MILILANI INTERCHANGE TRAFFIC STUDY

Mililani Mauka Elementary School
95-1111 Makaikai Street
September 05, 2013
MILILANI INTERCHANGE TRAFFIC STUDY

- Introduction
  - Welcome
  - Alvin Takeshita, Highways Administrator
MILILANI INTERCHANGE TRAFFIC STUDY

• Agenda
  ▫ Introduction
  ▫ Background of Study
  ▫ Study Objectives
  ▫ Study Schedule
  ▫ Recap of First Meeting
  ▫ Design Alternatives
  ▫ Closing Remarks
  ▫ Questions
MILILANI INTERCHANGE TRAFFIC STUDY

- **Background**
  - **2007** – Mililani Mauka Neighborhood Board requested a traffic study be performed due to morning rush hour traffic.
  - **2008** – Mililani Mauka Neighborhood Board sent a resolution asking for 6-month pilot program to add a second on-ramp to H-2 southbound and to synchronize traffic signals in the vicinity of the interchange.
  - **2009/2010** – HDOT in partnership w/City & County DTS optimized traffic signals in the vicinity of Mililani Interchange.
  - **2010** – HDOT conducted a preliminary evaluation. Results were presented at a community meeting held on May 5, 2010.
  - **2011** – Act 164/11 allocated funds to conduct a detailed study.
  - **2012** – HDOT procured a consultant, Community Planning & Engineering to conduct the study.
  - **2013** – HDOT held a community meeting to inform the public and to receive community feedback of the study.
MILILANI INTERCHANGE TRAFFIC STUDY

• Study Objectives
  To evaluate the feasibility of alternatives to reduce traffic congestion at the Mililani Interchange through detailed traffic analyses and cost estimates.

• Community Meeting Objective
  To inform the community on the results of the design alternatives and the traffic analysis performed.
MILILANI INTERCHANGE TRAFFIC STUDY
MILILANI INTERCHANGE TRAFFIC STUDY

• Study Schedule
  ▫ November 2012 – Traffic Data Collection
  ▫ May 2013 – First Community Meeting
  ▫ July 2013 – Draft Study Completed
  ▫ September 2013 – Second Community Meeting
  ▫ November 2013 – Final Study Completed
MILILANI INTERCHANGE TRAFFIC STUDY

- Recapitulation of First Meeting
  - Study Scope
  - Data Collection
  - Existing Conditions
  - Proposed Alternatives
MILILANI INTERCHANGE TRAFFIC STUDY

• Data Collection
  ▫ Traffic congestion was observed for the morning rush hour in the westbound direction of Meheula Parkway
  ▫ Traffic generally operated adequately along Meheula Parkway during the afternoon rush hour
MILILANI INTERCHANGE TRAFFIC STUDY

Traffic Volumes
Westbound traffic generally queued from the Northbound Interchange and extended beyond Ainamakua Drive for only 1-hour during the peak periods of traffic.
MILILANI INTERCHANGE TRAFFIC STUDY

Existing Condition
MILILANI INTERCHANGE TRAFFIC STUDY

• Design Alternatives
  ▫ Signal Optimization
  ▫ Double Loop On-Ramp with Pedestrian Traffic Signal
  ▫ Double Loop On-Ramp with Pedestrian Overpass
  ▫ Left Turn Lane via Auxiliary Lane
  ▫ Left Turn Lane via Auxiliary Lane with Upstream Improvements
  ▫ Temporary Morning Delineators
MILILANI INTERCHANGE TRAFFIC STUDY

- Signal Optimization
  - 2009 - HDOT in partnership w/City & County DTS optimized traffic signals in the vicinity of Mililani Interchange.
  - April 2013 – ATA performed an analysis of the traffic signal timing in the vicinity of the Mililani Interchange.
MILILANI INTERCHANGE TRAFFIC STUDY

Alternative II-A
MILILANI INTERCHANGE TRAFFIC STUDY

Alternative II-B
MILILANI INTERCHANGE TRAFFIC STUDY

Alternative III-A
MILILANI INTERCHANGE TRAFFIC STUDY

Alternative III-B
MILILANI INTERCHANGE TRAFFIC STUDY

Alternative III-B
MILILANI INTERCHANGE TRAFFIC STUDY

- Traffic Analysis
  - Level of Service Measurements
  - Volume to Capacity Ratios
  - Travel Time Runs
  - Queue Lengths/Delays
# MILILANI INTERCHANGE TRAFFIC STUDY

## Table 4: Meheula Parkway - Arterial AM Peak Travel Time Summary Comparison

<table>
<thead>
<tr>
<th>Meheula Parkway</th>
<th>AM Peak Hour</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Existing Conditions</td>
</tr>
<tr>
<td>Westbound</td>
<td>13 min.</td>
</tr>
<tr>
<td>Eastbound</td>
<td>3 min.</td>
</tr>
</tbody>
</table>

**Notes:**
- Travel time values shown are taken between Kaapeha Street and the Southbound Interchange.
MILILANI INTERCHANGE TRAFFIC STUDY

LEGEND
- EXISTING CONDITIONS
- EXISTING CONDITIONS W/ DELINATORS AT LOOP ON-RAMP
- ALTERNATIVE 1 - OPTIMIZED
- ALTERNATIVE 2a & 2b - DOUBLE LOOP ON-RAMP W/ PCD SIGN/OVERPASGS
- ALTERNATIVE 3a - LEFT-TURN ON-RAMP W/ LEFT-TURN PHASE ONLY
- ALTERNATIVE 4b - LEFT-TURN ON-RAMP W/ WIDETED MEHEULA PARKWAY
MILILANI INTERCHANGE TRAFFIC STUDY

• Closing Remarks
  ▫ “Next Steps”
    • Complete Cost Benefit Analysis (November 2013)
    • Finalize Report (November 2013)

• http://hidot.hawaii.gov/
Questions?
MILILANI INTERCHANGE TRAFFIC STUDY

MAHALO!