

CEE 123 Transport Systems 3: Planning & Forecasting

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The Miasma Beach Transportation Model

COST ESTIMATES FOR NETWORK ALTERNATIVES

Cost Estimation

Table 11 provides a summary of infrastructure improvement costs which must be utilized in your cost estimates. The figures provided are Present Value estimates of capital, operating, and maintenance costs.

Table 11. Future Infrastructure Improvement Cost Estimates

Current Road Type	Freeway	Primary	Major	Minor	Collect	Local
Roads (\$ per lane-mile for 2-way links):						
New facility:	500,000	300,000	225,000	150,000	100,000	50,000
Additional lane:	300,000	200,000	100,000	100,000	50,000	25,000
Upgrade Facility Type:	600,000	200,000	200,000	100,000	50,000	na
Intersections (\$, one per link):						
New Intersection:	600,000	100,000	100,000	75,000	75,000	25,000
Upgrade Intersection:	500,000	200,000	100,000	100,000	50,000	na
Grade Separate at Fwy:	na	300,000	300,000	150,000	150,000	na

*** Use cost for the more expensive facility type ***

Maintenance (\$ per lane-mile, after 10 years)

Existing Facility:	100,000	80,000	70,000	50,000	20,000	10,000
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Rehabilitation (\$ per lane-mile, after 20 years)

Existing Facility:	250,000	150,000	110,000	75,000	50,000	25,000
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If facility is not upgraded, apply maintenance fees after 10 years and rehabilitation fees after 20 years. No penalties apply to M&R.

Bridges

Link incorporating a bridge increases total link, maintenance, and rehabilitation costs by a factor of two (assume bridge runs the full length of the link)

Sensitive Areas
Construction in or adjacent to Miasma Wetlands (between (between 3rd and 4th Streets, from south of Coast Hwy to Mountain Blvd) increases all construction costs by 20%.

Construction along the beach increases costs by 10%.

Bus Transit:
\$2,000 per person-mile for an O-D pair; decrease O/D demand by 1-20% for each O-D pair with bus service added. Justify the percent reduction, convert OD vehicle-trips to person-trips on transit, convert to person-miles, and use new OD matrix in assignment.

Truck Prohibition: State Route 1 thru Miasma Beach is operated & maintained
----- by the State DOT. The State can divert truck thru-traffic.
Cost estimates depend on consultant proposal.

Demand Management Ridesharing, parking policies, and other strategies must
----- provide cost and traffic reduction justification.

HELP: Cost Estimation for Design Alternatives

For assistance in estimating design alternative costs, [Click HERE](#).

EXAMPLE: Cost Estimation for Design Alternatives

For assistance in estimating design alternative costs, [Click HERE](#).

Miasma Beach Project -- Cost Estimates[\[back to top \]](#)

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