COLUMBIA REGION ASSOCIATION of GOVERNMENTS

527 S.W. HALL STREET
PORTLAND, OREGON 97201
(503) 221-1646

Transport

M E M O R A N D U M

DATE: January 4, 1978

TO: Bob Sandman

FROM: Bill Ockert cwo

SUBJECT: Travel Forecasts Developed for the Banfield Transitway Project

At your request, I have reviewed the ODOT draft report, Traffic Analyses/Banfield Transitway Study.

In several places, further explanation of the underlying methodology is needed. Perhaps a short technical appendix would be appropriate. To name a few, needed is a more detailed description of the procedures used to (1) calculate base year VMT; (2) estimate future travel speeds and delays; and (3) estimate future year VMT. In addition, the source of the revised peaking factors shown in Table 1 needs to be described.

The adjustment process described on page 18 to account for the over-estimation of transit trips by the modal choice model is unclear. It appears that only the transit volume output was adjusted rather than both the transit and auto driver trip tables. How was this over-estimation adjusted for in estimating VMT? If the auto driver trip table has not been adjusted to account for the over-estimation of transit trips, the effect of transit alternatives on VMT would no doubt be exaggerated.

The modal choice results shown in Table 7 present some serious questions. While the estimates of transit ridership for the various alternatives appear to be reasonable, the number of automobile driver trips does not. Building a busway rather than HOV lanes is estimated to increase transit riders by 1,040 passengers. This would be accompanied by decreases in auto driver trips

of 1,954 trips. At the same time, the number of auto passengers and the average auto occupancy increases. Because of the effect of HOV lanes on carpooling, the decrease in auto driver trips should be much less than the increase in transit passengers. One would expect a loss in carpooling without the HOV lanes. Certainly, the average auto occupancy should not increase without HOV lanes. In comparison, building LRT (Alterative 5-1) rather than HOV lanes is estimated to bring about gains of 1,130 transit passengers, accompanied by a loss of 487 auto driver trips and 643 auto passengers.

An equally important concern is the comparison of the LRT and Busway alternatives. Here it is shown that LRT (Alternative 5-1) results in increases of 90 transit passenger trips. In comparison, an increase of 1,467 auto driver trips is shown. This would not be possible unless auto occupancy changed, which would be very unlikely.

The data on Table 8 is just as inconsistent. For instance, peak transit ridership on the HOV alternative is greater than the Busway alternative, whereas it was less for the total day. Beyond this, the Busway alternative shows 419 more peak transit trips than the LRT alternative (Alternative 5-1), whereas 628 fewer auto driver trips were shown, an impossible situation.

My greatest concern is with the VMT estimates presented on page 10. First, the VMT estimate for the HOV alternative appears to be high compared to the LRT alternative (2 percent more VMT compared with only 0.2 percent more auto driver trips). Second, the VMT estimate for the LRT alternative (Alternative 5-1), appears to be very low (2.1 percent below the VMT associated with the Busway) considering that LRT is forecast to carry only 100 more transit passengers than the Busway alternative (an increase of 0.3 percent).

The inconsistencies shown in the report are important considering their use in subsequent environmental impact work. I believe it would be well worth our efforts to sit down together and try to sort through the data.

CWO:ls
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cc: Denton Kent
Bob Bothman
Ted Spence
Doug Wright
Bob Post
Bebe Rucker
Keith Lawton
Steve Siegel