

Drafting the Future: **The Dollars and Sense of Toll Roads**



Assessing Projects for Toll Feasibility



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Highlights

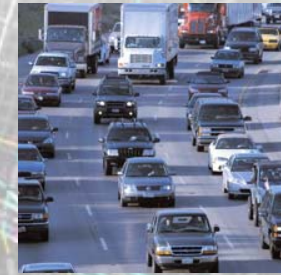
- Project Selection
- Toll Feasibility Process
- Factors in Feasibility
- Managing Expectations
- The “Big Picture”



Toll Candidate Project Selection

Toll Feasibility Studies are performed at the request of:

- The TxDOT Commission
- A TxDOT District
- A Developing RMA (with District Coordination)



Toll Feasibility Process: Industry Practice

- Level One - Sketch Level T&R
- Level Two - Intermediate T&R
- Level Three - Investment Grade T&R



Toll Feasibility Process: TxDOT Practice

- Screening Level
- Conceptual Level
- Project Specific Level
- Detailed Analysis Level
- Investment Grade T&R Level



**Increasing
Level of
Detail**

Toll Feasibility Process: Study Levels

- **Screening Level - Broad Assumptions**
- **Conceptual - Available Data, Broad Assumptions, TxDOT Sketch Level T&R**
- **Project Specific - Develop Data, Available Data, Broad Assumptions, Sketch Level T&R**
- **Detailed Analysis - Thoroughly Developed Data, Specific Assumptions, Intermediate T&R (Traffic Modeling necessary)**
- **Investment Grade - Intensive Study, Certified Data, Certified T&R, Professional Financial Planning**

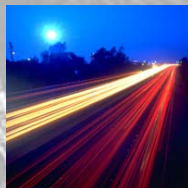
Factors in Feasibility Analysis:

Traffic Analysis

- Traffic Volumes
- Growth Factors
- Toll Collection Plan

Revenue Analysis

- Economic Projections
- Market Acceptance
- Elasticity



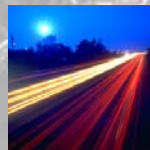
Factors in Feasibility Analysis:

Total Project Cost Estimates

- Construction
- ROW/Utility Relocations
- Engineering (Preliminary and Final)
- Environmental Mitigation
- Maintenance Expenses
- Construction Inspection
- Operational Expenses
- Inflation
- Capitalized Interest (if bonded)



A Toll Road Is A Business



Factors in Feasibility Analysis:

Roadway Design

- Typical Section
- Interchange Design
- Route/Alignment
- Direct Connections

Early Involvement

- Access Control



Factors in Feasibility Analysis:

Toll Collection Systems

- Manual
- ETC
- Mixed



Managing Expectations: Revenue Projections

GROSS REVENUE (Total Revenue)

— \$ OPERATIONS

— \$ MAINTENANCE

= NET REVENUE (Remaining Revenue)



Managing Expectations: Planning Projections

Estimated Bonding Capacity

$$PV = PMT \left[\frac{1 - \frac{1}{(1+i)^n}}{i} \right] \approx \frac{PMT}{i}$$



Managing Expectations: Planning Projections

Estimated Bonding Capacity

NET REVENUE \div INTEREST RATE

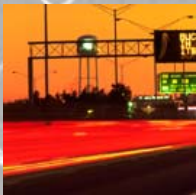
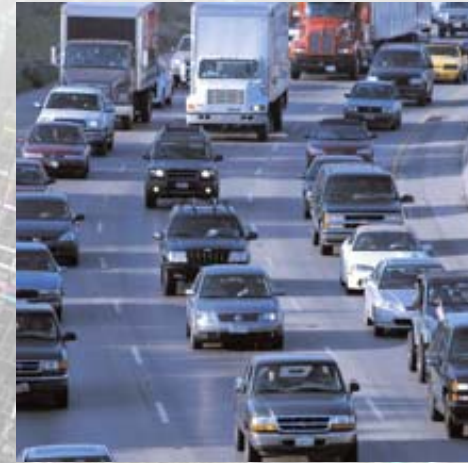
= ESTIMATED BONDING CAPACITY



Toll Roads and The Big Picture

Impact on Mobility:

- Local Level
- Regional Level
- State Level



Toll Roads and The Big Picture

Added Benefits:

- Reduced Congestion
- Improved Safety
- Travel Time Savings
- Ability to Leverage Highway Dollars
- Improved Trip Quality (Dependability)

