

PREPARED FOR:



# KALIA PLAZA MOBILITY HUB ALTERNATIVES ANALYSIS

## *Executive Summary*

Contract Number SC-DTS-20000097



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## PROJECT OBJECTIVE

The primary objective of this Ala Moana Transit Plaza (hereafter referred to as Kalia Plaza Mobility Hub) Alternatives Analysis (AA) was to assess alternatives for the development of a new mobility hub in the vicinity of the future Ala Moana (Kalia) Rail Transit Station. The Project evaluated potential uses of City and County of Honolulu-owned property and on-street transit facilities. The Project identified active transportation street improvements to facilitate access to the transit facilities by pedestrians and cyclists. The Project assessed options for including commercial and/or residential uses within the mobility hub as part of an integrated development.

Although the primary objective of the Kalia Plaza Mobility Hub AA was to assess alternatives for a new mobility hub in the vicinity of the future Kalia Rail Station, in the interim the Kalia Plaza Mobility Hub will continue to serve as a major transfer point for the bus system. There are currently 25 fixed bus routes that operate in the Ala Moana Center (AMC) district, with bus stops dispersed along several streets throughout the district (SEE FIGURE 1). Thus, the Kalia Plaza Mobility Hub has independent utility as a bus transfer center in advance of the rail system's extension to Ala Moana.

*Figure 1 – Buses Dwelling along Kona Street at the Ala Moana Center*



## PROGRAMMING

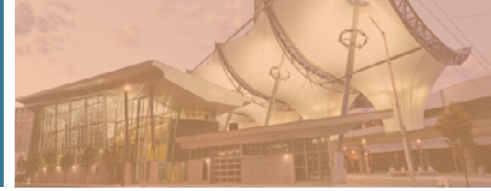
A program of facility requirements (i.e., the elements needed for the mobility hub to support the needs of transit users) for a new mobility hub was defined. Existing conditions and operations at the AMC Transit Center were evaluated to understand the current conditions for buses and other access modes. Future conditions were informed by prior studies including the Bus/Rail Integration Plan for Ala Moana Center Station (2014) and the Waikiki Regional Circulator Study (2013). Based on the analysis of existing and future conditions and operations, the program of facility requirements for a new mobility hub was identified (SEE TABLE 1).



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**Table 1 - Kalia Plaza Mobility Hub Program of Facilities**

| PROGRAM OF FACILITIES  |
|--|
| <b>Transit Facilities</b>  |
| 14 bus bays including 1 bus bay designated for paratransit (TheHandi-Van)  |
| 2-3 bus stops on Kapiolani Boulevard for through routes  |
| 3 layover/pre-positioning spaces for buses (with electric vehicle charging equipment)  |
| Comfort station for bus operators  |
| Accommodations for a future rail station entrance and supporting infrastructure (vertical circulation, wayfinding, fare gates, etc.) |
| <b>Multimodal Facilities</b>   |
| Mix of short- and long-term parking for 150 bikes  |
| Bikeshare station  |
| Space for parking/storage of micromobility vehicles (e.g., electric scooters)  |
| <b>Private Transportation Providers (may be provided on Ala Moana Center Mall property or on Kona Street)</b>                        |
| Bus stops for private bus operations (trolleys, hotel shuttle vans, etc.)  |
| Curb space for taxis and TNC operations  |
| <b>Passenger Amenities</b>   |
| Waiting areas with weather protection (shelters) and benches   |
| Wayfinding and including real-time information (next bus arrival)  |
| Fare vending machines  |
| Passenger service kiosks (self-service digital and/or staffed with transit ambassadors to help riders navigate the transit system)   |
| Public restrooms   |
| Vendors' space/transit-oriented retail   |
| <b>First-Last Mile Infrastructure</b>  |
| Traffic improvements for bus operations  |
| Pedestrian improvements (sidewalks, curb ramps, crosswalks, signals, future elevated pedestrian crossing over Kapiolani Boulevard)   |
| Bike improvements (routes/facilities connecting with mobility hub)   |
| <b>Joint Development</b>   |
| Multifamily residential (affordable housing component)   |
| Transit supportive retail  |



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### DEVELOPMENT AND EVALUATION OF ALTERNATIVES

Early in the Kalia Plaza Mobility Hub AA process, a precedent study was performed that included a review of prior planning initiatives, applicable guidelines, and peer transit centers (mobility hubs). The precedent study provided a foundation for the subsequent development of alternatives for the Kalia Plaza Mobility Hub.

Ten preliminary Tier 1 alternatives were developed and evaluated versus Tier 1 evaluation criteria. The Tier 1 screening included a conceptual level evaluation that analyzed the advantages and disadvantages of the preliminary alternatives. The Project Steering Committee provided input and identified the most important evaluation criteria. The purpose of the Tier 1 screening was to determine which of the alternatives would be the most feasible and to narrow the range of alternatives for more detailed analysis in the Tier 2 evaluation.

Three of the Tier 1 alternatives were advanced to the Tier 2 screening. The objective of the Tier 2 screening process was to identify the most feasible alternative for further refinement as the locally preferred alternative (LPA). Evaluation criteria were grouped by the following categories and the weighting of the criteria was informed by the Project Steering Committee.

- Site Functionality
- Bus Operations
- Transfer Convenience
- Local Circulation
- Land Requirements
- Construction Costs and Constructability

Based on the Tier 2 screening and input from the Project Steering Committee, an alternative was selected to be refined as the LPA. The alternative selected as the LPA provides a compact mobility hub, which co-locates bus positions and ground floor access to the future Kalia Rail Station and does not require crossing a street crossing for most transfers between bus and rail. The LPA also locates most of the transit facilities on City-owned property and within City-owned street rights-of-way. The primary deficiency noted for the selected alternative was the absence of a mixed-use building on the mobility hub site. Since an objective of the project was to incorporate mixed-use development, the alternative was refined to include a mixed-use/residential building. Two LPA options were developed; the primary difference between the options is the provision of on-site parking.

#### LPA Option A1

**LPA Option A1 (SEE FIGURE 2)** provides an integrated mobility hub/mixed-use building without on-site parking. One-way circulation of buses is provided on either side of a central plaza facilitating efficient bus circulation and convenient transfers between bus and rail. Mobility hub facilities are provided on the first level of the central plaza, including bike parking and passenger amenities, and there are opportunities for transit-supportive retail on the concourse level that provides a connection to the future Kalia Rail Station. A residential tower spans the podium above the mobility hub facilities.

#### LPA Option A2

**LPA Option A2 (SEE FIGURE 3)** provides an integrated mobility hub/mixed-use building with on-site parking. The bus circulation is accommodated in a two-way drive aisle adjacent to a plaza that accommodates the mobility hub facilities on the ground level. This arrangement facilitates efficient bus circulation but negatively impacts transfers between bus and rail, as accessing half of the bus positions requires crossing the bus drive aisle. The configuration of the parking structure reduces the space for transit-supportive retail on the concourse level, although a connection is maintained to the future Kalia Rail Station. A residential tower spans the parking podium above the mobility hub facilities.

### Rough Order of Magnitude Costs

Rough order of magnitude (ROM) capital cost estimates were prepared for LPA Option A1 and LPA Option A2. Note the estimates focused on the transportation facilities and did not include costs for a mixed-use building. Since the LPA Options have similar mobility hub components and first-last mile infrastructure improvements, their estimated costs are similar at approximately \$34 million. However, the costs of integrating a mixed-use building above the mobility hub will be significantly higher for LPA Option A2 because of additional costs associated with providing on-site parking in a structure.

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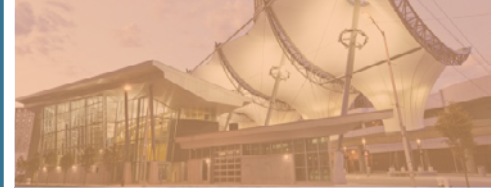
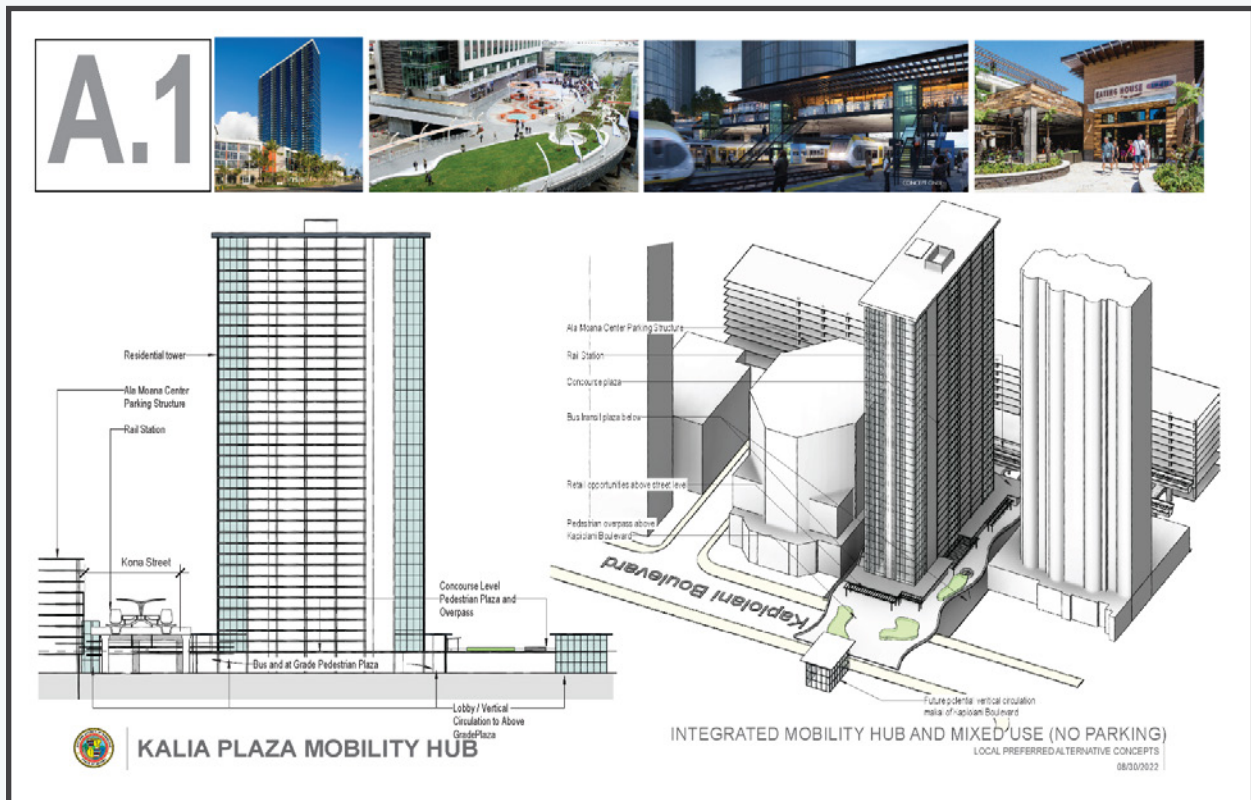
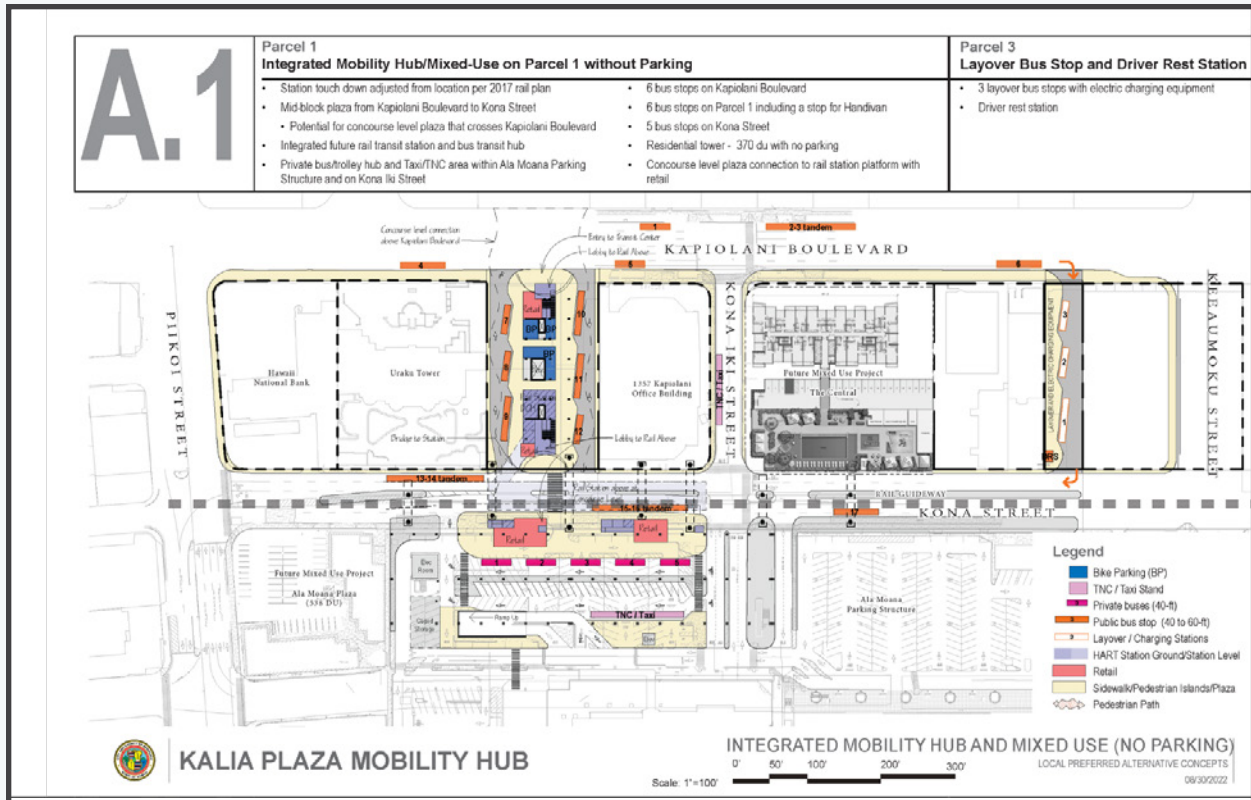


Figure 2 - LPA Option A1: Integrated Mobility Hub without Parking



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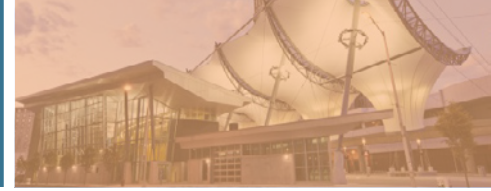
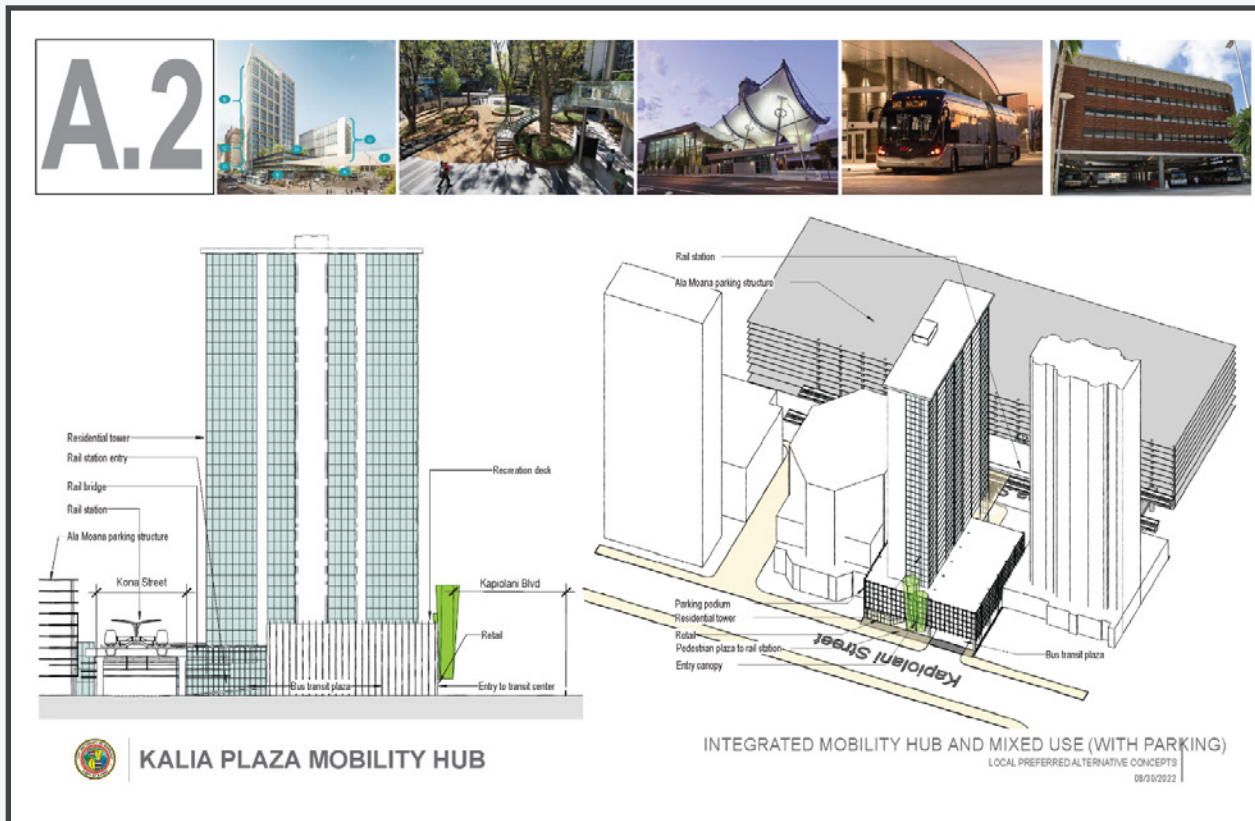
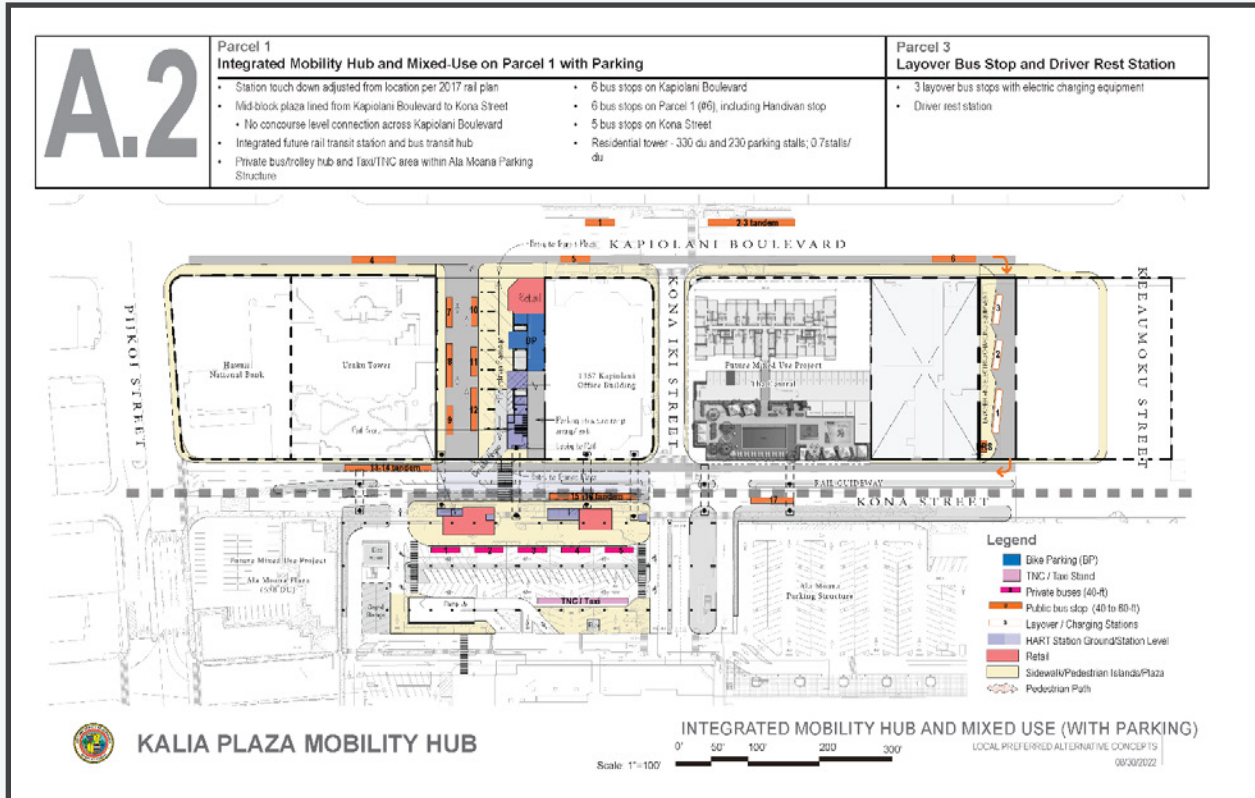


Figure 3 - LPA Option A1: Integrated Mobility Hub without Parking



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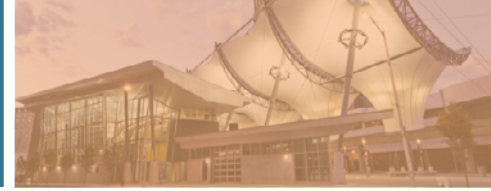


Figure 4 - First-Last Mile Infrastructure Improvements



First-Last Mile Improvements

First-last mile infrastructure improvements are an important component of the LPA for the Kalia Plaza Mobility Hub. Approximately 45 percent of the bus passengers currently engage in other activities besides transferring between buses at the Ala Moana Transit Center. In addition, walk/bike will be the second largest mode of access (behind transfer from bus) at the future Kalia Rail Station. An existing conditions multimodal transportation inventory and assessment was performed for the study area that evaluated pedestrian, bike, transit, and vehicle infrastructure and operations. Based on the findings, a program of first-last mile infrastructure improvements was identified for the LPA and is presented in **FIGURE 4**.



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### PRELIMINARY ASSESSMENT OF ENVIRONMENTAL IMPACTS

A preliminary assessment of potential environmental impacts and mitigation was conducted for the Kalia Plaza Mobility Hub project. The purpose of the preliminary environmental assessment was to identify sensitive environmental resources early in the planning process. Based on the preliminary findings, there is no indication of fatal flaws from an environmental perspective that would preclude the development and operation of the mobility hub.

### PRELIMINARY INFRASTRUCTURE ASSESSMENT

A preliminary infrastructure assessment was performed to evaluate the existing site infrastructure and determine the extent of infrastructure improvements necessary to support the proposed development of the Kalia Plaza Mobility Hub, including mixed-use joint development. New utility infrastructure, including water and sewer utilities, grading and earthwork, and new pavements, are not expected to have major impacts on existing infrastructure systems. However, based on information provided by the Hawaiian Electric Company (HECO), new transformer infrastructure may be necessary to support the project and the additional redevelopment occurring in the area.

### DEVELOPMENT APPROACHES

A range of potential development approaches is available for advancing the Kalia Plaza Mobility Hub. Due to space constraints, it may not be feasible to develop the mobility hub and mixed-use building as two separate projects. If the mobility hub was constructed in advance of the mixed-use building, the operations of the mobility hub would be severely restricted during the subsequent construction of the mixed-use building. Benefits of private developer-led implementation of the mobility hub/mixed-use building may include the transfer of risk, accelerated project delivery, increased innovation, alternative financing methods, and more in-depth understanding of market demand and property development.

Other components of the LPA, such as the first-last mile infrastructure along streets, could be developed separately as standalone projects or could be developed in conjunction with mobility hub. Advantages of advancing these improvements as independent City projects include maintaining maximum control of the design process for facilities that will serve the public, the opportunity to accelerate the delivery of these smaller-scale improvements, and the potential for these improvements to support transit operations during the construction of the mobility hub/mixed-use building.

### PUBLIC AND STAKEHOLDER PARTICIPATION

Figure 5 - Public Meeting Notice Flyer



The consultation program focused on identifying what type of services, facilities, support functions, open space, and development alternatives are needed or envisioned by project stakeholders. The AA phase of this project included consultation with an active Steering Committee composed of City departments, semi-autonomous City agencies, and Brookfield Properties Retail Group (owner of Ala Moana Center and host of the Ala Moana Transit Center). The project team also made presentations to three Neighborhood Boards, providing updates of ongoing project work and providing an opportunity for the Neighborhood Boards to ask questions and provide comments.

A public meeting was conducted on April 29, 2021. The project team prepared and distributed a meeting flyer (SEE FIGURE 5), drafted a news release, prepared a notice for the City’s Complete Streets Facebook page, and posted the meeting notice on bus stop signs around Ala Moana Center. The meeting format included introductions, a presentation, polling questions, and breakout group discussions. Results from the public meeting were combined with other outreach efforts and the Steering Committee input to refine the LPA. For example, more bike parking and storage space was added to the mobility hub.

The public and stakeholder participation program will continue to provide opportunities for information dissemination and feedback as the project moves forward into further phases.





Prepared by Kimley-Horn and Associates, Inc. in Cooperation with the Oahu Metropolitan Planning Organization and the United States Department of Transportation.

This report 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.



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