

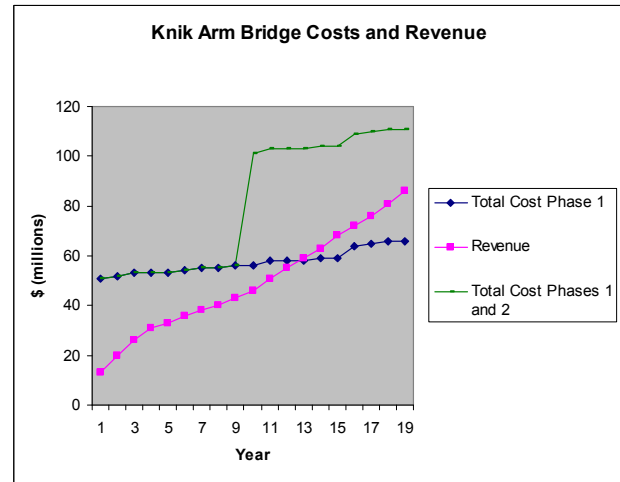
## Knik Arm Bridge Financials

### Assumptions:

- Phase 1 cost: \$686 million (MM) (The National Constructors Group, 2009); Phase 2 needed to address traffic in Year 10: \$835 MM (Federal Highway Administration, 2009)
- Assumes \$60 MM in remaining KABATA funding allocated to: \$36 MM for Phase 1 costs and \$24 MM for two years pre-bridge opening operating expenses, bond issuance costs, and underwriters discount
- Assumes Phase 1 debt service based on 6% bond for 37.5 years which equals \$44 MM/yr (\$650 MM financed or \$686 MM minus \$36 MM). The 6% rate is a blend of 3/4/10 TIFIA bond rate of 4.59% (up to 1/3 project) with private activity bonds (2/3) and is same rate as recent federal-state Port of Miami Tunnel project cited by KABATA to AMATS as similar to Knik Arm Bridge project
- O & M and toll operations cost estimates from Wilbur Smith Associates, 2005
- Assumes administrative costs drop to \$2 MM/yr with bridge opening and increase with inflation to \$5 MM/yr by Year 19
- Toll revenue estimates from U.S. DOT, 2008
- 8,200' bridge; if 14,000' design needed to protect belugas, costs increase significantly

- Revenue assumes population projections by ISER from 2005; those projections revised downward 12/09
- Assumes no private partner

Note: Phase 2 upgrades the bridge to 4 lanes and connects it to Ingra-Gambell rather than the A/C couplet through downtown



### Summary

The first nine years of Phase 1 bridge operating deficits approximately equal the total amount of federal, state, and local spending in Anchorage for surface transportation (roads, bridges, public transportation, trails) over those nine years.<sup>1</sup> The spreadsheet on p. 2 shows \$202 MM in cumulative deficits over the first nine years of Phase 1 bridge operations during the same period that Anchorage would spend approximately \$198 MM on transportation at the current rate of \$22 MM/year. With Phase 2 construction in Year 10, Knik Arm Bridge deficits will continue from then on to be more than current annual AMATS funding.

### Analysis

For the project to be cash flow positive from the first year would require the state or a private partner to put up \$550 MM of the \$650 MM Phase 1 construction costs since the \$6 MM net revenue in Year 1 available for debt service can only support approximately \$100 M in bonds.

For the first nine years of bridge operation, the average toll would need to be \$13 for passenger vehicles and \$48 for commercial vehicles each way to generate breakeven revenue (assuming *very optimistically* that a higher toll does not decrease bridge travel). This contrasts with the starting tolls of \$5 for passenger vehicles and \$18 for commercial vehicles projected by Wilbur Smith Associates (9/2007) for KABATA.

Why assume no private partner invests in the bridge? KABATA's federal TIFIA loan application (8/2007) projected a \$63 MM private equity contribution to the project but also showed those investors extracting significant equity in the early years of the project at a 15.6% internal rate of return. In that scenario, more

<sup>1</sup> Distribution of this money is via Anchorage Metropolitan Area Transportation Solutions, or AMATS, decision-makers.

private dollars would be extracted than would be invested during the 37.5 year life of the project. Since the rights of creditors are superior to equity holders, it is doubtful that bond creditors would allow significant equity extraction without a state guarantee on the revenue bonds and maybe not even then. In the current economic environment, public-private infrastructure deals need an investment grade credit rating to sell infrastructure bonds at reasonable rates, and rating agencies look for projects expected to be cash flow positive from day one or to have a public guarantee (or, more likely, both); the proposed Knik Arm Bridge has neither. The state's independent engineering cost estimate study stated that "without an equitable [financial] risk sharing agreement, the Project will not be economically feasible if proposals are received wherein all risks are passed on to the contractor,"<sup>2</sup> i.e., implying that state/local financial participation is critical for the project to move forward.

KABATA's written materials say that private investors will not fund Phase 2 of the project until traffic warrants it. "KABATA stands ready to deliver the Ingra/Gambell connection before it is required by traffic if public funding for this Project component is made available."<sup>3</sup>

Since revenue is substantially less than total cost each year of the project, the state would need to guarantee tax exempt bonds for those bonds to be sellable. If required, bond insurance costs - not included in this analysis - would add up to 2% of the bond or \$13 MM.

#### All Data in \$MM:

Year	O & M	Toll Operations Cost	Debt Service	Admin. Costs	Phase 1 Cost (P1)	Phase 2 Cost (P2)	Total Cost (P1&2)	Revenue	Net
1	3	2	44	2	51	0	51	13	-38
2	3	3	44	2	52	0	52	20	-32
3	3	3	44	3	53	0	53	26	-27
4	3	3	44	3	53	0	53	31	-22
5	3	3	44	3	53	0	53	33	-20
6	4	3	44	3	54	0	54	36	-18
7	4	4	44	3	55	0	55	38	-17
8	4	4	44	3	55	0	55	40	-15
9	4	4	44	4	56	0	56	43	-13
10	4	4	44	4	56	45	101	46	-55
11	5	5	44	4	58	45	103	51	-52
12	5	5	44	4	58	45	103	55	-48
13	5	5	44	4	58	45	103	59	-44
14	5	6	44	4	59	45	104	63	-41
15	5	6	44	4	59	45	104	68	-36
16	10	6	44	4	64	45	109	72	-37
17	10	6	44	5	65	45	110	76	-34
18	10	7	44	5	66	45	111	81	-30
19	10	7	44	5	66	45	111	86	-25

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<sup>2</sup> *Knik Arm Crossing Conceptual Cost Estimate (Final)*, prepared for the Alaska Department of Transportation and Public Facilities by The National Constructors Group, January 2009, p. 1-20 (see [http://www.dot.alaska.gov/comm/pressbox/arch\\_2009/Knik-Arm-Crossing-Report-Executive-Summary.pdf](http://www.dot.alaska.gov/comm/pressbox/arch_2009/Knik-Arm-Crossing-Report-Executive-Summary.pdf)).

<sup>3</sup> KABATA Answers to Selkregg/Flynn and Epstein Questions Regarding Knik Arm Crossing Project, August 7, 2008, Question II.A.3.a.