

Memorandum

Sunday, October 12, 2008

To: Don Horner
From: Karl Kim
Re: Transit Evaluation

I had hoped to finish our evaluation before leaving for my meetings in Las Vegas with Department of Homeland Security and with the Naval Postgraduate School in Monterey this week. I called you on Saturday to discuss these matters and left my mobile phone number but didn't hear from you before leaving. I will have limited access to email on my trip but unfortunately not much time.

Since our meeting with the Mayor, I had expected to receive more detailed information. To date, I've not received any new information regarding O/M and maintenance costs. Nor have they provided the information requested during our meeting. I'm getting the impression that PB and the DTS team are more focused on finishing the Draft Environmental Impact Statement and are hesitant to provide contradictory information. That's the only explanation for their steadfast posture on some of the numbers and assumptions related to the project.

I thought it might be helpful to summarize some of the key conclusions to date.

Operating and Maintenance Costs. The City is estimating that it will cost approximately \$61 million per year. After reviewing the staffing requirements, service requirements, utilities, and other aspects of the system, the major flaw I've identified relates to the utility costs. The city estimates it to be – according to the “Sacramento” model to be approximately \$5.2 million per year. I think that value is way off. Even if we utilize their utility cost estimates at approximately .11 per kilowatt hour – the estimated annual utility bill would be over \$10 million per year. The utility charges are more likely to be closer to .22 per kilowatt hour, effectively raising the utility costs to over \$20 million per year. Other costs, relative to Sacramento may be somewhat lower. As an automated system, there will not be a need for drivers, thereby reducing some of the salary and wage costs. As grade-separated system, there will be fewer conflicts and accidents with vehicles, so the repair and maintenance costs should be somewhat lower. Sacramento reports one accident every three weeks involving it's light rail vehicles.

Capital Costs. This is an expensive system. The major cost element is the guideway. I reviewed the capital cost elements for the guideway and they seem high, but reasonable given the costs of construction and materials in Hawaii. They've included a 26% contingency which should cover, for the most part, the major costs associated with this project. Cost overruns are a function of both changes in project scope and escalation of factor inputs (such as labor and materials) and the costs of construction and specialized services. There are two aspects of guideway

construction which are especially prone to escalation. The first involves the drilling and installation of the columns and support structure and the second involves the installation of the guideway deck. The extent to which pre-casting technologies can be applied needs to be further investigated. The good news is that since the mid-1990s, according to a recent FTA sponsored study, there has not been a statistically significant increase in the prices of light rail equipment, but there has been significant increase in the costs of steel, iron, concrete, and energy. In 2004, alone, the price of iron and steel jumped 33%. But these estimates were prepared after many of the significant increases have occurred.

The other good news is that the soft costs for the Honolulu project (19%) appear to be in line or lower than the national average of approximately 23% of the total project costs.

As I noted to you earlier, while the guideway costs on a per foot basis seem in line, the station costs seem a bit high. But the values seem more or less reasonable, for this level of analysis.

The capital costs affect the operating costs. Because this is an elevated, grade separated system, capable of supporting a steel wheel on steel rail technology, it is more expensive than smaller, lighter systems. But there is an advantage in terms of capacity and expandability. One thing the City should do is better demonstrate the added value we are getting for a more expensive capital system. An exclusive right-of-way will also mean faster, more predictable service and less intrusion or interference from other vehicles. As noted earlier, this will reduce the need for labor, but to run the system and also in terms of repair and maintenance.

Financing Plan. I spent the better part of Saturday trying to decipher the latest spreadsheet entitled, "Alternative Analysis Financial Feasibility Report..." Council on Revenues Mid 2008/FTA Add" GET Scenario. Several things appear to be going on:

1. GET surcharge is extended to 2023 with a value of 117;
2. Approximately 103 m in FTA new start revenues is added;
3. Capital Cost schedule appears the same;
4. The actual GET revenues which are available for 2007 and 2008 (good estimate) aren't added in – should be 148.5 and approximately 172 (est);
5. The values for a 1.5% growth for 2009 and 2010 and 2.5% could've been included;
6. Table doesn't include Other Sources of Revenue (estimated at 282 million);
7. Loan proceeds are increased in the table from 1184 to 1467
8. The estimated shortfall in GET is approximately \$600m if we follow your suggested growth of 1.5% and 2.5%.

The attached worksheet below summarizes the rough calculations based on your suggestions for how to reduce the level of anticipated economic growth. In addition to including your estimates, I also included the values from the worksheet we received and also the trend analysis included in the Alternatives Analysis. Under the most optimistic scenario the GET would yield 3788; based on the "Horner" scenario it would yield 3195.6 and on the "trend analysis" it would yield 3520.

This provides some rough, order of magnitude estimates of how far off we may be with respect to the decline in revenues from the GET. This shows how much we need to raise through other sources or also what the liability may be, if we can believe these capital cost estimates. There are three options. 1. Get more federal funding (hard to say); 2. Raise more locally (an addition 2-3 years of GET); 3. Look more aggressively at joint development. Right now, there's very little joint development built into these forecasts. Why should property owners and business just receive a major windfall due to this investment without sharing in some of the costs. We should look at this more seriously as a potential source of financing. The other option is to downscale the project.

I hope this make sense. Sorry that I didn't get a chance to talk to you before leaving. You can call my cel at 286-4878. I'll have limited email access. I have more details if you want to discuss them.

	GET Trend Analysis Net Revenues (YOE1 \$ M)	Mid-2008 FTA Add GET	Horner	
2007	162	93	actual	148.5
2008	169	173	actual	173.0
2009	175	190	1.50%	175.6
2010	181	198	1.50%	178.2
2011	188	203	2.50%	182.7
2012	195	211	2.50%	187.3
2013	203	224	2.50%	191.9
2014	211	234	2.50%	196.7
2015	220	242	2.50%	201.6
2016	229	250	2.50%	206.7
2017	239	259	2.50%	211.9
2018	249	268	2.50%	217.2
2019	259	277	2.50%	222.6
2020	269	286	2.50%	228.1
2021	280	296	2.50%	233.9
2022	292	267	2.50%	239.7
2023		117		
	3521	3788		3195.6
		267		-325.4

	Const Trend Analysis Net Revenues (YOE1 \$ M)	Mid-2008 FTA Add GET	FTA Trend Analysis Net Revenues (YOE1 \$ M)	Mid-2008 FTA Add GET
	40	40	3	
	41	41	3	
	318	318	3	35
	378	378	108	50
	556	556	159	65
	739	739	211	200
	685	685	196	200
	670	670	192	200
	588	588	168	200
	337	337	97	200
	182	182	52	153
	25	25	7	
	4559	4559	1199	1303
				-104

592.4