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BUILD OR NO BUILD?-Debates on Honolulu High-Capacity Transit Project

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ABSTRACT In view of the greater attention being paid today to such problems as pollution, the traffic congestion that contributes mightily to it, and the ever-increasing cost of gasoline, a recent planning process in Honolulu offers a timely look at how the decisions regarding a new mass-transit system were made and why. Honolulu's linear city layout, mountainous topography, and high density land-use make it ideal for a grade-separated transit system. Multiple efforts to plan a high-capacity mass transit system for Honolulu have occurred over the past several decades, and have been aborted at least three times since the 1970's. Through these floundered processes, it was learned that building a fixed guideway transit system takes more than sophisticated planning and engineering, it takes political will, public support, and a dedicated, predictable source of funding as well. This paper explains the most recent planning process for a new mass-transit system in Honolulu. It summarizes the debating points persistent since the beginning of the previous planning efforts. It was through these healthy debates that a broad consensus was reached on exactly what alternative best met locally defined goals and objectives for the specified corridor.

KEY WORDS: Mass Transit, Rail, Planning.

INTRODUCTION

Growing urban traffic congestion on existing transportation infrastructure has pushed jurisdictions around the world to aggressively seek mass-transit solutions. The City and County of Honolulu, Hawai'i, USA on the island of O'ahu is among these jurisdictions. Multiple efforts to plan a high-capacity mass transit system for Honolulu have occurred over the past several decades, and have been aborted at least three times since the 1970's. Through these floundered processes, it was learned that building a fixed guideway transit system takes more than sophisticated planning and engineering, it takes political will, public support, and a dedicated, predictable source of funding as well. In 1992, the City Council voted 5-4 to reject raising taxes to fund a new transit system. The rejection turned away more than $600 million in federal funds authorized for Honolulu's fixed guideway system. Ten years later Honolulu proposed Bus Rapid Transit (BRT) as an affordable alternative but a lack of dedicated right-of-way made it less attractive so the project was later terminated.

The most recent effort to resurrect a high-capacity mass-transit system was initiated in 2005. This time the planning came with a tangible local financial commitment from the state legislature – a half percent State General Excise and Use Tax (GET) surcharge was designated for building and operating a high-capacity transit system on O'ahu. Immediately after this most recent planning effort was announced, organized support and opposition mobilized and the project stepped into its familiar territory. Will it survive this time?

The paper summarizes Honolulu's so-far successful planning of a new mass transit system. The paper has five sections: 1) Introduction; 2) Planning Procedure; 3) Debating Points; 4) Selection of Locally Preferred Alternative; and 5) Conclusion.

PLANNING PROCEDURE

The planning and project development process follows the requirements of the U.S. Department of Transportation, Federal Transit Administration (FTA) because FTA New Starts funds will be used for this project. Figure 1 illustrates the major tasks and the milestones carrying the project to construction.

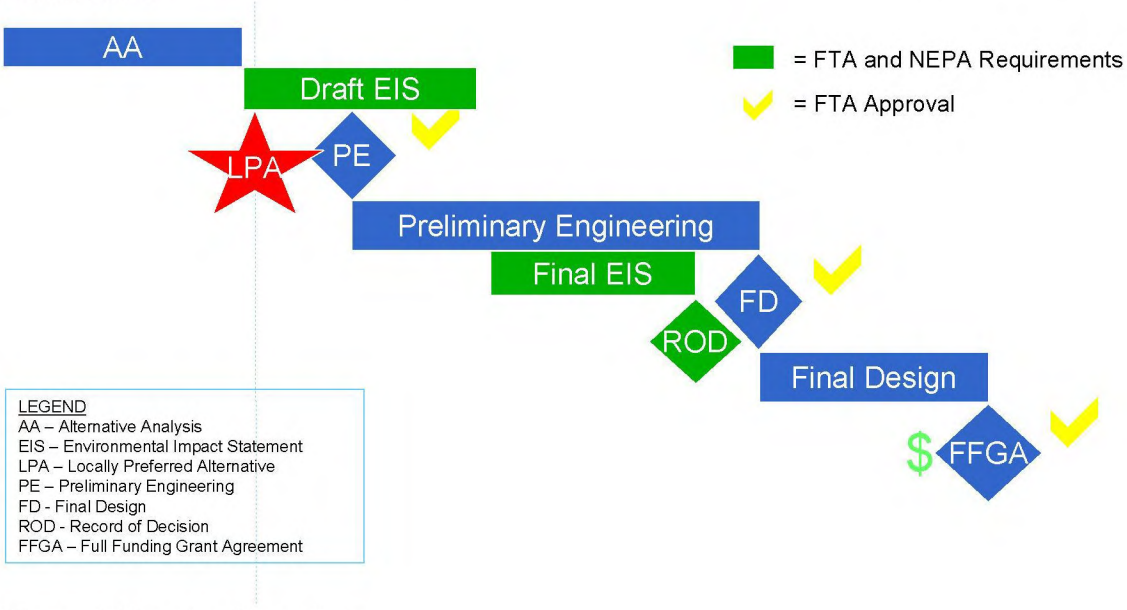

Figure 1 Planning Procedure

This paper covers the very first step, the Alternatives Analysis (AA) which includes:

- Identifying specific transportation problems in an area, or "corridor" being studied;
- Defining reasonable alternative strategies to address these problems;
- Forecasting potential environmental, transportation, and financial impacts of these alternatives; and
- Evaluating how each alternative effectively addresses the transportation needs, goals, and objectives for the corridor.

The primary result of the AA is selection of the Locally Preferred Alternative (LPA). The AA Report provides decision makers (who in this case are the nine members of the Honolulu City Council) with enough information to select a specific project design concept, and determine the scope of the project. After completion of the AA, the City Council has the information needed to select an LPA. With this information, the project can advance to preliminary engineering and the final phases of environmental review, design and eventually project construction.

Alternatives Considered

Four alternatives were considered through the project scoping process (City and County of Honolulu, 2006) including:

- No Build. The No Build Alternative includes existing transit and highway facilities and committed transportation projects anticipated to be operational by 2030. This alternative shows what the transportation system would be like if there were no additional new changes made to the system. The No Build Alternative served as a baseline to compare the other alternatives' environmental impacts.
- Transportation System Management (TSM). The TSM Alternative would provide an enhanced bus system based on a streamlined route network, expansion of the present morning peak-

hour-only reversible lane to both a morning and afternoon peak-hour operation, and relatively low-cost capital improvements on selected roadway facilities to give priority to buses. The TSM Alternative is the baseline of the performance comparisons.

- Managed Lane. The Managed Lane Alternative would include construction of a two-lane grade-separated facility for use by buses and other priority vehicles. The lanes would be managed to maintain free-flow speeds for buses, while simultaneously allowing High-Occupancy Vehicles (HOVs) and variable pricing for toll-paying single-occupant vehicles.
- Fixed Guideway. The centerpiece of the Fixed Guideway Alternative is a mostly elevated fixed guideway system integrated with the bus, walking and bicycling networks for access and egress, as well as with automobile access with park-and-ride and passenger drop-off facilities at appropriate stations. Multiple alignment options were studied and potential station locations were identified.

Public Outreach

Public outreach was a critical part of the AA process because the decision makers must consider public acceptance when selecting the LPA. Conveying timely and accurate information is essential to ensuring full public awareness of the facts surrounding the project and its issues. This is one of the most challenging aspects of a successful transportation project. Honolulu embraced a proactive methodology for raising community awareness and understanding by implementing a "Speakers Bureau" which presented information on the project to any group who requested it. Through Speakers Bureau meetings, citizens engaged directly with project planners and engineers regarding the project issues relevant to them. The speakers were carefully selected professional planners and engineers rather than public outreach and marketing professionals. The intent was to engage the public through technical discussions at the meetings and offer the opportunity to address any constituents' questions directly. Schools, professional organizations, community groups, politicians, and employers as well as informal groups of 3 – 300 people met with one or more of 35 trained speakers of the Speakers Bureau. Each presentation was tailored to match the group's interests and discussed the current status of the project. In less than one year, over 200 Speakers Bureau engagements were fulfilled. The effect was an increase in a focused understanding of the project and a deeper comprehension of the process. The deeper understanding is evident in news broadcasts, newspaper letters to the editor and in the thoughtfulness and detail of questions received from the general public regarding the project. The Speakers Bureau engagements have proven to be an effective method of reaching the deeper community roots and activating them to become involved in the process.

Yet the proactive approach did not quiet the well-organized, vocal opposition who, in the past, successfully presented highly contentious and controversial aspects of the proposed mass-transit solution. During this AA process discussions and arguments, sometimes emotional and unsubstantiated, were carried out at public meetings, Speakers Bureau presentations, in the newspaper, internet forums, and on radio and TV. It was through these challenging, yet healthy debates that the public was given more avenues to thoroughly understand the alternatives and decide which alternative was the best fit for their communities.

DEBATING POINTS

1 Does Honolulu have the population to support the new mass transit system?

Opponents of the new mass transit system claimed that Honolulu's less than 1 million in population can not provide adequate ridership. Population is an important consideration in planning for any mode of travel including transit or highways. But the population within a transportation corridor is more important than overall population. As shown in Figure 2, the primary transportation corridor in Honolulu extends from Kapolei in the 'Ewa District to the University of Hawai'i at Manoa and Waikiki in the east. The east/west length of the corridor is approximately 25 miles. The north/south width is a maximum of four miles, bounded by the Koolau Mountain Range and the coastline. This corridor encompasses 60% of the island's population currently and will encompass

close to 70% in 2030. In addition, 93% of population growth and 95% of employment growth will occur in this corridor by 2030.

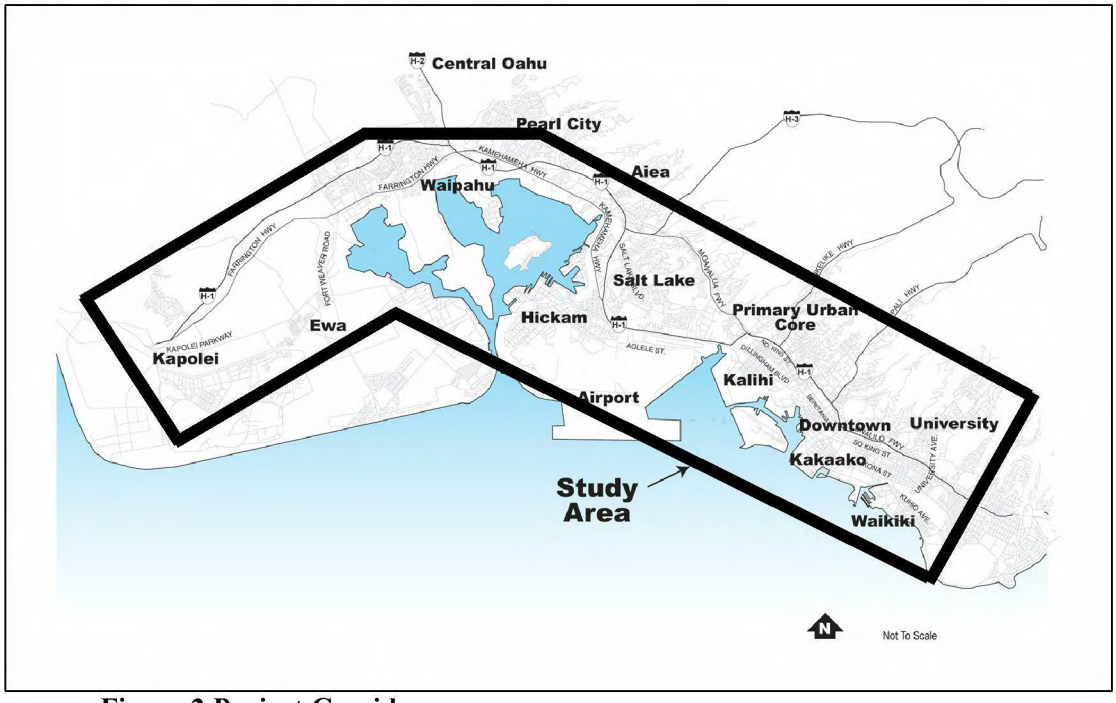

Figure 2 Project Corridor

Population density is actually a better determinant of the potential for a new mass transit system ridership than pure population. The population density for the entire island of O'ahu was 1461 people per square mile making O'ahu the nation's 16th most dense metropolitan area (U.S. Census Bureau, 2000). The population density of the primary transportation corridor is over 50% higher than the O'ahu average and is higher than all but four metropolitan areas on the mainland. Thus, the potential of the new mass transit system for Honolulu is higher than many other successful existing fixed guideway systems on the Mainland.

2 Why should we support transit when most people use cars to get to work?

In the Honolulu District, the most recent data indicates that about 8% of the work force used transit to get to their jobs while 83% used automobiles. Islandwide transit use is about 11% of all work trips. This ranks O'ahu in the top twenty U.S. metropolitan areas for transit use. High trip attraction and production centers such as Waikiki, Downtown, the University area, and areas immediately west of Downtown have a transit modal split as high as 36%.

Transit is not for everyone for all purposes. Some people need a car for their work. For other people, transit does not go where they want to go with a sufficient level of service. But providing an effective transit system gives people a choice, and many people will choose transit over automobiles if the level of service is high enough and the trip is convenient. Today's massive traffic congestion in Honolulu coupled with the fact that the current transit system operates in the same right-of-way has made transit less competitive than it used to be. That's precisely why the proposed fixed guideway will have its own right-of-way to bypass daily traffic congestion.

3 Will the whole Island benefit from it?

The reactions from individual neighborhoods to the proposed mass-transit alignment have been distinct: generally, neighborhoods in the vicinity of the alignment are more supportive than the

ones that will not be served directly. However, island-wide planning on O'ahu has focused future growth into Central O'ahu and the 'Ewa area, rather than East Honolulu and windward. There was an explicit decision to preserve other areas of the island at close to current development size and density. The planned growth into Central O'ahu and the 'Ewa area will relieve growth pressure from the rest of the island. Therefore, there is a political sense of responsibility to support the areas designated for future growth by providing the necessary transportation infrastructure.

If a fixed guideway system is implemented, bus resources will be reassigned to the underserved areas of the island and will enhance the feeder bus network for the fixed guideway.

System benefits will be experienced island-wide. Commuters will be able to get to their destinations more reliably. People who drive will benefit from less congested roads. Businesses will require less parking for employees and customers.

4 How does Fixed Guideway perform better than a Managed Lane Option?

With the Fixed Guideway Alternative, future island-wide hours of traffic delay would be reduced compared to No Build. In addition, users of the fixed guideway system would experience no delay from congestion while using the fixed guideway. Thus, fixed guideway provides a true alternative to the ever increasing highway congestion.

Neither the Fixed Guideway nor Managed Lane alternative is expected to reduce future congestion to levels less than today, but future island-wide hours of traffic delay would be 20% greater with the Managed Lane Alternative than with the Fixed Guideway Alternative. The Managed Lane provides added capacity for highway vehicles for a portion of the corridor, and while congestion would decrease with the Managed Lane Alternative compared to No Build along this portion of the corridor, the alternative actually attracts more cars into the network systemwide. The system increase in automobiles results in a net increase in system delay. And, in the case of the Managed Lane Alternative, transit riders would be subjected to the same delay as automobile drivers through critical portions of the corridor (e.g. downtown).

Bottleneck conditions will exist as drivers attempt to access and exit the Managed Lane facility. The number of automobiles per hour conveyed by the Managed Lane facility would put tremendous pressure on the existing downtown roadway network where considerable improvement is often impossible due to scarce land availability.

Fixed guideway has a lower unit length cost than the managed lane. The managed lane structure is identical to a two-lane viaduct and is typically more than 45 feet wide, while the fixed guideway could be as narrow as 25 feet wide because a median or shoulder lanes are not needed. Either structure will be supported by columns about 30 feet tall.

5 Can Honolulu afford a Fixed Guideway System?

Opponents of a fixed guideway system have claimed that Honolulu does not have the population base to finance it. Paying for such a large project does require collective effort. However, financial estimates show that a GET surcharge increase could raise most of the local funding needed.

Local money must be provided to meet FTA matching funding requirements. The GET provides a steady cash flow because it is collected for all sales transactions. It was estimated that 30 - 36% of the GET tax burden will be borne by tourists. After years of discussion and analysis, the majority of political members agreed that the GET is the best mechanism to raise the funds necessary to finance a transit project. The Hawai'i state legislature passed Act 247, authorizing the county to levy a tax surcharge to construct and operate a mass transit project serving Honolulu. In August, 2005, the Honolulu City Council subsequently adopted ordinance 05-027 to levy a 0.5% general excise tax surcharge to fund public transportation. It was estimated that about 80% of total project cost will be paid by GET surcharge revenue and 20% will be paid by FTA New Starts Funds.

SELECTION OF LOCALLY PREFERRED ALTERNATIVE

The City Council examined the findings of the analysis by having a transit advisory task force review the methodologies documented in the AA report. The task force found that the numbers were reasonable and ended up supporting the report's overall findings.

The Fixed Guideway Alternative was chosen as the LPA. Fundamental to the council's decision were ensuring maximum ridership in densely populated areas and encouraging development in the designated areas of O'ahu. Because the amount of available and expected funding is a concern, the Council requested that transportation officials determine a minimum operable segment (MOS) which would be a section of the LPA serving a significant portion of the transit corridor.

Technologies retained for future study include light rail, people mover, monorail, magnetic levitation, and rapid rail. Honolulu intends to select the technology through a process that includes considerations for cost and performance criteria.

CONCLUSION

Honolulu's most recent mass transit planning considered four alternatives: No Build; Transportation System Management; Managed Lane; and Fixed Guideway. The Alternatives Analysis Report and supporting materials provided a substantial comparison of the transportation, environmental, and financial costs and benefits between the various alternatives. The proactive public outreach entailed many community and regional scoping meetings to allow the public to comment and offer suggestions on the various ways of providing alternative transportation solutions.

Debates between fixed guideway supporters and opponents were healthy for the community. It helped to reach a broad consensus on exactly what type of improvement best meet locally defined goals and objectives. The debates positively answered the following questions:

1. Does Honolulu have the population to support the new mass transit system?
2. Why should we support transit when most people use cars to get to work?
3. Will the whole Island benefit from it?
4. How does Fixed Guideway perform better than a Managed Lane option?
5. Can Honolulu afford a Fixed Guideway System?

The discussion on debating points is not limited to Honolulu and it can be applicable to other areas that are considering mass transit system.

The Honolulu City Council chose Fixed Guideway as Locally Preferred Alternative. The development of the mass transit system is advancing to reality 40 years after it was first recommended as a necessary component of the future transportation system.

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