



### **ASCE Report Card**

Origin - Public Works Improvement Act of 1984

First Report – 1988 – Fragile Foundations

Focus

Age and Condition

Capacity

Methods of Finance

Trends in Methods of Finance

- Maintenance Needs and Projected Expenditures

### **1988 Report**

- Users Should Bear the Costs Especially Maintenance
- Federal Government Limited Role in Maintenance Costs
- Developers Should Pay for New Facilities to Accommodate Growth
- Effect of Tax Reform Act of 1986

### The 2010 Report Card – Grades

Sub-SET	2007	2008	2009	2010	2011
Aviation	B-	C-	D	D+	D
Bridges	-	C-	C	C	C
Dams	-	D	D	D	D
Drinking Water	B-	D	D	D-	D-
Energy	-	-	D+	D	D+
Hazardous Waste	D	D-	D-	D	D
Inland Waterways	B	-	D+	D-	D-
Levees	-	-	-	-	D-
Public Parks and Recreation	-	-	-	C-	C-
Rail	-	-	-	C-	C-
Roads	D+	D-	D+	D	D-
Schools	D	F	D-	D	D
Solid Waste	C-	C-	C+	C+	C+
Transit	C-	C	C	D+	D
Wastewater	C-	C-	D-	D	D-
America's Infrastructure G.P.A.	C	D	D+	D	D
Cost to Improve	-	-	\$1.5 trillion	\$1.8 trillion	\$2.8 trillion

### 2009 Report Card - Roads

Estimated Spending \$380.5 Billion

Projected Shortfall \$549.5 Billion

Investment Needed \$930 Billion

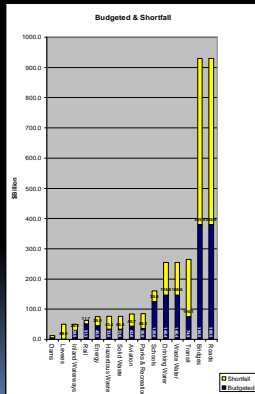
**RAISING THE GRADES SOLUTIONS**  
THEY'LL WANT THEM

- KEY FINDING:** The latest highway program reauthorization provides a significant opportunity to improve highway safety, efficiency, and sustainability.
- KEY FINDING:** Federal transportation programs will increase by over 10% if all federal transportation programs are fully funded, providing critical and necessary funding.
- KEY FINDING:** Funding opportunities for a variety of government programs, and support for states and other transportation entities.
- KEY FINDING:** Funding opportunities for research and development.
- KEY FINDING:** An increase in the number of highways for transportation funding will help to address the needs of the most critical projects to improve the nation's infrastructure.
- KEY FINDING:** A national effort to address the need for a comprehensive infrastructure program is needed to address the nation's infrastructure needs.

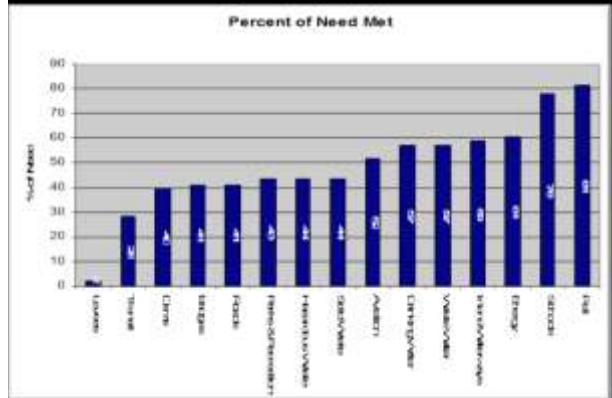
**Grade: D**

### 2009 Report Card - Total

Tier	(Budget – Shortfall – Total)
<u>Roads</u>	1 \$380 – \$550 - \$930
<u>Water</u>	2 \$146 – \$109 - \$255
<u>Transit</u>	3 \$75 – \$190 - \$265
<u>Parks</u>	\$37 – \$48 - \$85
<u>Aviation</u>	\$43 – \$41 - \$84
<u>Waste</u>	4 \$34 – \$43 - \$77
<u>Energy</u>	\$45 – \$30 - \$75
<u>Rail</u>	\$51 – \$12 - \$63
<u>Waterways</u>	\$30 – \$20 - \$50
<u>Levees</u>	5 \$1 – \$49 - \$50
<u>Dams</u>	\$5 - \$8 - \$13



### The 2010 Report – Shortfalls



## ***The 2009 Report -- Solutions***

- Increase Federal Leadership
- Develop Federal Regional and State Infrastructure Plans
- Improve Infrastructure Investment
- Promote Sustainability
- Address Life Cycle Costs and Maintenance

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## ***Innovative Financing for Infrastructure Projects***

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## ***Federal Policies and Programs Supporting Infrastructure Finance***

### BOND AND DEBT FINANCING

- Grant Anticipation Borrowing (GARVEE AND GANs)
- Build America Bonds (BABs)
- Private Activity Bonds (PABs)
- 63-20 Issuance

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## ***Federal Policies and Programs Supporting Infrastructure Finance***

### LOANS and CREDIT ASSISTANCE

- Transportation Infrastructure Finance and Innovation Act (TIFIA)
- State Infrastructure Banks (SIBs)
- Section 129 Loans

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## **Federal Policies and Programs Supporting Infrastructure Finance**

### PUBLIC-PRIVATE FINANCE MECHANISMS

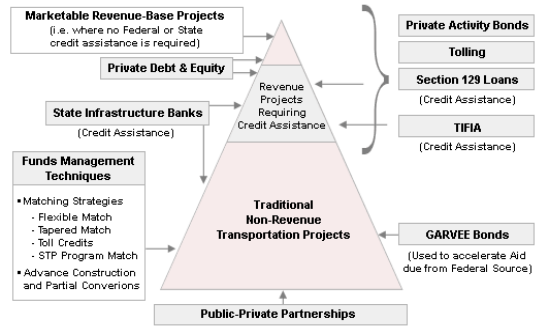
- Pass-through Tolls / Availability Payments
- Long-Term Leases of Existing Assets

### FUND MANAGEMENT TOOLS

- Advance Construction (AC)
- Federal-Aid Matching Strategies

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### Federal Project Finance Tools



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## **I-635 Managed Lanes Project**



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## **I-635 Managed Lanes Project**

**TOTAL COST: \$2.6 BILLION**

- PABs - \$606 million
- TIFIA loan - \$850 million
- Equity contribution - \$672 million
- Toll Revenues - \$17 million
- Public Funds - \$490 million

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## **North Tarrant Express - Texas**



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## **North Tarrant Express – Texas**

**Total cost: \$2 Billion**

- PABs Proceeds - \$398 million
- TIFIA Loan - \$650 million
- Public Funds - \$573 million
- Equity Contribution - \$426 million

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## **Intermodal Facility (FL)**



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## **Intermodal Facility (FL)**

**Total Cost: \$2 Billion**

- Federal funding (grants) - \$6 million
- TIFIA loan - \$270 million

### State Funding:

- State Transportation Trust Fund (STTF) loan - \$245 million
- Florida SIB Loan (plus capitalized interest) - \$25 million
- Other state funding (grants) - \$1,048 million

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## **BART San Francisco Airport Extension**



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## **BART San Francisco Airport Extension**

### **Total Cost: \$1.5 Billion**

- Federal Funds: FTA New Starts - \$750 million
- State of California Funds - \$152 million
- Local Funds: \$252 million (*sales tax revenue bonds, airport station premium fare revenue bonds, project investment earnings, interest earnings*); SFO Airport - \$200 million; San Mateo County Transit District - \$171 million; Metropolitan Transportation Commission - \$27 million
- Private line of credit from several banks, backed by a pledge of future discretionary funds

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## **Las Vegas Monorail**



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## **Las Vegas Monorail**

### **Total Cost: \$650 million**

- Tax exempt revenue bonds (backed by fares and advertising)
- Zero public funding
- Original developer: MGM Grand-Bally's Monorail, LLC
- Current owner: Las Vegas Monorail Company (filed for Chapter 11 bankruptcy protection on Jan. 13, 2010)

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## Hudson-Bergen Light Rail



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## Hudson Bergen Light Rail

**Total Cost: \$2.2 billion**

- FTA New Starts Full Funding Grant Agreements
- Grant Anticipation Notes (GANs) (*backed by passenger fares*)
- State Transportation Trust Fund (*motor fuel tax receipts*)

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## Transportation-Expansion (T-REX)



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## Transportation Expansion (T-REX)

**TOTAL COST: \$1.67 Billion**

### Highway elements (\$795 million):

- GARVEEs - \$600 million (*backed by future Federal aid receipts*)
- Sales and use tax revenue - \$195 million

### Transit elements (\$879 million):

- FTA New Starts Full Funding Grant Agreement - \$525 million
- Sales and Use Tax Revenue bonds - \$324 million
- Local matching funds - \$30 million (*passenger fares*)

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### ***Value Capture for Transportation Finance***

- Impact Fees
- Special Assessments
- Tax Increment Financing
- Land Value tax
- Transportation Utility Fees
- Development Impact Fees
- Negotiated Exactions
- Joint Development
- Air Rights

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### ***Value Capture in Use***

Dulles Metrorail project (\$5B) - Landowners created funding contribution of \$800M based on increased land use.



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### ***Availability Payment P3***

- Guaranteed, long-term budget certainty for public owner
- Payments only being at start of project operation, providing faster delivery for "greenfield projects"
- Private operator focused on meeting a specified standard of service
- Public partner maintains complete control over user fees
- Payments may not be viewed as debt owed by public entity

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### ***I-595 Corridor Improvements***



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### I-595 Corridor Improvements

**TOTAL COST: \$1.8 Billion**

- Senior bank debt - \$781.1 million (backed by final acceptance/availability payments)
- TIFIA loan - \$603 million + capitalized interest during construction (backed by final acceptance/availability payments)
- Equity - \$207.7 million
- Revenues - \$10.0 million
- FDOT qualifying development funds - \$232 million

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### Representative Bid Comparison

	Cintra	Itinere	VCP
<b>Total Financing</b>	<b>\$1.441 Billion</b>	<b>\$1.948 Billion</b>	<b>\$2.432 Billion</b>
<b>Total Construction Cost</b>	<b>\$1.052 Billion</b>	<b>\$1.550 Billion</b>	<b>\$1.536 Billion</b>
Equity Investment	\$406.7 million	\$98.3million	\$363.0 million
Investment Earnings	-	\$173.9 million	-
Bank Debt	\$410.0 million	\$476.8 million	-
TIFIA Debt	\$450.0 million	\$143.6 million	\$219.0 million
PABs	-	May be used	\$1.849 billion
Public Investment	\$174.5 million	\$1.056 billion	Not identified
Term of Concession	50 Years	60 Years	50 Years

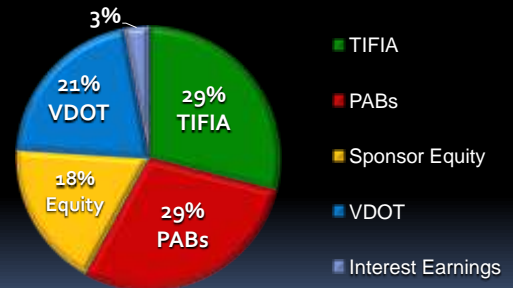
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### VA/DC/MD Capital Beltway/I-495 High Occupancy Toll Lanes



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### Funding Sources for Capital Beltway/I-495



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## **Denver RTD – FasTracks**



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## **Conclusions and Plenary Takeaways**

- Potential Advantages
  - Risk Transfer
  - Project Acceleration
  - Operational Benefits
- Potential Disadvantages
  - Loss of Control / Private Ownership
  - Non-Compete Clauses / Transparency
  - Value for Money (Cost Effectiveness)
  - Generational and Other Equity Concerns

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**Break...**

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