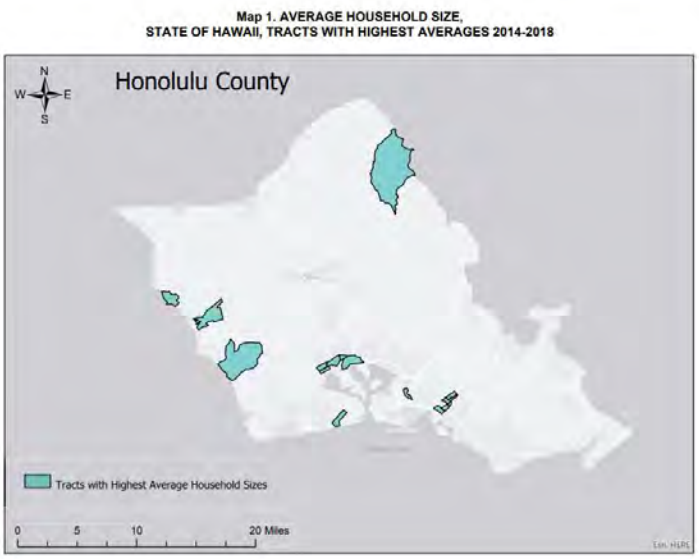
Source: OahuMPO Regional Transportation Plan 2035

Household size

Average household size in Honolulu is 3.05, slightly above the state average of 3.02 and higher than the national average of 2.53. Some census tracts on Oahu have significantly higher household sizes, seven of which have averages above 5. Error! Reference source not found. below shows the distribution of the census tracts with the highest average household size based on the 2018 American Community Survey, including the top five:

- August Aherns School: 5.97
- Gulick Avenue-Likelike: 5.85
- Managers Drive: 5.52
- Campbell High School: 5.40
- Kalihi Valley Park: 5.27

Figure 3. Census tracts with largest average household size

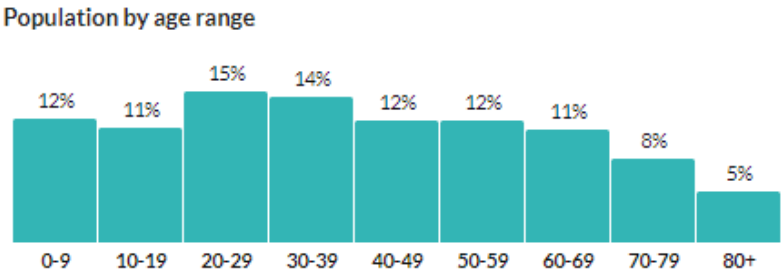


Source: Hawaii State Data Center, Highlights of the 2014-2018 American Community Survey 5-Year Data for Hawaii (2019)

Age distribution

The median age in Honolulu County is 38.4, roughly the same as the state of Hawai'i and the US. 61% of the population is between the ages of 18 and 64.

Figure 4. Population by age range, County of Honolulu



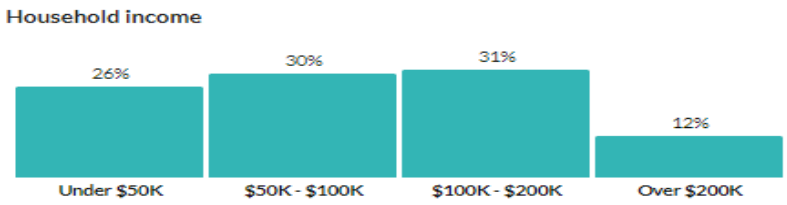
Source: Census Reporter

The State of Hawai'i has a rapidly aging population. Those over 65 comprised 7.9% of the state's population in 1980, 17.1% in 2016, and is projected to increase to 23.8% by 2045. This rapid increase in the aging population is expected to have a large impact on the island's transportation system and economy.

Income

The median household income in the county is $87,470 and the per capita income is $38,671. The breakdown of household income by income bracket is as follows:

Figure 5. Household income, County of Honolulu



Source: Census Reporter

While the median household income is relatively high, it is important to note that households on the island tend to be larger due to multiple generations living together. This results in a *lower* per capita income.

The island is highly stratified between rich and poor, with both the state's wealthiest neighborhoods and the highest number of census tracts where more than 30% of people live below the poverty line. Of the 17 census tracts in the state where 30% of residents or more live in poverty, 10 are on Oahu. The state poverty level is 11%.

Table 1. Highest median household incomes by census tract, 2018

Census Tract	Median household income
Portlock	$175,833
Waialae Prison	$157,448
Waialae Iki	$156,615

Source: Datausa.io

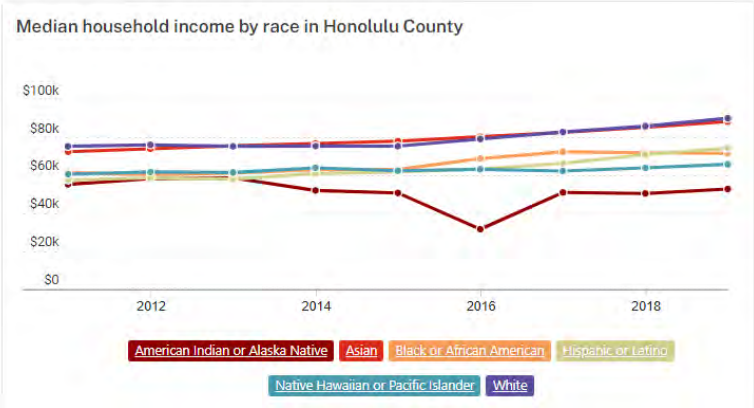
Table 2. Poorest census tracts in Oahu, 2018

Census Tract	Median household income
Chinatown	$22,300
Mayor Wright Housing	$29,201
Ahana Street	$29,526
Civic Center	$31,250
Waianae Kai	$33,370
Linapuni Street	$36,750
Hale Mohalu Hospital	$37,500
Aala	$37,989
Lower Pawaa	$38,125
Wahiawa Waena	$39,980

Source: Datausa.io

When disaggregating median household income by race in Honolulu County, Whites and Asians have the highest median income, at around $90,000. Native Hawaiians, Pacific Islanders and have the lowest average median household income at

Figure 6. Median household income by race



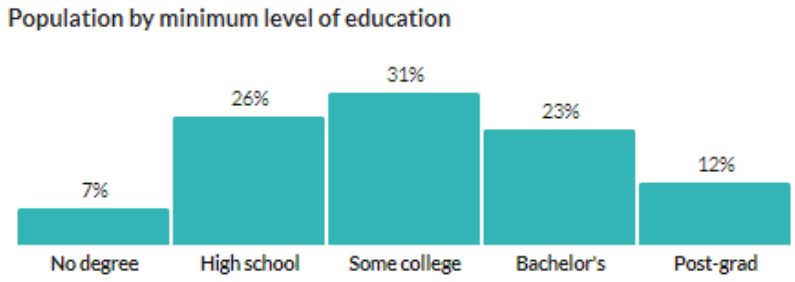
Source: US Census Bureau

Educational attainment

26% of the population graduated from high school, 31% attended some college. 23% of the population has a bachelor's degree, and 12% have a post-graduate degree. 7% have had no schooling.

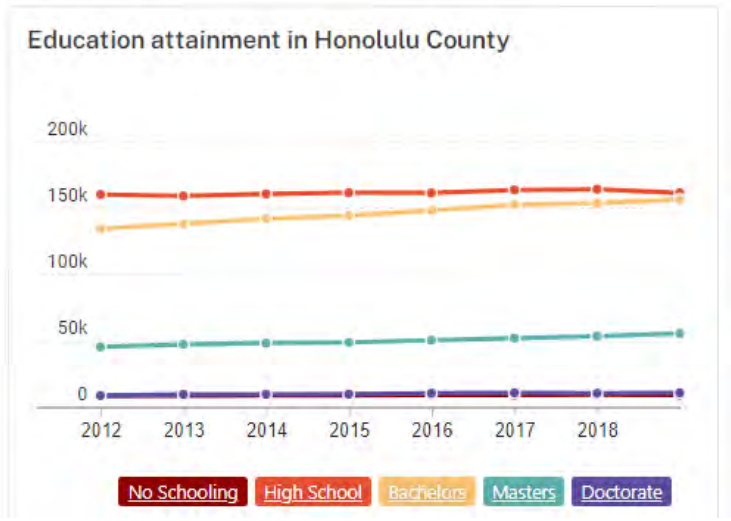
This breakdown has remained steady the past few years, with the absolute number of high school graduates slightly decreasing and the absolute number of master's degree and college graduates slightly increasing.

Figure 7. Population by minimum level of education



Source: Census Reporter

Figure 8. Education attainment in Honolulu County

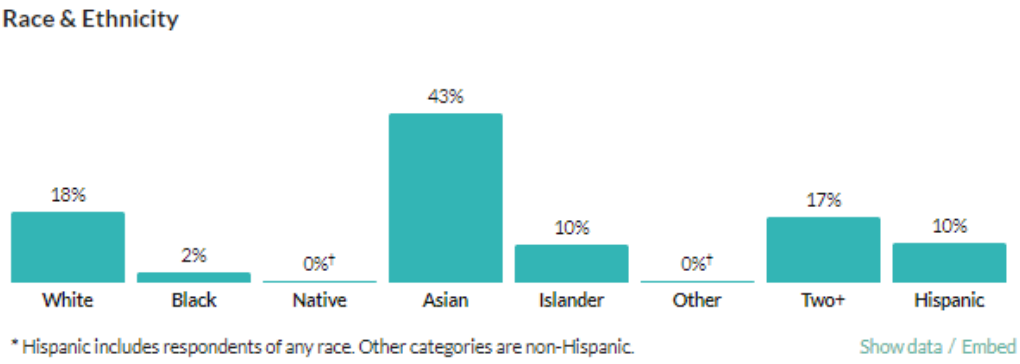


Source: US Census Bureau

Race/ethnicity

The island is one of the most ethnically and racially diverse places in the US, with a majority-minority population. 43% identify as Asian, 10% identify as Pacific Islander, and 17% identify as mixed-race.

Figure 9. Race and ethnicity in Honolulu County



Source: Census Reporter

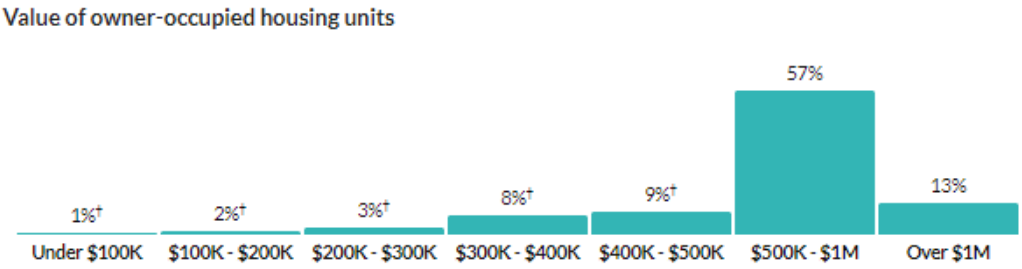
According to the 2010 census, the two largest Asian ethnic groups in the state are Filipino and Japanese. Filipinos make up 14.5% of the state's population, of whom 70% live on Oahu. Japanese make up 13.6% of the state's population. In Urban Honolulu, the largest ethnic groups are Japanese (20%), Filipino (13%), and Chinese (10%.).

Housing

Housing prices and characteristics

The median value of owner-occupied housing units is $739,700, about 10% higher than that of the state and more than double the median value in the US. 57% of owner-occupied housing units are valued between $500,000 and $1 million.

Figure 10. Value of owner-occupied housing units



Source: Census Reporter

The median and average sale prices for both single family housing and condominiums have skyrocketed since 1985. The median sale prices for single family homes has increased by 423%, while the median sales price for condominiums grew by 384.4% in the past 15 years.

While many had expected the housing market to collapse during the pandemic of 2020, the island saw an increase in housing prices, due to low interest rates and mainland buyers who could work remotely. The median price for a single-family home on Oahu in the month of November rose to $877,500, while the median condominium price was $425,000. Single-family homes were on the market for a median of just 11 days (about 1 and a half weeks) that month.

The average monthly rent in Oahu throughout 2020 was $2,070, a 1% increase compared to the previous year. Over 85% of the apartments on the island have a rent of over $1,500.

Figure 11. Rent ranges in Oahu

Source: RentCafe

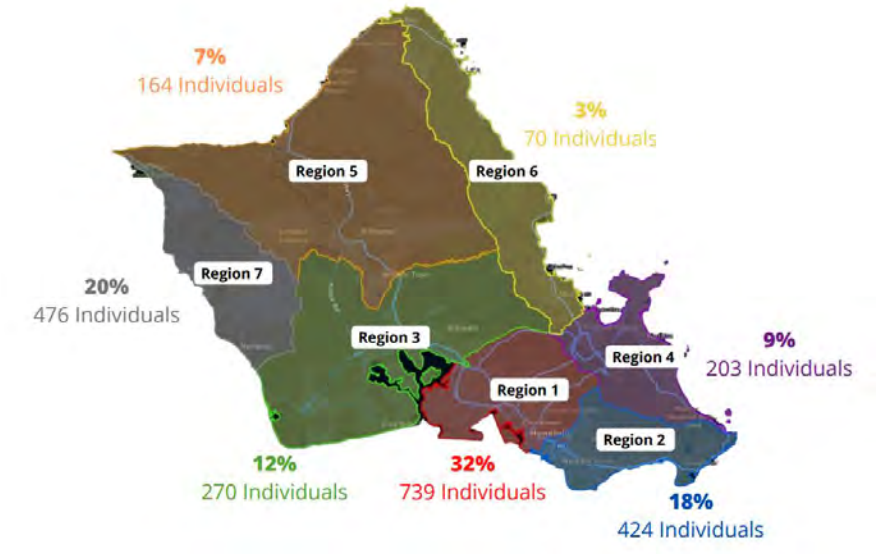
There are 354,719 housing units on the island, of which 89% are occupied. Of the occupied units, 57% are owner occupied and 43% are renter occupied. 55% of units are single-family units and 45% are multi-family units.

According to the state's Department of Business, Economic Development & Tourism, the forecasted demand of additional housing units on the island is 25,847 units during the 2015-2025 period. While the projected household growth rate of the county is 8% by 2025, which is low compared to other islands, most of the growth in households will come from groups aged 45 and older looking to buy seasonal and second homes.

Homelessness

Due to the high cost of living and stagnant wages, the island has a considerable number of residents experiencing homelessness. According to the Partners in Care Point-in-Time Count Report, there were 4,448 people experiencing homelessness on the night of January 22, 2020 (and this number is expected to have increased since the start of the pandemic.) The overall number has not changed drastically since 2019. The persons experiencing homelessness are scattered throughout the island, with Region 1 (Downtown Honolulu/Kalihi/Nu'uanu, etc) and Region 7 (Wai'anae Coast) having the largest percentage of individuals experiencing homelessness. Native Hawai'ians and Pacific Islanders are overrepresented by 210% in Oahu's homeless population; in other words, just over 1 in 2 individuals expressing homelessness on January 22, 2020 identified as Native Hawaiian and/or Pacific Islander. The most common self-reported causes of homelessness are inability to pay rent and job loss.

Figure 12. Percent of homeless individuals in Honolulu



Source: Partners in Care

Employment

A large and growing number of workers in Oahu are in jobs that pay hourly wages. As of 2019, 35% of the labor force is working full-time or part-time on hourly wages, similar to those seen in Washington (34.1%) and New York (32.9%). These workers are more likely to have fluctuations in income and less likely to receive benefits such as retirement or pension benefits. Wages have been stagnant due to the low number of workers outside of the labor force; before the pandemic, the unemployment rate was at 2.1%.

Figure 13. Labor status of Honolulu residents

Source: United for Alice

As of May 2019, the five largest occupation titles were Retail Salespersons, Fast Food and Counter Workers, Waiters & Waitresses, Registered Nurses, and Janitors & Cleaners excluding Maids & Housekeeping Cleaners. The top five occupational groups were as follows: Office and Administrative Support, Food Preparation and Serving Related, Transportation and Material Moving, Educational Instruction and Library, and Sales and Related.

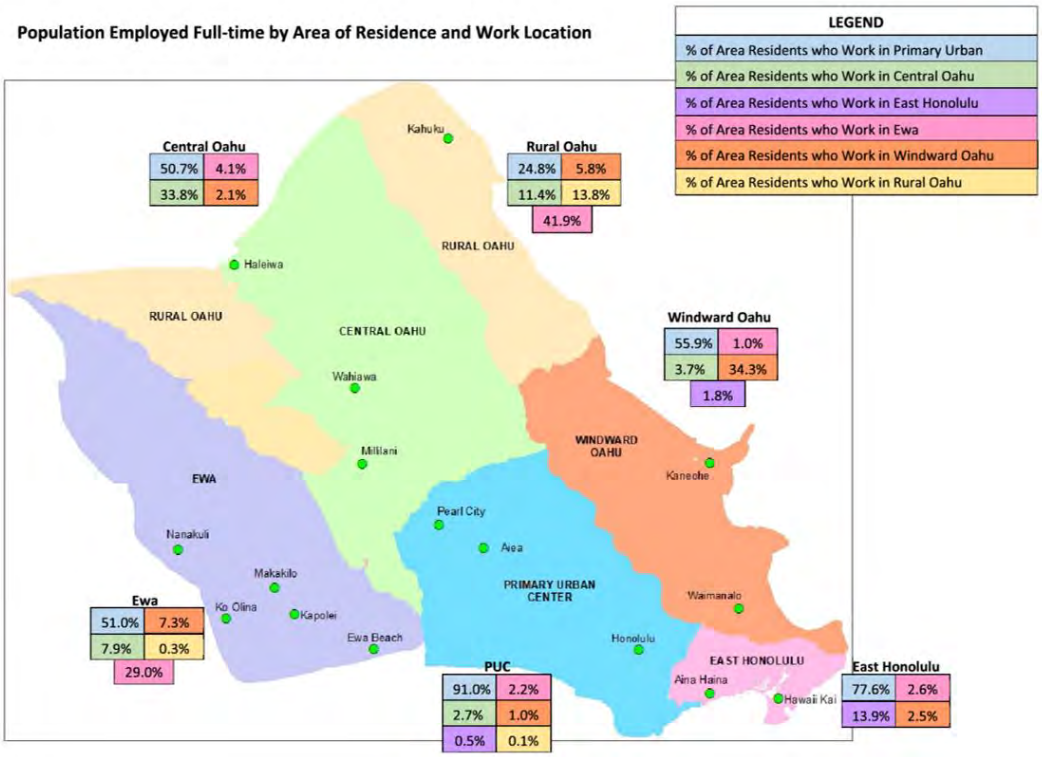
Several major companies have their headquarters in Oahu, such as Hawaiian Airlines, Aloha Air Cargo, First Hawaiian Bank, Bank of Hawaii and the Hawaiian Electric Company. Other major companies and employment centers include hospitals and health organizations (ex: The Queen's Medical Center, Hawaii Pacific Health), educational institutions (ex: Honolulu Community College, Kamehameha Schools, the University of Hawaii), the tourism industry (Kyo-Ya Hotels & Resorts), food services (Zippy's Restaurants), government and law enforcement (the U.S. government, the State of Hawaii, TheBus, Honolulu Police Department), real estate (Homes by Towne) and shipping (Matsons Shipping Honolulu.)

According to projections, the hospitality, service and tourism industries will remain Hawaii's top sectors for the years to come, even despite the pandemic. Recent efforts to expand and diversify Hawaii's economy to the technology and renewable energy sectors have been met with local opposition. Other areas of growth include the grocery business, which is projected to see 12% growth by 2029, the home health care business, with a predicted 50% growth by 2029, and air transportation jobs. However, these jobs pay low wages that are not expected to increase to match the high cost of living on the island.

In terms of work location, as of 2019 the largest percentage of employees across the island work in the Primary Urban Center (which spans Pearl City to Waikiki). As shown below in **Error! Reference source not found.**, in almost all areas across the island, the l argest percentage of full-time working residents work in the Primary Urban Center. The only outlier is Rural Oahu, where 41.9% of full-time working residents work in the Ewa area.

Aside from the Primary Urban Center where 91% of full time working residents work locally, less than 35% of working residents work in the area they live.

Figure 14. Employment by residence and work location



Source: SMS Hawaii: Where O'ahu Reisdents Live and Work

Cost of Living

The rise in housing prices, stagnant wages, and the lack of economic diversification on the island has led to a very high cost of living. An article published by 24/7 Wall St in 2020 found that Honolulu is the 3rd most expensive city to live in, with a monthly cost of living of $9,632 for a family of four and $4,296 for a single adult. This would equal $115,584 and $51,552 a year, respectively. However, the cost of living is considerably higher than the monthly median family and individual incomes, which are $9,632 and $4,296 respectively.

The Housing +Transportation Index published by the Center for Neighborhood Technology also shows housing and transportation costs as a percentage of income across population, households, and neighborhoods on the island. It provides a view of affordability that combines housing and transportation costs and sets the benchmark at no more than 45% of household income. According to this Index, 70.6% of households on the island pay more than 45% of their household income on housing and transportation costs. 393 out of 561 neighborhoods are severely rent and transportation burdened. These include most neighborhoods in District 2, the southern portion of District 1 from Waianae to Ewa Beach, Schofield Barracks and Mililani in District 9, as well as most areas in the Leeward portion of the island. The Urban Core generally has the lowest percentage of income spent on both housing and transportation, with the exception of Kaimuki, Kaka'ako, Ala Moana and parts of Diamond Head.

The cost of living is also made especially high due to the cost of food and energy, according to Democrat & Chronicle. 85-90% of the state's food is imported, and the price of a kilowatt hour of power costs three times the national average. As such, many families have struggled to make ends meet on the island.

3 Land Use

The City and County of Honolulu was incorporated in 1907 and encompasses the entire island of Oahu (it also includes the unpopulated Northwestern Hawaiian Islands.) With a total land area of 600 square miles and 230 miles of shoreline, the city of Honolulu is both the largest city in the State and is the State capital.

Out of all the islands, Oahu has experienced the greatest recent population growth and development. There has been a general policy to concentrate development in key areas around the island, with protected growth in suburban and urban areas (e.g., Ewa and Koa Ridge in Central Oahu). Refer to Figure 15 for a map of the development patterns on the island. A summary of these development patterns is as follows:

- Urban core: extends from Wai'alae-Kāhala to Pearl City, including the financial center in downtown Honolulu, visitor destinations in Waikiki, and the state's commercial harbor and international airport.
- 2nd City in Kapolei: planned in the 1970s and partially executed, the plan was to create a "second city" in Kapolei with commercial and industrial zones. Supportive infrastructure has been built and government offices have been relocated. This area is the location of the largest portion of Oahu's population growth through greenfield suburban development.
- Suburban and rural communities: beyond the urban core are suburban communities, active farmlands, and natural and geological landmarks such as Ko'olau and Wai'anae Mountain Ranges and Diamond Head.

Figure 15. Development pattern on Oahu

Source: General Plan Update Presentation

Guidance Documents

General Plan

The City and County of Honolulu's General Plan sets forth the City's objectives and policies for the long-range development of the island. First adopted as an ordinance by the City Council in 1964, the document has been amended numerous times, most recently in 2017 following a comprehensive review of new trends and emerging issues and a robust community engagement process.

Through this process, several objectives for the physical development and urban design of the island emerged:

- To coordinate changes in the physical environment to ensure that all new developments are timely, well-designed, and appropriate for the areas in which they will be located;
- To plan and prepare for the long-term impacts of climate change;
- To develop the urban corridor stretching from Wai'alae-Kāhala to Pearl City as the island's primary urban center;
- To develop a secondary urban center in 'Ewa with its nucleus in the Kapolei area;
- To maintain those development characteristics in the urban-fringe and rural areas which make them desirable places to live;
- To create and maintain attractive, meaningful, and stimulating environments throughout Oahu; and
- To promote and enhance the social and physical character of Oahu's older towns and neighborhoods.

Development and Sustainable Communities Plans

The City and County have also created eight regional plans guiding land use approvals and infrastructure improvements and investment in those communities. Refer to **Error! R eference source not found.** for a map of the eight development plans.

- The 'Ewa Development Plan, the Primary Urban Center Development Plan, and the Central Oahu Sustainable Communities Plan account for most of the island's population growth and development activity.
- East Honolulu, Ko'olaupoko, Ko'olau Loa, North Shore, and Wai'anae focus on modest development activities to maintain the areas' rural character.

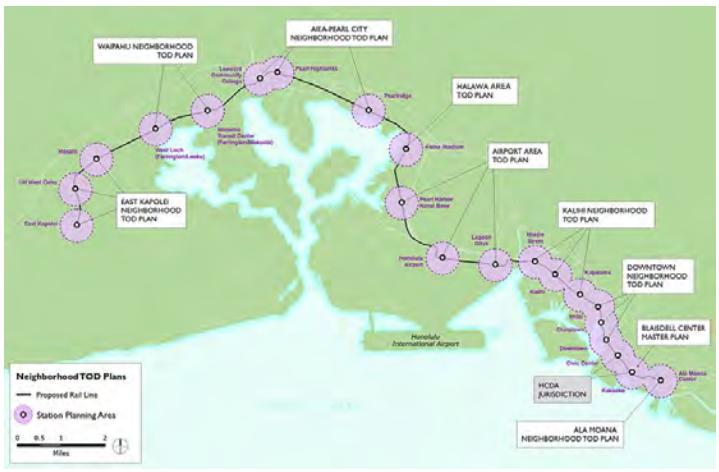
Figure 16. Development and Sustainable Communities Plans

Source: City and County of Honolulu, Department of Planning & Permitting

Neighborhood Transit-Oriented Development Plans

There are currently eight TOD plan areas centered around Honolulu's 20-mile rail transit corridor, with the two in Kakaako under the jurisdiction of the Hawai'i Community Development Authority (HCDA) with their own TOD Plans. The plans are meant to provide regulations and financial incentives to encourage higher density development and enhance transit access and walkability near the transit stations. The plans cover one to three station areas—each addressing land use, circulation, urban design, housing, community facilities, parking, pedestrian amenities, historic and cultural enhancements, and infrastructure.

Figure 17. Neighborhood TOD Plans



Source: City and County of Honolulu TOD Neighborhoods Website

The following tools and strategies are completed or in progress to realize the TOD projects:

Completed:

- Neighborhood TOD plans are completed for the station areas. The Waipahu, Aiea-Pearl City, and Kalihi Plans have been adopted by the City Council.
- Partnerships have been formed with state agencies to identify and prioritize the potential for TOD on state lands, including Mayor Wright Homes and the lands around Aloha Stadium.
- An island wide housing strategy has been developed to stimulate the production and retention of affordable and workforce housing, with a focus on rental housing and TOD areas.
- The City has identified pedestrian, bicycle, and transit access improvements around every station.

In Progress:

- Planning for several catalytic projects, including: a bus transfer station and mixed-use development at the Pearlridge station; transformation of Kapalama Canal and the surrounding area; infrastructure planning in Iwilei; and placemaking and connectivity in Chinatown and Waipahu. All projects will be developed through public-private partnerships.
- Evaluation of City properties in TOD areas for potential redevelopment and new affordable housing using “asset optimization” approach.
- Development of new TOD zoning and land use regulations for each area. These will require urban site design, active streetscapes, and usable open space.
- Development of new Complete Streets policies and standards.
- Evaluation of critical infrastructure to accommodate anticipated growth, including wastewater, water, streetscapes, utilities, broadband, and parks, as well as the funding mechanisms to achieve them.
- Development of financial toolkit to stimulate private development investments in priority TOD areas. Options include property tax and permit fee waivers, community facility districts, targeted state and federal funding, and other long-term funding mechanisms.
- The City is working with the Hawaii Interagency Council for TOD to support development on other State properties.
- Planning, design and interpretation of priority pedestrian, bikeway and transit access projects are underway in communities from East Kapolei to Ala Moana.
- An interdepartmental group is working to ensure seamless, safe connections between transit stations, bus stops, streets and sidewalks, and major activity nodes, including wayfinding signs and fare integration.

TOD Design Guidelines & Supporting Regulatory Mechanisms

Development planning with the City is designated and determined by the specifications and regulations outlined in the Land Use Ordinance (LUO). The LUO regulates land use in a manner such that is encourage orderly development in accordance with adopted land use policies, including the City's general plan, and development and sustainable communities plans, and, as may be appropriate, adopted neighborhood plans. Base limits for development projects (for example, density and height designations) are outlined in the LUO.

In relation to the construction of Honolulu's 20-mile rail transit corridor and following the adoption of each Neighborhood TOD Plan, the City is responsible for creating land use and zoning regulations that help to implement the development and urban design recommendations in each plan. These guidelines outline how the City enforces land use, which can shape the development of TDM measures in new developments.

An important regulatory change involves rezoning from single uses to mixed uses within ¼- to ½-mile of the rail stations. In addition to mixed-use zoning, properties in the TOD areas will be regulated by a new TOD Special District. Properties in the TOD areas will be regulated by a new TOD Special District within the City's Land Use Ordinance that specifies requirements on site layout and ground-floor building design. The goal of these development standards is to improve the pedestrian experience, business access, and connectivity around the rail stations, particularly along designated "key streets."The City's Design Guidelines for TOD Special Districts[1], published by the DPP in June 2018, provides guidelines by which developers can seek Special District Permits based on the scope and impact of development projects. The TOD Special District is designed to supplement or modify the underlying zoning district regulations to promote TOD, while providing opportunities for review and comment on major projects.

Examples of permitting within TOD Special Districts includes:

- Minor Special District Permits, for projects that have limited impact on the surrounding community, such as modifications to existing development not along "Key Streets" identified in the LUO, minor deviations from the development standards, or streetscape improvements. These may include modifications to parking stall supply, above-grade infrastructure improvements or streetscape improvements.
- Major Special District Permits, for projects that will have significant impact on the surrounding community, for example major modifications to projects along Key Streets, or projects seeking height and density bonuses through a Planned Development-Transit Permit.
- Planned Development-Transit Permits (also known as Interim PD-T), which allow for additional height, density, and flexibility to the development standards for "catalytic" projects. These projects will define the areas around them and should incorporate

[1] City and County of Honolulu Department of Planning and Permitting, TOD Special District Design Guidelines, June 2018

community benefits commensurate with the bonuses and flexibility being requested. Examples of community benefits include affordable housing, improved connectivity, and/or public open spaces, like parks and plazas. PD-T applications are reviewed by the DPP, and approved by City Council.

TDM Requirements for New Developments

There are no formal TDM Plan requirements for most projects on the island. The DPP typically imposes TDM measures for larger projects that require a discretionary permit, on the advice of the Traffic Review Branch (TRB), but projects that go straight to building permit, regardless of size, do not have a TDM plan unless the developers prepare one on their own accord. The DPP can require a Traffic Study as part of their permit application, which will often include specific recommendations to implement TDM strategies. These recommendations are then turned into specific conditions on their final permit.
Transportation

While Honolulu does not yet have an established TDM Plan or Program, their planning documents and transportation landscape incorporate many elements of TDM. Of note is the effort to make the island a more pedestrian and bicycle-friendly space, as evidenced by the recent Pedestrian and Bike Plans, as well as the state's goal to reduce transportation-related GHG emissions.

Local and statewide goals for transportation

Oahu Regional Transportation Plan (RTP) 2040 (2016)

Adopted by the OahuMPO, the RTP 2040 outlines transportation policies, goals, and objectives for the island. Based on current resources, projects, community input, and available funding, the document outlines strategies for Oahu to achieve an integrated, inter-modal surface transportation system that improves safety, mitigates congestion and increases mobility for the island's residents and visitors.

The following table summarizes the plan's projects to achieve these broad goals.

Table 3. Oahu Regional Transportation Plan projects and strategies

Project Type	Strategies
Congestion Mitigation and Alternatives	• Enhancement of Oahu's existing pedestrian and bicycle network • Implementation of ITS technologies to improve traffic flow • TDM projects to reduce demand and increase efficiency, such as managed lanes, park-and-ride lots, carpools and vanpools
Modernizing Projects	• Adding lanes • Increasing roadway capacity
Transit Projects	• Facility and system improvements for TheBus and The Handi-Van • Redirection of bus routes to serve as feeder bus routes to Honolulu Rail Transit • Honolulu Urban Bus Circulator System • Construction of transit centers
Operations, Maintenance, System Preservation and Safety	• Highway maintenance • Installing guardrails and other safety features

Hawaii Statewide Pedestrian Master Plan (2013)

The Hawaii Statewide Pedestrian Master Plan is a plan that focuses on pedestrian safety and mobility and provides guidance on supporting a multi-modal transportation system that prioritizes pedestrians. It gives an overview of the existing pedestrian environment, identifies areas of concern, and provides recommendations and implementation strategies.

It is accompanied by the Hawaii Pedestrian Toolbox (2013), which outlines concrete strategies for planning, design and operation of pedestrian facilities based on best practices around the world, adapted to Hawaii's unique context and characteristics.

The following table summarizes the Master Plan's goals and strategies.

Table 4. Hawaii Statewide Pedestrian Master Plan goals and strategies

Goals	Strategies
Improve pedestrian mobility and accessibility	• Encourage use of Hawaii Pedestrian Toolbox • Implement projects along state highways to enhance mobility and accessibility • Improve maintenance of pedestrian facilities
Improve pedestrian safety	• Increase driver and pedestrian knowledge of laws, legal requirements, rights and responsibilities • Use best practices for design and operation of all pedestrian crossings
Improve connectivity of pedestrian network	• Encourage pedestrian connectivity across jurisdictions • Support Safe Routes to School programs to encourage more students to walk to and from school
Promote environmental benefits of walking	• Broaden public awareness about the environmental benefits of pedestrian travel • Integrate pedestrian facility design with natural environment
Encourage walking to foster healthy lifestyles	• Support community-based events that encourage walking for daily exercise and socialization
Enhance communities and economic development by creating pedestrian-oriented areas and positive pedestrian experiences	• Encourage pedestrian infrastructure investment in high-density, pedestrian-oriented populations • Require development projects to include ped. infrastructure for appropriate land use and facility
Promote and support walking as an important transportation mode that reduces overall energy use	• Strengthen public awareness about the energy conservation benefits of walking • Encourage Smart Growth development with coordinated land use/transportation planning

Hawaii Statewide Transportation Plan (2045)

The Hawaii Statewide Transportation Plan (HSTP) is a document that outlines the framework for transportation planning decisions in the state of Hawai'i. It is coordinated in consultation with the planning, transportation and public works departments in each county, the Oahu Metropolitan Planning Organization (OahuMPO), and modal divisions of the Hawaii State Department of Transportation.

Updated, every 10 years, with the last HSTP completed in 2011, the state's Department of Transportation is in the process of updating the Plan for 2045.

The following table summarizes the plan's drafted goals and the strategies to achieve them.

Table 5. Hawaii Statewide Transportation Plan goals and strategies

Goal	Strategies
Safe and secure air, land, and water transportation systems	• Seek to eliminate transportation-related fatalities and serious injuries • Maintain cybersecurity and biosecurity and protect against other security threats to the transportation system • Maintain military transportation network connections
A high-quality, well-maintained multimodal transportation system	• Maintain the multimodal transportation system in a state of good repair • Optimize maintenance strategies and investments • Ensure infrastructure meets customer needs and expectations
Improved mobility and enhanced access to destinations for people and goods	• Provide an efficient and reliable multimodal transportation network for people and freight • Improve intermodal connectivity and options for people and freight • Support diverse modal options and improve multimodal connections within local communities
A transportation system that supports a vibrant and changing economy	• Enhance the efficiency and reliability of goods movement systems and infrastructure • Improve the movement of the state's workforce • Support statewide and local economic development • Improve efficiency and convenience of inter- and intra-state movements of Hawaii's tourists, people and goods
A resilient transportation system that anticipates and adapts to climate change and is responsive to storms, pandemics and other disruptions	• Reduce vulnerability and increase resiliency of land, air, and marine transportation systems to the impacts of climate change • Maintain secure and resilient supply chains • Improve emergency preparedness, response and evacuation • Protect the health of transportation system users during epidemics and pandemics
A transportation system that supports public health, equity and quality of life	• Increase access to high-quality mobility options for populations with limited access • Increase access to affordable transportation for populations with high transportation cost burdens • Reduce exposure to harmful impacts of the transportation system particularly within Environmental Justice communities • Provide equitable participation in transportation decision making that ensures community health, safety and culture are valued and supported in transportation infrastructure development and policy decisions

Goal	Strategies
Environment	• Improve and preserve the quality of air, water, land, and other natural resources • Reduce transportation-related impacts on natural, historic and cultural resources • Reduce transportation GHG emissions to support the statewide goal of carbon neutrality by 2045
Implement statewide planning process that correlates land use and transportation	• Incorporate new and evolving methods of public involvement, communication and social networking • Create and implement Integrated Sub-Regional Area Planning initiative that links strategic planning to project implementation for all modes through visioning process • Keep abreast of current and evolving programs and regulations that affect transportation in Hawaii • Seek wider application of geospatial technologies

Oahu Bike Plan

The Oahu Bike Plan was first drafted in 2012 and has since been updated in 2019 to include strategies related to the new rail project and to add a focus on low-stress bikeway facilities. The Plan identifies specific projects, policies, and programs that will expand bicycle ridership, provide a network of safe and comfortable bikeways for all users, and lead Oahu to become a first-class cycling destination.

The following table summarizes the plan's goals and strategies.

Table 6. Oahu Bike Plan recommendations and strategies

Recommendations	Strategies
Commit to Vision Zero	• Implement traffic calming measures • Identify and implement emerging and best practices • Develop collaborative interagency approach to transportation safety • Cooperate with HPD on effective enforcement
Develop seamless connections between bike and transit	• Provide safe bike access to train stations • Accommodate bikes on transit • Integrate bikeshare around transit stations • Provide secure bike parking
Expand encouragement and education efforts	• Support establishment of ongoing Open Streets events • Prioritize support for programs that serve marginalized populations • Increase City staff to oversee encouragement and education programs • Leverage City's network of community partners

Recommendations	Strategies
Establish comprehensive bikeway maintenance program	• Create maintenance and quick build team • Develop facility conditions inventory and prioritized maintenance schedule for all off-street shared use paths • Publicize 311 app and pothole reporting system • Establish Work Zone Accommodation Standards for bikeways, paths and sidewalks
Implement consistent signage and wayfinding program	• Prioritize signage on low-stress bikeways • Develop specialized treatments along iconic bikeway segments
Evaluate bicycle facilities and programs	• Collect, analyze and publish ridership data • Evaluate safety of new design treatments • Assess effectiveness and distribution of bicycle programs

Oahu Pedestrian Plan (2020 – present)

The Oahu Pedestrian Plan is an upcoming long-term action plan to create vibrant, safe, and accessible streets in support of healthy and livable communities. The Plan will involve inventorying existing pedestrian conditions, identifying pedestrian safety issues, proposing improvement projects and programs, and prioritizing improvements to facilitate walking and multimodal travel consistent with the City and County of Honolulu's Complete Streets Ordinance, as well as State and local transportation plans.

The City and County has solicited input from community members to shape this plan. The City and County has conducted public meetings and community events and has also added an interactive map for users to add their ideas by July 6th, 2020. Steer was provided an administrative draft of the 2020 Plan, which, as of the time of this publication, has not yet been released to the public.

The Plan has four goals it hopes to achieve: to make Oahu's pedestrian environment safe, comfortable, and clean; prioritizes modes of travel and infrastructure projects that preserve Oahu's natural environment and optimizes economic return on investment; to engage the greater community in creating and maintaining an active and context-sensitive pedestrian environment; and to focus investment in historically disenfranchised communities to create equitable walking conditions.

The following table shows the strategies and tools the City and County will use to achieve these goals.

Table 7. Pedestrian Plan tools and strategies

Objective	Tools + Strategies
Improve safety at signalized intersections	• Reduce crossing distance/exposure • Reduce pedestrian-motorist conflicts with signal phasing • Reduce speeds of turning vehicles • Maximize opportunities for walking in signal phase • Convert intersection to roundabout • Red light enforcement cameras • Street lighting at intersections
Improve safety at uncontrolled crossings	• Reduce crossing distance/exposure • Increase visibility of crossing • Reduce speeds of approaching motorists • Relocate or consolidate crossings • Provide adequate walkways • Provide frequent well-designed crossings • Implement lane reconfigurations • Implement low-traffic, low-speed neighborhood streets • Limit driveway exposure
Improve safety system wide	• Design and retrofit for target speeds • Reduce speed limits
Build out the walkway network	• Construct sidewalks to complete gaps in pedestrian priority network on major streets • Construct walkways with cost saving strategies to complete gaps in pedestrian priority network on non-major streets • Implement low-cost improvements to the ped environment
Provide clear sidewalks	• Require placement of utilities to preferred pedestrian zone width • Place bike parking, bus shelters and seating outside of the pedestrian zone
Upgrade walkways	• Widen sidewalks in high pedestrian traffic areas • Upgrade existing walkways to meet accessibility standards • Provide buffers to separate pedestrians from motorists
Enhance the pedestrian environment	• Provide protection from the elements • Provide bus shelters/seating
Pedestrian oriented environment	• Provide primary entries located directly from sidewalk • Orient sites to the sidewalk • Provide active and inviting facades and high pedestrian traffic streets • Shield parking, vehicular circulation areas, and utilities from the sidewalk • Provide seating in commercial areas • Promote development of neighborhood-sized schools

In addition, the document lists education, encouragement and enforcement pedestrian programs as strategies to promote walking. Of note is the City's suggestions for a TDM program managed by the City and County: "best practices, legislative recommendations and enabling policies, island-wide mode share targets, residential/employer commute trip reduction strategies and investments, community outreach and engagement, program website, program administration, marketing, educational materials, online reporting and webmap monitoring mechanisms.

Existing transportation services and infrastructure

TheBus

TheBus is Oahu's public bus network. Operated by Oahu Transit Services, a nonprofit, under a public-private partnership with the City and County of Honolulu, it has an average weekday ridership of about 199,960 (FY 2019.) It provides daily service on 110 routes that cover the entire island. A 2011 report from the Brookings Institution found that the island ranked first in the whole country for the share of working-age residents with access to transit, with 97% of working-age residents having access to transit.

According to TheBus Demographic and Fare Media Ridership Survey conducted in December 2018, 30% of surveyed riders have an annual household income of $74,999 or less, and 49% of riders do not have a driver's license. It also appears that full-time employees use the bus five das a week as their main mode of transportation to and from work: 56% of riders use TheBus for work, and 42% of riders ride the bus 5 times a week. These indicate that a high number of passengers rely on TheBus service for everyday usage and that TheBus is a critical lifeline for some of its users.

While it carries more passengers per revenue hour than its peers, despite operating fewer revenue hours and miles and a smaller fleet of available vehicles, it has still seen a steep decline in ridership. In FY 2018-2019, TheBus saw its second-lowest ridership in the past 25 years with 62.3 million rides. It is currently facing a $400 million shortfall that has been exacerbated by the sharp decrease in ridership during the pandemic. In order to stay compliant with the City's policy for fares to cover 25-30% of TheBus operational costs (it is important to note here that this is considered to be very high for an urban bus service; usually this percentage is reserved for high-passenger commuter rails), the City Council and Mayor Caldwell passed a bill increasing adult single rides fares to $3, monthly passes to $80 and annual passes to $880. These fare increases would take effect in July 2021.

TheBus has undergone several major changes to increase ridership and to improve the experience of existing riders. In 2019, it introduced the HOLO card, a smart card that allows riders to load cash and to tap while boarding. The new system caps fares so that riders will not have to pay more than the price of two fares on a single day, and allows riders to manage their card online or at retail locations. In 2020, the City's Department of Transportation Services awarded a contract to local firm Ulu HI-Tech to expand the card's use to the upcoming Honolulu Rail and Handi-Van.

TheBus has also worked with the City to designate bus-only lanes. On December 13, 2020, the City designated a bus-only lane on King Street from Dillingham Boulevard to Punchbowl Street, the state's busiest bus corridor serving 36 different TheBus routes coming from Leeward, Central Oahu and the North Shore.

Biki

Biki is Honolulu's large-scale bikeshare system. Launched in late June 2017, it has over 1,300 bikes at self-service "Biki Stops" throughout downtown Honolulu.

While established relatively recently compared to most other major cities in the US, the foundation for its arrival was laid as early as 2008. Bikeshare had first made its way to Hawaii as a pilot project in Kailua from 2011-2014, which offered two stations and 12 bikes. Later, in 2011, the State Department of Health formed the Hawaii Clean Energy Initiative working group and identified bikeshare in urban Honolulu as a strategy to decrease vehicle miles traveled. In 2014, the City Council approved Resolution 14-35 in support of bringing bikeshare to Honolulu as a public-private non-profit model. Subsequently, Bikeshare Hawaii was established as a 501c3 nonprofit.

Biki is operated as a public-private partnership, as was recommended by the City's 2014 Honolulu Bikeshare Organizational Study. Bikeshare Hawaii manages the day-to-day operations and programming of Biki and actively seeks additional partnerships and sponsorship for support. It contracts with Secure Bike Share LLC, a private operator that provides operations, customer support and system billing. Meanwhile, the City provides the vision for the program, hosts the majority of the docking stations, issues street use permits, and provides technical support for federal and state grants. It is supported by the City, the State, as well as by organizations such as Hawaii Pacific Health, All Nippon Airways, Hawaiian Electric, and others.

As of 2019, Biki has logged over 3 million rides by 121,270 unique riders to date; in 2018, it was the 6th most used bikeshare system in the nation. Oahu residents make up 24% of riders but take 64% of all trips. Roughly two-thirds of members are ages 18-39, and one-thirds of members have an annual household income of below $50,000. A recent survey has shown that the top three purposes for using Biki are fun/recreation, personal appointments, and dining.

As of April 29, 2021, Biki has seen a 70% drop in total rides due to the pandemic and has removed Biki stations to cut costs. It is possibly closing if they cannot receive financial assistance from the City and has sent an email blast to 44,000 customers asking them to write the Mayor and City Council in support of the program. This comes at the heels of a December 2020 independent audit that claimed the City lost out on $450,000 of revenue due to Biki's exemption from city permit and concession fees in using metered stalls and other spaces that previously generated revenue for the city. In response to this audit, Biki wrote on its website reiterating the structure of their partnership with the City, noting that the City hosts Biki stations their property free of charge "due to the benefit to the community and their customers, employees and tenants."

Other shared micromobility services

Aside from Biki, Ride Sharee started operations in October 2018 after being being allowed to operate by the City and County of Honolulu. Owned and operated by Neptune New Solutions LLC, a Honolulu-based for-profit company, it considers itself a competitor to Biki and has come into conflict with the city before over where to park the bikes. It is unclear whether this service is still operational, as sightings of the bikes are rare.

The island is a contested hotbed for e-scooters, which has caused friction between private operators and the City over regulations. In 2018, Lime launched 1000 e-scooters, drawing 3,500 rides in its first four days. However, the City immediately deemed them illegal, classifying them as mopeds that didn't have the required license plates, safety inspections and tags, and ordering the Honolulu Police Department to impound them. The growing interest in e-scooters and the demonstrated demand for them has prompted city and state officials to scramble to create regulations to manage them. The Hawaii State Legislature has introduced bills that would amend the definition of "moped" to exclude electric scooters and retain personal injury protection benefits for any individual sustaining injuries while using or operating an electric scooter. As of April 2021, the bill is in the hands of the House Finance Committee. In addition, the Honolulu City Council has passed two bills that would establish fees and areas for where companies can leave their shared rentals, paving the way for the inclusion of shared micromobility options on the island.

As city and state officials continue to consider regulations, new e-scooter companies continue to crop up. Go X has launched in Waikiki in early 2021, facing the same issues as Lime back in 2018. Go X's CEO claims that what they're doing is "completely legal," provided that the company partners only with businesses and ensures that bikes are only left on private property.

Paratransit Operations

TheHandi-Van, the paratransit service for people with disabilities, seniors, and Medicare recipients, is operated by Oahu Transit Services concurrently with TheBus. The service costs $35 for an annual pass and is generally available island wide, while 24-hour service is available in areas located within ¾ mile of TheBus routes 2 and 60. Average daily ridership was at 185,000 passengers just before the onset of the COVID-19 pandemic, with ridership recovery at 52% of pre-pandemic levels as of April 23, 2021.

Since 2011, demand has grown by approximately 3% per year above the projected demand rate calculated solely by population growth. It yields the highest per capita level of paratransit demand among large paratransit providers in the US. The most frequently used routes are those in the Urban Core and the West Side, areas with a high density of seniors, indicating that it is a well-used service. Given the aging population, this service will be needed more than ever in the years to come.

While service has increased by about 63% in the past twenty years to meet this demand, the operator has struggled to effectively manage demand, facing budget cuts and other shortfalls. The service's on-time performance is poor; a 2016 audit found that on-time

arrivals on TheHandi-van had fallen by 5%. In the past decade, at least three vans have caught on fire, and the city has struggled to replace its aging fleet. Riders have also raised concerns about the reservation system, which is conducted entirely over the phone and is down at times. Officials have expressed their frustration with the service's dispatch software, which has sent vehicles across the island to pick up different passengers, extending their trips by hours.

The City Council is now considering a bill to increase the fare by 25 cents to $2.25 starting next year.

Transportation Network Companies (TNCs)

Uber arrived in Oahu in 2013, followed shortly by Lyft in June 2014. They cover the entire island.

The trajectory of TNC or ride hailing services in Oahu has followed a similar course to that of rideshare in other major cities. Its arrival has been blamed for traffic congestion and declining transit ridership. In 2018, the Honolulu City Council approved a measure to limit prices that ride hailing services could charge during peak demand, effectively capping the fare even in times of increased demand. However, this bill was vetoed by Mayor Caldwell. Tensions between municipal officials, taxi companies, and rideshare companies surrounding their regulation still remain.

Publicly available data on TNC ridership is scant. A survey conducted by Anthology Research for *Hawaii Business* in the last quarter of 2017 found that 40% of local business leaders had used Uber or Lyft in the past two years. Those who responded that they used both taxi and TNCs overwhelmingly preferred TNCs, with 58% indicating that preference. The survey then polled the general public and found that 44% had used either Uber or Lyft. TNC usage is highest in urban Honolulu, among people under the age of 35, and among those earning over $100,000 a year. Those who stated that they preferred using TNCs cited the convenience of their apps, the fast pickups, the cost, the customer service, and the discounts and promotions.

In addition to Uber and Lyft, riders will now have a third option. Cecil Morton, the President and CEO of SpeediShuttle, a company that provides luxury airport shuttles throughout Hawaii, is starting Holoholo, another ridesharing app. It has a no-surge-pricing policy, making it competitive to Uber and Lyft, and wants to be a locally owned alternative that touts Hawaiian values and culture. Riders will be given an option to choose a green vehicle, and drivers will be rewarded for driving hybrid or electric vehicles by receiving a 5% greater share of a given ride's fee. As of May 2021, the app is recruiting drivers.

Taxi Services

There are many private taxi companies that operate in Oahu, such as Charley's Taxi, The Cab Hawaii, Hello Cab Hawaii, among others. Many of these are multi-generational family-owned companies whose presence is well-established on the island. Charley's Taxi has been operating on the island since 1938. It has established corporate partnerships with Disney, Hilton, Japan Airlines, Waikele Outlet Stores, and other major tourism

industry players; clients who use JTB, Japan's largest travel agency, can use a Charley's taxi for a flat rate.

The 2017 survey in *Hawaii Business* found that 44% of local business leaders had used a taxi within the past two years, and of the 24% of local business leaders who had used both TNCs and taxi, only 5% preferred taxi. 30% of the general public surveyed had used a taxi in within the past two years. Taxi usage is highest in urban Honolulu, and it is primarily used among individuals earning more than $100,000 a year. Those who preferred taxis over TNCs cited their convenience, their trust in the services, and that they are more regulated than Uber and Lyft.

Pedestrian infrastructure

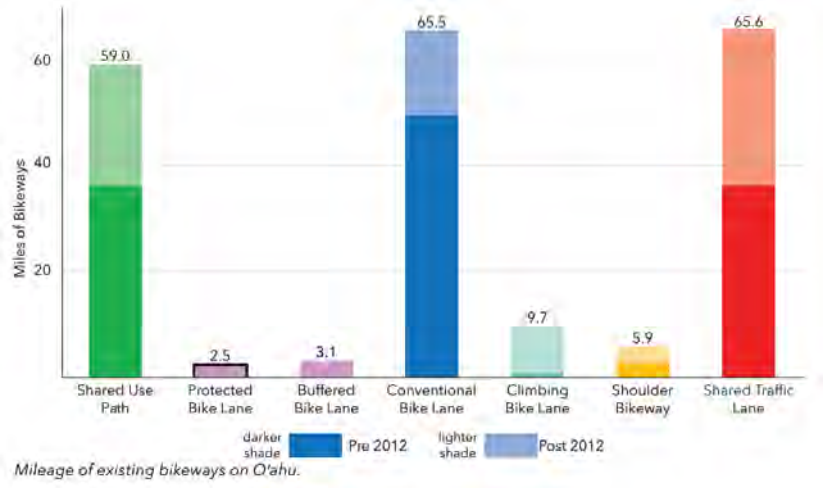
Oahu has a disparate sidewalk system that is well-developed in commercial and mixed-use areas. However, there are some critical gaps even in these high pedestrian demand areas. Rural communities are poorly served by pedestrian facilities and generally lack pedestrian facilities connecting residents to major destinations and transit. Residential areas are varied; newer suburban neighborhoods have good pedestrian facilities, while older residential areas, including even apartment areas, tend to lack complete pedestrian networks.

Due to the lack of adequate infrastructure island wide, Oahu has had the highest numbers of crashes of all islands involving pedestrians, with most of them occurring in the Primary Urban Center (PUC). The PUC has a relatively high percentage of elderly and tourist populations, who are often pedestrian-oriented. The central and western parts of Oahu have high percentages of youth under 17, as well as people without access to vehicles.

Bicycle infrastructure

Currently there are 211 miles of existing bikeways on the island that fall into three categories: shared use paths, conventional bike lanes, and shared roadways. According to the American Community Survey conducted in 2017, approximately 1.2% of Oahu commuters bike to work. Some areas in Oahu, such as Downtown Honolulu and Lā'ie, see upwards of 10% biking rates. Following the first Oahu Bike Plan in 2012, Oahu added 67 new miles of bikeways, a 47% increase in the island's bikeway network.

Figure 18. Mileage of existing bikeways on Oahu



Mileage of existing bikeways on O'ahu.

Private vehicle

Private vehicle is the most prevalent means of transportation on the island. While the majority of households (59%) own two or more cars, the remaining 41% own either one car or no cars. A majority of commuters (67%) report driving alone to get to work. The OahuMPO RTP 2040 states that the daily vehicle miles traveled (VMT) in 2012 was a total 13,709,049. It estimates that even with all projects implemented in the 2040 plan the island would see 16,544,144 VMT, while a no build 2040 would see 16,328,312 VMT. Daily vehicle hours traveled (VHT) totaled 427,619 in 2012; this number is expected to increase to 559,123 in 2040.

The island has seen a 31% increase in vehicles registered between 1995 and 2017 with a total of 792,000 vehicles registered in 2017. Since 1995, however, Oahu has only added 190 miles of roads to its streets and highway system. The increase in vehicles on the road has led to record levels of congestion on Oahu roads: the average Oahu driver in 2019 spent 64 hours in traffic annually, up from 53 hours annually in 2009. Additionally, a recent study published by the Ulupono Initiative highlights the cost of the vehicle economy in Hawai'i beyond the traditionally considered road maintenance and construction. They found that, when considering costs such as parking, emergency service use in response to vehicle accidents, and associated costs such as environmental impact and congestion, the total costs amount to roughly $14.3 billion annually on the island.

Parking

There are a variety of parking options on the island:

- Free on-street parking
- Metered on-street parking (price per hour higher in highly frequented areas)
- Off-street parking (employer, residential, hotel/resort, private and parking lots and garages)

The City has the authority to establish parking meter spaces or individual parking spaces in public off-street parking facilities. In facilities where monthly parking is authorized, the director can designate a certain amount of carpool parking spaces. As of 2021, the parking rates are as follows:

Table 8. Parking Costs

Parking Type	Rate
Smart meter in Honolulu urban core + Waikiki	$3/hour
Parking meter at Honolulu Zoo and Kapiolani Park	$1.50/hour
Parking meter outside urban core	$1.50/hour
Off-street city parking lots	$0.10 - $1.50/hour depending on facility

Some attendant parking facilities offer special rates for low-income residents, commercial tenants, and market unit residents. Many dining establishments offer parking validation or valet parking. Employers often subsidize the cost of parking for their employees. For example, the City and County offers monthly parking passes to employees for the cost of a monthly transit pass, which is currently $70 when market rate parking in the same district is $220, and $25/month parking is available a short walk from the Downtown offices.

A 2011 study on parking in the Urban Core, defined as the area bordered by River Street, Keeaumoku Street, Beretenia Street and Nimitz Highway/Ala Moana Boulevard, has found that there is an average of 13,000 vacant parking spaces during peak hours. This equates to roughly a 71% occupancy rate, indicating that there is a surplus of parking. Indeed, the study suggests that lack of parking space could potentially be an issue of perception; while streets had parking rates that exceeded 85% and sometimes even 100%, while some off-street parking lots in buildings lay empty.

There is a scarcity of parking, however, in select residential neighborhoods outside the Urban Core. This has prompted the City and County to create an ordinance to establish the procedure for creating Residential Parking Zones (RPZ.)

Originally piloted in Kalihi, one of the most congested neighborhoods where residents struggled to find parking, the RPZ pilot gives residents special permits to park on the street in their neighborhoods at certain times. The City may expand the RPZ program to become formalized passed it's pilot stage (as of April, 2021).

City officials are aware of the impact parking has on affordable housing and climate change. In late 2020, Honolulu City Council and former Mayor Caldwell signed into law Ordinance 20-041, a law that updates Honolulu's parking requirements. It removes the minimum parking requirement as part of each new development, which could potentially reduce costs for developers and prospective homeowners and renters and incentivize people to drive less. The Ulupono Initiative released a report in August 2020 detailing the high costs of parking; depending on location and type, the total cost (land and construction) can go from $22,500 to $57,000. In addition, the Hawaii State

Legislature enacted a package of incentives to electric vehicle (EV) users, including reserved parking spaces for EVs and free EV parking at state and county facilities, including meters. However, the State repealed parking benefits at state airports and most state and county parking lots and meters on June 30, 2020.

Despite these progressive parking policies, the governance and operations of City-owned parking assets is fragmented and uncoordinated. They are controlled by several different City departments and parking revenues do not go to a single dedicated fund, but rather scattered to a variety of funds. In addition, the City may be potentially be losing out on parking revenue due to lack of parking meter overtime enforcement by the Honolulu Police Department, as it does not retain any parking citations income, which goes directly to the State Judiciary.

Bicycle Parking

The Department of Transportation Services has a map of bike racks, both city-owned and non-city-owned, on its website. Most facilities are either in the urban core or in Kailua. The City has also opened up a new long-term parking shelter at the Kalihi Transit Center, which provides secure storage for 16 bicycles.

The City has responded to the increased bicycling activity by passing Ordinance 17-55 in 2017, which requires the provision of bicycle parking in new structures in Apartment, Apartment Mixed Use, Business and Business Mixed Use Zoning Districts. Ordinance 20-041 has added the required provision of bicycle parking in resort districts and all precincts of the Waikiki special district.

Carshare

There are a few carshare providers on the island. Hui Car Share has over 50 stations across Oahu with 130 active cars. Their stations are at the airport, Waikiki, Kaka'ako, Downtown Honolulu, Kaimuki and Kapahulu, Manoa and Makiki, Ala Moana, Central Oahu, Kapolei and the major hospitals.

Launched by Servco Pacific and Toyota Connect in 2018, it aims to provide cost savings and convenience to its users. While Hui initially worked with private landowners and parking lot operators to house their fleet, in 2019, Mayor Caldwell signed a bill that would reserve up to 160 public parking stalls for car-sharing vehicles only. Companies pay a price depending on location; at the city-owned lot at Smith and Beretania streets would cost $3,150 per space. The ordinance attracted some controversy, with opponents arguing that it takes away much-needed street parking in highly frequented areas.

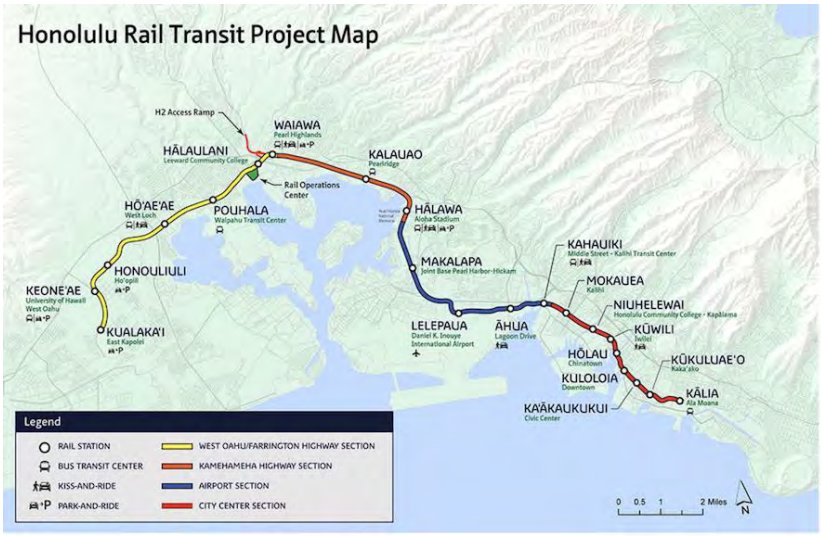
Additional carshare providers on the island include Enterprise CarShare and Zipcar. Enterprise has four locations in Waikiki, as well as at Hawaii Pacific University, the University of Hawaii at Manoa and Brigham Young University Hawaii. Zipcar is the cheapest option, but has only two locations, at the Alohilani Resort and the International Market Place.

Future transportation services and infrastructure

Honolulu Rail Transit

The Honolulu Rail Transit is a 20-mile-long light metro system under construction that will connect East Kapolei to Ala Moana, running through key areas of Downtown and the airport. It began construction in 2012 and was originally expected to open in three phases: Phase I, from East Kapolei to Aloha Stadium, in late 2021; Phase II, from Aloha Stadium to Middle Street, in 2022; and Phase III, from Middle Street to Ala Moana Center, is expected to open in late 2025. The new system is expected to relieve traffic congestion along the East-West corridor, take cars off the road, minimize dependence on imported oil, and create new jobs.

Figure 19. Honolulu Rail Transit Project map



Source: HART

The Rail Transit is a highly controversial project, due to its high cost, its questioned cost effectiveness, potential community displacement, continuous construction delays. Originally estimated to be a $4 billion project that would open to passengers in 2020 under a funding agreement with the Federal Transit Administration, the City is now estimating it to open in 2033 with a cost of $11 billion due to multiple cost overruns and most recently, the COVID-19 pandemic. The City asked the FTA for an extension on its $250 million grant and the FTA has extended the deadline to December 31, 2021.

The project is also being funded by a General Excise Tax surcharge paid by residents, some of whom do not believe that they will benefit directly from the project. Notably, the project is funded partially by the Transient Accommodation Tax on hotel transactions, another point of controversy.

There are also concerns about displacement of residents and businesses as a result of new developments surrounding the route. In order to ensure that growth that arises as a result of the delivery of the Rail Transit project creates neighborhoods where people can live, work, play and raise their families, the City has implemented its TOD program,

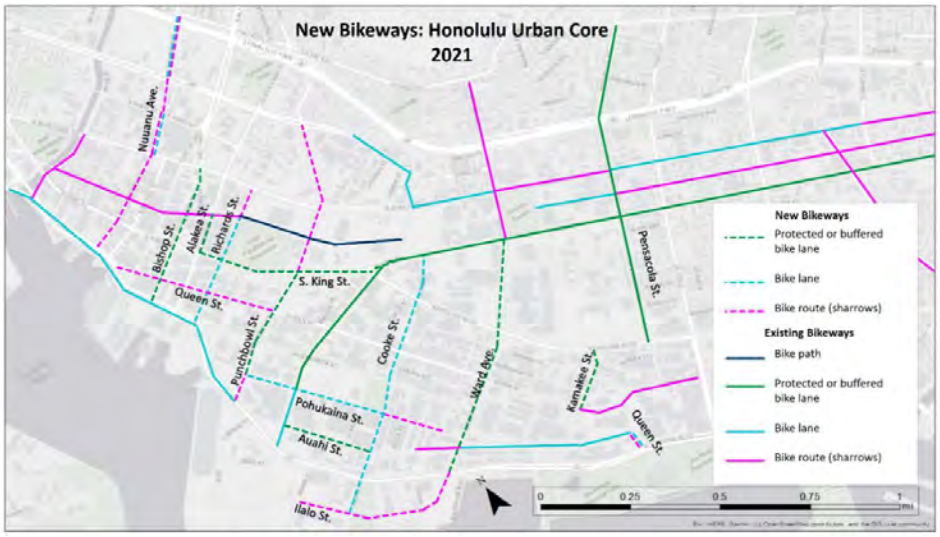
outlined in Chapter **Error! Reference source not found.**, which seeks to incorporate a high l evel of design, creates the conditions for active transportation, and enables more green space safer streets and less noise and pollution. The preparation of Neighborhood TOD plans around 19 of the 21 stations areas under City jurisdiction address opportunities for new development and holistically plan for orderly growth and improved accessibility around the stations.

Bikeway and pedestrian infrastructure improvements

As part of the Complete Streets program, the City and County is in the process of planning, designing and constructing new bikeways and pedestrian infrastructure across the island in conjunction with road repaving projects. These include:

- Curb ramp improvements
- ADA bus stop improvements
- Bike lane extensions
- Pedestrian crossing improvements
- Tree beautification projects
- Quick build projects (as administered by the City and community groups)
- Sidewalk improvements
- Multimodal access improvements
- Quick Build projects
- Highway improvements
- Multi-use paths
- Intersection improvements

Figure 20. New bikeways in Honolulu Urban Core



Source: Honolulu Complete Streets

4 Travel behavior and TDM

Travel trends

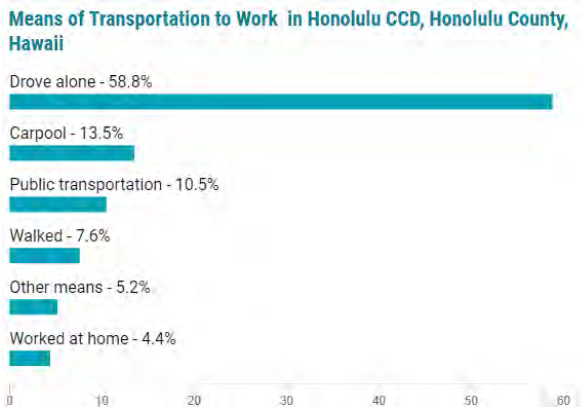
The island of Oahu is notorious, like many other cities in the world, for having too many cars and not enough space to sustainably support them. As a result of increasing density, tourism impacts, and fragmented public transportation, there is notable traffic in Honolulu and across the Island. In the 20 years leading up to 2020, the population of Oahu grew by 12% while car ownership increased by 30%.

As of 2019, the American Community Survey (ACS) reported a 58.8% drive alone rate among commuters, which is significantly lower than the national average of 75.9%, and more in line with rates in counties like Multnomah County, OR (including City of Portland) and King County, WA (including the City of Seattle), with 60.1% and 60.2% drive alone rates respectively. Additionally, INRIX, a company that provides location-based data and analytics, found that roughly 55% of all trips made in Honolulu were under three miles – easily replaceable with other travel modes.

Honolulu has a notably high percentage of employees who carpool to work, at 13.5%. As described in a 2014 article for *governing.com*, the former Oahu MPO Executive Director Brian Gibson speculates that high rates of carpooling in Honolulu and Hawaii overall is reflective of two main factors. First, the 'relative poverty' (the high cost of living in Honolulu compared to average income) experienced by workers in the City likely means commuters are cost-conscious. Sharing a ride provides those with access to a vehicle financial support toward gas and maintenance costs, while those who may not be able to afford their own vehicle can still travel to work as passengers. Additionally, Gibson points to the community-focused culture in Hawaii that both facilitates logistics of carpooling and reduces concern around riding with strangers.

Outside of driving alone and carpooling, Honolulu's commuters take public transportation (10.5%), walk (7.5%), telecommute (4.4%), or use other means, including bicycle (5.2%).

Figure 21. Means of transportation to work (ACS, 2019)



Source: American Community Survey

While traffic and vehicle miles traveled have momentarily subsided due to the Covid-19 pandemic, they have already reached 80% of pre-pandemic levels, according to the State Department of Transportation. Some industries may be able to sustain regular teleworking practices, the city's most prevalent industries require on-site support from employees. Those who might have considered alternative modes before may be hesitant to travel in enclosed spaces with others, and opt to drive alone if they have the ability. Additionally, Hawaii launched a program to attract remote workers and the subsequent influx of semi-permanent residents is likely to cause in influx on roadway demand, as many temporary visitors may find a car rental preferable to public transit for the needs of their trips, including non-work related travel.

As the City strives to stay on top of increasing car ownership and congested roadways, influencing behavior change and encouraging shift away from drive-alone travel through TDM will be crucial. However, rather than starting from scratch, the City can build off the current range of TDM programming and policy that exists today, implemented across the public and private sectors on both broad (up to statewide) and specific (site-based) scales.

School Commutes

Publicly accessible data on school commuting by mode on Oahu is limited. The Hawaii State Department of Education (DOE) provides public school bus services in neighborhoods across the state to ensure broad access to Hawaii's students. The DOE estimates that it serves approximately 15,000 student riders on Oahu per day, and a further 18,000 on neighbor islands, totaling 33,000 student riders of public school bus services per day. According to GreatSchools.org, there are approximately 180,800 students (PK-12 & Ungraded) within the Hawaii DOE school district. This data suggests that approximately 1 in 5 public school students (PK-12) commute by public school bus in Hawaii. The mode choice(s) of the remaining pool of students is unknown.

Statewide TDM

Hawai'i Department of Transportation (HDOT) designates rideshare programs as "the least expensive way to reduce rush hour traffic congestion." HDOT has a Transportation Demand Management Office housed within the Highways Division Traffic Branch, and provides a variety of programs and services aimed at encouraging shared rides.

Senate Bill 1401 – Complete Streets Policy and Principles

As of May 2021, the Hawaii State Legislature is considering SB 1401, which requires the Department of Transportation to report on the complete streets policy and principles, to establish standards relating to safe travel along state roadways, and to provide training for maintenance staff in complete street policies, principles and implementation procedures. It also requires counties to consider complete street policies when adopting or amending land use ordinances. Most importantly, it specifically requires that projects consider the following goals, which relate broadly to TDM: meet complete streets goals, reduce vehicle miles traveled, provide capacity to meet future mode share goals established by the State, and reduce carbon emissions and greenhouse gases to meet state climate and zero emissions clean economy goals.

The bill is in conference as of May 2021.

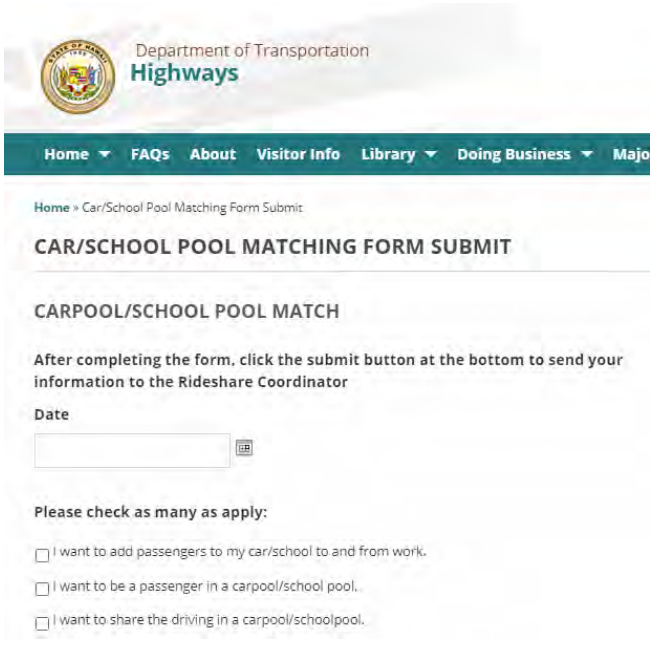
Carpool/School Pool Match

The state's Carpool/School Pool Match system allows users to enter the date they're interested in carpooling, whether they want to drive, be a passenger, or both, and requests information about home and work or school location and start/end times.

The Carpool/School Pool Matching Form also asks users how they typically get to school or work, which should allow HDOT to track percentage of interest from current single-occupancy drivers vs. those who typically use other modes.

However, HDOT does not provide any posted data that demonstrates outputs such as how many participants have used the site or been matched with carpool partners. As there is no way for users who fill out the form to log trips or confirm whether carpools have actually taken place, it is assumed that HDOT is not keeping track of outcome based data surrounding mode shift, trip reduction or VMT reduction achieved from the program.

Figure 22. Current Car/School Pool matching form



Source: Department of Transportation and Highways

Of note, in recent years technology platforms such as Scoop and Waze Carpool have supported more seamless processes to connect carpoolers that likely require less administrative staffing work. The State is working on launching an updated system, likely in Spring 2021.

Multi-Modal Travel Information

The HDOT "Rideshare" web page, provides multi-modal travel resources and information about TDM programs across the state, including:

- Qualified Transportation Fringe Benefit, which allows employers to provide a portion of their employees' paycheck before tax deductions to be used for alternative commuting.
- Transit resources such as TheBus, the Oahu Vanpool Incentive Program, and brochures/flyers on carpooling tips (though very out of date)
- Links to successful TDM programs such as the University of Hawaii at Manoa's Commuter Program.

HDOT also produces the HDOT Moves podcast, which touches on TDM-related topics such as "Public Transportation and Pandemics" and "A Governmental Perspective on Telework."

High Occupancy Vehicle (HOV) lanes

HDOT has restricted lanes along some of its highway corridors during peak commute/travel times. Portions of H-1, H-2, Nimitz Highway, H-201, and Kalanianaole Highway, all have lanes open to only vehicles with occupancy of two or more people, or vehicles with special permits, during those times.

Act 205 – Commuter Benefits Program

In 2015, the Hawai'i State Legislature introduced House Bill No. 1010, which gives counties within the state the permission to adopt ordinances that establish commuter benefits programs which consist of one or more of the following:

- Allowing employees to take advantage of pre-tax commute benefits for transit or vanpool travel
- Providing employees who don't drive alone with monthly incentives, up to the cost of traveling by transit or other alternative mode
- Direct transportation service.

Support for the bill was voiced by HDOT, the Hawaii Government Employees Association, the City and County of Honolulu Department of Transportation Services, Blue Planet Foundation, Ulupono Initiative, the Hawaii Energy Policy Forum at the University of Hawai'i at Manoa, and the Hawai'i Bicycling League, among others. The bill was signed into law in July 2015, making way for the potential for commuter benefits programs to be delivered in accordance with state law. However, there are no references to county-produced ordinances in Honolulu (or the other counties) online – either they have not been produced or not publicly accessible. However, the City and County of Honolulu has taken advantage of this for its own employees.

Safe Routes to School Program

Safe Routes to School (SRTS) is a national and international movement to encourage more children to walk and bicycle to and from school through programming, advocacy and education. It is seem as an effective TDM strategy as it reduces drop-off related VMT and engrains walking and biking habits in students that could last up to adulthood. SRTS is a Anyone can start an SRTS program and can apply for city and state infrastructure and non-infrastructure funds.

Hawaii Bicycle League has helped a couple of schools in Oahu develop their Safe Routes to School plans, including Kalihi Kai Elementary, Kailua Elementary, Kailua Intermediate and Waialua Elementary Schools. In Fiscal Year 2020, SRTS provided the following:

- Pedestrian and bike safety education at Ala Wai Elementary School for their Walk to School Day
- Walking field trip for Kindergarten classes at Ala Wai Elementary School to the McCully fire station
- 96 reflective children's vests to Pohakea Elementary School and Pearl City Elementary School
- Workshops at Wilson Elementary, Kapolei Middle School
- Blue Zones' efforts towards creating an SRTS Plan at Robert Louis Stevenson Middle School, which will be drafted sometime in 2021

Due to the pandemic, the program focus has shifted to creating support materials for education and addressing programmatic challenges on equity and engagement.

City and County of Honolulu TDM

Despite the lack of a comprehensive TDM policy or incentive and education program, the City and County of Honolulu undertakes coordinated efforts that support TDM programming across the island, including a vanpool incentive program and work with developers to require site-based programming aimed at changing travel behavior.

Vanpool Incentive Program

Years after the previously existing Vanpool Hawaii program was suspended, the City and County of Honolulu launched the Oahu Vanpool program in 2016. The program subsidizes the cost of monthly vanpool use for riders and drivers across the island. Vanpool riders and drivers can sign up for the incentive program and receive up to $500 for each vanpool. The program is operated by private vendors who contract with the City (right now this includes only Enterprise Rideshare), and the subsidies are provided by the City.

Figure 23. Oahu Vanpool Incentive Program banner

As of March 2021, the Vanpool program has 57 active vanpools. Its annual environmental impact include about 2.5 million commuters miles reduced, over 150,000 trips eliminated, and roughly 1.9 million lbs of CO2 emissions reduced. Its farebox recovery ratio is 118%, considerably higher than that of TheBus (27%.) Its contract with Enterprise is set to end in mid-May 2021. The City has plans to extend the contract, transition to a sustainable funding source, and potentially procure a new contract in the future.

New development project requirements

The City Department of Planning and Permitting (DPP) works with new developments to ensure projects can mitigate traffic and environmental impacts that their future sites may contribute to. This is often done through the creation of Traffic Management Plans (TMPs), which typically have a TDM component. Developers are required to submit these plans and have them approved by the City prior to receiving their certificate of occupancy.

While TDM is often a component of these plans, there are no guidelines in place for either developers or DPP staff approving TMPs related to the level of TDM programming or anticipated impact from required. Additionally, due to the timing of the TMP (prior to the Certificate of Occupancy rather than the initial building permit) the plans may not be approved/implemented before development. There is also a lack of formal criteria/measurement for reduction in SOV (single occupant vehicle) travel. Thus TMPs may be approved with TDM language that is vague, including “recommendations” for the site, rather than commitments. The City does undertake a one-year “post-TMP” follow up with developers, however they don’t have capacity to monitor regularly the impact of the TMP elements, nor, as is crucial with TDM programming in particular, whether they are actually being implemented.

Citywide and Area Partners

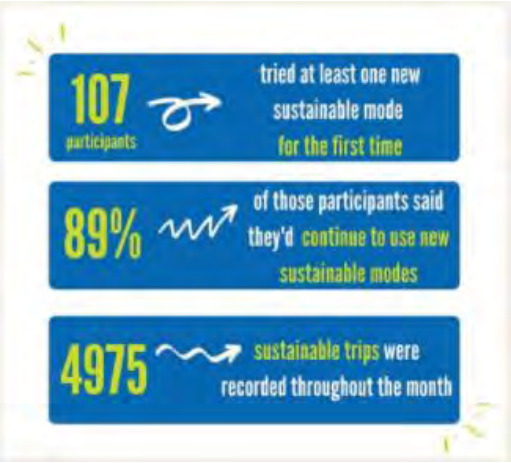
Beyond the publicly funded programs outlined above, TDM is also implemented in Honolulu through nonprofit and other public-private partnerships.

Blue Planet Foundation’s Oahu Commute Challenge

The Blue Planet Foundation is a nonprofit focused on transitioning Hawai’i to 100% clean energy and removing the state’s reliance on fossil fuels. They provide youth education, support for policy and community change, and manage large-scale marketing campaigns focused on promoting energy efficiency. Blue Planet Foundation powers and administers the Sustainable Transportation Coalition of Hawaii, (STCH) part of the U.S. Department of Energy Clean cities Program.

One major campaign administered by Blue Planet Foundation and STCH is the Oahu Commute Challenge, which held its inaugural event in 2020, working with employers and encouraging employees to log non-drive-alone commutes for a month in February. Employer teams competed for the most points (earned by logging commute and mid-day trips) and received prizes like Lyft credits or entrance into raffles for airline credit.

Figure 24. Oahu Commute Challenge statistics



Source: Blue Planet Foundation

Programs like this that require trip-logging over a short period of time provide the opportunity for useful data collection not always present in TDM programming. The 2020 Oahu commute challenge was able to solicit participation from 140 commuters, 107 of which indicated that they tried a new mode for the first time because of their participation. Most of the participants (89%) indicated that they would continue to use sustainable modes after the monthlong challenge was complete.

Love to Ride Hawaii Bike Challenge

Love to Ride, an online cycling community, has partnered with Ulupono Initiative, Biki, and other community partners to kickstart the Hawaii Bike Challenge as part of the national Bike Month Challenge for the month of May. Riders can start or a join a team to ride as much as they can during May and have a chance to win prizes, such as a two-night stay at the Queen Kapiolani Hotel, a Patagaonia backpack, a Maitai Catamaran sail for two, etc. As of May 3, 2021, 93 teams and 582 people have registered statewide.

Transportation Management Associations

Transportation Management Associations/Organizations (TMAs/TMOs) are typically public-private partnerships between local government and area developers and employers with a common goal of reducing congestion, improving air quality, and improving quality of life for commuters and other travelers.

Honolulu is home to the Waikiki TMA, which was established through a City Ordinance in 2017, creating the Waikiki TMA Special Improvement District. The TMA is structured to support projects such as RPZs, implementing flexible curb management strategies, and working with partners to fund other projects that support decongestion in the Waikiki area.

TMAs can take many different forms and responsibilities, and it is important that they be created to fit the unique needs of each of their audiences. Previously, a TMA also existed for the Leeward Coast area of Oahu; that organization was focused more specifically on programmatic TDM support such as the provision of carpool matching and a guaranteed ride home service. The Leeward Oahu TMA is no longer active.

Hawaii Bicycling League

Hawaii Bicycling League, a nonprofit that encourages people to ride bicycles through advocacy, education and events, offers a plethora of educational resources for adults who wish to commute by bike. These include free Learn to Ride workshops, Commuter Cycling 101 classes, the Commuter Mentor program, among others. The Adult BikeEd program is funded with support from the City, and over 2,600 residents participated in Adult BikeEd in FY 2020.

Biki Employer Plans

Biki offers employer plans for employers on the island. HDR was the first employer to offer a $15 monthly plan, which includes unlimited 30-minute rides, to its employees. It has covered the full cost of a monthly membership for all employees. Biki has also set up employer plans with Ulupono Initiative, American Savings Bank, Hawaii Pacific Health, Hawaiian Electric Industries, and Hawaii Medical Service Association.

TheBus Tax-Free Transit Benefit Program

Employers can offer a tax-free transit benefit program to their employees. Employers can distribute bus passes or transit voucher benefits to employees, which can be structured as either a low-cost fringe benefit program in which the employer provides the benefit, or as a voluntary pre-tax program in which the employee chooses to purchase transit benefits through pre-tax payroll deduction. Employers who opt to participate in this program can arrange for TheBus staff to meet with employees to introduce them to the program, help them with transit trip planning, design and analyze a survey analyzing commute needs, and train a designated staff person as the in-house coordinator.

As of April 22, 2019, 93 companies were participating in the Transit Benefit Program. These include Coldwell Banker Pacific, Doubletree Alana Hotel, Outrigger Enterprises Group, Queens Medical Center, the State of Hawaii, the U.S. Coast Guard, Verizon Wireless, Waikiki Beach Marriott Resort and Spa, Farmers Insurance of Hawaii, First Hawaii Bank, etc. City employees are now involved in the testing and roll-out of the HOLO card, with 103 City employees using the pre-tax HOLO monthly pass.

Site-based TDM programs

Either stemming from development requirements, a desire to support employees and other users, or an interest in supporting sustainable objectives, TDM is implemented across the island on a site-based level by universities and employers. Some of Honolulu's most active TDM programs are highlighted below:

University of Hawai'i at Manoa

Figure 25. University of Hawai'i at Manoa

The University of Hawai'i at Manoa was experiencing an increase in parking demand and challenges with congestion and subsequent access to campus. The University was not in a financial position to build more parking to accommodate single occupant vehicle access, and many students didn't own cars, so the University turned to TDM in order to alleviate congestion issues with a "people first" approach built on the foundation of access to education. The plan involved significant amounts of stakeholder outreach with students and faculty, as well as external stakeholders.

The university hired a consultant to develop a series of TDM strategies after gathering input from diverse stakeholders from campus and the city and county of Honolulu. The plan included a parking model, policy framework based on cost effectiveness, and a benchmark to provide for monitoring key indicators related to mobility and sustainability goals. Strategies in the plan included:

- A ranked list of investments to improve access and circulation
- Implementing a transportation fee over 3-5 years
- Existing conditions of access and parking management, and subsequent recommendations
- Local Transit, Shuttle, and Active transportation review and recommendations
- Strategies to coordinate transportation initiatives with neighboring communities
- Recommended phasing
- Implementation recommendations including partnerships, monitoring, and TDM staff roles

The University provides a discounted semester pass for students that provides unlimited TheBus rides, established by the Associated Students of the University of Hawai'i in 2009. Students pay a mandatory $20 fee that would grant all fee-paying students the pass for the semester. The proposal had overwhelming support from students, public transit authorities, advocates, and community groups. Now in its 12th year, the "Mandatory U-Pass" costs $50/semester for eligible students, while the "Opt-In U-Pass", available for Medical, Law and other grade students, costs $225/semester.

The University also provides the Rainbow Shuttle, a free service for both students and employees that provides access around the campus on routes that are not frequented by regular public transportation. A 2018 analysis conducted by Kimley Horn found that between August and December 2017, ridership is higher on routes that serve faculty and student housing as well as upper campus, while ridership is lower along longer off-campus loops to surrounding neighborhoods, in particular on routes that overlap with

TheBus. The Rainbow Shuttle has ceased operations since the beginning of the COVID-19 pandemic, and the University plans to decrease the number of shuttles when it returns to operations.

The TDM Plan fully outlines recommended metrics and measurement strategies and encourages regularly updating performance data metrics as to share real time information with partnering jurisdictions. Highlighted key performance metrics are outlined below:

- Modeshare KPI's as collected through annual Campus Transportation Survey
- Carshare parking supply as measured by Facility reported parking data
- Ratio of University population to parking supply
- TheBus Ridership as measured by Automatic Passenger Counts
- Revenue from parking re-allocated to TDM Programming

The University implemented various strategies and adopted the monitoring and evaluation plan starting with a survey. The plan was adopted in 2011 and in 2014 a series of strategies were underway. Notably, the University has implemented a low-cost car rental program which incentivizes students not to own a car. Access to vehicles on a short-term basis gives options to individuals who've chosen not to bring a car to campus, thus making even more viable commute modes such as TheBus, biking, walking, or carpooling. By exchanging the ownership of an under-used car for renting a car when needed, departments save money and free up parking spaces. The University promotes TDM through their Commuter Resources webpage which includes a full suite of alternative modes information, required paperwork for parking permits, policy overview, and special event information.

According to a 2011 campus transportation survey, 43% of affiliates drove alone to campus. 21% used TheBus/HandiVan, 11% biked, 8% carpooled, 7% walked, 5% were dropped off by car, 4% drove either a motorcycle, scooter, or moped; and 1% took the Rainbow Shuttle. However, campus mode share for beyond 2011 are unknown.

Hawaii Pacific University

While Hawaii Pacific University does not have a comprehensive TDM Plan like UH Manoa, it still offers TDM programs to encourage students and employees to consider sustainable commute options. HPU offers the HPU Greenride, a ridesharing system that helps students and employees find partners for carpooling, biking, busing and walking to HPU's campuses and for single trips. The website allows participants to log their commutes to realize emissions savings, cost savings, and health benefits of their transportation decisions.

The UPass is also available at Hawaii Pacific University.

5 Conclusions

Honolulu's unique landscape, environmental connection, and changing demographic conditions present a need for a reduction in vehicle trips and miles traveled in the coming years. Infrastructure improvements such as rail and additional freeway capacity, while beneficial, will not meet the demand on the roadways in Honolulu. In addition to those efforts, the City and County must see a systematic and sustained change in behavior among its residents and visitors away from drive-alone travel.

The words of Hawaii DOT Director for Highways, Ed Sniffen, as told to Civil Beat capture the essence of this issue: "Changing the culture — our car-centric view of Hawaii is the big thing. Making sure that we get to that point where we start seeing transportation differently matters."

In summary, there must be a culture shift before there is a behavior shift and a mode shift. Transportation Demand Management programs and incentives are typically much less costly than infrastructure investments, so provide lower-risk opportunities for agencies to reduce drive-alone travel.

Key Findings

As the City begins to develop its TDM program based on the current conditions outlined above, the following Key Findings from this desktop research effort to be influential:

1. The demographics, employment patterns and land use patterns on the island are unique show that the traditional large employer-focused TDM programs that work well elsewhere may not be as successful in Honolulu. Instead, the City will need to be creative in order to reach communities with much more varied travel schedules, habits, and motivations.
2. There are currently long-rage plans and legislation in place or underway that will create a solid base for a wider island-wide TDM strategy. These include the new biking and pedestrian plans, the growing biking culture, the creation of the RPZ's, as well as regulations for new developments.
3. However, these components make for a fragmented TDM landscape. There will need to be centralized coordination and promotion of TDM strategies.
4. There is also very little monitoring or success measurement taking place, so it is difficult to know how impactful these programs are in changing behavior or reducing vehicle miles traveled. Measurement must be a key element in any formal Honolulu TDM program.

SWOT Analysis

Strengths, Weaknesses, Opportunities and Threats that might impact increased TDM delivery or a unified program in the area. Error! Reference source not found. below o utlines the current landscape for TDM through the SWOT lens, as have been identified through desktop research and conversations with stakeholders. As is demonstrated in more detail in the table:

- Strengths revolve around Honolulu's environmentally conscious population and pre-established and recognized City programs with which TDM can partner.
- Weaknesses relate to the island's inherently difficult to reach populations with irregular work schedules and potentially less attunement to technology among older populations.
- Opportunities involve the Covid-19 pandemic's ability to encourage adoption of new travel behaviors, and an appetite among public agencies to support low-cost investment in reducing vehicle miles traveled.
- Threats include increasing rates of car ownership across the island and a need to support rather than restrict the business community.

Table 9. TDM in Honolulu SWOT Analysis

Strengths • Momentum and enthusiasm around sustainable transportation initiatives exists already. • The City has a strong rapport with the business community who generally supports environmental efforts and congestion reduction • Notably high rates of carpooling, indicating strong propensity for shift to other sustainable modes • Existing City/County plans and policies provide a base for TDM programming: – Vision Zero and Complete Streets commitments to improve active transportation infrastructure – Commuter Benefits Program (HB 1010) – Current RPZ pilot and upcoming program	**Weaknesses** • Transit Oriented Design lacking in areas of high density. • Enforcement toward property owners of transportation-related policy (i.e. curbside management, TMP upkeep) is light. • Significant amount of labor force works part-time or hourly, and therefore employer-sponsored transportation incentives may not reach majority of work force. • Public parking is heavily subsidized. Parking management is fragmented and decentralized, and therefore may be complicated to reform/restructure on a large scale.
Opportunities • Post-pandemic travel patterns will change and with that, subsequent opportunities to create new, sustained travel habits • Micro-transit and on-demand transit could serve low-traffic and low-density areas in lieu of underperforming bus routes • Large private school populations provide potential targets for innovative TDM programming • Recognition of importance of environmental issues and protecting the island among the general public may strengthen TDM messaging if focused on environmental impacts	**Threats** • Increasing rates of car ownership, infill housing, and persons per household increases roadway and parking demand • Lack of affordable housing means population may continue to spread out to areas with lesser access to multi-modal options • Covid-19-related budgetary constraints across the island may inhibit funding for both transit and TDM. • The City's desire to attract business and development may mean some key players are against any ordinance or requirement related to TDM. There is also no mechanism to monitor TDM plans associated with development, and these plans are limited to encouragement without financial incentives. • Complex planning and policy issues take significant time and commitment from stakeholders and can lead to loss of interest

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Appendix C Best Practices Report

TDM Best Practices Report

City & County of Honolulu
Honolulu Transportation Demand Management Plan

HNL Connect

Report
June 2021

Honolulu Transportation Demand Management Plan

TDM Best Practices Report

Department of Transportation Services

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Prepared by the City and County of Honolulu Department of Transportation Services, in cooperation with the O'ahu Metropolitan Planning Organization and the United States Department of Transportation.

Contents

1 Introduction

The City and County of Honolulu has initiated a project to design and implement a Transportation Demand Management (TDM) Program to reduce traffic and parking demand while increasing walking, bicycling, rideshare, and transit use. In addition to an existing conditions analysis, a review is also being conducted of national best practices as a basis for TDM Program planning.

This report summarizes several TDM Programs from across the United States and identifies key takeaways for the City's consideration in developing a TDM Program. To help ensure the case studies address the City's unique challenges and opportunities, key indicators were identified in coordination with the City. Refer to **Error! Reference source not found.** for each case study and their applicability to the key indicators. At least one case study was identified for each indicator.

The key indicators included:

- Tourism-based economy
- Development centered around urban core with few transit options outside
- Diverse demographics
- Upcoming transportation projects

For each case study, a brief background about the municipality is included to provide context and explain the rationale for their inclusion in the report. It is followed by an in-depth review of the TDM Program, including program applicability, funding & administration, monitoring, and employer support. Reference links, such as program websites and other documents, are provided as well as a program contact.

Table 1 Summary of Case Studies

Case Study	Tourism-based economy	Development centered around urban core	Diverse demographics	Promotion of new rail projects
Seattle, WA		X	X	X
San Francisco, CA			X	
Las Vegas, NV	X	X	X	
Santa Monica, CA			X	X
West Palm Beach, FL	X	X	X	
San Diego, CA			X	X

2 Tourism-Based Economy

West Palm Beach, FL

The City of West Palm Beach, FL is one of the three largest cities in South Florida and is the central city of Palm Beach County. Covering 57.89 square miles, the waterfront city is a popular destination year-round.

Due to its location by the coastline, West Palm Beach serves as the business hub for employers in the aerospace engineering, healthcare, marine industries as well as City and County government.

CITY FACTS

Population (2019):	111,955
Employment/Population Ratio:	59.4%
Median Household Income:	$54,334
Per Capita Income:	$33,839
Transit Access:	Medium

TDM Program

The City of West Palm Beach's TDM program seeks to establish partnerships with employers and organizations to provide mobility options and reduce overall vehicle miles traveled. As a commitment to reducing VMT and greenhouse gas emissions, implementation of TDM and Transportation System Management (TSM) measures were identified as a core principle of the city's Transportation Element.

An element of the City's TDM Program, the West Palm Beach Transportation Management Initiative (TMI) was established in 2002 by City and County leaders with the goal of providing education about alternative transportation modes and other programs to reduce vehicle trips in the Downtown area. TMIs are hybrid entities that help multiple parties to take collective action toward a common goal. TMIs are usually not legally constituted and may be projects or field offices of larger organizations with boarder missions.

The City's TMI is staffed by the South Florida Commuter Services (SFCS), the FDOT-funded Commuter Services Program for Districts 4 (Southeast Florida, including West Palm Beach, Fort Lauderdale and Boca Raton) and 6 (South Florida, including Miami and Key West), to deliver the support for West Palm Beach employers and universities directly. SFCS' main role is to assist employers and universities with establishing their own TDM programs and resources related to parking, transit,

SOUTH FLORIDA COMMUTER SERVICES
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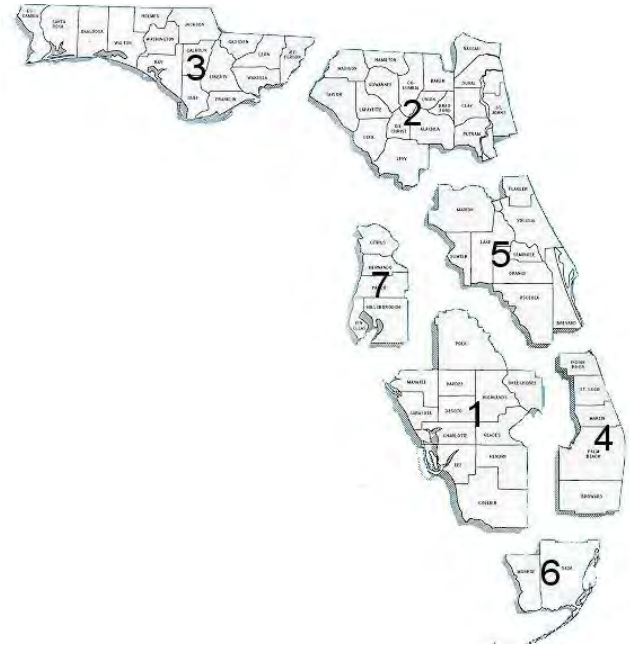
carpooling, and flexible and remote working. SFCS manages the region's carpool and vanpool programs, ride matching services, and Guaranteed Ride Home.

The City's TMI helps Downtown employers develop and implement their own TDM programs, including carpooling, vanpooling, transit, walking, biking, and teleworking. The TMI Program Administrator conducts regular outreach to employers, targeting larger employers that would have a larger impact on the Downtown overall mode split. The administrator distributes surveys to employees to understand interest in different modes, arrival/departure times, residential locations, and daily commute patterns to inform which programs to offer to which employer.

Funding & Administration

Under authority of Chapters 187 and 341, Florida Statutes, the Florida Department of Transportation (FDOT) provides financial and technical assistance to promote alternatives to commuters driving alone. To enable local management of the TDM programs, the transit funds are given to District offices who then appoint a Metropolitan Planning Organization, transit agency, Transportation Management Associations (TMAs), or non-profit organization to administer the program for the region.

Figure 1 Florida Commuter Services Districts



Funds are allocated to Districts based on a statewide assessment of Commuter Assistance Program need and may cover up to 100% of eligible costs if they are determined to be regional in scope and application or statewide in nature.

TDM Clearinghouse

The Center for Urban Transportation Research (CUTR), located in the University of South Florida, currently serves as the TDM clearinghouse for the state, providing strategic planning assistance, evaluations and survey assistance, training, TDM Resource Center, and periodic newsletters.

While there are no TDM targets that Districts and employers must meet on an ongoing basis, employers are encouraged to provide commuting services and support in order to

be on the list of Best Workplaces for Commuters. The national membership program recognizes employers and developments that meet the National Standard of Excellence in commuter benefits by providing:

1. At least one primary benefit, such as employer-paid tax-free transit or vanpool passes, teleworking, or parking cash-out
2. Three secondary benefits, such as shuttles, ridesharing or carpool matching, preferred or reduced-cost parking for carpools and vanpools, and compressed work schedules
3. Emergency Ride Home (ERH), either directly or through a regional program.

While CUTR manages the program and are commissioned to assist Florida employers with meeting the requirements, it is open to any and all employers and developments in

the US.

Monitoring

Each District is required to develop a work plan for its District Commuter Assistance Program, including program goals, objectives, and targets. On an annual basis, the District offices will report their monitoring compliance data to the Central Office, which compiles it into a Statewide Commuter Assistance Annual Report.

Agencies are required to administer an annual survey and report on the following:

- Number of commuters requesting assistance
- Number of commuters switching from single occupant vehicles
- Number of agency vans in service, and other coordinating agency vans that are participating in the rideshare-matching program (where applicable)
- Number of vehicle trips eliminated for all commuters participating in the commuter assistance program
- Number of vehicle miles eliminated for all commuters participating in the commuter assistance program
- Number of employer contacts and employers participating
- Description of major accomplishments
- Number of parking spots saved / parking needs reduced
- Amount of commuter costs saved

Table 2 West Palm Beach TDM Program Summary

Policy Goals, Implementation, & Outcomes	
Goal	Reduce the use of the automobile through the application of strategies related to traffic control, public parking, and public transit that will help address traffic congestion.
Audience	Employers
Measure	Vehicles Miles Traveled (VMT) and Mode Share
Outcome	N/A
Implementation	State-funded regional TDM Programs
Regulation	WPB TDM Program: Transportation Element, Objective 2.3.1 WPB TMI: Transportation Element, Policy 1.1.3(b) State Commuter Assistance Program: Chapters 187 and 341, Florida Statues (F.S.)

Resources

- City of West Palm Beach Transportation Page: https://www.wpb.org/our-city/transportation-services
- City of West Palm Beach Transportation Element: https://www.wpb.org/Home/ShowDocument?id=417
- South Florida Commuter Services: https://1800234ride.com/
- Florida Department of Transportation Commuter Services: https://www.commuterservices.com/
- Florida Department of Transportation Commuter Assistance Program Procedures: https://www.commuterservices.com/wp-content/uploads/2010/12/FDOT-CAP-procedures.pdf
- Best Workplaces for Commuters: https://www.bestworkplaces.org/

Las Vegas, NV

Las Vegas is the largest City in Nevada by population, and covers about 140 square miles in Clark County, in the southern tip of the state.

The City is known for its extensive entertainment and hospitality industry, which includes nightlife and casinos, as well as hotels and business conference support. Outside of the infamous Las Vegas Strip, however, the City is also home to a broader group of employers from across multiple industries.

CITY FACTS

Population (2019):	651,319
Employment/Population Ratio:	58.2%
Median Household Income:	$56,354
Per Capita Income:	$30,761
Transit Access:	Low

TDM Program

Las Vegas Valley employers have free access to Club Ride, the free TDM program provided by the Regional Transportation Commission of Southern Nevada (RTC). The program offers employers and their employees support for alternative-mode commuting in the form of education, services such as carpool matching and guaranteed ride home, and giveaways and incentives for those who log non-drive-alone trips on their online platform.

While the program does not cater exclusively to the entertainment or hospitality industries, they do partner with local restaurants and retailers who can receive advertising in exchange for discounts provided to Club Ride employee members.

Club Ride is focused exclusively on employers and commuters. They have partnered with over 300 employers, and in 2019 had 18,143 active registrants on their platform. Employers can become partners for free, and are ranked on a bronze through platinum scorecard based on the level of TDM services they provide and engagement with the Club Ride team they can support.

Club Ride was presented with a Clean Air Excellence Award in 2015 by the United States Environmental Protection Agency (EPA) in the Community Action category.

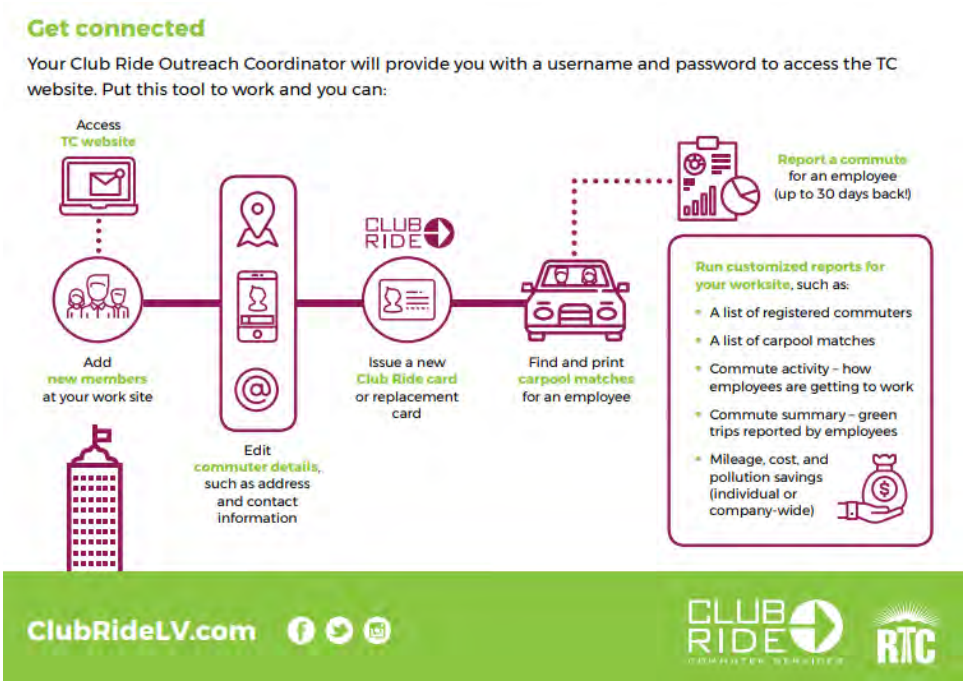
Funding and Administration

Club Ride is funded by RTC which passes through Federal funding from the Congestion Mitigation and Air Quality Improvement Program (CMAQ).

Monitoring

Data on Las Vegas Valley commutes is collected through the Club Ride app and website, where employees log their trips to become eligible for monthly rewards, and Transportation Coordinators at each site have access to site-level data on their employees' commute habits. At some sites, Club Rides provides electronic kiosks to encourage easy reporting among employees.

Figure 2 Results Tracking Instructions for Transportation Coordinators



While the Club Ride team uses the website and application to keep track of logged commute trips, there are no regular survey or other data collection processes required for members, and Club Ride does not report and data publicly on the impact of the program on mode shift or VMT reduction.

Table 3 Las Vegas TDM Program Summary

Policy Goals, Implementation & Outcomes	
Goal	The program's goal is to improve air quality by encouraging use of alternative modes for commuters.
Audience	Employers
Measurement	Club Ride reports 'output' style data surrounding numbers of participants on their commute platform/website.
Reported Outcomes	N/A
Implementation	Countywide TDM program
Regulation	N/A

Resources

- Club Ride informational website: https://www.rtcsnv.com/ways-to-travel/club-ride/
- Club Ride online commute logging platform: www.clubridelv.com

3 Development Centered Around Urban Core

Seattle, WA

Puget Sound is one of the fastest growing regions in the country and is home to large employers such as Amazon, Google, Starbucks, Nordstrom, and Costco. While the growth has brought jobs to the region, it has also widened inequality in income, employment, and access to transportation.

CITY FACTS

Population (2019):	753,675
Employment/Population Ratio:	73.6%
Median Household Income:	$92,263
Per Capita Income:	$59,835
Transit Access:	High

Inequal access to high-quality transit continues to be a challenge for the region. While King County, especially Downtown Seattle, enjoys a range of transportation choices, (e.g., commuter and light rail, bus, water ferry, etc.), neighboring counties such Snohomish and Pierce have fewer transit options. This frustration was brought to the surface in 2019 when a ballot measure to roll back car-tab fees narrowly passed with 60% of King County voters against and 58% of Snohomish and nearly two-thirds of Pierce County voters for[1]. Ensuring equality in transit access continues to be a priority both for the City of Seattle, King County Metro, and decisionmakers in the Puget Sound region.

TDM Program

Seattle's TDM program consists of several different programs initiated in the 1980s and 1990s in response to nationwide concerns about traffic congestion on highways and related air pollution. Information about all the programs can be found under the city's Transportation Options Program:

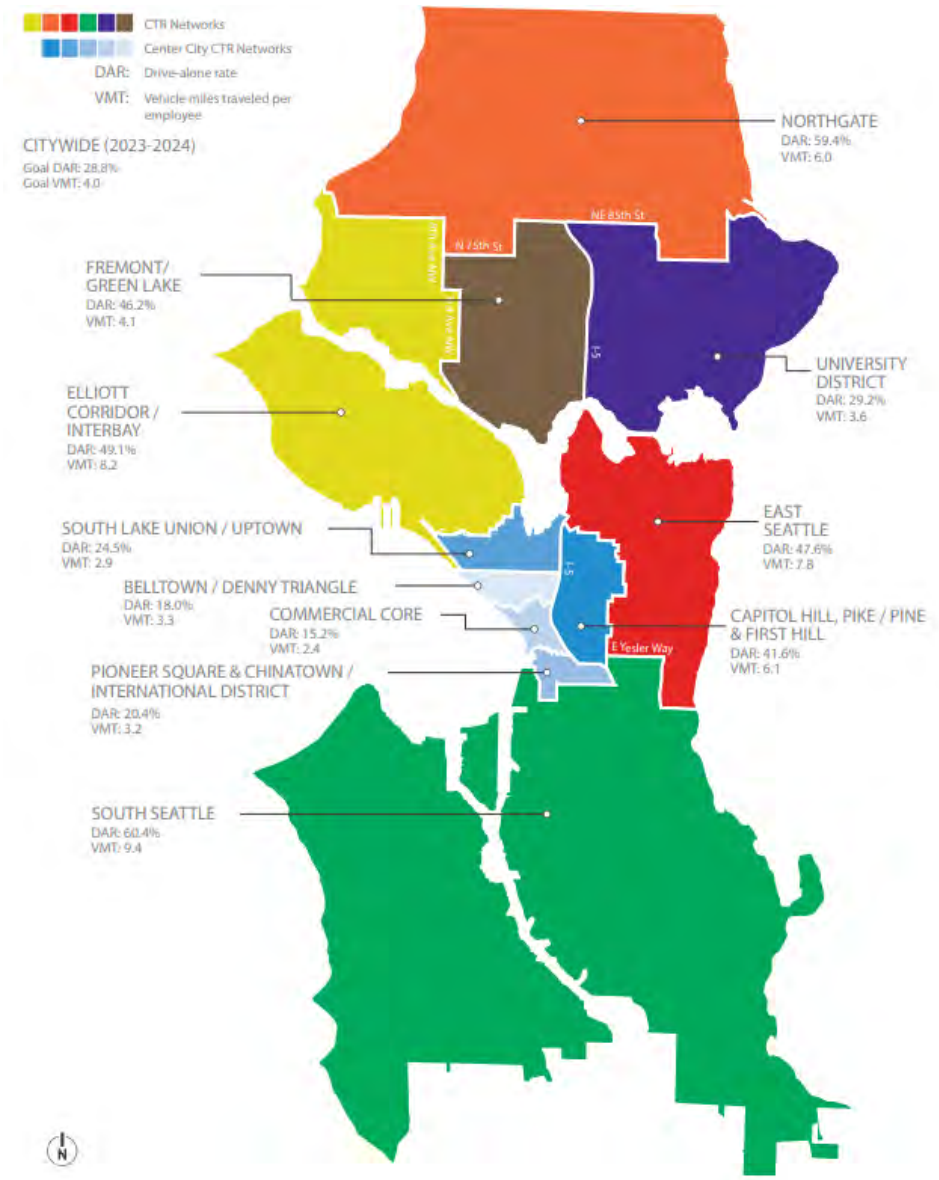
- The Washington State Commuter Trip Reduction (CTR) program is intended to reduce VMT and demand on highway infrastructure at peak hours, which is achieved by asking large employers to reduce SOV trips or drive-alone rate (DAR).
- The City's Transportation Management Plan (TMP) is aimed at reducing single occupancy vehicle trips associated with new commercial development. Target SOV rates are set for each unique building.

[1] https://www.seattletimes.com/seattle-news/politics/majority-of-voters-paying-sound-transits-car-tab-taxes-opposed-i-976/, accessed 12/23/2020.

Program Requirement Thresholds

Under the State's Commuter Trip Reduction (CTR) regulations, employers with 100 or more employees commuting to a single worksite during the AM peak are required to develop a TDM program. The regulation is administered jointly by the Planning Department and the Seattle Department of Transportation (SDOT). Employers must complete annual surveys and commit to achieving a target Drive Alone Rate (DAR), which varies by district.

Figure 3 2019 - 2023 DAR and VMT Targets by Network Areas



For the City's Transportation Management Plan (TMP) requirements, development triggers are generally based on square footage; however, whether a site is considered TMP-affected is ultimately based on whether the development will have a traffic impact (determined via traffic study) or affect parking demand. There are no bonuses or incentives offered to developers for compliance, unless associated with specific zoning overlays in some areas of the city.

- New developments of 100,000 SF of commercial, office or retail must complete a Transportation Management Plan (TMP).
- Developments of less than 100,000 SF gross floor area may be subject to a TMP if needed to mitigate impacts through environmental or land use review/requirements.

Developers must submit a TMP at the time of applying for a building permit and agree to complete a CTR survey every two years. During the off-years, they are expected to submit a program report and their parking supply/utilization.

The TMP includes a list of required and recommended TDM measures selected from a menu. This approach, while flexible, is highly qualitative, making it harder to monitor and enforce. One requirement is that each site has a Building Transportation Coordinator (BTC) who attends annual trainings and conducts periodic surveys. Sites in Downtown Seattle also have the option of participating in the local TMA, Commute Seattle, which offers a suite of programs for commuters free of charge.

The TMP program does not apply retroactively. In fact, one of the drawbacks to the program, as expressed by the SDOT administrator, is that TMPs exist in perpetuity. They do not expire and there is no change of use that triggers a recalculation of their CTR targets. This means that many older buildings in downtown Seattle fail to meet the targets established in the 1980s.

Funding & Administration

The CTR and TMP programs are funded through a variety of state and local sources and suffer somewhat without a dedicated revenue stream, particularly with respect to staffing. Both planning and SDOT staff manage the program. The City no longer employs a single full-time employee to manage the programs.

- Staffing in the Planning Department involves roughly one full-time person. Planners who are involved in TMP review dedicate approximately 10% of their time to those tasks.
- SDOT relies heavily on graduate level interns to administer the program, particularly during survey periods. Although responsibilities are shared by department staff, tasks occupy roughly half of a full-time intern's workload.

Monitoring

Both the City Planning Department and SDOT oversee TDM program administration; however, responsibilities are split between departments. SDOT oversees the monitoring of the program, while the Planning Department oversees enforcement. Employers and

developers must survey occupants every two years to establish whether they are meeting their CTR goals.

While the language of the TMP rule states that failure to comply with TMP conditions or achieve goals may incur civil penalties, this is not enforced. For the most part, SDOT urges adherence to the rule, but without recourse. For those who fail to meet the performance targets as documented in the biannual report, an additional five points are required to be implemented from the TDM strategy list. Commute Seattle is supported by the Downtown Transportation Alliance (DTA), comprised of the executive leadership of the Downtown Seattle Association, local and state public agencies and rotating private-sector representation.

Employer/Developer Support

Commute Seattle is a non-profit TMA which provides education, outreach, and consulting services to Downtown Seattle employers, property managers, and developers. Since the 2013-17 planning cycle, SDOT has contracts with Commute Seattle to support CTR and TMP sites with Commuter Benefits development, compliance, including conducting commute surveys and submitting Program Reports, ETC resources and training, and other customized consulting services. Commute Seattle is led by a partnership between the Downtown Seattle Association, King County Metro, Sound Transit, and the Seattle Department of Transportation.

Figure 4 Seattle TDM Program Summary

Policy Goals, Implementation, & Outcomes	
Goal	The goal of the CTR program is to reduce SOV trips during peak hours and increase transit options for residents and employees. Participants must achieve a target drive-alone rate (DAR), which supports a citywide reduction in DAR of 10% by 2017. The goal of the TMP if also SOV trip reduction, and specifically involved an SOV rate goal for each building.
Audience	Employers (CTR) and Developers (TMP)
Measure	Mode-share is the predominant measure for both CTR and TMP programs. The CTR uses Drive-Alone Rate (DAR), calculated by employers through annual surveys while the TMP uses SOV rate, also measured through bi-annual survey.
Reported Outcomes	The CTR program has contributed to a 3% reduction in DAR from 2012 to 2014 and an overall alternative mode share of 66%. 50% of employers offer commuter benefits programs. The city presently monitors 140 active TMPs, although there is less available compliance data due to understaffing.
Planning	No special outreach occurred for the development of the ordinance.
Implementation	City Council Approval
Regulation	CTR: Regulatory compliance with the Washington State Commute Reduction Law and Seattle Municipal Code Chapter 25.02 TMP: Director's Rule, Joint rule between Departments of Planning and Transportation

Resources

- City of Seattle TMP Website: https://www.seattle.gov/transportation/projects-and-programs/programs/transportation-options-program/transportation-management-programs
- City of Seattle CTR Program Website: https://www.seattle.gov/transportation/projects-and-programs/programs/transportation-options-program/commute-trip-reduction-program
- Commute Seattle Website: https://www.commuteseattle.com/

4 Diverse Demographic

San Francisco, CA

San Francisco is a dense urban city with a diverse population. According to Plan Bay Area 2040, the Bay Area's Regional Transportation Plan and Sustainable Community Strategy, San Francisco is expected to grow by approximately 191,000 jobs and 102,000 households between 2010 and 2040. With 40.5% of the population identifying as non-Hispanic white, the city has a minority majority, including 15.2% Hispanic, 34.4% Asian, and 5.2% Black or African American.

CITY FACTS

Population (2019):	881,549
Employment/Population Ratio:	68.1%
Median Household Income:	$112,449
Per Capita Income:	$68,883
Transit Access:	High

As the city continues to grow, it was a priority for the City to not only improve and expand the transportation system to accommodate new growth, but to also create a policy that took into consideration the different ways in which its citizens use and experience the transportation network. "Transit First Policy" in the City Charter declares that public transit is "an economically and environmentally sound alternative to transportation by individual automobiles," and that within the City, "travel by public transit, by bicycle and on foot must be an attractive alternative to travel by private automobile '

TDM Program

The City and County of San Francisco's TDM Program is part of the *Shift* initiative with the goal of improving and expanding the transportation system to help accommodate new growth. Aimed at new developments and changes of use, the Program provides guidance related to the provision of on-site amenities, services, and tools to help residents, tenants, employees, and visitors travel using sustainable modes. The Program went into effect on March 18, 2018 through Ordinance No. 160925 and is consistent with Plan Bay Area 2040, the GHG Reduction Ordinance, the San Francisco Climate Action Strategy 2013 Update, the Transportation Element of the General Plan, and the San Francisco County Transportation Plan.

The goal of the Program is to reduce vehicle miles traveled (VMT) generated by new development projects and changes of use. By targeting new developments, the City can accommodate new growth while encouraging sustainable travel modes.

The TDM Program Standards outline the requirements for compliance, including:

- Determining applicability to the project and land use categories and targets
- TDM Plan development, including TDM Menu of Options and factsheets
- TDM Plan monitoring and reporting, including pre-occupancy and ongoing monitoring and reporting to the City

Due to diverse types of developments and businesses operating in the city, it was important for the City that the TDM Program allowed for flexibility in design and implementation while ensuring that any new growth arising out of the new project are offset and accounted for through the TDM Plan.

Program Requirement Thresholds

The City identified four land use categories (retail, office, residential, and other) which establish triggers based on a number of parking spaces. A change in land use that results in intensification (within those four categories) triggers the TDM program. Affordable housing developments, parking lots and parking garages are exempt from the requirements. Once a project triggers the TDM program, the City requires developers to submit a TDM Plan Application with the first Development Application to document the project's compliance with the TDM Program Standards and Planning Code Section 169.

Table 4 Land Use Categories and Targets

Land Use Category	*Typical Land Use Type*	*# of Parking Spaces proposed by Land Use*	*Target*
Ⓐ	Retail	Base number: 0 ≤ 4	Base Target: 13 points
		Each additional 2*	1 additional point
Ⓑ	Office	Base number: 0 ≤ 20	Base Target: 13 points
		Each additional 10*	1 additional point
Ⓒ	Residential	0 ≤ 5	10 points
		6 ≤ 10	11 points
		11 ≤ 15	12 points
		16 ≤ 20	13 points
		Each additional 10*	1 additional point
Ⓓ	Other	Any # of parking spaces	3 points

* For each additional parking space proposed above the base target, the number of parking spaces will be rounded up to the next highest target. For example, a project within Land Use Category C that proposes 21 parking spaces is subject to a 14 point target.

TDM Menu of Options

Each development is assigned a target number of points based on the number of parking spaces provided for their development. The developer can choose from a menu of TDM options to meet their target number of points (Figure 5). The menu options are sorted into different categories and include infrastructure and programmatic measures.

The values associated with each of the menu items is established by the City, based on best practice research, and is designed to be flexible and responsive to new information overtime.

Figure 5 TDM Menu of Options (Page 1 of 3)

Category	Measure	Points	Land Use Category A	B	C	D
ACTIVE-1	Improve Walking Conditions: Option A; or	1 ●	Ⓡ	Ⓡ	Ⓡ	○
	Improve Walking Conditions: Option B; or	1 ●	Ⓡ	Ⓡ	Ⓡ	○
	Improve Walking Conditions: Option C; or	1 ●	Ⓡ	Ⓡ	Ⓡ	○
	Improve Walking Conditions: Option D	1 ●	Ⓡ	Ⓡ	Ⓡ	○
ACTIVE-2	Bicycle Parking: Option A; or	1 ●	Ⓡ	Ⓡ	Ⓡ	Ⓡ
	Bicycle Parking: Option B; or	2 ●●	Ⓡ	Ⓡ	Ⓡ	Ⓡ
	Bicycle Parking: Option C; or	3 ●●●	Ⓡ	Ⓡ	Ⓡ	Ⓡ
	Bicycle Parking: Option D	4 ●●●●	Ⓡ	Ⓡ	Ⓡ	○
ACTIVE-3	Showers and Lockers	1 ●	Ⓡ	Ⓡ	⊘	Ⓡ
ACTIVE-4	Bike Share Membership: Location A; or	1 ●	Ⓡ	Ⓡ	Ⓡ	○
	Bike Share Membership: Location B	2 ●●	Ⓑ	Ⓑ	Ⓑ	○
ACTIVE-5A	Bicycle Repair Station	1 ●	Ⓡ	Ⓡ	Ⓡ	○
ACTIVE-5B	Bicycle Maintenance Services	1 ●	Ⓡ	Ⓡ	Ⓡ	○
ACTIVE-6	Fleet of Bicycles	1 ●	Ⓡ	Ⓡ	Ⓡ	○
ACTIVE-7	Bicycle Valet Parking	1 ●	Ⓑ	⊘	⊘	○
CSHARE-1	Car-share Parking and Membership: Option A; or	1 ●	Ⓟ	Ⓟ	Ⓟ	Ⓟ
	Car-share Parking and Membership: Option B; or	2 ●●	Ⓟ	Ⓟ	Ⓟ	Ⓟ
	Car-share Parking and Membership: Option C; or	3 ●●●	Ⓟ	Ⓟ	Ⓟ	Ⓟ
	Car-share Parking and Membership: Option D; or	4 ●●●●	Ⓟ	Ⓟ	Ⓟ	○
	Car-share Parking and Membership: Option E	5 ●●●●●	Ⓟ	Ⓟ	Ⓟ	○
DELIVERY-1	Delivery Supportive Amenities	1 ●	Ⓡ	Ⓡ	Ⓡ	○
DELIVERY-2	Provide Delivery Services	1 ●	Ⓑ	⊘	⊘	○
FAMILY-1	Family TDM Amenities: Option A; and/or	1 ●	⊘	⊘	Ⓡ	⊘
	Family TDM Amenities: Option B	1 ●	⊘	⊘	Ⓡ	⊘
FAMILY-2	On-site Childcare	2 ●●	Ⓡ	Ⓡ	Ⓡ	⊘
FAMILY-3	Family TDM Package	2 ●●	⊘	⊘	Ⓡ	⊘

One point may be equal to a 1% reduction in VMT.

Ⓡ = applicable to land use category.
Ⓑ = applicable to land use category, see fact sheets for further details regarding project size and/or location.
Ⓟ = applicable to land use catgory only if project includes some parking.
⊘ = not applicable to land use category.
○ = project sponsor can select these measures for land use category D, but will not receive points.

Parking reforms, including incentives like reduced parking minimums, are closely tied to the ordinance. Parking supply data, gathered in a study conducted by the Planning Department, shows that the availability of parking spaces influences the choice on whether people will drive alone the most.

Funding and Administration

The TDM program is administered by Planning Department staff and is funded by administrative fees. The developer pays a one-time fee of $6,000 at the time of submitting the TDM Plan Review Application. This fee covers the initial review of the TDM plan as well as a site visit by city staff. After the first year, developers pay an annual $1,000 fee for ongoing reporting. The City views these amounts as a baseline, therefore small, medium and large developments alike pay the fixed fees. Over time, the City may refine the process and charge time and materials on top of the base fee.

Monitoring

City staff monitor developments throughout the project life-cycle and after a certificate of occupancy is issued:

- Property owners must continue monitoring through the life of the project by maintaining a TDM coordinator, allowing City staff to access the property for monitoring, facilitating a site inspection, and submitting periodic compliance reports.
- A pre-occupancy site visits occurs prior to issuance of a First Certificate of Occupancy.
- Once a building is occupied, the property owner must submit ongoing monitoring and reporting statements, which are reviewed by the Planning Department for compliance with the TDM plan.

The City does not intend to hold individual building projects to specific performance standards, therefore the ordinance does not require developers to conduct annual surveys and meet certain VMT targets. Instead, developers must demonstrate progress in implementing the measures that they agree to in their TDM Plan while the City is responsible for monitoring VMT. The City will then modify the menu of items in response to new VMT data.

- Developers submit an annual monitoring report application (City provides template).
- Every three years, city staff will conduct an audit (site visit) to verify that projects are complying with their report.
- Projects that remain in good standing for five years will be eligible to submit monitoring reports every three years thereafter (incentive for compliance).

The City plans to conduct their own research at individual sites and determine whether VMT targets are met (person-trip and vehicle-trip counts). They will use this information to adjust the menu of options, point values, etc. for other developers in the future. In this way, the TDM menu remains flexible and responsive to the most up-to-date information.

Employer Support

The City actively coordinates with *TMASF Connects*, the local transportation management association (TMA), to provide ongoing TDM support to 82 commercial office buildings in the city, representing 3,000 employers and more than 130,000 employees. TMASF runs a Commute Program to work with employers and developers to increase mobility in the area, Career Program to assist with workforce development, and

Community Program to provide daycare options for children, seniors, and pets. The TMA is privately funded through its membership.

Table 5 San Francisco TDM Program Summary

Policy Goals, Implementation & Outcomes	
Goal	The City's goal is to reduce VMT, but there is no specific target currently. The City is currently undertaking multiple long-range transportation plan updates.
Audience	Developers and property owners
Measure	VMT traveled per capita, per employee. The City will initially conduct a person-trip and vehicle-trip counts at sites to determine VMT. The City's staff intends to develop its own research protocol separately overtime.
Reported Outcomes	According to the First-Year Monitoring Report (2018), eighty-six development projects filed a TDM Plan Application in the first year.
Implementation	Planning Commission
Regulation	City of San Francisco Planning Code Section 169, enforced by the SF Planning Department.

Resources

- SF Planning Website: https://sfplanning.org/transportation-demand-management-program
- TDM Program Standards: https://default.sfplanning.org/transportation/tdm/TDM_Program_Standards.pdf
- TDM Measures: https://default.sfplanning.org/transportation/tdm/TDM_Measures.pdf
- TDM Program First-Year Monitoring Report: https://sfplanning.s3.amazonaws.com/default/files/transportation/tdm/tdm_20180607_Monitoring_Report.pdf
- TMASF Connects website: https://www.tmasfconnects.org/

5 Promotion of New Rail Projects

Santa Monica, CA

The City of Santa Monica is a beachfront city in western Los Angeles County covering 8.4 square miles. Santa Monica is recognized as one of the top ten sustainable cities in the US and is transit, bike, and walk-friendly.

CITY FACTS

Population (2019):	90,401
Employment/Population Ratio:	65.8%
Median Household Income:	$96,570
Per Capita Income:	$75,481
Transit Access:	High

The construction of the Metro Expo Line extension and additional seven transit stations to connect Downtown Los Angeles to Downtown Santa Monica began in Fall 2011. In anticipation of the Spring 2016 opening, the City invested $1.5 billion to add and expand mobility options, including the introduction of bikeshare, extension of the Big Blue Bus transit service to connect to the new stations, 1.5 miles of new off-street bike/pedestrian path along the Expo route, and 12 pedestrian scrambles downtown. Likewise, the City, through the City's TMO (GoSaMo TMO) ramped up education and marketing efforts to raise awareness and energize the community about the arrival of the Expo line.

Figure 6. Santa Monica's Breeze Bike Share

TDM Program

Santa Monica has a robust TDM ordinance with set trip reduction targets to reduce SOV trips among employers and development sites. The City of Santa Monica and the GoSaMo TMO jointly support the TDM Ordinance in a division of labor where the City serves as the regulator and the TMO as the TDM marketing and outreach arm. Trip reduction targets are based on proximity to transit stops. Additionally, the City and TMO support trip reduction efforts among residents and visitors.

The City's first TDM ordinance was enacted in 1990, then updated in 2015. The 2015 update was prompted by changes in the Land Use Circulation Element (LUCE) in 2010,

which involved a significant community outreach effort. City residents identified traffic congestion as a key issue. The goal of the ordinance is to manage congestion, reduce automobile dependence, and enhance transportation choices for residents, employees, and visitors.

Program Applicability

Both employers and developers must comply with the ordinance and submit specific TDM plans. Employers are subject to the ordinance based on number of employees. The City's pre-2015 ordinance targeted employers with 50 or more employees, requiring them to survey employees annually and calculate a site-based Average Vehicle Ridership (AVR) or the number of people arriving at the site vs. the number of vehicles. The 2015 updated ordinance increased the AVR targets for these firms, and lowered the thresholds, as shown in Table 6. Note that in 2020, due to the COVID-19 pandemic, the City of Santa Monica suspended the portions of the 2015 TDM Ordinance that applied to businesses with 49 or fewer employees. The requirements are suspended through 2024.

Table 6 Santa Monica Ordinance Thresholds and Requirements as set by the 2015 Ordinance update

Employer Size	Required Plan	Submission Deadline	Plan Elements
10 to 29 employees	Worksite Transportation Plan (WTP)	60 days	• Attend a class to become certified as an Employee Transportation Coordinator. • Estimate how many people drive, walk, bike, ride transit, and carpool to work. • Describe the amenities available for employees who choose not to drive. • Distribute education materials about transportation services to employees. • Incentivize customers and visitors to walk, bike, ride transit, and carpool. • Pay the Annual Transportation Fee (reduced if AVR target met)
30 or more employees	Emission Reduction Plan (ERP)	90 days	• Attend a class to become certified as an Employee Transportation Coordinator. • Survey your employees about how they commute. • Identify and carry out strategies to increase biking, walking, riding transit, and carpooling to your worksite. • Meet annual AVR targets, based on proximity to transit (range from 1.6-2.2) • Pay the Annual Transportation Fee (reduced if AVR target met)

While smaller firms are required to submit a Worksite Transportation Plan (WTP) and pay annual transportation fees, larger firms are subject to more rigorous requirements, including an Emission Reduction Plan (ERP), annual surveys, and meeting specified AVR targets. The city offers online tools for completing both WTPs and ERPs.

City staff also work with developers on a case-by-case basis to implement TDM measures based on the following thresholds for residential and nonresidential construction:

- Nonresidential projects > 7,500 sq. ft.
- Residential projects > 16 units
- Mixed-use > 16 residential units or 7,500 sq. ft. of commercial space

Developers are typically required to implement physical and programmatic elements to reduce SOV trips and ensure compliance with the TDM Plan in any lease documents or agreements. Developers can also pay an Alternative Compliance Fee to off-set the AVR Target.

Funding & Administration

The City of Santa Monica administers the program through the Mobility Department, and it is funded by Employer Transportation Fees, which total about $400,000/year for four full-time staff to monitor and enforce the program. The TDM Manager coordinates with additional staff in the Mobility Department who administer related Safe Routes to School and shared mobility programs.

In addition, the City funded the creation of a Transportation Management Organization (GoSaMo TMO) from a separate funding source. The TMO budget was supplemented by an additional $35,000 contribution through a development agreement with a local hospital during its first year of operation.

Monitoring

The City monitors compliance through the annual AVR survey data, required for employers, and may perform selective audits if necessary. Failure to pay fees, submit appropriate plans to the City, or maintain proper records of compliance may lead to the City revoking a business license, levying fines, or criminal prosecution.

Figure 7 GoSaMo TMO promotional items

Employer Support

In 2016, the City launched the Santa Monica Transportation Management Organization (GoSaMo TMO) to serve as the city's one-stop shop for transportation resources and support. Participation in the TMO is free of charge and available to all employers located in Santa Monica.

Table 7 Santa Monica TDM Program Summary

Policy Goals, Implementation, & Outcomes	
Goal	Reduce drive-alone commuter mode share citywide.
Targets	Employers, developers on case-by-case basis
Measure	Annual Average Vehicle Ridership (AVR) survey (an annual Commuter Survey conducted by the employer and reported to the City). Each employer with 30+ employees has an AVR target based on proximity to transit.
Reported Outcomes	Employers, including the City of Santa Monica, are struggling to meet the new AVR targets. Employers who participate with the TMO show a year over year improvement in AVR.
Implementation	City Council Approval
Regulation	City of Santa Monica Municipal Code Chapter 9.53, Zoning Ordinance and Land Use and Zoning Related Provisions

Resources

- TDM Program for Employers website: https://www.smgov.net/Departments/PCD/Transportation/Employers/
- City Ordinance: http://www.smgov.net/uploadedFiles/Departments/PCD/Zoning/ZO%20Combined%20Full%20with%20cover%20(June%202015).pdf
- GoSaMo TMO website: https://www.santamonica.gov/gosamo

San Diego County, CA

San Diego County is California's second-most populous county and boasts 70 miles of coastline. The County of San Diego is part of the Southern Border Region, the smallest but most economically diverse region in the state. In addition, the county is the base for 16 naval and military installations of the US Navy, US Marine Corp, and the US Coast Guard.

REGIONAL FACTS

Population (2019):	3.3 Mil
Employment/Population Ratio:	59.5%
Median Household Income:	$78,980
Per Capita Income:	$38,073
Transit Access: Medium	Medium

To accommodate the continued population growth and ease congestion in the region, nearly 50 major public, private, and transportation projects are underway or planned for the region. Understanding the potential disruption and confusion that may arise as a result of the multitude of construction projects, SANDAG proactively worked with its TDM Program (iCommute) team and other departments to not only provide residents, businesses and commuters information about upcoming construction impacts, but also offer alternative transportation solutions.

TDM Program

The iCommute program offered by the San Diego Association of Governments (SANDAG), the regional Metropolitan Planning Organization for San Diego County.

iCommute offers TDM services at no-cost to employers and cities within the region, such as:

- Annual commuter survey and analysis
- Telework Consulting
- Carpool Incentives
- Vanpool program and $400/monthly subsidy
- On-site trip planning events
- Try Transit Program

Employers sign up with iCommute as 'partners' and are provided with a dedicated staff member from iCommute to attend on-site events, support employee commute guidance, coordinate rewards and incentives program participation, and assist with an annual survey.

While SANDAG does not enforce any type of requirements on employers in the region, they do support local jurisdictions in their quest to develop more formal TDM policy. In 2018, they supported the creation of the City of Carlsbad's TDM ordinance. The general purpose of the TDM ordinance is to establish regulatory development requirements for TDM in the City of Carlsbad. The TDM ordinance places requirements on non-residential development that is anticipated to generate 110 or more average daily employee trips. Those developments will be required to design and implement a TDM plan specific to their site.

Funding and Administration

The annual program budget is approximately $1.3 million which supports 5 consultant staff members and the management and services of subconsultants.

Monitoring

iCommute partners with employers to conduct commuter surveys 1-2 years to measure behavior change. This survey gathers information about existing commutes, interest in trying and alternative commute, challenges and motivations to change behavior. In 2019, SANDAG reported that employers participating in the program were likely to have a single occupant vehicle (SOV) mode share **10% lower** than employers not participating.

Promotion of Local Rail Projects: Shift San Diego

In 2012, SANDAG led the development of the North Coast Corridor TDM Plan. The goal of the plan was to support multi-modal infrastructure investments (HOV lanes, rail, biking) and Coastal Commission objectives to reduce emissions, help mitigate the impacts of construction traffic congestion, and promote the use of alternatives to driving alone over the long term. The plan provides multi-modal solutions that will help manage congestion during construction and act as a foundation for continued travel behavior change in the corridor.

Plan recommendations included:

- Customized and geographically focused TDM programs to encourage sustainable travel;
- Education, marketing and outreach strategies;
- Performance measures and methods for monitoring performance; and
- Administration program and budget.

While San Diego County does not have a TDM ordinance, SANDAG supported Carlsbad, a city in the north coast community, in the development of a TDM ordinance in 2018. As part of that effort, a citywide voluntary TDM Program was also created to encourage existing businesses to implement TDM strategies at their sites.

While City staff are responsible for the administration, monitoring, and enforcement of the ordinance, the City also partners with iCommute to provide support to help developers and employers develop and implement their TDM Plans.

Table 8 Shift San Diego TDM Program Summary

Goals, Implementation & Outcomes	
Goal	The iCommute program seeks to reduce congestion and increase quality of life through employer support and educational programs.
Audience	Employer, Municipal, Developer, and Commuter
Measure	SOV rate reduction via survey administered through iCommute, # employers engaged in program measured via Diamond Awards Criteria, other KPI's defined in programmatic goals
Reported Outcomes	Average of ~10% reduction in SOV at employers who participate in the iCommute program
Implementation	40 hours/year of complimentary consulting via SANDAG staffed account executives (on-site events, telework assistance, attendance and guidance for regional planning initiatives
Regulation	No formal regulation aside from one City's TDM ordinance (Carlsbad)

Resources

- Shift San Diego: https://shiftsandiego.com/shiftsandiego/aboutus
- iCommute Employer Services: https://www.icommutesd.com/docs/default-source/employer/icommute-employer-services-and-recognition-program-flier.pdf?sfvrsn=f0996778_4

6 Key Considerations for the Honolulu TDM Program

Based on the initial review, we have identified several key considerations for further exploration during the TDM Program development phase.

Category	Description
TDM Program	A key consideration for the TDM Program is whether developers and/or employers would be required to comply (e.g., through an ordinance or similar regulation) or voluntarily participate. This report provides examples of both instances: • Requirement: Seattle, San Francisco, Santa Monica • Voluntary: West Palm Beach, Las Vegas, San Diego County – For compulsory programs, clarity and predictability are important so businesses understand exactly what is expected of them. – For voluntary programs, the provision of support as well as recognition are key to encouraging participation. Program goals should communicate clear benefits to developers, employers, and employees. To encourage buy-in and participation, consider linking them to Climate Action goals, improved access to mobility options, expedition of project approval process to provide tangible benefits that are important and relevant to stakeholders.
Performance Targets	As demonstrated in the above case studies, performance indicators should reflect program goals (e.g., reduction in VMT, parking demand and/or GHG emissions.) For an island-wide program, targets should be tailored to the opportunities for mode shift in each region. Similar to the City of Seattle, Honolulu has distinct districts with varying levels of employment, transportation infrastructure, and transit access. Therefore, the targets should take into consideration what is feasible in each district. Targets should be attainable, measurable, and trackable over time.

Category	Description
Audience	The City will need to determine the key audience to whom the program will be targeted. The following should be considered: • The scale of the program as it impacts the other decisions related to funding and administration – should it apply city-wide or to certain districts, uses, or business sizes? Would the City have the capacity and resources to administer, monitor, and enforce the program? • How implementation will affect developments/employers of different sizes while providing flexibility to ensure the strategies make sense (e.g., tiered programs, flexible menu of TDM options). How would small businesses respond to an ordinance and would they need additional support?
Funding & Administration	A dedicated funding source is needed for sustained implementation and effective monitoring/enforcement. An application processing and auditing fee such as San Francisco's may be a potential source of funding to support the City's time spent reviewing and monitoring plans.
Monitoring & Reporting	Applications and monitoring reports should be standardized to reduce potential administrative burden for employers or developers. The use of surveys or other techniques to capture and track travel mode share will be important. To assist with enforcement, the City may want to consider linking compliance with the issuance of a certificate of occupancy or conditional use permit.
Developer/ Employer Support	Regardless of whether the program is compulsory or voluntary, education and guidance will be important in helping employers or developers understand what is expected of them and have the appropriate tools to satisfy the requirements. The City should consider providing marketing and compliance support to developers and employers, especially during the first few years of program rollout. This could be in the form of a dedicated planner to help businesses plan, administer, and monitor their programs and can be managed by the City itself, or through a local organization such as a TMA/TMO.

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Appendix D Market Research Report

Report
January 2022

Market Research Report

City & County of Honolulu
Honolulu Transportation Demand Management Plan

HNL Connect

Report
January 2022

Honolulu Transportation Demand Management Plan

Market Research Report

Department of Transportation Services

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Prepared by the City and County of Honolulu Department of Transportation Services, in cooperation with the O'ahu Metropolitan Planning Organization and the United States Department of Transportation.

Contents

1 Introduction

Key Findings

The City & County of Honolulu Transportation Services, in cooperation with the O'ahu Metropolitan Planning Organization and the United States Department of Transportation, set out to better understand O'ahu residents' transportation behaviors and attitudes toward potential alternative modes of transportation. The results of the survey will guide the development and implementation of the Transit Demand Management Plan strategies for the City & County of Honolulu. Outreach was done island wide through email and telephone. The key findings from this survey are summarized below.

Driving Frequency – Two-thirds (66%) of those polled are what we would describe as heavy drivers using their vehicles five to seven days a week on average. One in five (20%) drives an automobile anywhere from two to four days a week. The remaining 14% drive less frequently than once a week.

Driver Highlights – From those who report driving a personal vehicle at least once per week.

- The vast majority of drivers on O'ahu feel that they are already consolidating their trips taken in their personal vehicle (38% strongly agree + 50% somewhat agree).
- Drivers believe that individual freedoms are of high importance, as the majority of drivers agree that "People should be allowed to use their cars/ trucks/ vans as much as they like" (38% strongly agree + 50% somewhat agree).
- Finding parking in residential areas is difficult for one in four O'ahu drivers (10% strongly agree + 16% somewhat agree).

Support for Alternative Forms of Transportation among Drivers

- Willingness is greater to adopt alternative forms of transportation amongst those who live in the urban core. This sentiment weakens as one moves out to the suburbs and rural O'ahu.
- There is greater pushback amongst larger households, particularly those who live in homes with multiple vehicles, when it comes to arguments supporting alternative forms of transportation.
- Those with a longer commute show a stronger pushback on topics related to alternative forms of transportation.
- Younger segments of the sample, particularly those who live and rent in the urban core of Honolulu, appear the easiest to convert or generally support topics promoting alternative forms of travel.

Travel Mode Influencers – There are a variety of factors that are considered when selecting a mode of transportation. Among the seven factors tested, five were identified as very important by the majority of research respondents: saving time / fastest way (66% very important), ability to carry items / cargo (60% very important), saving money (58% very important), air conditioning / climate control (54% very important) and privacy (53% very important). Other considerations include: the ability to transport other people (42% very important) and getting exercise (34% very important).

Parking at Home – Most (81%) of respondents who have at least one vehicle in their household indicate they park off-street in private garages, driveways or elsewhere on property. Nearly one in five (18%) utilize a parking lot, and another 18% park a vehicle on a public street.

Willingness to Pay for Parking – A majority of respondents with a vehicle (59%) indicate they would not be willing to pay for parking if doing so made finding a parking space easier when they needed it. Thirty-one percent would be willing to pay for parking at work, and 18% would be willing to pay for parking at home.

- Willingness to pay for parking at home is highest among residents of urban Honolulu.

Parking at Work – The majority of respondents who are employed (56%) enjoy free parking at work. One in four (23%) workers pays the entire cost to park at their place of employment. The remaining workers have their employer pay the entire cost of parking (14%) or have it partially covered by their employer (7%).

Smart Parking Meters – A majority (62%) of those polled would be more willing to use metered street parking if they could pay using credit/ debit cards.

Walkability – Nearly all research respondents (93%) live within a 10-minute walk from a bus stop. Significantly fewer individuals are within a 10-minute walk from a store to buy food (57%), their child's school or daycare (45%), and retail shopping options (44%). Just 15% live within a 10-minute walk from their place of employment.

Modes of Transportation – The results show that nearly everyone polled had ridden in a personal vehicle (97%) at least once in the past 12 months. Two-thirds (67%) of the sample had walked or used a wheelchair to get around while a third (34%) had participated in a rideshare program. One in five (21%) had ridden a bicycle and/or used TheBus. Fifteen percent had carpooled while two percent had tried a carshare program and/or used the HandiVan.

Methodology

The City & County of Honolulu, through primary contractor Steer Group, contracted Anthology Research to conduct a quantitative mixed-mode (online and telephone) study of fulltime, adult residents of O'ahu (lives on O'ahu a minimum of six months each year).

Data collection began on October 4, 2021 and ended on November 23, 2021. This coincided with work-from-home policies instituted as a result of the COVID-19 pandemic. Please

take note of the timing of the report and the impact of the pandemic in potentially impacting the perception of respondents. A total of n=1,009 completed surveys were collected during this period. The margin of error for an overall sample of this size is +/- 3.09 percentage points with a 95% confidence level.

Sampling quotas by County Council District were established to ensure equal representation of residents throughout the County. Anthology targeted collecting a minimum of n=100 surveys from residents in each of the nine Council Districts on island. The total number of completed surveys in each district are shown on the following page. Based on the disproportionate sampling design, the overall data were weighted to reflect population estimates of adults 18 years of age and older by major ethnic groups on O'ahu.

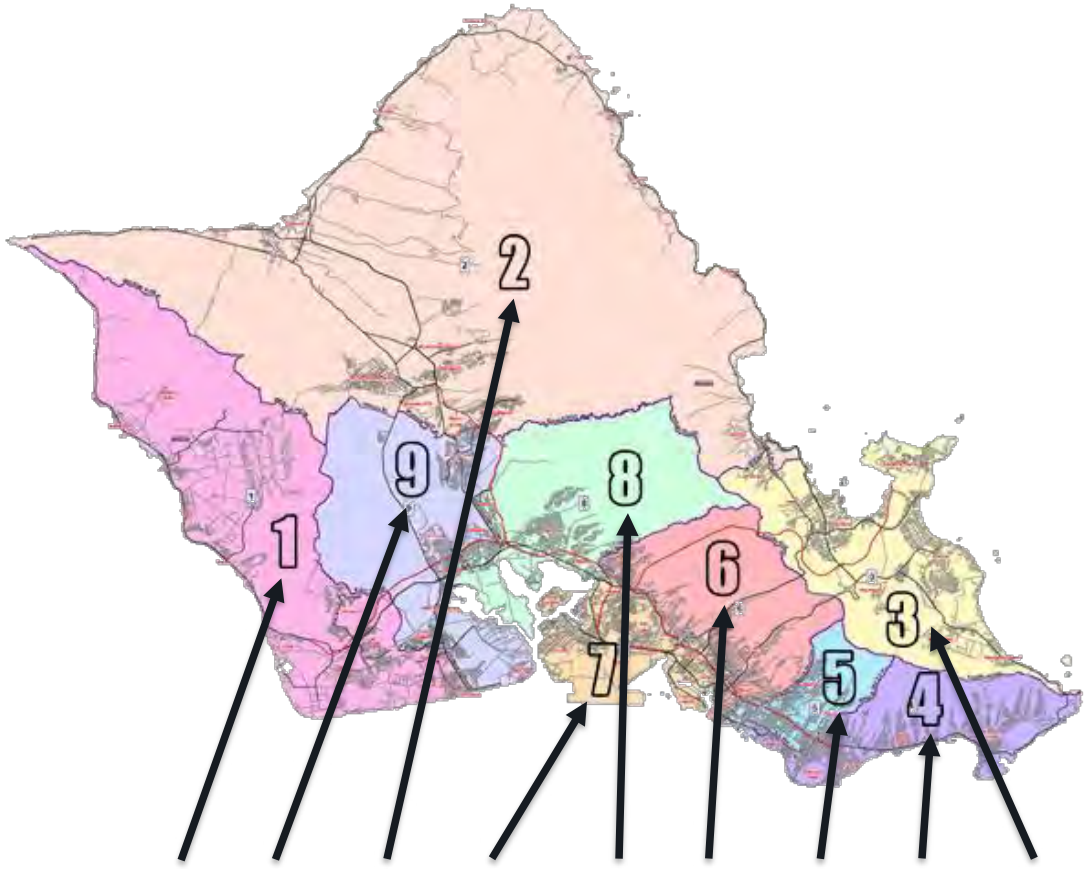
The sample for this mixed-mode survey was compiled from three sources: The sample for the Internet-based portion of the study was derived from a combination of third party online sample providers, purchased consumer and voter contact lists and Anthology's proprietary panel of Hawai'i residents. The sample used to generate the telephone surveys was derived using Anthology's proprietary Random Digit Dialing software and Voter Contact lists; both mobile and landline numbers were called.

The questionnaire used in this study was developed by the City & County of Honolulu with input from Anthology Research. A portion of the survey included key questions, used with permission, from "SEGMENT: Applicability of an Existing Segmentation Technique to TDM Social Marketing Campaigns in the United States." The SEGMENT study Market Segment Prediction Tool was used to calculate the driver segments shown in this report. The questionnaire is located in the appendix of this report.

(Note: The research design for this study is proprietary and should be considered the property of Anthology Research.)

Prepared by the City and County of Honolulu Department of Transportation Services, in cooperation with the O'ahu Metropolitan Planning Organization and the United States Department of Transportation.

The graphic below shows the number of surveys collected in each region/ Council District.

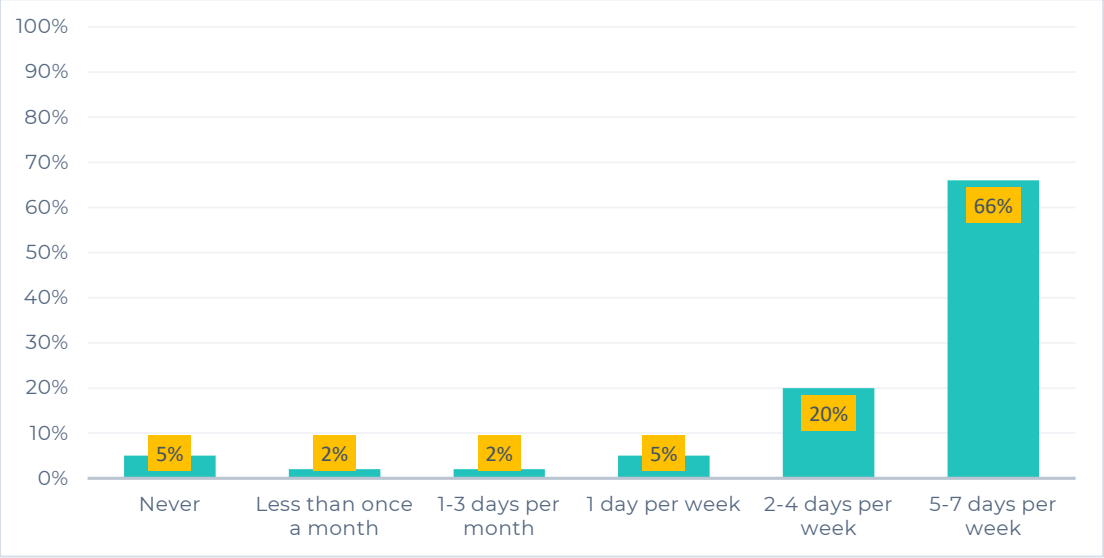


OVERALL	Council District 1	Council District 9	Council District 2	Council District 7	Council District 8	Council District 6	Council District 5	Council District 4	Council District 3
n=1,009	n=111	n=130	n=121	n=101	n=112	n=110	n=104	n=108	n=112

Note: The margin of error for an overall sample of n=1,009 is +/- 3.09 percentage points with a 95% confidence level. The margin of error for subsets of the overall sample, including at the council district level, may be higher than +/- 3.09 percentage points with a 95% confidence level.

2 Driving Frequency

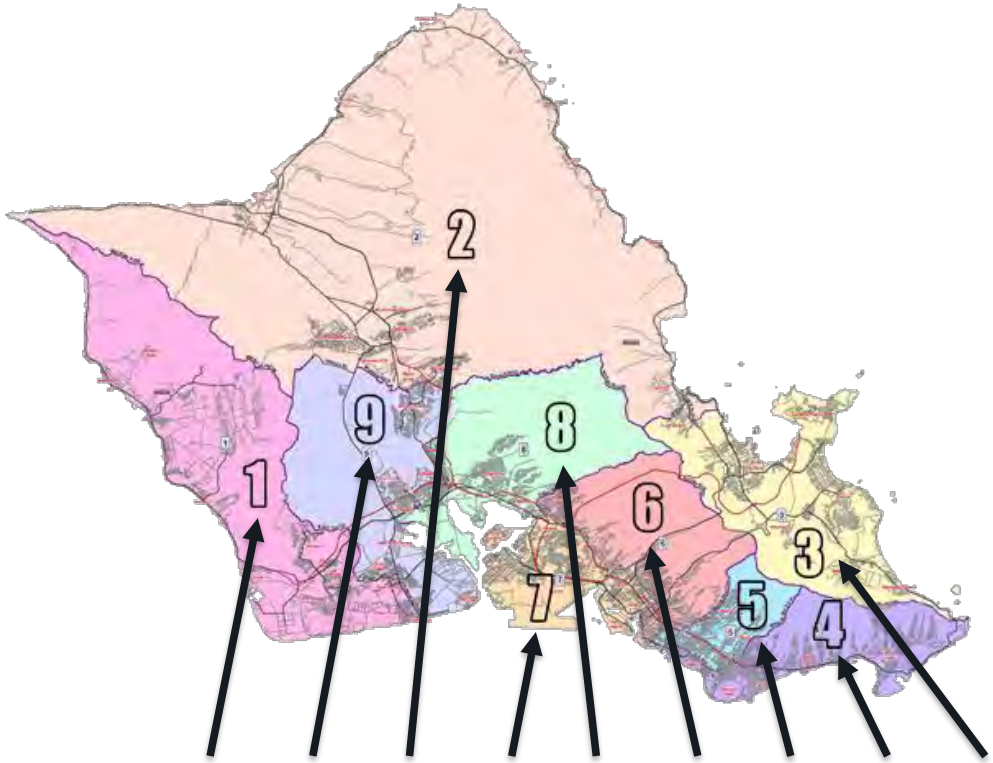
In this section of the study, research respondents were asked which of the following options best described how frequently they travel by car, truck, or van as a driver.



Two-thirds (66%) of those polled are what we would describe as heavy drivers using their vehicles five to seven days a week on average. One in five (20%) drives an automobile anywhere from two to four days a week. The remaining 14% drive less frequently than once a week.

- Those who live with at least one child in their homes (78%) were more likely to drive nearly every day of the week compared to those who do not live with children (61%).
- Driving frequency is higher amongst more affluent and educated segments of the sample. For example, 72% of those who live in homes with combined incomes in excess of $100K drive five to seven days a week. This number drops to 56% amongst those who live in homes with combined incomes below $50K.
- Those who are employed or students (77%) were more likely to drive nearly every day compared to those who are not employed or currently going to school (44%).

The graphic below highlights transportation modes used in the past 12 months by geographic region/ Council District.



	OVERALL	Council District 1	Council District 9	Council District 2	Council District 7	Council District 8	Council District 6	Council District 5	Council District 4	Council District 3
BASE	1,009	111	130	121	101	112	110	104	108	112
Never	5%	3%	3%	5%	6%	4%	5%	7%	8%	5%
Less than once a month	2%	1%	2%	0%	0%	2%	2%	5%	2%	2%
1-3 days per month	2%	4%	-	-	3%	1%	2%	3%	0%	5%
1 day per week	5%	5%	8%	5%	1%	5%	6%	2%	3%	6%
2-4 days per week	20%	20%	12%	26%	22%	19%	34%	14%	21%	16%
5-7 days per week	66%	68%	75%	64%	68%	70%	51%	69%	65%	67%
Classification based on SEGMENT Market Segment Prediction Tool Non-driver = Never + Less than once a month + 1-3 days per month Driver = 1 day per week + 2-4 days per week + 5-7 days per week										
NET Non-Driver	9%	8%	5%	5%	9%	7%	9%	15%	10%	12%
NET Driver	91%	93%	95%	95%	91%	94%	91%	85%	89%	89%

3 Driver Segments

Driver Segments

The overall results from the study were filtered to help identify the following four driver segments which will be highlighted throughout the report. The table below highlights the actual count that comprised each segment along with a description of each to aid the reader as they progress through the report.

As noted in the methodology section, these driver segments and associated descriptions were used with permission from "SEGMENT: Applicability of an Existing Segmentation Technique to TDM Social Marketing Campaigns in the United States."

	BASE	DESCRIPTION
Malcontented Motorists & Non-bikers	263	*This group likes driving, but not as much as the car lovers and devoted drivers do. They agree that it is important to reduce the number of cars, trucks, and vans on the road due to traffic noise and pollution. They also feel responsible about environmental problems and do not believe that climate change and global warming have been exaggerated. They somewhat believe that reducing car usage can help stop climate change. Nevertheless, they do not enjoy public transportation because driving is faster. Therefore, they do not have many options besides driving. A distinctive feature of this group is that they dislike bicycles and motorcycles, even though they acknowledge the health benefits of bicycling.*
Active Aspirers	183	*This group does not enjoy driving as much as people in other groups and would gladly cut down their car, truck, or van use if they could. They believe that driving is quicker than transportation but not cheaper because owning a car, truck, or van is expensive. They do not like traveling by taxicab and motorcycle. They have positive attitudes toward public transportation such as bus, subway, railroad, and ferryboat. They also enjoy biking and walking and highly appreciate the health benefits. They are highly aware of environmental responsibilities and climate change and would like to act on them. Therefore, this group believes that it is important to reduce the number of cars, trucks, and vans due to traffic noise and odor, and to solve environmental issues. If this group has to use a car to get to work, they would like to carpool.*
Open-minded Car Lovers	110	*Just like the Car Lovers/Devoted Drivers group, this group really loves to drive, does not want to cut down their car, truck or van use, and believes that there is no realistic alternative to driving. They strongly believe that people should be allowed to use their car/truck/van as much as they like and think that driving is a way to express themselves. Since they believe that driving is cheaper and quicker, they have unfavorable views toward public transportation. Nevertheless, they still like traveling by walking and biking and highly appreciate the health benefits. Despite their love for driving, this group feels responsible about environmental issues and does not believe that climate change and global warming have been exaggerated. Therefore, they think that it is important to reduce the number of car/truck/vans because of traffic noise and odor. This group is also open to carpooling.*
Car Lovers/ Devoted Drivers	61	*This group really loves to drive and does not want to cut down their car/truck/van use, and believes that there is no realistic alternative to driving. They believe that driving is a way to express themselves. As a result, they strongly believe that people should be allowed to use their car, truck, or van as much as they like. They have very negative attitudes towards biking and walking even though they understand the health benefits. They also have very negative attitudes towards any kind of public transportation and believe that cars, trucks, and vans are faster, cheaper and safer. However, they do not think that they are too dependent on cars, trucks, and vans. They also do not enjoy carpooling. They do not agree that cars, trucks, or vans create noise and odor nuisance or lead to an unhealthy lifestyle. Regarding environmental issues and climate change, this group somewhat believes that environmental threats have been exaggerated.*

Driver Profile

The table below provides a profile of each driver segment based on the various demographics spotlighted in this particular study. The numbers highlighted in red signify statistically significant differences with at least one other driver segment.

	Active Aspirers	Open-minded Car Lovers	Car Lovers/ Devoted Drivers	Malcontented Motorists & Non-bikers
REG VOTER	85%	77%	87%	89%
PRIMARY RESIDENCE				
Own	52%	51%	60%	57%
Rent	38%	39%	32%	31%
Live rent free	10%	9%	9%	12%
HOUSEHOLD SIZE				
1-2 persons	55%	51%	56%	55%
3-4 persons	36%	39%	36%	31%
5 or more	8%	10%	8%	13%
MEAN	3.18	3.52	3.09	3.18
EDUCATION				
HS/ Less	3%	10%	10%	7%
Some College	24%	35%	31%	28%
Four-year college grad	32%	33%	28%	36%
Post-graduate	40%	20%	30%	28%
YEARS IN HAWAII				
Born and Raised	45%	60%	72%	66%
Transplant	55%	40%	28%	34%
AGE				
18-34	25%	17%	17%	19%
35-49	38%	45%	44%	30%
50-64	25%	20%	33%	33%
65+	10%	18%	6%	18%
MEAN	45.08	47.05	46.36	49.72
ETHNICITY				
Caucasian	43%	26%	17%	21%
Japanese	18%	26%	43%	36%
Chinese	5%	3%	3%	3%
Filipino	8%	10%	8%	14%
Hawaiian	16%	26%	20%	20%
Other	7%	6%	5%	6%
HOUSEHOLD INCOME				
< $50K	11%	15%	20%	20%
$50K-$100K	35%	32%	41%	36%
$100K+	45%	40%	34%	34%
Rf	9%	13%	4%	11%
GENDER				
Male	36%	54%	33%	31%
Female	64%	44%	61%	69%

4 Driver Segment

In this section of the study those respondents who drive at least once a week were presented with a list of 17 statements and then asked how strongly they agreed or disagreed with each one. They were instructed to quantify their perceptions using a standard five-point rating scale highlighted in the table below. In addition to the percent results a mean or average score was also computed. The higher the mean score (closer to 5.00) the more strongly they agreed with each statement. Please note the varying number of respondents (BASE) for each statement when analyzing these results.

	BASE	Strongly agree (5)	Somewhat agree (4)	Neither (3)	Somewhat disagree (2)	Strongly disagree (1)	MEAN
I try to consolidate my trips taken in my car/ truck/ van	902	38%	50%	7%	4%	2%	4.18
People should be allowed to use their cars/ trucks/ vans as much as they like	914	28%	41%	22%	8%	2%	3.85
I feel a moral obligation to reduce the emission of greenhouse gases	903	19%	41%	26%	6%	7%	3.61
I would like traveling by ferryboat	810	22%	31%	26%	13%	8%	3.48
Reducing my car/truck/ van use would make me feel good	900	16%	35%	29%	12%	8%	3.39
I like traveling by walking	885	14%	35%	26%	16%	8%	3.31
I am NOT the kind of person to use public transportation	900	17%	20%	26%	26%	11%	3.06
I am NOT the kind of person who rides a bicycle	882	21%	19%	21%	24%	15%	3.06
I would like traveling by streetcar or trolley car	838	10%	26%	32%	19%	13%	3.00
Driving gives me a way to express myself	885	8%	20%	42%	18%	12%	2.93
In general, I would rather bicycle than use the bus	860	10%	21%	28%	25%	16%	2.82
I would rather be a carpool passenger to read, use smartphones, or sleep on the way to work	788	11%	18%	26%	27%	18%	2.78
I like travelling by bicycle	811	9%	18%	26%	22%	24%	2.65
If I could, I would gladly do without a car/ truck/ van	909	8%	18%	17%	33%	23%	2.56
Finding a parking spot where I live is difficult	871	10%	16%	8%	34%	31%	2.41
I tend NOT to walk much because it's physically draining	902	6%	11%	19%	36%	29%	2.29
Environmental threats such as global warming have been exaggerated	907	7%	11%	21%	24%	37%	2.28

The five statements that received the highest mean scores from the driver segment are highlighted above in yellow signifying the strongest level of agreement amongst the various statements being tested. At the opposite end, the three statements with the lowest mean scores or overall level of agreement are highlighted in red.

The table below segments the results by mean score by driver segment. The purple shaded regions highlight statistically significant differences where the mean score was higher than at least two other driver segments of the sample. The areas shaded in yellow highlight statistically significant differences where the mean score was higher than one other driver segment of the sample. Once again, the higher the mean score (closer to 5.00) the more strongly they agree with each statement.

	Active Aspirers	Open-minded Car Lovers	Car Lovers/ Devoted Drivers	Malcontented Motorists & Non-bikers
I try to consolidate my trips taken in my car/ truck/ van	4.40	4.12	3.83	4.03
People should be allowed to use their cars/ trucks/ vans as much as they like	3.51	4.43	4.52	3.71
I feel a moral obligation to reduce the emission of greenhouse gases	4.24	3.27	2.60	3.45
I would like traveling by ferryboat	4.12	3.36	2.35	3.28
Reducing my car/truck/ van use would make me feel good	4.19	3.14	1.86	3.41
I like traveling by walking	4.07	3.51	2.14	3.06
I am NOT the kind of person to use public transportation	2.24	3.55	4.23	3.05
I am NOT the kind of person who rides a bicycle	2.06	2.20	3.91	3.85
I would like traveling by streetcar or trolley car	3.81	2.58	1.64	2.99
Driving gives me a way to express myself	2.48	3.43	3.34	2.89
In general, I would rather bicycle than use the bus	3.59	3.62	2.21	2.21
I would rather be a carpool passenger to read, use smartphones, or sleep on the way to work	3.45	2.43	1.64	2.78
I like travelling by bicycle	3.62	3.47	1.43	1.99
If I could, I would gladly do without a car/ truck/ van	3.47	2.03	1.52	2.45
Finding a parking spot where I live is difficult	2.61	2.37	2.16	2.41
I tend NOT to walk much because it's physically draining	1.72	2.07	2.41	2.56
Environmental threats such as global warming have been exaggerated	1.49	3.03	3.07	2.23

Segmentation Analysis

The table below highlights statistically significant differences by mean score signifying a higher degree of agreement with each statement.

	STATISTICAL DIFFERENCES
*Stronger level of agreement from those who have **traveled on TheBus in the past year***	• *I like traveling by bicycle* • *Reducing my car/truck/van use would make me feel good* • *I would like traveling by streetcar or trolley car* • *I would rather be a carpool passenger to read, use smartphones, or sleep on the way to work* • *I like traveling by walking*

	STATISTICAL DIFFERENCES
	• *I would like traveling by ferryboat* • *Finding parking where I live is difficult*
*Those **who have not traveled on TheBus in the past year** more strongly agree with the following*	• *I am NOT the kind of person to use public transportation* • *I am NOT the kind of person who rides a bicycle* • *In general, I would rather bicycle than use the bus* • *If I could, I would gladly do without a car/truck/van* • *People should be allowed to use their cars/trucks/ vans as much as they like*
*Stronger agreement from those with the **longest daily commutes***	• *Environmental threats such as global warming have been exaggerated* • *I tend NOT to walk much because it is physically demanding*
*Stronger agreement from those with **shorter daily commutes***	• *I feel a moral obligation to reduce the emission of greenhouse gases* • *I like traveling by walking*
***Males** more strongly agree with the following statements than females*	• *I like traveling by bicycle* • *In general, I would rather bicycle than use the bus* • *People should be allowed to use their cars/trucks/ vans as much as they like* • *Environmental threats such as global warming have been exaggerated*
*Stronger agreement from **female** respondents*	• *Reducing my car/truck/van use would make me feel good* • *I am NOT the kind of person who rides a bicycle*
*Stronger agreement from **Caucasians***	• *I like traveling by bicycle* • *I would like traveling by streetcar or trolley car* • *I feel a moral obligation to reduce the emission of greenhouse gases* • *I like traveling by walking* • *In general, I would rather bicycle than use the bus* • *I would like traveling by ferryboat*
*Stronger levels of agreement from **Japanese** respondents*	• *I feel a moral obligation to reduce the emission of greenhouse gases* • *I am NOT the kind of person to use public transportation* • *I am NOT the kind of person who rides a bicycle*

	STATISTICAL DIFFERENCES
***Native Hawaiians** provide higher levels of agreement*	• *I like traveling by bicycle* • *I would like traveling by ferryboat* • *Environmental threats such as global warming have been exaggerated*
*High level of agreement from **Filipino** respondents*	• *Driving gives me a way to express myself* • *Environmental threats such as global warming have been exaggerated*
***Those living in homes earning in excess of $100K** of the sample provided higher mean scores*	• *I am NOT the kind of person to use public transportation*
*Stronger sense of agreement **from those living in homes (<$50K)** respondents*	• *Driving gives me a way to express myself* • *I tend NOT to walk much because it is physically demanding*
***Respondents under the age of 35** of the sample provided higher mean scores*	• *Reducing my car/truck/van use would make me feel good* • *I would rather be a carpool passenger to read, use smartphones, or sleep on the way to work*

	STATISTICAL DIFFERENCES
	• *In general, I would rather bicycle than use the bus* • *Finding parking where I live is difficult*
Higher levels of agreement from ***those 65 and older***	• *I feel a moral obligation to reduce the emission of greenhouse gases* • *Environmental threats such as global warming have been exaggerated (higher level of disagreement with this statement among this segment)* • *I tend NOT to walk much because it is physically demanding* • *I try to consolidate my trips taken in my car/truck/van*
Locals, born & raised in Hawaii *more strongly agree*	• *I am NOT the kind of person to use public transportation*
More likely to garner agreement from ***transplants to the state or those not born in Hawai'i***	• *I would rather be a carpool passenger to read, use smartphones, or sleep on the way to work* • *Finding parking where I live is difficult*
More educated segments or those ***with a college degree*** *more strongly agree with the following*	• *Reducing my car/truck/van use would make me feel good* • *I would like traveling by streetcar or trolley car* • *I feel a moral obligation to reduce the emission of greenhouse gases* • *I like traveling by walking* • *If I could, I would gladly do without a car/truck/van* • *I try to consolidate my trips taken in my car/truck/van*
Greater sense of agreement from those ***without a college degree***	• *People should be allowed to use their cars/trucks/ vans as much as they like* • *Environmental threats such as global warming have been exaggerated* • *I tend NOT to walk much because it is physically demanding*
Stronger agreement from those who ***own their primary residents***	• *I am NOT the kind of person to use public transportation* • *I try to consolidate my trips taken in my car/truck/van*
Renters *agree with the following in greater numbers*	• *I would rather be a carpool passenger to read, use smartphones, or sleep on the way to work* • *Finding parking where I live is difficult*
Those who are ***currently employed or go to school*** *more strongly agree with the following*	• *I like traveling by bicycle* • *Reducing my car/truck/van use would make me feel good* • *I would rather be a carpool passenger to read, use smartphones, or sleep on the way to work* • *In general, I would rather bicycle than use the bus* • *Finding parking where I live is difficult*
Greater level of agreement from those who ***do not either work or go to school***	• *I am NOT the kind of person who rides a bicycle* • *Environmental threats such as global warming have been exaggerated* • *I tend NOT to walk much because it is physically demanding*
Households that ***contain at least one child*** *more strongly agree*	• *I like traveling by bicycle* • *In general, I would rather bicycle than use the bus*
Stronger agreement from those who ***do not live with children***	• *I feel a moral obligation to reduce the emission of greenhouse gases* • *I am NOT the kind of person who rides a bicycle* • *I tend NOT to walk much because it is physically demanding*

	STATISTICAL DIFFERENCES
*Those who live in the **urban Honolulu** more strongly agreed with the following*	• *I would like traveling by streetcar or trolley car* • *I feel a moral obligation to reduce the emission of greenhouse gases* • *I like traveling by walking* • *If I could, I would gladly do without a car/truck/van* • *Finding parking where I live is difficult*
*Strong level of agreement from those who **live in the suburbs***	• *I would like traveling by streetcar or trolley car* • *If I could, I would gladly do without a car/truck/van*
*Higher levels of agreement from those **living in rural O'ahu***	• *I would like traveling by ferryboat* • *Environmental threats such as global warming have been exaggerated*
*Respondents who **live alone** more strongly agree*	• *I would like traveling by streetcar or trolley car* • *I like traveling by walking*
*Stronger agreement from those **who live in larger households***	• *I would rather be a carpool passenger to read, use smartphones, or sleep on the way to work* • *Environmental threats such as global warming have been exaggerated*
*Those who **live in homes with a single auto** more strongly agree compared to those living in homes with multiple vehicles*	• *I feel a moral obligation to reduce the emission of greenhouse gases* • *I like traveling by walking* • *I would like traveling by ferryboat* • *Finding parking where I live is difficult*
*Higher levels of agreement from those who **live in homes with multiple vehicles***	• *I am NOT the kind of person to use public transportation* • *People should be allowed to use their cars/trucks/ vans as much as they like* • *Environmental threats such as global warming have been exaggerated*
*Those who **drive 5-7 days a week** more strongly agree with the following*	• *Driving gives me a way to express myself* • *People should be allowed to use their cars/trucks/ vans as much as they like* • *Environmental threats such as global warming have been exaggerated*
*Stronger level of agreement from those who **do not drive as frequently***	• *I feel a moral obligation to reduce the emission of greenhouse gases* • *I am NOT the kind of person who rides a bicycle* • *If I could, I would gladly do without a car/truck/van* • *I try to consolidate my trips taken in my car/truck/van* • *I tend NOT to walk much because it is physically demanding*

A quick summation of the segmentation analysis shows a greater willingness to adopt alternative forms of transportation amongst those who live in the urban core. This sentiment weakens as one moves out to the suburbs and rural O'ahu.

There is also greater pushback amongst larger households, particularly those who live in homes with multiple vehicles, when it comes to arguments supporting alternative forms of transportation.

The daily commute also plays a key role in how research respondents generally fall in line regarding this topic in general. Those with a longer commute show a stronger pushback on topics related to alternative forms of transportation.

Younger segments of the sample, particularly those who live and rent in the urban core of Honolulu, appear the easiest to convert or generally support topics promoting alternative forms of travel.

5 Non Driver Segment

In this section of the study those respondents who drive just three times a month or less were presented with a list of 18 statements and then asked how strongly they agreed or disagreed with each one. They were instructed to quantify their perceptions using a standard five-point rating scale highlighted in the table below. In addition to the percent results a mean or average score was also computed. The higher the mean score (closer to 5.00) the more strongly they agreed with each statement. Please note the relatively small bases when examining these results.

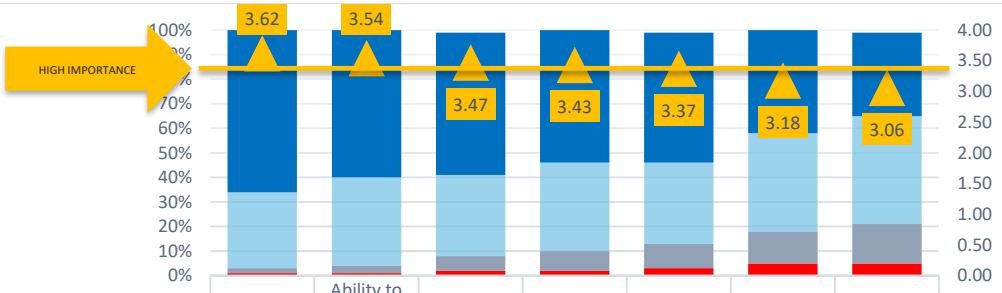
	BASE	Strongly agree (5)	Somewhat agree (4)	Neither (3)	Somewhat disagree (2)	Strongly disagree (1)	MEAN
I like saving money by NOT driving	84	32%	40%	18%	6%	4%	3.90
Walking can be the quickest way to travel for short journeys	88	24%	59%	4%	9%	4%	3.89
I feel a moral obligation to reduce the emission of greenhouse gases	87	27%	36%	24%	11%	2%	3.75
Traffic congestion is a problem in my local area	91	36%	26%	22%	5%	10%	3.72
Finding a parking spot where I live is difficult	81	31%	21%	21%	20%	6%	3.51
I do NOT know anyone with whom to carpool	66	22%	38%	16%	10%	14%	3.43
I like traveling by TheBus	88	16%	34%	27%	15%	7%	3.38
I would like traveling by ferryboat	79	23%	28%	22%	7%	19%	3.30
Finding a parking space at work is difficult	54	28%	20%	10%	33%	9%	3.24
There are many problems with using public transportation	89	9%	24%	37%	25%	5%	3.09
I would like traveling by subway or elevated rail	85	18%	31%	16%	11%	24%	3.07
I have no need to drive as public transport/walking/cycling are all adequate	86	18%	20%	21%	22%	19%	2.97
I do NOT need to have a car/truck/van	86	16%	17%	19%	25%	22%	2.80
In general, I would rather walk than use the bus	91	11%	19%	27%	26%	18%	2.79
I like traveling by taxicab	80	3%	15%	26%	29%	27%	2.39
I am NOT the kind of person to use public transportation	91	15%	6%	7%	34%	38%	2.27
I had a bad experience as a carpool passenger in the past	44	1%	10%	33%	26%	30%	2.26
My employer reimburses bicycle commuting expenses	40	12%	3%	15%	15%	54%	2.05

The five most effective arguments that influence the non-driver segment are highlighted in yellow in the table above. Conversely, the bottom three ranked statements are shaded in red based on mean scores once again.

6 Travel Mode Influencers

Importance Ratings

In this section of the study residents of the City & County of Honolulu were presented with seven incentives that might impact the transportation choices of research respondents. After being presented with each they were asked to rate its importance in helping them to determine how they prefer to travel on-island. They were instructed to quantify their perceptions using a standard four-point rating scale highlighted in the table below. In addition to the percent results a mean or average score was also computed. The higher the mean score (closer to 4.00) the greater its importance in the decision-making process.



	Saving time/ fastest way	Ability to carry items/ cargo	Saving money	Air conditioning	Privacy	Ability to transport other ppl	Getting exercise
Very important (4)	66%	60%	58%	54%	53%	42%	34%
Somewhat important (3)	31%	36%	33%	36%	33%	40%	44%
Somewhat unimportant (2)	2%	3%	6%	8%	10%	13%	16%
Very unimportant (1)	1%	1%	2%	2%	3%	5%	5%
DK/Rf							
BASE	1009	1009	1009	1009	1009	1009	1009
MEAN	3.62	3.54	3.47	3.43	3.37	3.18	3.06

Overall, two of the seven influencers received mean scores above 3.50 signifying a high degree of importance placed on the fastest mode of transportation (3.62) and the ability to carry cargo/ items (3.54).

Each of the other five items received mean scores that exceeded 3.00 signifying that each was of relative importance to a large proportion of the sample. Saving money and air-conditioning fell just slightly below the 3.50 threshold.

The table below segments the results by mean score by driver type. The areas shaded in purple show segments that were statistically higher than at least two other segments. The areas shaded in yellow were statistically higher than one other segment.

	Active Aspirers	Open-minded Car Lovers	Car Lovers/ Devoted Drivers	Malcontented Motorists & Non-bikers
Saving time/ fastest way	3.54	3.71	3.80	3.69
Ability to carry items/ cargo	3.48	3.60	3.78	3.56
Saving money	3.53	3.48	3.32	3.50
Air conditioning	3.22	3.44	3.69	3.51
Privacy	3.04	3.65	3.84	3.42
Ability to transport other people	3.12	3.38	3.21	3.19
Getting exercise	3.23	3.13	2.69	2.99

Segmentation Analysis

The table below highlights statistically significant differences by mean score signifying a higher degree of agreement.

	STATISTICAL DIFFERENCES
*Greater impact amongst those who have **ridden TheBus in the past year***	• *Saving money*
*Higher mean scores from those who have **NOT ridden TheBus in the past year***	• *Saving time/ fastest way* • *Privacy* • *Air conditioning*
*The following have a greater influence on **those with longer commutes***	• *Privacy*
***Females** provided higher mean scores than males*	• *Saving money* • *Saving time/ fastest way* • *Ability to carry items/ cargo* • *Privacy* • *Air conditioning* • *Getting exercise*
*Least important to **Caucasians***	• *Saving money* • *Saving time/ fastest way* • *Privacy*
*Less of an impact on **seniors***	• *Saving money* • *Saving time/ fastest way*
*More of an influence amongst **less affluent segments***	• *Saving money* • *Privacy*
*Higher mean scores from less educated segments or **those without a college degree***	• *Saving money* • *Privacy*
*More of an impact amongst **transplants to the state***	• *Saving money*
***Renters** provide higher mean scores*	• *Saving money*
*Those who **live in rural parts of the island** gave higher mean scores*	• *Saving money*
*More of an impact amongst those who are **employed or students***	• *Saving money* • *Saving time/ fastest way* • *Ability to transport other people* • *Getting exercise*
*Has more of an influence amongst those **living in large households***	• *Saving money* • *Ability to transport other people* • *Privacy* • *Getting exercise*

	STATISTICAL DIFFERENCES
*Has more of an influence amongst those **living in large households***	• *Saving money* • *Ability to transport other people*

	• *Privacy* • *Getting exercise*
Higher mean scores from those who ***do not have a vehicle***	• *Saving money*
Households with at least one child *are more influenced*	• *Saving time/ fastest way* • *Ability to transport other people* • *Privacy* • *Air conditioning*
Households with multiple vehicles *provide higher mean scores*	• *Ability to transport other people*
Those who ***drive 5-7 days a week*** *gave higher mean scores*	• *Saving money* • *Saving time/ fastest way* • *Ability to carry items/ cargo* • *Ability to transport other people* • *Privacy* • *Air conditioning*

7 Household Background

Number of Residents

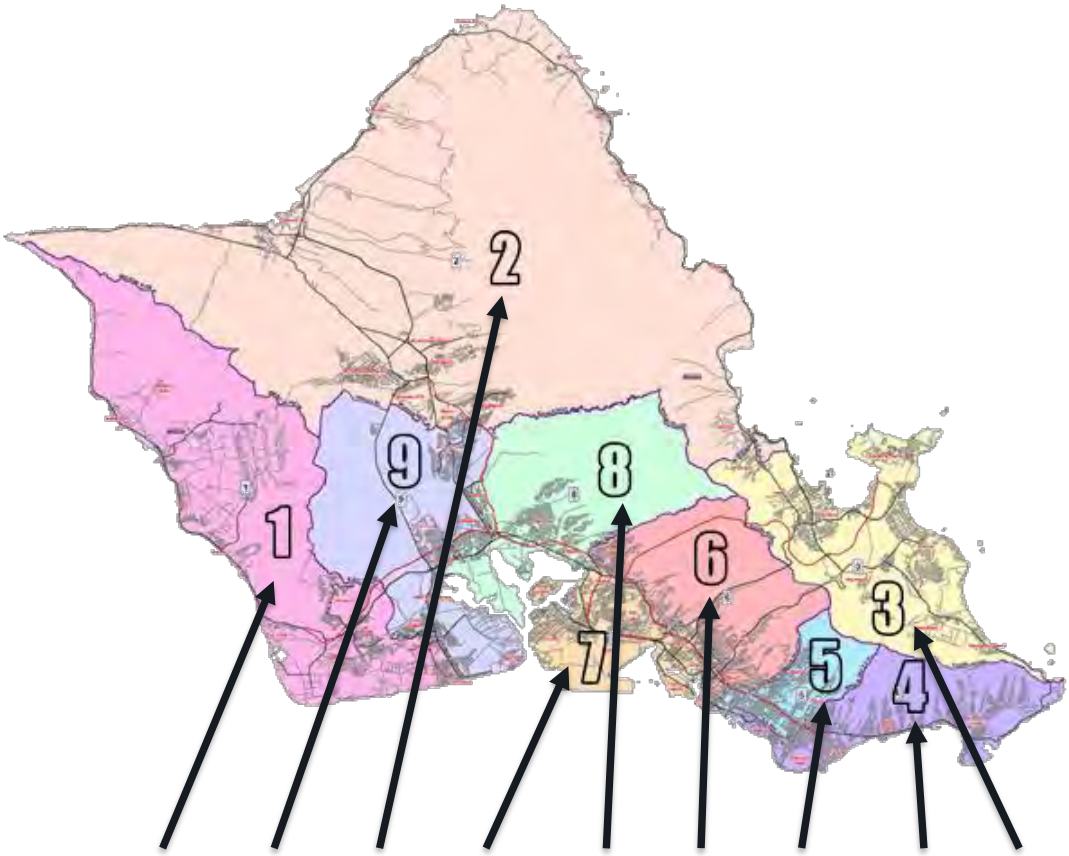
In this initial section of the study residents of the City & County of Honolulu were asked how many persons currently reside in their household.

	OVERALL	Active Aspirers	Open-minded Car Lovers	Car Lovers/ Devoted Drivers	Malcontented Motorists & Non-bikers
BASE	1009	183	110	61	263
One	17%	17%	12%	10%	16%
Two	34%	30%	30%	24%	28%
3-4	35%	41%	38%	49%	41%
5+	14%	12%	20%	17%	14%
MEAN	2.92	2.91	3.42	3.27	3.00
MEDIAN	2	3	3	3	3

Overall, 17% live alone with 34% residing in homes with two individuals. Thirty-five percent live in homes of three to four persons while 14% live in homes of five or more residents. The mean or average number of residents per household in the study is 2.92 with the median being lower at two individuals.

- Those who reside in homes with multiple vehicles tend to contain more residents. For example, amongst those who live in homes with more than one automobile, the average household size is 3.42 (mean). This number, household size falls to 1.85 (mean) amongst those living in homes with a single car.
- Those who have longer daily commutes for either work and/or school tend to live in larger households. For example, amongst those who have a daily commute of 11 or more miles, 66% live in homes of three or more persons. As a point of comparison, this number shrinks to 45% amongst those whose commute is less than five miles a day.
- Female (3 persons median) respondents tend to live in larger households compared to males (2 persons median).
- When segmented by ethnicity we find Native Hawaiians (3 persons median) and Filipinos (4 persons median) living in larger households compared to Caucasian (2 persons median) and Japanese (2 persons median) respondents.
- Younger segments of the sample, particularly those under the age of 50 tend to live in larger homes.
- Less educated segments of the sample or those without a college degree (3 person median) live in larger homes compared to college graduates (2 person median).

The graphic below highlights household size by geographic region/ Council District. Areas shaded in purple were statistically higher than two or more other Council Districts while those areas shaded in yellow were statistically higher than one other Council District.

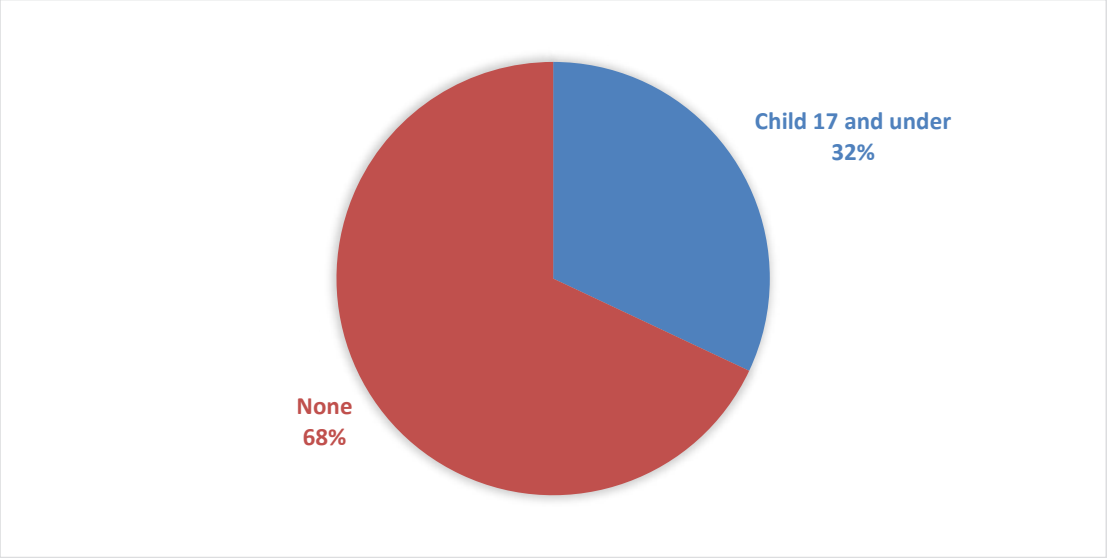


	Council District 1	Council District 9	Council District 2	Council District 7	Council District 8	Council District 6	Council District 5	Council District 4	Council District 3
BASE	111	130	121	101	112	110	104	108	112
MEAN	3.35	3.04	3.36	2.75	3.39	2.63	2.46	2.30	2.85
MEDIAN	3	3	3	2	3	2	2	2	2

Those living the furthest from the urban core of Honolulu or who live in the suburbs tend to live in larger households.

Child in Household

Next, research respondents were asked how many, if any, persons in their households were 17 years of age or younger.



One in three (32%) respondents live in a home with at least one child under the age of 18. The table below breaks down household penetration by the age of the child. Overall, one in ten (10%) lives in a home with a child under the age of five. Nearly one in five (19%) lives in a home with at least one child between the ages of five and 12. Sixteen percent live in homes with a child between the ages of 13 and 17.

	OVERALL	Active Aspirers	Open-minded Car Lovers	Car Lovers/ Devoted Drivers	Malcontented Motorists & Non-bikers
BASE	1009	183	110	61	263
< 5 years old	10%	8%	16%	13%	12%
5-12 years old	19%	25%	29%	30%	17%
13-17 years old	16%	18%	18%	18%	18%

- The likelihood of having at least one child in the household is higher amongst those homes with multiple vehicles (38%). As a point of comparison, amongst those who live in homes with a single auto, 21% have a child under 18 that lives with them.
- Those who live in the urban core (22%) were the least likely to live in homes with at least one child. As a point of comparison, this number increases to 36% amongst those who live in the suburbs and rises further to 40% amongst those who live in rural O'ahu.
- Female (37%) respondents were more likely to live with a child than males (24%).
- Those who have not used TheBus (35%) in the past year are more likely to live with a child compared to TheBus users (25%).
- Native Hawaiians and Filipino residents were more likely to live with children than were Caucasians and Japanese residents.

Adult 60+ in Household

The table below highlights the proportion of households that contain a member who is 60 years of age and older.

	OVERALL	Active Aspirers	Open-minded Car Lovers	Car Lovers/ Devoted Drivers	Malcontented Motorists & Non-bikers
BASE	1008	183	110	61	263
Adult 60+	52%	34%	38%	38%	51%
None	48%	66%	62%	62%	49%

Overall, half (52%) of those polled live in homes where at least one person is an adult 60 years of age or older.

8 Vehicles in Household

Number of Vehicles

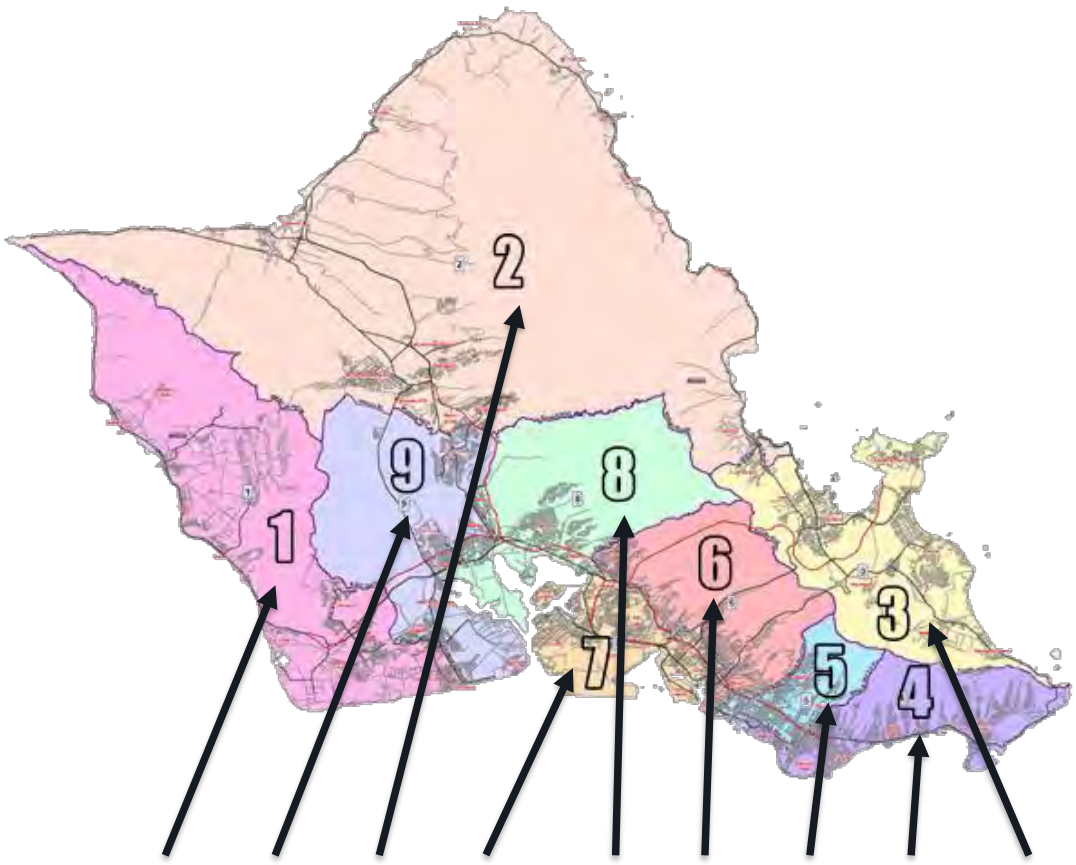
In this initial section of the study residents of the City & County of Honolulu were asked how many vehicles are presently owned or could be assigned to their household.

	OVERALL	Active Aspirers	Open-minded Car Lovers	Car Lovers/ Devoted Drivers	Malcontented Motorists & Non-bikers
BASE	1009	183	110	61	263
None	4%	1%	-	-	1%
One vehicle	28%	31%	16%	24%	31%
Two vehicles	39%	35%	49%	34%	36%
3+ vehicles	29%	33%	35%	41%	32%
MEAN	2.12	2.22	2.53	2.47	2.16
MEDIAN	2	2	2	2	2

Nearly everyone (96%) polled resides in a home with at least one vehicle. Overall, 28% live in a household with just a single car while 39% live in a home with two vehicles. Twenty-nine percent live in households with three or more cars. The mean number of vehicles per household is 2.12 with the median being two vehicles.

- Those who have longer commutes tend to live in homes with a greater number of vehicles. For example, amongst those who have a daily commute of 11 or more miles, 44% live in homes with three or more vehicles. As a point of comparison, this number drops to 23% amongst those who have short commutes of less than five miles.
- Those respondents who live in homes with at least one child under 18 (41% three or more vehicles) were significantly more likely to live in homes with a larger number of vehicles compared to those who do not live with a child under 18 (24% three or more vehicles).
- Males were more likely to live in homes with a larger number of vehicles compared to female respondents.
- Amongst the major ethnic groups in the state, Native Hawaiians (35% three or more cars) and Filipinos (38% three or more cars) live in homes with a larger number of vehicles compared to Caucasians (22% three or more cars) and Japanese (30% three or more cars).
- The number of vehicles per household increases with household size and household income.
- Those who live in rural (38% 3+ cars) and suburban (34% 3+ cars) parts of O'ahu own a larger number of vehicles than do those who live in the urban core (14% 3+ cars).

The graphic below highlights the total number of vehicles in the household by geographic region/ Council District. Areas shaded in purple were statistically higher than two or more other Council Districts while those shaded in yellow were statistically higher than one other Council District.

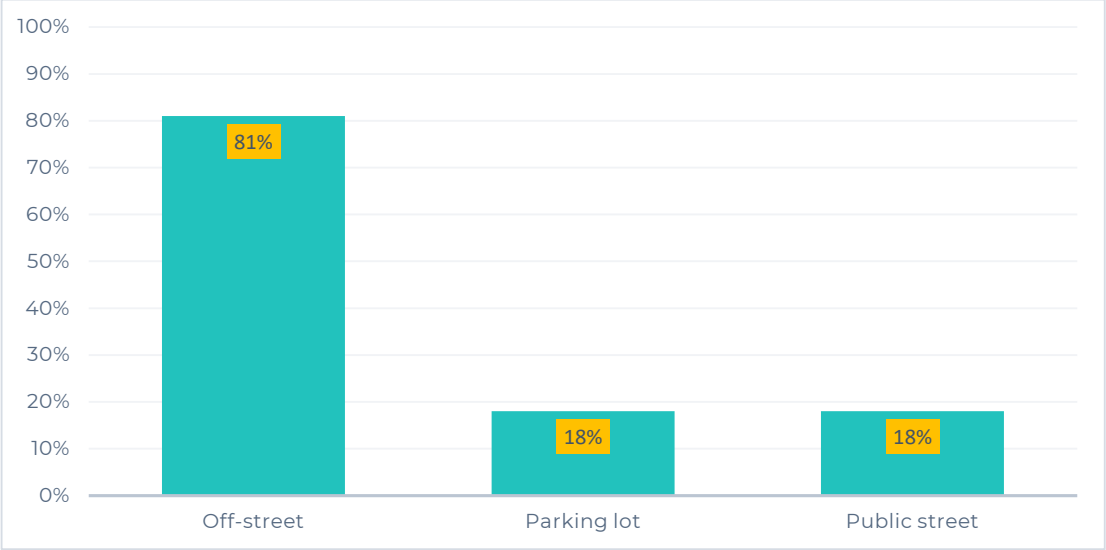


	Council District 1	Council District 9	Council District 2	Council District 7	Council District 8	Council District 6	Council District 5	Council District 4	Council District 3
BASE	111	130	121	101	112	110	104	108	112
MEAN	2.40	2.31	2.52	1.93	2.25	1.77	1.76	1.72	2.28
MEDIAN	2	2	2	2	2	2	2	2	2

9 Parking

Parking at Home

In this next section of the study those who have at least one vehicle in their household were asked where the cars and trucks were parked while at home.



A majority (81%) of the vehicles on O'ahu are parked off of the street in private garages and/or on the property of the owner. Eighteen percent parks their vehicle(s) in a parking lot, while another 18% park at least one car on a public street.

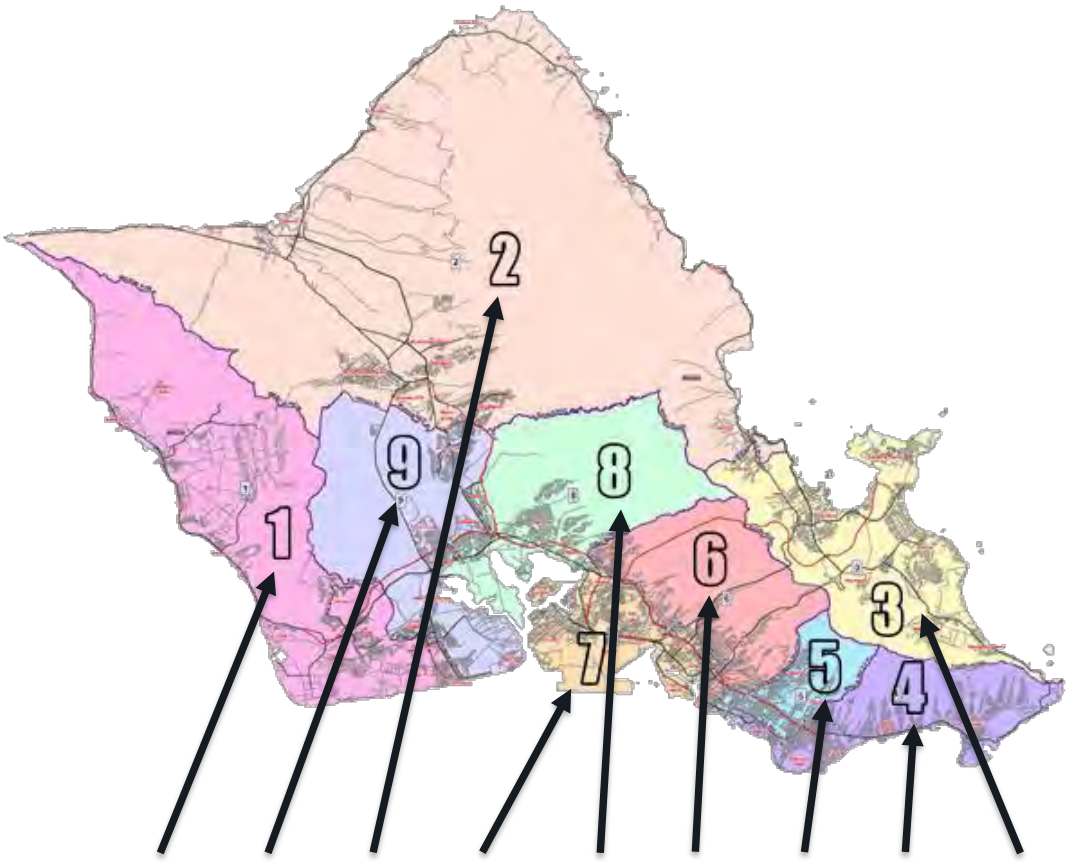
Parking Fees

Regardless of whether they have a vehicle at their disposal each respondent was asked if they would be willing to pay for parking if doing so made finding a parking space easier when they needed it.

	OVERALL	Active Aspirers	Open-minded Car Lovers	Car Lovers/ Devoted Drivers	Malcontented Motorists & Non-bikers
BASE	1009	183	110	61	263
Yes, at home	18%	24%	14%	12%	18%
Yes, at work	31%	44%	31%	33%	35%
No	59%	47%	60%	64%	56%

Overall, 18% of those polled would be willing to pay for parking at their place of residence if it meant finding a parking would be easier. Thirty-one percent would be willing to pay for parking at work. A majority (59%) are unwilling to pay for parking in either situation.

The graphic below highlights the results by geographic region/ Council District. Areas shaded in yellow highlight statistically significant differences.



	Council District 1	Council District 9	Council District 2	Council District 7	Council District 8	Council District 6	Council District 5	Council District 4	Council District 3
BASE	111	130	121	101	112	110	104	108	112
Yes – home	15%	14%	6%	20%	18%	29%	26%	24%	14%
Yes – work	37%	32%	24%	30%	31%	28%	32%	36%	33%
No	58%	62%	72%	59%	60%	56%	56%	48%	58%

Those living in Metro Honolulu and East Honolulu are the most willing to pay for parking at their residence if it meant it would be easier to find/ obtain while those who live in Council District 2 were the least likely.

10 Personal Vehicle Access

Personal Vehicle

Nearly everyone polled has a personal vehicle that they use.

	OVERALL	Active Aspirers	Open-minded Car Lovers	Car Lovers/ Devoted Drivers	Malcontented Motorists & Non-bikers
BASE	1009	183	110	61	263
Personal vehicle	94%	95%	100%	98%	97%
No	6%	5%	-	2%	3%

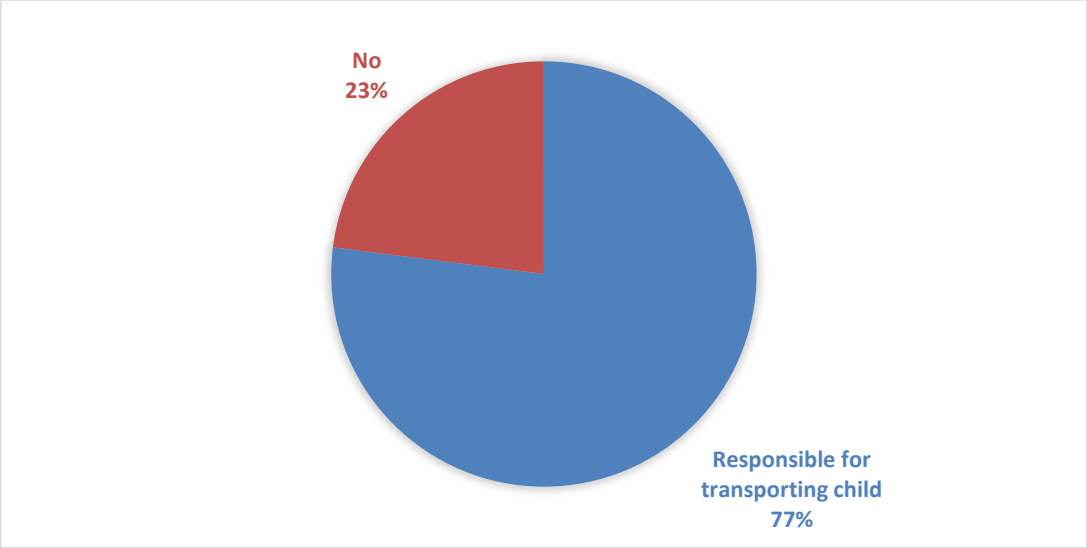
Next, those who have a personal vehicle that they use were asked if they share this car or truck with others in the household.

	OVERALL	Active Aspirers	Open-minded Car Lovers	Car Lovers/ Devoted Drivers	Malcontented Motorists & Non-bikers
BASE	832	152	96	56	222
Yes, share vehicle	42%	52%	43%	37%	38%
No	58%	48%	57%	63%	62%

Two in five (42%) of this subset of the sample shares their car or truck with others in their household.

- The longer the daily commute the less likely they are to share their vehicle. For example, amongst those with a relatively short commute of under five miles, 47% share their car or truck with others in their household. This number falls to 32% amongst those whose daily commute is 11 or more miles.

Those who have access to a vehicle and also have a child in their home (n=326) were then asked if they were responsible for taking this minor to and/or from school/ daycare.

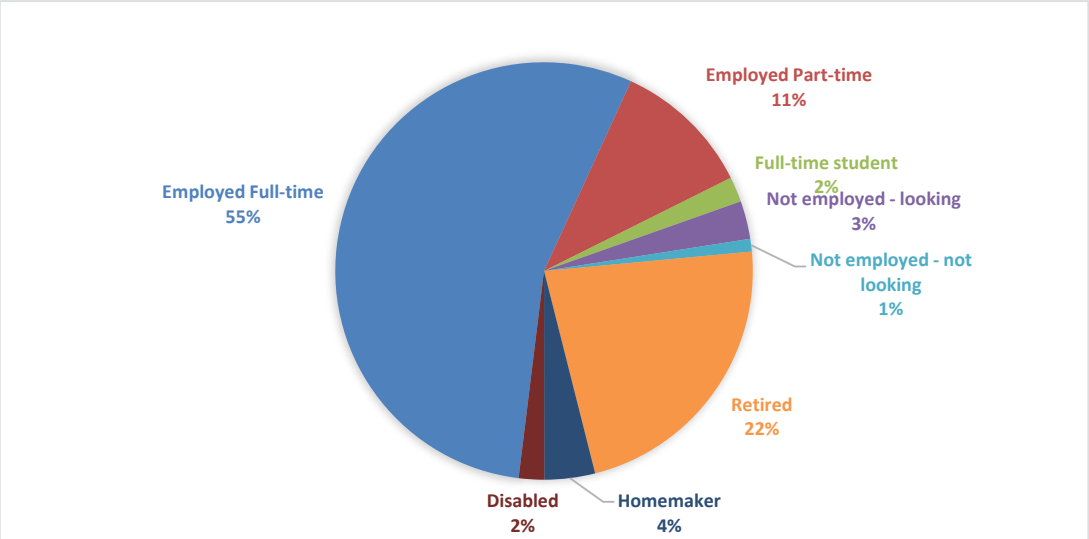


The results from this section highlights that a majority (77%) of this subset of the sample is responsible for the transport of the children in their homes to and from school/ daycare.

11 Daily Commute

Employment Status

At the outset of this section of the study research respondents were asked about their current employment status.



The results show 68% of those polled are currently employed (55% full-time/ 11% part-time) or are going to school (2% full-time student) providing the basis for potential daily commuters amongst a relatively large proportion of the sample.

Daily Commute

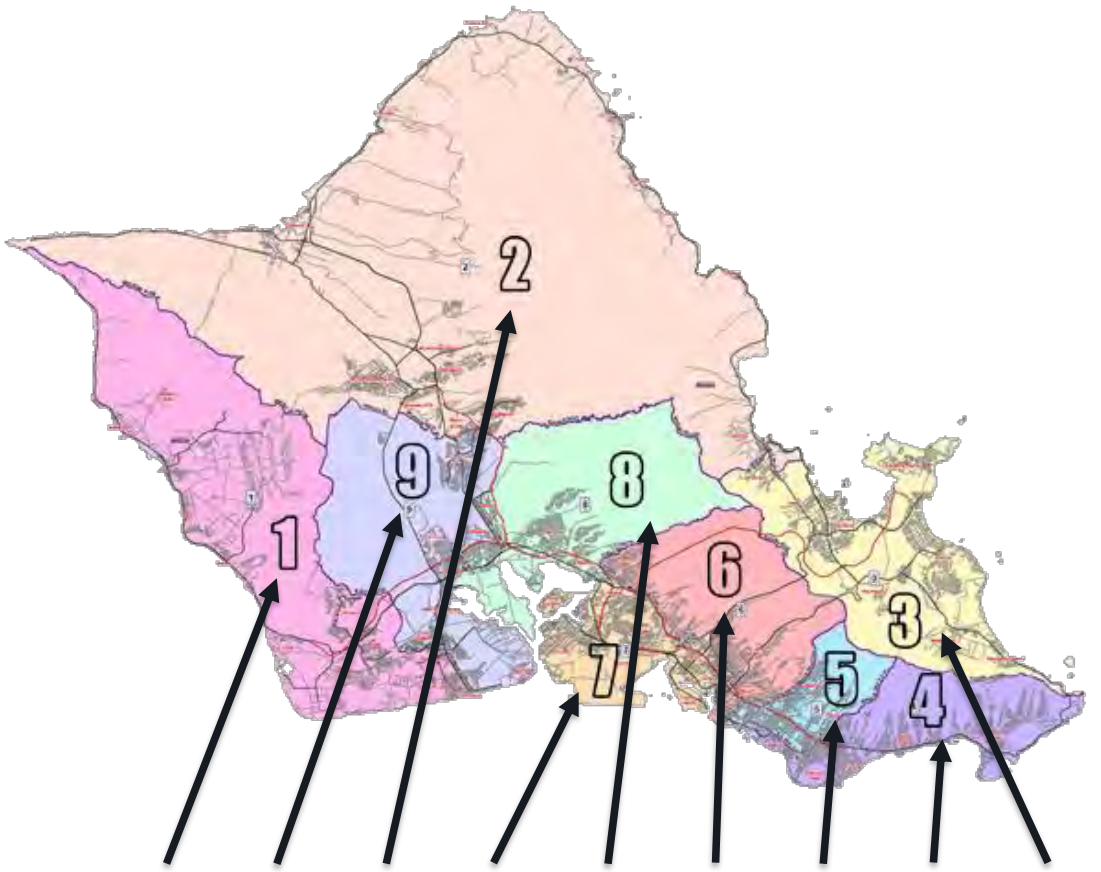
In this section of the study those who are employed or attending school were asked to estimate their daily commute in miles.

	OVERALL	Active Aspirers	Open-minded Car Lovers	Car Lovers/ Devoted Drivers	Malcontented Motorists & Non-bikers
BASE	692	160	91	45	203
< 5 miles	31%	31%	28%	21%	26%
5-10 miles	28%	27%	32%	24%	30%
11+ miles	41%	41%	40%	55%	44%
MEAN	11.10	12.03	11.92	13.13	11.73
MEDIAN	8	8	9	12	10
MIN	0	0	0	1	0
MAX	100	100	70	34	52

Overall, the typical daily commute amongst this subset of the sample is 11.10 with the median being lower at eight miles per day.

- Those in this subset of the sample who have used TheBus in the past year (7 miles median) have a shorter daily commute compared to those who have not used TheBus (10 miles median).
- Less educated segments of this subset of the sample or those without a college degree (10 miles median) have longer commutes compared to those with a college degree (8 miles median).
- Commuters who live in rural O'ahu (15 miles median) have longer commutes compared to those living in the urban core (5 miles median).
- The average daily commute is higher as the number of vehicles in the household increases. For example, the average daily commute amongst those who live in homes without a vehicle is 2.30 miles (median). This average increases to 5 miles (median) amongst those who live in homes with a single vehicle and tops out at 10 miles (median) amongst those who live in homes with multiple vehicles.

- The graphic below breaks out the daily commute by area (Council District). Areas shaded in purple highlight areas that were statistically higher than two or more other Council Districts.



	Council District 1	Council District 9	Council District 2	Council District 7	Council District 8	Council District 6	Council District 5	Council District 4	Council District 3
BASE	79	94	80	63	78	72	78	81	67
<5 miles	25%	12%	26%	24%	16%	60%	60%	32%	27%
5-10 miles	11%	25%	15%	53%	38%	29%	29%	48%	16%
11+ miles	63%	63%	60%	23%	47%	11%	11%	20%	57%
MEAN	16.59	15.80	16.13	7.79	11.29	5.47	5.07	7.25	11.82
MEDIAN	15	15	15	6	10	4	3	6	12

The longest commutes are from those who reside outside of the urban core of Honolulu.

Potential Impact of Remote Work Options

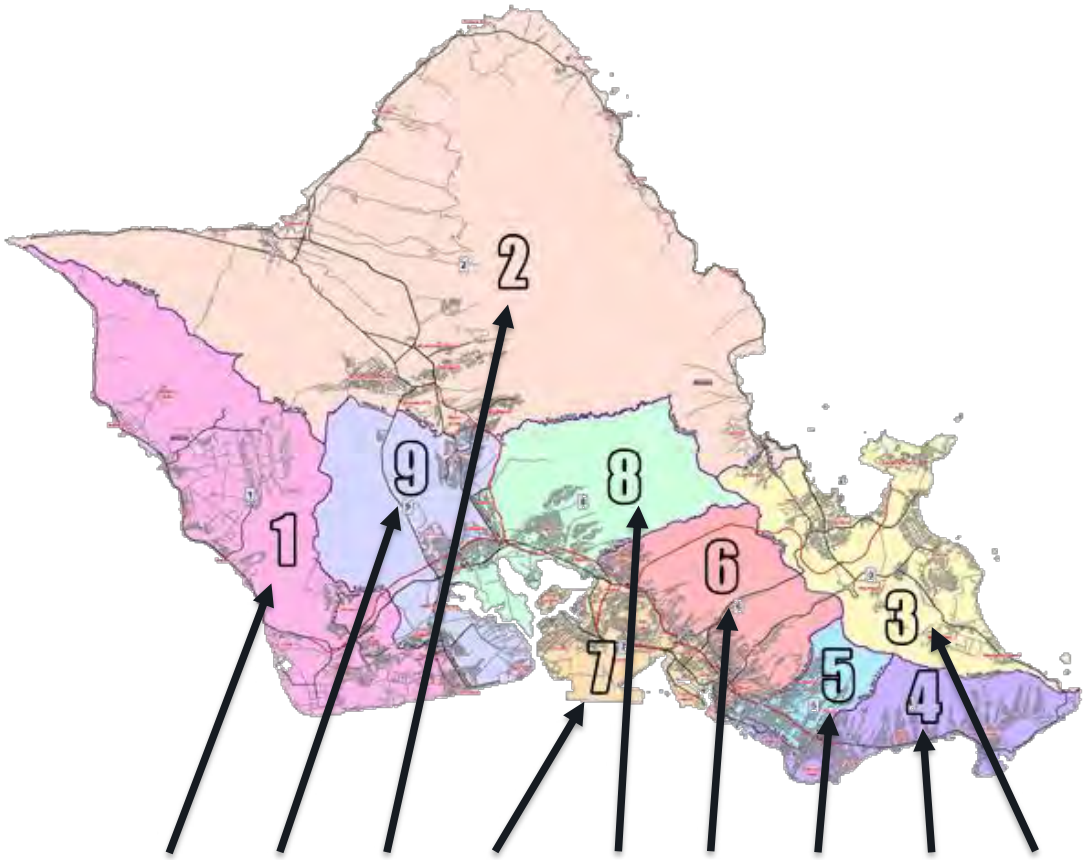
In this next section of the study those who are currently employed were asked if their job can be performed remotely from home or from another location.

	OVERALL	Active Aspirers	Open-minded Car Lovers	Car Lovers/ Devoted Drivers	Malcontented Motorists & Non-bikers
BASE	677	158	89	45	197
Yes, always	15%	18%	11%	11%	17%
Yes, sometimes	42%	45%	37%	42%	44%
NET	57%	63%	48%	53%	61%

A little over half (57%) of those who are currently employed indicates that at least some of the time they are able to work remotely from home or another location.

- The research shows that those with the shortest daily commute to be the most likely to have the option of working remotely. For example, amongst those with a daily commute of less than five miles, 69% are able to work at least some of the time on a remote basis. As a point of comparison, this number shrinks to 52% or fewer amongst those with commutes in excess of five miles.
- Less affluent segments are the least likely to have the ability to work remotely. Just 36% of those who are employed and reside in homes with combined incomes below $50K have the option to work at least part of the time remotely. This number increases as respondents become more affluent eventually topping out at 66% amongst workers who reside in homes that exceed $100K.
- When segmented by gender we find that females (61%) are more likely to be able to work remotely than males (50%).
- Just 36% of workers without a college degree have the option to work remotely. This number rises to 70% amongst those with a college degree.
- Those who live in the heart of Honolulu/ Council District 5 at 76% were the most likely to have the option of working remotely. As a point of comparison, only 47% of those who say they live in a rural environment have the option of working remotely.

The graphic below breaks out the potential impact remote work can have by area (Council District). Areas shaded in yellow highlight statistically significant differences from one other Council District.



	Council District 1	Council District 9	Council District 2	Council District 7	Council District 8	Council District 6	Council District 5	Council District 4	Council District 3
BASE	77	94	77	63	77	71	73	80	65
Yes, always	10%	19%	17%	6%	10%	17%	17%	17%	22%
Sometimes	33%	40%	39%	39%	41%	40%	59%	42%	43%
NET	43%	59%	56%	45%	51%	57%	76%	59%	65%

Those who live in the heart of Honolulu/ Council District 5 at 76% were the most likely to have the option of working remotely. Those who live in Council Districts 1/7/8 were the least likely to have this option.

Employee Parking

Those respondents were currently employed in either a full and/or part-time basis were then asked which of the following options best mirrored their current situation.

	OVERALL	Active Aspirers	Open-minded Car Lovers	Car Lovers/ Devoted Drivers	Malcontented Motorists & Non-bikers
BASE	677	158	89	45	197
Free parking	56%	52%	73%	64%	52%
I pay the entire cost of parking	23%	22%	11%	24%	26%
My employer pays the entire cost of parking	14%	15%	12%	8%	14%
My employer pays a portion of the cost of my parking at work	7%	10%	4%	4%	8%

For a little over half (56%) of those who are currently employed the cost of parking at work is not a deterrent to driving as parking is free of charge. For seven percent their place of employment helps to subsidize this cost with partial coverage of parking expenses. One in four (23%) actually pays the entire cost to park at their place of employment. The remaining 14% are fortunate to have their employer cover the entire cost to park at or near their place of work.

- When segmented by those who have used TheBus in the past year (46%) we find these individuals to be less likely to have free parking at work. Those who have not used TheBus in the past year (59%) were more likely to have parking that is readily available for free.

Metered Parking – Credit / Debit Cards

Each respondent was then asked if they would be more willing to use metered street parking if they accepted credit/ debit cards.

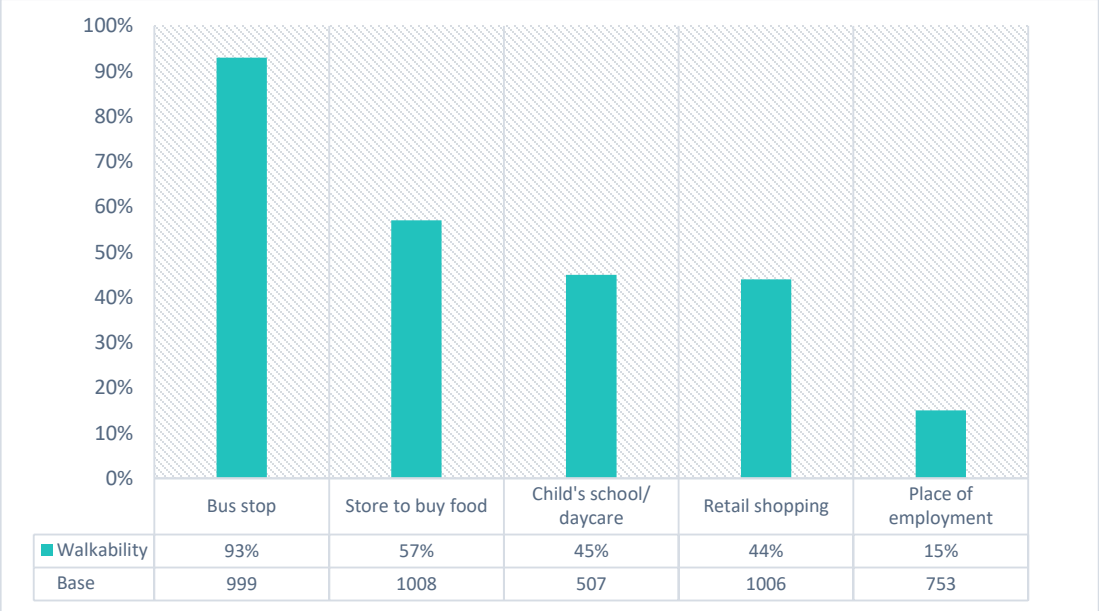
	OVERALL	Active Aspirers	Open-minded Car Lovers	Car Lovers/ Devoted Drivers	Malcontented Motorists & Non-bikers
BASE	1009	183	110	61	263
Yes	62%	80%	59%	52%	60%
No	38%	20%	41%	48%	40%

A majority (62%) of those polled would be more willing to use metered street parking if they could pay using credit/ debit cards.

- The appeal of metered parking that takes credit/ debit cards is less appealing to less affluent segments of the sample. For example, amongst those who live in homes in the bottom incomes tier (<$50K), 53% say this development would have no impact on them. As a point of comparison, 69% of those who live in homes with combined incomes that exceed $100K say this would make them more likely to use metered street parking.

12 Primary Residence - Walkability

Residents of the City & County of Honolulu were asked if their primary residence was within a 10-minute walking distance to each of the following general destinations.



	Bus stop	Store to buy food	Child's school/ daycare	Retail shopping	Place of employment
Walkability	93%	57%	45%	44%	15%
Base	999	1008	507	1006	753

Nearly everyone (93%) who responded to this question lives within a 10-minute walk from a bus stop.

Significantly less individuals are within a 10-minute walk from a store to buy food (57%), their child's school or daycare (45%), and retail shopping options (44%).

Just 15% live within a 10-minute walk from their place of employment.

The table below breaks out the results by driver segment showing the percentage that live within a 10-minute walk from each destination.

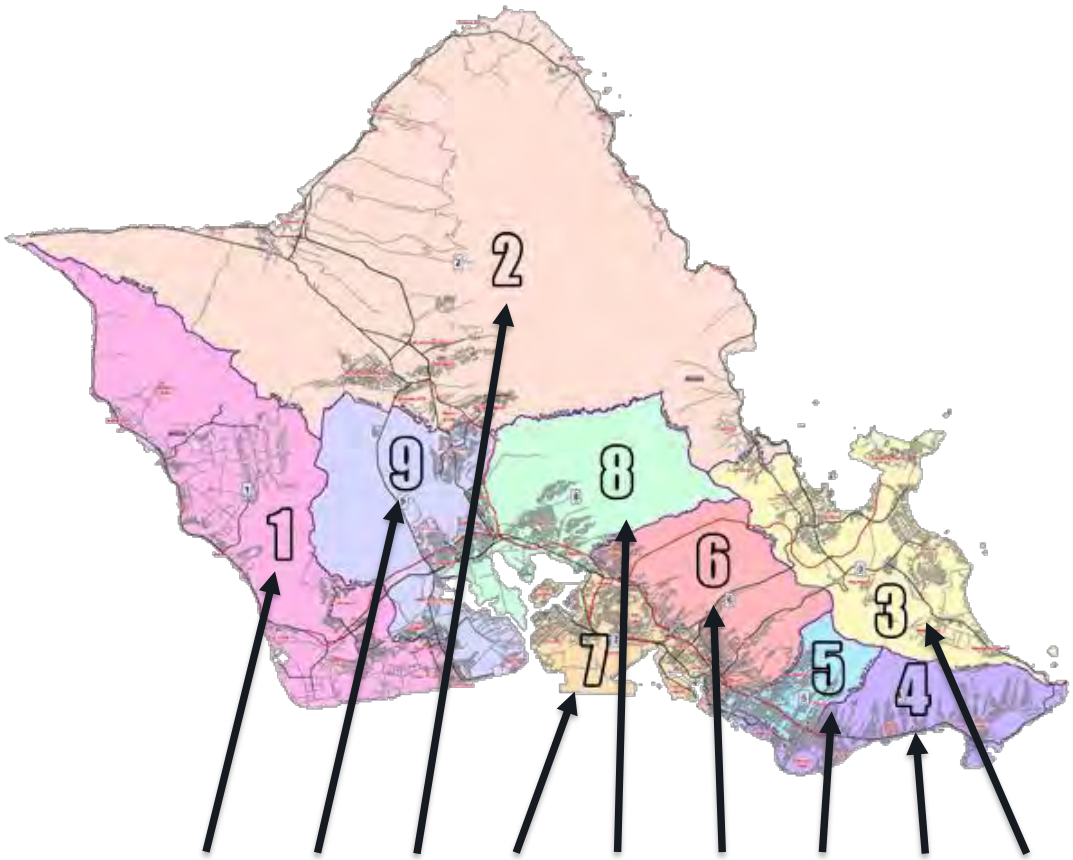
	Active Aspirers	Open-minded Car Lovers	Car Lovers/ Devoted Drivers	Malcontented Motorists & Non-bikers
Bus stop	96%	95%	92%	93%
Store to buy food	66%	65%	48%	54%
Child's school/ daycare	44%	39%	46%	42%
Retail shopping	47%	43%	38%	47%
Place of employment	15%	20%	13%	11%

Segmentation Analysis

The table below highlights statistically significant differences by demographic segments highlighted in the data tables.

	STATISTICAL DIFFERENCES
*Those with **shorter work commutes** were more likely to also live within a 10-minute walk from the following*	• *Store to buy food* • *Place of employment* • *Retail shopping*
*Those who have **access to a personal vehicle** were more likely to live within a 10-minute walk*	• *Bus stop*
*Those who have used **TheBus in the past year** were more likely to live within a 10-minute walk from the following compared to those who have not*	• *Store to buy food* • *Place of employment* • *Retail shopping*
***Native Hawaiians** and **Filipinos** more likely to live within a 10-minute walk compared to Japanese respondents*	• *Place of employment*
***Younger segments** of the sample were more likely to live within a 10-minute walking distance*	• *Store to buy food*
***Renters** were also more likely to live closer distances to the following*	• *Store to buy food*
*Those who **moved to Hawaii from elsewhere** were more likely to live within a 10-minute walk*	• *Store to buy food*
*Research respondents who say they **live in the urban core** were more likely to live within a 10-minute walk from the following*	• *Store to buy food* • *Place of employment* • *Bus stop* • *Retail shopping*
*Those who **live in suburban areas** more likely to live within a 10-minute walk compared to those living in rural O'ahu.*	• *Bus stop* • *Retail shopping*
*Those who are **currently employed** were more likely to live within a 10-minute walk*	• *Store to buy food*
*Less educated segments or those **without a college degree** were more likely to live within a 10-minute walk*	• *Child's school or daycare*
*Those who are **currently employed** were more likely to live within a 10-minute walk from*	• *Retail shopping*
*Those who **live in homes with a single vehicle** were more likely to be within a 10-minute walk compared to those living in homes with multiple cars*	• *Retail shopping* • *Place of employment* • *Store to buy food*
***Households that contain at least one child** were more likely to live within walking distance*	• *Store to buy food*

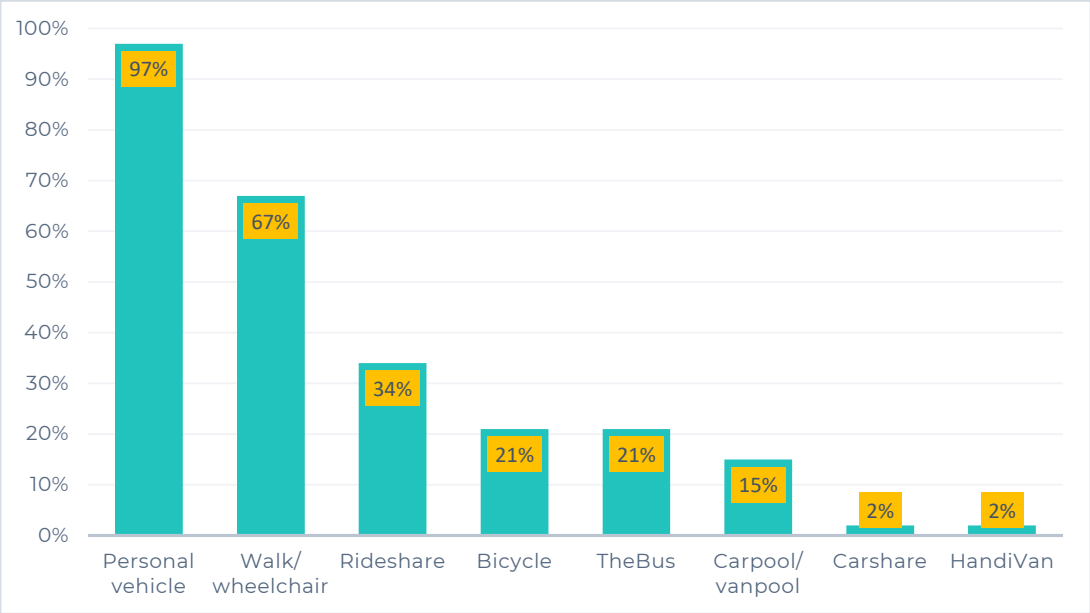
The graphic below highlights destinations that were within a 10-minute walk by geographic region/ Council District. The areas shaded in purple highlight areas with statistically significant differences compared to two or more other Council Districts. The areas shaded in yellow highlight areas where a Council District was statistically different from one other Council District.



	Council District 1	Council District 9	Council District 2	Council District 7	Council District 8	Council District 6	Council District 5	Council District 4	Council District 3
Bus stop	88%	88%	88%	98%	93%	97%	99%	100%	93%
Store to buy food	49%	56%	45%	62%	56%	60%	70%	55%	59%
Child's school/ daycare	47%	51%	58%	54%	33%	46%	41%	30%	38%
Retail shopping	32%	49%	33%	38%	45%	43%	53%	55%	48%
Place of employment	14%	6%	17%	7%	9%	24%	18%	20%	21%

13 Area of Residence

At the outset of this section of the study residents of the City & County of Honolulu were asked if they have used the following forms of transportation within the past 12 months.



The results show that nearly everyone polled had ridden in a personal vehicle (97%) at least once in the past 12 months.

Two-thirds (67%) of the sample had walked or used a wheelchair to get around while a third (34%) had participated in a rideshare program. One in five (21%) had ridden a bicycle and/or used TheBus. Fifteen percent had carpooled while two percent had tried a carshare program and/or used the HandiVan.

The table below breaks out the results by driver segment showing the proportion that have used each mode of transportation in the past 12 months. The areas shaded in purple highlight segments that were statistically higher than at least two other segments. Those shaded in yellow were statistically higher than one other segment.

	Active Aspirers	Open-minded Car Lovers	Car Lovers/ Devoted Drivers	Malcontented Motorists & Non-bikers
BASE	183	110	61	263
Personal vehicle	100%	100%	100%	100%
Walk/ wheelchair	85%	73%	48%	59%
Rideshare	50%	33%	28%	36%
Bicycle	49%	39%	11%	7%
TheBus	21%	16%	10%	16%
Carpool/ vanpool	20%	20%	12%	15%
Carshare	3%	3%	-	1%
HandiVan	-	2%	2%	2%

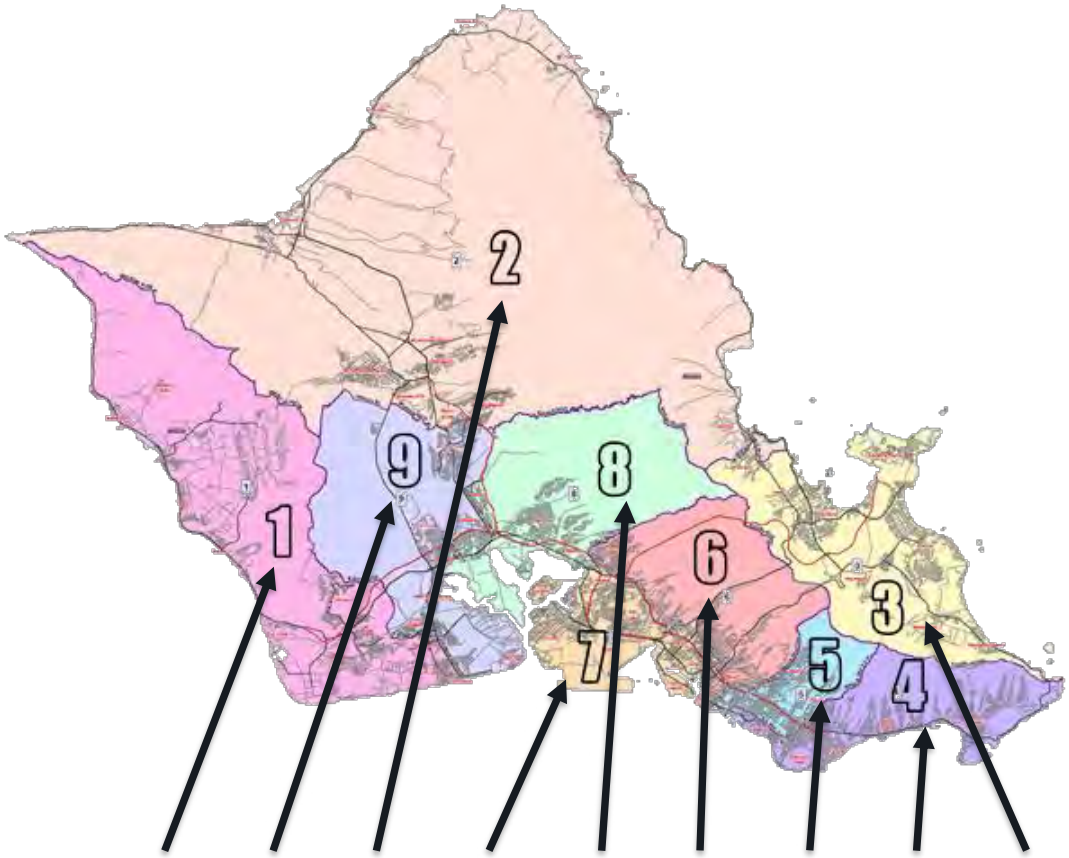
Segmentation Analysis

The table below highlights statistically significant differences by demographic segments highlighted in the data tables.

	STATISTICAL DIFFERENCES
*More likely to have been used by those **without access to a personal vehicle***	• *Rideshare* • *TheBus*
*Those with **shorter daily commutes** were more likely to use the following forms of transportation*	• *Walk/ wheelchair* • *Rideshare* • *TheBus*
***Male respondents** were more likely to use the following modes of transportation compared to females*	• *Walk/ wheelchair* • *Bicycle* • *TheBus*
*The following forms of transportation were used more by **females***	• *Carpool/ vanpool*
*More likely to be used by **Caucasians** when compared to Japanese residents*	• *Rideshare* • *Bicycle*
***Caucasians** were more likely to use this mode of transportation compared to Native Hawaiians and Filipinos*	• *Walk/ wheelchair*
***Filipinos** were more likely to use than Japanese*	• *Carpool/ vanpool*
*Higher likelihood of usage amongst **younger segments** of the sample*	• *Walk/ wheelchair* • *Rideshare* • *Bicycle* • *Carpool/ vanpool*
*Greater usage by **less affluent** segments*	• *TheBus*
*More educated segments or those **with a college degree** were more likely to use in the past 12 months*	• *Personal vehicle* • *Walk/ wheelchair* • *Rideshare* • *Bicycle*
*Those **without a college degree** were more likely to use*	• *TheBus*
***Transplants** or those not from Hawaii showed greater usage*	• *Rideshare* • *TheBus* • *Carpool/ vanpool*
***Renters** were more likely to have used the following modes of transportation in the past 12 months*	• *Rideshare* • *TheBus* • *Carpool/ vanpool*

	STATISTICAL DIFFERENCES
*Greater usage amongst those who reside in **urban Honolulu***	• *Walk/ wheelchair* • *Rideshare* • *Bicycle* • *TheBus* • *Carshare*
*Those who are **employed** were more likely to use the following forms of transportation*	• *Rideshare* • *Bicycle* • *Carpool/ vanpool*
*Those who live in **homes with just a single vehicle** were more likely to use the following transportation modes compared to those living in homes with multiple vehicles*	• *Walk/ wheelchair* • *TheBus*
*Those who **live alone** were more likely to have used the following in the past year*	• *TheBus*
*More likely to be used in the past year by those **who live with children***	• *Personal vehicle* • *Bicycle* • *Carpool/ vanpool*
*Those **living in homes without any children** were more likely to use the following*	• *TheBus*

The graphic below highlights transportation modes used in the past 12 months by geographic region/ Council District.

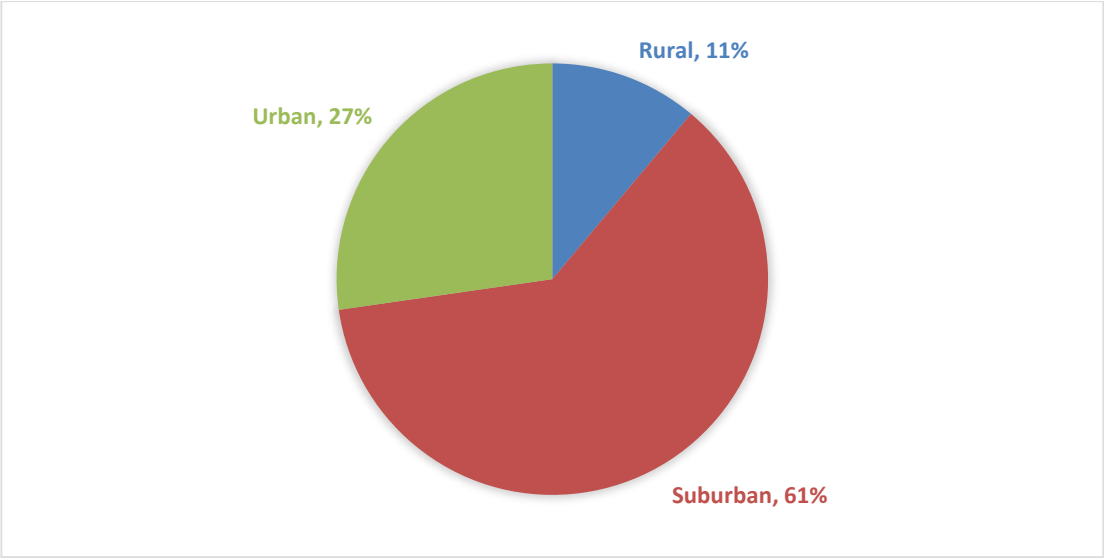


	Council District 1	Council District 9	Council District 2	Council District 7	Council District 8	Council District 6	Council District 5	Council District 4	Council District 3
BASE	111	130	121	101	112	110	104	108	112
Personal vehicle	97%	100%	99%	97%	98%	96%	94%	95%	94%
Walk/ wheelchair	58%	60%	66%	63%	62%	68%	76%	76%	73%
Rideshare	24%	21%	25%	34%	32%	43%	53%	43%	34%
Bicycle	16%	20%	27%	21%	14%	25%	25%	22%	22%
TheBus	20%	13%	13%	20%	19%	25%	32%	28%	20%
Carpool/ vanpool	10%	10%	15%	13%	18%	13%	21%	16%	17%
Carshare	2%	1%	2%	2%	3%	4%	4%	4%	-
HandiVan	3%	-	5%	1%	4%	1%	-	0%	5%

Usage of rideshare services and TheBus appear to be less of an option for those in West O'ahu, Central O'ahu and the North Shore. Usage of these transportation options is highest in the urban core.

14 Area of Residence

Each respondent was asked which of the following three options best described their place of residence.



A majority (61%) of those polled reside in the suburbs while one in four (27%) lives in the urban core of Honolulu, while 11% describe themselves as living in rural O'ahu.

- When segmented by those who have used TheBus in the past year we find a higher proportion of residents who live in urban Honolulu (38%). As a point of comparison, amongst those who have not used TheBus in the past year the proportion of those who live in urban Honolulu drops to 25%. Conversely, amongst those who have not used TheBus, there is a higher percentage of suburbanites at 64%.
- The proportion of respondents who live in the suburbs increases as respondents become more affluent.
- With most of the jobs centered in urban Honolulu we note that those with longer commutes tend to have larger proportions of those living in the suburbs and rural O'ahu comprising their bases.

15 Profile of Respondents

	OVERALL	COMMENTS
REG VOTER	86%	A majority of those polled are registered to vote.
PRIMARY RESIDENCE		
Own	59%	A little more than half are current homeowners.
Rent	33%	
Live rent free	9%	
HOUSEHOLD SIZE		
1 person	17%	
2 persons	34%	
3-4 persons	35%	
5 or more	14%	
MEAN	2.92	
EDUCATION		
High School/ Less	7%	A majority of those polled possess a college degree.
Some College	31%	
Four-year college grad	32%	
Post-graduate	28%	
YEARS IN HAWAII		
Born and Raised	58%	A little more than half were born & raised on O'ahu.
Transplant	42%	
AGE		
18-34	16%	The average age of those polled was 51.67 with the median being 52.
35-49	30%	
50-64	27%	
65+	26%	
MEAN	51.67	
ETHNICITY		
Caucasian	29%	Data weighted to reflect estimates of adults 18+ on O'ahu.
Japanese	28%	
Chinese	4%	
Filipino	12%	
Hawaiian	18%	
Other	6%	
HOUSEHOLD INCOME		
< $50K	20%	
$50K-$100K	34%	
$100K+	35%	
Rf	11%	
GENDER		
Male	37%	
Female	62%	

16 Appendix/Questionnaire

2021 Transit Demand Management (TDM) Study

AUGUST 2021

Sample size: n=1,000, targeting n=100 in each of nine Council Districts
Audience: Fulltime O'ahu residents only

Aloha, I'm _____ from Anthology Research, a market research company based here in Hawaii. We're conducting a study today/this evening on behalf of the City & County of Honolulu about transportation options for O'ahu residents. There are no right or wrong answers in this survey and everything you tell us will be kept confidential and never attached to any information that could identify you.

We are not selling or promoting any product or service. This is market research only.

May I speak to someone 18 years of age or older who lives in this household?

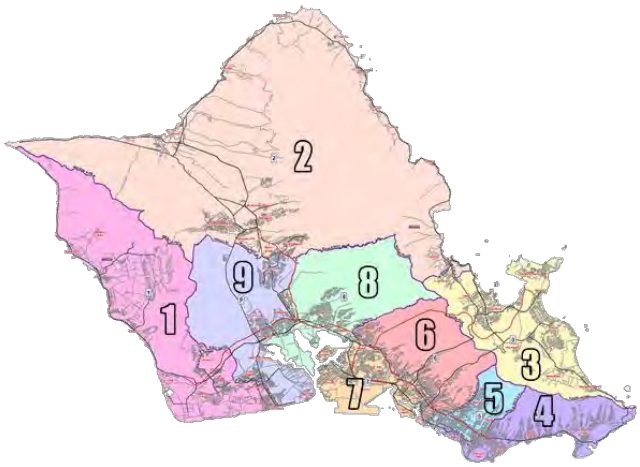
(VERIFY IF PERSON IS 18 YEARS OLD OR OLDER. IF NO ONE AVAILABLE, TERMINATE)

A. Are you a resident of O'ahu (lives on island at least 6 months out of the year)?
   1. Yes
   2. No **(TERMINATE)**

B. Are you 18 years of age or older?
   1. Yes
   2. No **(TERMINATE)**

CHECK QUOTAS AND CONTINUE IF NEEDED

C. In which area of O'ahu do you live? (Please click the area) If you don't know or are not sure, please select "Don't know."



1. Don't know which area I live.

Cx. If DON'T KNOW, ASK: What are major cross streets nearest to your home?

And what is your zip code? _____

CXX. What are major cross streets nearest to your home (OPEN END)

First, let us ask a few questions about you and your household.

1. Which one of the following best describes the area on O'ahu where you live?
    1. Rural – "country"
    2. Suburban – large residential areas outside of urban Honolulu
    3. Urban – densely populated area of Honolulu

2. Is your primary residence within a 10-minute walking distance to each of the following destinations?

		Yes	No	N/A
1.	Store to buy food	1	2	3
2.	Your place of employment	1	2	3
3.	Bus stop	1	2	3
4.	Your children's school or daycare	1	2	3
5.	Retail shopping	1	2	3

3. Yes or no, have you personally used each of the following forms of transportation in the last 12 months?

		Yes	No
1.	TheBus	1	2
2.	Rideshare (Uber / Lyft)	1	2
3.	Bicycle	1	2
4.	Walk / Use wheelchair	1	2
5.	Carpool / vanpool	1	2
6.	Carshare (Hui / Zipcar)	1	2
7.	Personal vehicle (car/truck/van)	1	2
8.	HandiVan	1	2

4. What is your current employment status?
    1. Employed full time
    2. Employed part time
    3. Fulltime student
    4. Not employed, looking for work
    5. Not employed, not looking for work
    6. Retired, not employed
    7. Homemaker
    8. Disabled

5. **[IF EMPLOYED OR IN SCHOOL]** Approximately how far in miles do you typically commute from home to work or school? _____

    (If less than a mile, please enter '1')

    (If you do not commute to work or school, please enter '0')

6. **[IF EMPLOYED]** Regardless of whether you typically drive to work, do you or does your employer pay for your parking at work?
    1. Neither, parking is free
    2. I pay the entire cost of my parking at work
    3. My employer pays the entire cost of my parking at work
    4. My employer pays a portion of the cost of my parking at work

7. **[IF EMPLOYED]** Can your job be performed "remotely," from home or another location?
    1. Yes, always
    2. Yes, sometimes
    3. No, never

8. Including yourself, how many persons live in your household? [Record #] _____

9. **[IF MORE THAN ONE IN HH]** How many people, if any, are 17 years of age or younger?

    Newborn to under five (5) years old _____

    5 to 12 years old _____

    13 to 17 years old _____

10. **[IF MORE THAN ONE IN HH]** And how many people, if any, are 60 years of age or older? [Record #] _____

11. In total, how many personal vehicles does your household currently have (leased, owned or company vehicle)? _____ **[VALIDATE WHOLE NUMBER] [IF ZERO, SKIP TO Q16]**

12. Where are your household's vehicles parked at home? (Select all that apply)
    1. Off street parking (driveway, garage, elsewhere on property)
    2. On public street
    3. Parking lot (paid or unpaid)
    4. Somewhere else (please specify:)_____

13. Do you personally have a vehicle (car/truck/van) that you use?
    1. Yes
    2. No

14. **[IF MORE THAN ONE IN HH]** Do you share the vehicle (car/truck/van) with others in the household?
    1. Yes
    2. No

15. **[IF ANY MINORS IN HH AND HAS PERSONAL VEHICLE OR SHARES A VEHICLE]** Are you responsible for driving children 17 years or younger to school or daycare?
    1. Yes
    2. No

16. In the past 12 months, how frequently have you traveled by car, truck, or van as a driver?
    1. Never
    2. Less than once a month
    3. 1 to 3 days per month
    4. About 1 day per week
    5. 2 to 4 days per week
    6. 5 to 7 days per week

Appendix E HNL Connect KPIs and Metrics Table

City and County of Honolulu
Honolulu TDM Plan
TDM Targets

KPIs and Metrics Table

	Goals			Program-wide KPIs	Strategy KPIs
Priority	**Goal**	**Outside reporting**	**Source**	**HNL-Connect Overall Target**	**Strategy**
Environment	Increase sustainable mode share	Island-wide non-SOV mode share	ACS Data	**5%** increase in non-SOV mode shift identified through HNL Connect Strategies	Developer TDM Reporting City Employees TDM/parking Program Vanpool Subsidy Program RPZ Program Annual Travel Challenge
	Decrease Vehicle Miles Traveled (VMT)	Island-wide VMT	Department of Business, Econmic Development & Tourism, State Data Book, VMT for Honolulu County	**3%** decrease in VMT identified through HNL Connect Strategies	Developer TDM Reporting City Employees TDM/parking Program Vanpool Subsidy Program Annual Travel Challenge
	Increase awareness of alternative transportation modes			**15%** increase in total engagement (incl. social media likes, shares, comments, newsletter clicks, and media mentions)	Targeted Marketing Campaigns General Communication
Equity	Increase accessibility			**1%** increase of vanpool routes originating within .5 miles of TVI/EJ designated block groups	Vanpool Subsidy Program
	Reduce travel cost burden	% of Cost of Living related to transportation	EERP (Task 7)	**20%** Increase in direct funding provided to Honolulu residents and employees	Vanpool Subsidy Program RPZ Program Developer TDM Reporting City Employees TDM/parking Program

KPI	How is it measured
1% increase in reported mode share	Non-SOV mode share reported in Annual Compliance Report Survey
1% increase in reported mode share	Non-SOV mode share reported in Annual City Travel Survey
1.5% increase in vanpool trips	Vanpool trips recorded through subsidy program
1.5% increase in transit trips	Trips recorded through Mobility Wallet HOLO Cards
3% increase in challenge participants who indicate they are 'likely' or 'very likely' to increase use of alternative mode	Survey at conclusion of Annual Travel Challenge

2.5% reduction in reported aveage daily VMT	Reported trip length [x] reported average daily vehicle miles in Annual Compliance Report survey
2% reduction in reported aveage daily VMT	Reported trip length [x] reported average daily vehicle miles in Citywide survey
3% reduction in reported aveage daily VMT	Total vanpool rider [x] route length for each participating vanpool
3% increase in reported average trip length for challenge participants who indicate they are 'likely' or 'very likely' to increase use of alternative mode	Survey at conclusion of Annual Travel Challenge

10% increase in total engagements with Targeted Marketing Campaigns	Mediums TBD based on individual campaigns, to include, social media likes, shares, newsletter opens, and media mentions
5% increase in total engagements with Complete Streets social media accounts	Likes, shares and mentioned across the Complete Streets accounts

1% increase of vanpool routes originating within .5 miles of TVI/EJ designated block groups	Vanpool provider data listing geographic start/end of vanpool routes

5% increase in $ distributed to vanpool riders overall	Total money distributed through vanpool program
10% increase in $ distributed to Mobility Wallet recipients	Number of mobility wallets distributed [x] mobility wallet value
10% increase in $ value distributed through bike and transit subsidies	Number of subsidy participants [x] subsidy value
5% increase in City employees receiving transit subsidy	Number of employees who received a transit subsidy [x] transit subsidy value

City and County of Honolulu
Honolulu TDM Plan
TDM Targets

KPIs and Metrics Table

	Goals			Program-wide KPIs	Strategy KPIs
Priority	**Goal**	**Outside reporting**	**Source**	**HNL-Connect Overall Target**	**Strategy**
Land Use	Increase parking Return on Investment (ROI)	Annual cost vs. revenue	City budgets	**10%** increase in RPZ revenue	RPZ Program
	Maximize efficiency of parking assets	Citywide parking utilization rates	City-managed parking reporting	**20%** decrease in number of individuals on parking permit waitlist	City Employees TDM/parking Program
Program reslience	Increase TDM reporting			**17%** increase in sites providing TDM data	Annual Travel Challenge Developer TDM Reporting Vanpool Subsidy Program
	Manage a self-sustaining program			Program maintained within expected annual budget, subsidized by RPZ and Vanpool revenue and reimbursements	RPZ Program Vanpool Subsidy Program

KPI	How is it measured
10% increase in RPZ revenue	Revenue collected through purchase of RPZ permits
20% decrease in number of individuals on parking permit waitlist	Number of individuals on waitlist
5% increase in participating sites	Number of sites registered with Travel Platform
100% of required sites submitting reports	Number of sites providing Annual Compliance Report
10% increase in Annual Compliance Report survey responses annually	Number of survey responses
3% increase number of destinations receiving vanpool subsidies	Number of worksites registered for vanpool program
100% coverage of RPZ program direct costs, including Mobility Wallet provision	Cost vs. revenue for RPZ program
100% recuperation of annual vanpool subsidies through FTA Section 5307 funds	Cost vs FTA reimbursement for vanpool program (after 1.5 year lag)

Note: grey background targets are NOT related to program growth or monitored over a baseline.

Endnotes

1 Association for Commuter Transportation. (n.d.). What is TDM? Retrieved from https://www.actweb.org/what-is-tdm

2 Association for Commuter Transportation. (n.d.). What is TDM? Retrieved from https://www.actweb.org/what-is-tdm

3 Hawai‘i Regional Economic Analysis Project. (2022). Hawaii vs. Honolulu County Comparative Trends Analysis: Population Growth and Change, 1969-2021. Retrieved from https://hawaii.reaproject.org/analysis/comparative-trends-analysis/population/tools/150000/150003/

4 Department of Business Economic Development and Tourism. (2021). Table 18.07 – Motor Vehicles Registered, by County: 1995 to 2021. Retrieved from https://files.hawaii.gov/dbedt/economic/databook/db2021/section18.pdf

5 While the four TDM Plan development phases were generally carried out in chronological order, some elements that align with each phase were completed outside of the phase's primary time period. Stakeholder outreach (described as part of Phase 1) was carried out across the entire 3-year plan development period. Some of the elements that support Phase 4 such as the HNL Connect brand, or the social media plan did not rely on a final list of strategies, and were carried out earlier. Some of the Plan's objectives were identified prior to the strategy evaluation and others were identified after Phase 3 was complete.

6 Oahu MPO. (2021). 2045 O‘ahu Regional Transportation Plan. Retrieved from https://www.oahumpo.org/?wpfb_dl=2215

7 City and County of Honolulu. (2010). City and County of Honolulu Public Parking System: Preliminary Feasibility Analysis of Monetization. Retrieved from https://www.oahumpo.org/plans-programs-and-studies/planning-studies/honolulu-urban-core-parking-master-plan/

8 The case studies included: West Palm Beach, FL; Las Vegas, NV; Seattle, WA; San Francisco, CA; Santa Monica, CA; San Diego County, CA.

9 Individuals who live on O‘ahu a minimum of six months a year.

10 Ulupono Initiative. (2020). The Costs of Parking in Hawai‘i. Retrieved from https://ulupono.com/media/ivcfs2pu/the-cost-of-parking-in-Hawai‘i-report-2020-08.pdf

11 City and County of Honolulu. (2021). Right-of Way Widths for Planned Street Improvements. Retrieved from https://www4.honolulu.gov/docushare/dsweb/Get/Document-295397/Right%20of%20Way%20Widths%20for%20Planned%20Street%20Improvement_110121.pdf

12 City and County of Honolulu. (2022). About DTS. Retrieved from https://www.honolulu.gov/transportation/about-us.html

13 USAID. (2023). Logic Framework. Retrieved from https://www.usaid.gov/logical-framework

14 Increase in combined trip length results in a decrease in VMT

15 Of note, Ongoing Compliance Report requirements are tied to site location, NOT the project applicant. If a project changes ownership before this five-year period has expired, new owners must continue to report in order to maintain compliance with CCH.

16 The Center for Neighborhood Technology. GreenTRIP Parking Database. Retrieved from http://database.greentrip.org/.

17 City and County of Honolulu. (2022). Ordinance 22-17. Retrieved from https://hnldoc.ehawaii.gov/hnldoc/document-download?id=14729

18 City and County of Honolulu. (2020). Ordinance 20-41. Retrieved from https://hnldoc.ehawaii.gov/hnldoc/document-download?id=9207

19 City and County of Honolulu. (2021). Advanced Project Planning Report Microtransit Pilot. Retrieved from https://www.honolulu.gov/rep/site/dts/Honolulu_DTS_Microtransit_Pilot_Draft_Planning_Report.pdf

20 Ibid.