29 December, 2008

To:
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Subject: Comment on Draft Environmental Impact Statement (DEIS) "Honolulu High-capacity transit corridor Project", Issue : The DEIS unjustly excludes Managed Lanes and other alternatives

Discussion:

DEIS Chapter 2 evaluates only "No build and Steel Wheel Rail Transit" alternatives identified by the 2006 City Alternative Analysis. The AA intentionally assigned flawed information to the Managed Lanes Alternative (MLA) to eliminate the MLA from further consideration for Oahu's Mass Transit system. The flawed information is further displayed in Honolulutransit.com which makes a comparison of Mass Transit Options including the MLA (aka HOT) and is shown below. Honolulutransit.com provides a chart to compare the Mass Transit options and concludes that Steel Wheel Rail Transit is the best option. The Mass Transit Options included:

1) Steel Wheel Rail Transit (SWRT)

2) Rubber Tire Fixed Guideway (RTFG)

3) Elevated "HOT" Toll roads or Managed Lanes (HOT)

Comparison of Options (see chart in www.honolulutransit.com/FAQ under "Why was steel wheel Technology chosen for Honolulu?"

A) Lowest construction cost: SWRT – YES ; RTFG – NO ; HOT - NO.

B) Lowest Cost to maintain and operate: SWRT – YES ; RTFG – NO ; HOT - NO.

C) Qualifies for federal transit funding: SWRT – YES ; RTFG – YES ; HOT - NO.

D) Highest Passenger Capacity: SWRT – YES ; RTFG – YES ; HOT - NO.

E) Electric-powered, can run on wind, solar, H-power: SWRT – YES ; RTFG – YES ; HOT - NO.

F) Lightest construction impact on community: SWRT – YES ; RTFG – YES ; HOT - NO.

G) Greatest relief of traffic congestion: SWRT – YES ; RTFG – YES ; HOT - NO.

H) Lowest operating noise levels: SWRT – YES ; RTFG – NO ; HOT - NO.

I) Most proven transit solution: SWRT – YES ; RTFG – NO ; HOT - NO.

There are comparison flaws between HOT and SWRT or RTFG in each of the above topics. However, the major flawed comparisons are found in comparisons "A", "D", and "G" as explained below.

Discussion of Comparison A) - (Rail has) Lowest construction Cost:

The capital cost estimate for the 30 mile SWRT in the Alternative Analysis (Table 5-1) is $5.5 Billion for Kamokila to Waikiki or $183 million per mile (rail includes 20 + four story rail stations, 180 land acquisition and power substations at each rail station). The Alternative Analysis assigns a capital cost estimate for 11 mile **HOT two-lane reversible highway** from Waikele to Iwilei at $2.57 Billion o**r** **$233 million per mile** (HOT has zero bus stations and zero power substations).

The AA-assigned capital cost estimate for the HOT reversible at $233 per mile is **grossly incorrect** based on several factors:

a) The Oahu Regional Transportation Plan (ORTP 2030) link http://oahumpo.org/ortp/ORTP2030/OMPO_Report_FINAL.pdf shows the State Project No. 52 - 2.2 mile Nimitz two-lane elevated flyover at $250 million (State DOT cost Estimate) or $113 million per mile.
b) The **10 mile Tampa three-lane elevated** expressway http://www.tollroadsnews.com/node/172 cost $420 million or $42 million per mile.
c) The AA assigned cost estimate for the HOT reversible would conclude that the HOT would cost twice as much per lane mile as H-3, the most expensive highway because it had to bore two tunnels through the Koolaus.
d) Professor Panos Prevedouros study "Transportation Alternative Analysis for Mitigating traffic Congestion between Leeward Oahu and Honolulu" March 2008, shows a cost estimate for a **three lane, 11 mile elevated Managed Lane** for $900 million or **$81 million per mile**. The Managed Lane facility is similar in construction to the Tampa three lane elevated reversible. **The full report is available at www.eng.hawaii.edu/~panos/UHCS.pdf.**

Conclusion: It is concluded that the AA-assigned capital cost estimate for the HOT reversible at $233 per mile is **grossly incorrect** and that a three-lane reversible HOT or managed lane is estimated to cost not more than **$80 million per mile** or **$880 million** for 11 miles from the H-1/H-2 merge to downtown Hotel Street.

Discussion of Comparison D) - (Rail has) Highest Passenger Capacity:

Numbers from Table 3-12 of city 2006 Nov Alternative Analysis ($10 million report):

Rail only: **The rail has a peak passenger capacity of 6,000 commuters per hour** (2,000 seated, 4,000 standees) based on 300 commuters per train group at 3 minute intervals. Also see honolulutransit.com/FAQ "What is Honolulu Rail Transit?" for rail commuter capacity.

HOT or Managed Lane: The HOT will have three lanes, each lane has a capacity of 2000 vph. For three lanes, the vehicular capacity is 6000 vehicles per hour. The HOT person capacity is calculated thus:
Projected use of the HOT during peak hour includes:
200 express buses w/~5O pns = 10,000 pns

500 HOV5 (carpool) = 2,500 pns
500 vanpool (~5pns) = 2,500 pns.

Remaining excess capacity available for low occupancy vehicles:
6,000 vph minus (200 + 500 + 500) = 4,800 vph. 4,800 low occupancy vehicles
Average persons per vehicle = 1.2 pns per vehicle
4,800 vehicles with 1.2 pns = 5700 pns

Summary: HOT persons capacity = 10,000 + 2,500 +2,500 + 5,700 = ~ 20,700 pns

Conclusion: Rail carries 6,000 commuters per hour while a three-lane HOT or Managed Lane carries about 20,000 commuters per hour. Managed Lane Alternative carries over three times the commuter capacity of rail.

Comparison G) - (Rail provides) Greatest relief of traffic congestion:

Numbers from Table 3-12 of city 2006 Nov Alternative Analysis ($10 million report):

Rail only: The rail has a peak passenger capacity of 6,000 commuters per hour (2,000 seated, 4,000 standees) based on 300 commuters per train group at 3 minute intervals.

H-1 only: rated capacity = 9,500 vehicles per hour (equivalent 15,400 commuters per hour)

H-1 forecast yr 2030 traffic load = 17,500 vehicles per hour per City AA Table 3-12 (or 8,000 vph overload = 9,600 commuters per hour)

Managed Lane three-Lane HOV Reversible Flyover: capacity = 6,000 high occupancy vehicles per hour (equivalent 21,600 commuters per hour). Capacity based on HOV use on Flyover by 200 express buses per peak hour , car pools, van pools, green cars and HOV2. (50 pns per express bus and 5800 vph at avge 2 pns per vehicle).

Year 2030 commuter load by City AA Report = Rail (6000) + H-1 overload (9,600) + H-1 capacity (15,400) = 31,000 commuters.

2030 Load = 31,000 commuters per hour
Rail + H-1 = 21,400 commuters per hour
Managed Lane HOV + H-1 = 37,000 commuters per hour

Conclusion: Rail does not have sufficient commuter capacity which will cause 9,600 commuters to be stuck in gridlock on H-1 or stuck at rail stations (especially at stations between Waipahu and Kalihi). Managed Lane HOV Alternative will eliminate congestion and bottlenecks on H-1.

Overall Conclusion and Recommendation:

It is concluded that the Managed Lane (three-Lane HOT) Alternative was erroneously discarded for further evaluation in the Alternative Analysis and therefore it is recommended that the

Managed Lane (Three-Lane elevated HOT) must be reinstated into the DEIS for consideration as a viable Mass Transit Alternative.

Respectfully,

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