

Juneau Fixed Guideway Transit System (FGS) for increasing cruise ship visitor Carrying Capacity (CC), reducing CO2 emission and cost of living (COL)

DRAFT

Bill Leighty wleighty@earthlink.net Made: 3-Feb-19
 907-586-1426 206-719-5554 mobile REV: 5-Feb-19

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 All components and numbers are Bill Leighty's ad hoc rough estimates; this template need professional help to achieve credibility

ECONOMIC ANALYSIS

Goal: Increase Juneau community CC to 1.5 million pax
 Assumptions: See NOTES
 See: References

OPEX, SUMMER 4 MONTHS, CRUISE SHIP INDUSTRY ALLOCATION

FGS labor: drivers (operators)	10	\$ million
FGS electric energy	10	
FGS maintenance	5	
FGS other	5	
FGS subtotal	30	\$ million
Cruise ship car host, hostess labor	10	\$ million
Total cruise ship industry allocation	40	\$ million

OPEX, SUMMER 4 MONTHS, CBJ ALLOCATION "CAPITAL TRANSIT"

FGS labor: drivers (operators)	2	\$ million
FGS electric energy	1	\$ million
FGS maintenance	1	\$ million
FGS other	1	\$ million
FGS subtotal	5	\$ million
Less % "head tax" from CBJ	30	per cent
(Assume X million @ \$ 8)	1.5	3.6 \$ million
Net opex, CBJ share, summer 4 months	1.4	\$ million

OPEX, OTHER 8 MONTHS, CBJ ALLOCATION "CAPITAL TRANSIT"

FGS labor: drivers (operators)	3	\$ million
FGS electric energy	3	
FGS maintenance	3	
FGS other	2	
FGS subtotal	11	\$ million

OPEX BENEFITS, SUMMER 4 MONTHS, CRUISE SHIP INDUSTRY: incremental margin increase

0.6 million pax CC increase @ \$500 margin per pax =
 Less opex, cruise ship share
 Net total annual incremental margin increase
 Simple annual ROI on total cruise ship industry capex
 240 short tons CO2 not emitted from burning diesel in "hiway" MCI buses; diesel buses
 Note: average 40 buses / day @ 30 miles / day x 100 days per summer = 120,000 r
 @ 5 mpg, = 24,000 gal diesel / summer @ 20 lbs CO2 / gallon = 480,0

JUNEAU PUBLIC BENEFITS, PER 12 MONTHS

1	\$ million	Estimated Capital Transit Opex savings: fewer buses, fewer drivers
1	\$ million	Estimated savings in school bus transportation
36	\$ million	Estimated savings in after-tax expense, privately owned light duty ve 6,000 fewer LDV's @ 6,000 total annual cost of ow
1	\$ million	Estimated savings in snow removal
1	\$ million	Vacant garages converted to rental housing (small, inexpensive units
10	\$ million	Health care costs reduction, because people walk more, are healthie
0	\$ million	Other

50 \$ million Total annual Juneau benefits

Simple annual ROI on total FGS capex, before adjustments
 Simple annual ROI on adjusted total FGS capex
 Juneau population = 32,000
 \$1,563 Average cash saving per person, after tax, per year

TOTAL ANNUAL PUBLIC AND PRIVATE BENEFITS

Cruise ship industry, net	\$260	million
Juneau, private and CBJ	\$50	million
Total	\$310	million

Simple annual ROI on total FGS capex, before adjustments
 Simple annual ROI on adjusted total FGS capex

\$300 million per year, gross margin, industry aggregate

40 \$ million

260 \$ million

140 per cent

replaced by FGS

miles per summer;

100 lbs CO2 = 240 short tons CO2 / year

vehicles (LDV's): fewer families need 2 or 3 "cars"

membership = \$36 million

); improving shortage of "affordable" housing

er; health insurance premiums may be lower

14 per cent

36 per cent

85 per cent

225 per cent