Testimony by

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Highways, Transit and Pipelines Subcommittee
Committee on Transportation and Infrastructure
U. S. House of Representatives

On

"Understanding Contemporary Public-Private Highway Transactions: The Future of Infrastructure Finance?"

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Mr. Chairman and Members of the Committee, thank you for inviting me to testify today on a topic of great interest to the transportation community. As you are aware, policy makers and project sponsors in many parts of the country are seeking to better understand "public-private partnerships" (PPPs) – especially their potential to supplement existing sources of investment capital. Recent and proposed long-term concession financings of toll facilities have generated particular interest.

My name is Bryan Grote, and I am a Principal of Mercator Advisors LLC. My company helps sponsors of major projects develop financial plans and assemble investment capital. We also work with government agencies to design, implement and evaluate financial assistance programs. Over the past 15 years, as both public policy analyst and project financial advisor, I have observed the evolution of innovative financing techniques and public-private partnerships. In response to growing investment needs and constrained public funds, state and local project sponsors have increasingly experimented with alternative approaches. In my testimony today, I will briefly summarize the nature and extent of public-private highway transactions. And I hope to put PPPs in a useful context for examining their potential to generate capital and help address the nation's funding gap for highway and other transportation investment.

Facing the Growing Challenge of Infrastructure Investment

It has often been said that transportation infrastructure is to the economy what the circulatory system is to the body. And that supporting economic growth and promoting social welfare require both adequately maintaining the existing system and strategically investing in new capacity. Yet most analyses indicate that our nation faces a substantial gap in meeting its highway and transit system needs. This "investment gap" at the national level has been estimated at somewhere between $500 billion (to merely maintain the system at current conditions and performance) and $1.1 trillion (to make cost-beneficial improvements that expand economic growth) over the next 10 years.[1]

Complicating the investment challenge is the urgent need to address numerous "mega projects" in many parts of the country. These major corridors and urban connectors may cost hundreds of millions – or even billions – of dollars each and cannot be readily accommodated within existing capital programs.

This Subcommittee has been at the forefront of efforts to bolster Federal assistance. In addition to increasing Federal funds by a third over the previous authorization period, SAFETEA-LU authorizes or extends several so-called "innovative financing" provisions to help advance transportation investment. Examples include:

- More flexibility to charge tolls on Interstate and other Federally assisted highways, through the Express Lanes Demonstration Program, the Interstate System Construction Toll Pilot Program, and the Value Pricing Pilot Program;

[1] *Future Highway and Public Transportation Financing*, National Chamber Foundation, November 2005.

- Potentially greater access to Federal loans and guarantees, under the Transportation Infrastructure Finance and Innovation Act (TIFIA) and Railroad Rehabilitation and Improvement Financing (RRIF) credit assistance programs; and
- Reduced debt financing cost for certain public-private highway projects and rail-truck transfer facilities, through the new $15 billion private activity bond program.

But even with more Federal grant funds and innovative finance tools, the current program structures and funding sources are insufficient. It seems increasingly obvious that state and local governments must become more pro-active in addressing their infrastructure needs. Federal assistance – particularly outside the health and social security "mandatory" entitlements and defense and homeland security "discretionary" priorities – will continue to face mounting budget pressures. For various political and technical reasons, the existing broad-based excise taxes that currently support most public transportation assistance will continue to fall well short of infrastructure needs.

Assessing the Nature and Potential of Public-Private Partnerships

Certainly there is a strong tradition of public funding of public works in the United States. The unique ability of state and local governments to access tax-exempt financing through the U.S. capital markets, coupled with the 50-year grant reimbursement funding strategy afforded by the Federal Highway Trust Fund, firmly established the public orientation towards highway investment in this country.

But some states, regions and localities are recognizing that relying on "more of the same" in order to manage the existing infrastructure and make even minimal capacity enhancements for the future will not be a successful strategy. Public officials are beginning to turn to the private sector to share management responsibility and supplement governmental resources. Business concepts such as market pricing, customer orientation and operations outsourcing are being applied to the development and management of transportation assets. Many transportation agencies around the country are beginning to experiment with PPPs to develop, operate, maintain and, in some cases, even finance transportation infrastructure.

A significant challenge before policy makers and program managers at all levels of government is to move beyond the PPP rhetoric and examine both the nature and potential of transportation PPPs:

- What types of PPPs are being employed and why?
- How much "private investment" can be generated by PPPs?
- Why might a concession (long-term franchise) approach make sense for some projects?

My brief testimony today cannot exhaustively cover the many aspects of transportation PPPs. Rather, my objective to give a broad overview of some fundamental issues and questions concerning PPP approaches to transportation investment. Hopefully, this will provide a useful analytical framework for considering the potential benefits, as well as limitations, of partnering with the private sector to help address the nation's critical transportation investment needs.

Basic Types of Public-Private Partnerships

PPPs appear to be best-suited for large, complex projects with acknowledged need and strong governmental support. Private sector involvement can provide substantial benefits in terms of accelerating project development and construction, transferring construction and performance risk, providing more efficient operation and superior service, introducing new technologies, and even attracting net new investment capital.

The generic term "public-private partnership" encompasses a wide range of contractual arrangements by which public (federal, state, local or special) authorities and private entities collaborate in the development, operation, ownership and/or financing of a transportation infrastructure project or program. The precise form of these arrangements is a function of the legal, political and financial features of the relevant state or local project sponsor.

Different PPP arrangements can be thought of as extending along a spectrum, from governmental (traditional) sponsorship at one end to essentially private provision of transportation infrastructure at the other. **Exhibit I** displays these arrangements in five basic categories:

1. Traditional governmental delivery model (conventional design-bid-build with public funding);
2. Design-build approach with conventional public funding;
3. Design-build approach with innovative public financing and/or private operation;
4. User-backed project financing with governmental control; and
5. User-backed project financing with private sector control (private concession).

Although not every PPP arrangement and corresponding project will fit neatly into this simplified template, it is a useful way to analyze the service the PPP is providing. The ultimate source of revenue support for the project is a key factor in determining whether a PPP can directly induce new investment. User charges such as tolls and fares secure "project financing," whereas general and dedicated taxes are associated with "public financing." Under this definition, a bond issue sold to private investors but *payable from tax sources* would be considered "public financing," whereas a bond issue sold to the same private investors but *payable from direct user charges* would be classified "project financing."

This basic PPP template helps identify the specific "value-added" by the private sector participation: Is it absorbing construction risk, expediting completion, assuming operational responsibility, bringing management expertise to bear, or all of the above? Many PPP benefits derive from risk transfer, project acceleration, operating and maintenance efficiencies, and enhanced project management. These benefits are real and can be significant, but they do not necessarily generate additional investment capital needed to pay for the project.

Some PPP arrangements, however, can directly induce new investment capital. To the extent that a PPP project generates user fees, it can help attract new debt and equity capital by

monetizing the economic value of the project. For example, in Exhibit I, the "Governmental Tax-Exempt Project Financing" approach and the "Private Concession Project Financing" approach both involve user charges rather than governmental resources (tax support). In contrast, the "D-B with Public Funding" approach and the "D-B with Innovative Financing or Operation" approach both require a governmental payment stream that ultimately relies on public revenues like taxes – moneys that otherwise would be spent on other projects. So it is arguable whether these last two PPP models are truly bringing new resources to bear.

Private Investment through User Charges

Those PPP arrangements involving projects capable of generating their own revenues, whether through direct user charges (like tolls) and/or indirect beneficiary fees ("value capture" like development impact fees or special district assessments), are of particular interest to project sponsors and policy makers. Such PPPs have the potential to generate "private" (user-backed) revenues that represent net new resources for capital investment. Essentially, the private investment attributed to PPPs derives from their ability to produce *new* user fees or achieve greater leveraging of *existing* user fees. The state of Texas, for example, recently entered into an agreement with a consortium led by a Spanish toll road company to develop $7 billion of new highway projects along one of the statewide "Trans Texas Corridors," without public subsidy. The developers have committed to invest a total of $1 billion of private equity in the project, and raise the balance through toll-backed bond issues.

Overview of U.S. Highway Investment

Despite the visibility of several large, high-profile, toll-backed project financings in recent years, highway capital investment in the U.S. is still dominated by traditional public funding. As shown in **Exhibit II**, about 94 percent of the nearly $750 billion invested in highway capital improvements nationwide during 1993-2005 has come in the form of either public grant funding ($575 billion) or tax-supported debt capital ($119 billion). Only about six percent ($49 billion) has been in the form of private investment – toll-funded grants, tax-exempt toll revenue bonds, or (in a handful of cases) taxable debt and equity capital through concession financings.

This picture very likely will begin to change more quickly in future years, as state and local governments struggle to cope with deteriorating conditions and worsening congestion. But even aggressive assumptions about the public's future willingness to pay tolls and other user or beneficiary fees nudge up the private share of *nationwide* highway capital investment only gradually. The complex nature of many vital unfunded projects and the sheer magnitude of the investment shortfall preclude any "quick fix."

Recent History of Major Highway PPP Projects

Another snapshot of highway investment in recent years reveals the growing importance of PPPs in generating private investment. While the ability of PPPs to significantly address funding shortfalls *on a nationwide scale* may be limited, their usefulness in advancing *particular projects* (such as major corridors and urban connectors) is considerable and growing. Nationwide, some

$21 billion of investment in 43 major highway facilities has been accomplished using various public-private templates over the last dozen years. The states of California, Florida, Texas and Virginia are leaders in this field, having accounted for 50 percent of the total dollar volume ($10.6 billion) through 18 major highway PPP projects. Nationwide, PPPs have accounted for over a quarter of the total user-backed private investment in U.S. highways (nearly $13 billion of the total $49 billion). **Exhibit III** summarizes PPP activity since 1993 for major highway projects (those costing in excess of $25 million each).[2]

While much of the PPP focus is on the potential for private capital and new resources, it is important to keep in mind the other – perhaps less obvious – benefits. Many PPP arrangements do not access new user-backed revenue streams and therefore address the investment gap only indirectly, at best. There may still be compelling reasons to involve the private sector in developing, constructing, financing, operating and maintaining transportation projects. And for certain projects the accelerated benefits and reduced costs of such PPP investment may be significant. Over the long run the cumulative savings achieved through value engineering, accelerated schedules and other innovative PPP approaches may be significant even on a program-wide basis.

For example, it may be possible to reduce governmental operating costs through partnering with the private sector. Several states have outsourced maintenance responsibilities for portions of their Interstate systems. In terms of transit, overseas experience with "private finance initiatives" has shown that substantial cost savings and service improvements may be possible through private operations. Private sector participation does not make transit self-supporting, but it can reduce the required level of government subsidy. In essence, policy makers are finding that there can be value in separating the *public funding* of transportation services from the *public provision* of them.

Financing Highways through Long-Term Concessions

Of particular interest to industry observers are those projects that have been financed or leased through private concession-type PPPs:

- The Dulles Greenway (VA, 1993);
- The SR-91 Express Lanes (CA, 1993);
- The Camino Columbia Bypass (TX, 1999);
- The SR-125 South Toll Road (CA, 2003);
- The Chicago Skyway (IL, 2005); and
- The Indiana Toll Road (IN, 2006)

There is considerable speculation about the future role of highway and other transportation concessions in the U.S. In many countries without the relatively easy access to tax-supported

[2] Public Works Financing, U.S. Transportation Projects Scorecard (through 2005).

capital, long-term private concessions have been used successfully to develop and operate a significant share of the transport infrastructure. We are beginning to see versions of that financing approach emerge as a realistic alternative for large user-backed facilities in this country.

Rationale for the Concession Model

In simple terms, the rationale for using concession-type approaches lies with the revenue / risk profiles of the projects being financed. Large, start-up toll projects tend to face significant construction and revenue ramp-up risks. But in the long-run, these projects generally are able to generate net revenues (in excess of operating and maintenance requirements). The more flexible and patient capital provided through private concessions may better match these project financing profiles than conventional municipal debt capital.

Concession financing typically combines private equity investment and interim debt financing (in the form of bank loans and/or revenue bonds) to carry the project through construction and revenue ramp-up. During this initial period of uncertainty, the debt holders receive interest-only payments to minimize the financing burden on the cash flows. Once project performance has stabilized, permanent financing can be arranged more easily. This "regearing" not only takes out the interim loans but also provides a return to equity investors. Increasingly, financial intermediaries are assembling mutual funds as the preferred vehicle to raise investment capital. In this way, participating mutual fund investors pool their risk based on the performance of a portfolio of projects. This contrasts with the municipal bond model, where investors face individual project risk in terms of full and timely debt service payments throughout the project financing period.

It is true that private equity and taxable debt under a concession approach require higher nominal returns than does tax-exempt debt. Yet private sponsorship can bring advantages in the form of development expertise and greater flexibility in structuring the plan of finance to accommodate the project's revenue profile. For example, as we have recently seen with the Chicago Skyway and the Indiana Toll Road, a capital structure involving private equity and taxable debt may be able to monetize a larger sum from a given revenue stream than a 100 percent municipal bond approach. Municipal bonds (unlike bank debt) generally require an investment grade rating and therefore are more volume-constrained by the debt service coverage levels the project must demonstrate.

Limitations of the Municipal Model

The traditional U.S. municipal bond model works well for financing established systems. But this may not be the most efficient method for financing large start-up, user-backed projects. Municipal bond investors typically require full and timely payments on long-term, fixed-rate obligations. In order to mitigate construction completion and revenue ramp-up risk and achieve minimal investment grade ratings (necessary for wide market access), the standard municipal bond model often must accommodate a back-loaded debt structure, extra large cash reserves and external credit enhancement. Furthermore, municipal bonds typically have fixed amortization

schedules, which lack flexibility in dealing with the revenue ramp-up risk exhibited by many project financings.

These various requirements tie up extra capital, require negative amortization of principal (compounding of outstanding debt), or otherwise result in additional expenses that can significantly dilute the cost savings of the tax exemption. Finally, with several large toll projects financed under this model having experienced difficulty because of lower-than-anticipated traffic levels, there may be greater resistance among municipal bond investors to purchasing long-term debt that subjects them to "equity-type" risks but pays them only "fixed-income-type" returns.

The bottom line result depends on the underlying project economics and the willingness of future users to pay for use of the facility. It may not always be the case that a public/tax-exempt financing approach is optimal for a particular project.

Conclusion: Considering a Strategic Role for PPPs

Given the current fiscal and political realities, it is clear that state and local project sponsors will have to rely increasingly on new approaches to highway and other transportation infrastructure investment. PPPs can play an important role in expediting projects, bringing innovation and, under certain circumstances, even attracting capital. Yet the fundamental resource issue remains. PPPs may facilitate the use of innovative procurement, management and finance techniques, but they are not revenue sources per se. Their ability to address the investment gap depends on generating new, often project-related, revenue streams – in other words, charging fees that direct users or other beneficiaries are willing to pay for enhanced service levels.

The great reliance on broad-based, general government resources for most highway investments will remain. But the extent to which PPPs can be used to generate targeted, supplemental resources will be increasingly important in advancing certain large, complicated projects that are a key part of the investment backlog.

Figuring out better ways to partner with the private sector may not solve all – or even most – funding problems. But it can be a meaningful step towards a more effective and rational long-term investment strategy at the project level. While debating how to address the larger government funding and policy issues surrounding highway investment, some policy makers and project sponsors are in fact beginning to take this step without waiting for more ominous signs of the transportation system's circulatory failure.

Exhibit I: Simplified PPP Template

Project Activity	Traditional Governmental Delivery	D-B with Public Funding	D-B with Innovative Financing or Operation	Governmental Tax-Exempt Project Financing	Private Concession Project Financing
Delivery	Public	Private	Private	Private	Private
Operation	Public	Public	Public or Private	Public or Private	Private
Financing	Public	Public	Public	Public or Private	Private
Ownership	Public	Public	Public	Public	Private
Examples		Utah I-15; Conway Bypass (SC)	Route 3 (MA); US 550 (NM)	TCA Toll Roads (CA); Denver E-470	Dulles Greenway (VA); Chicago Skyway

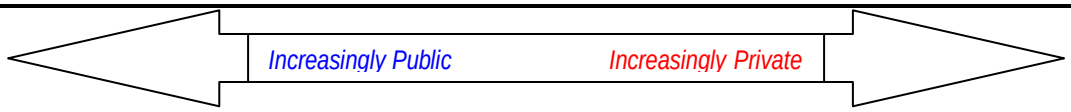
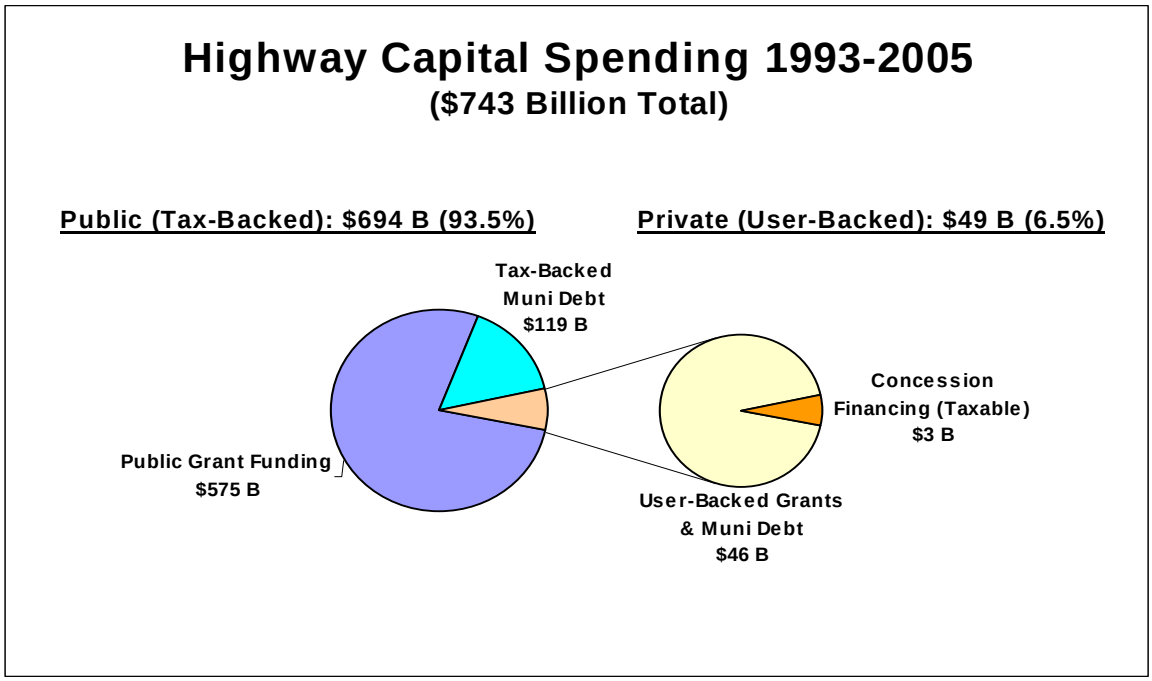
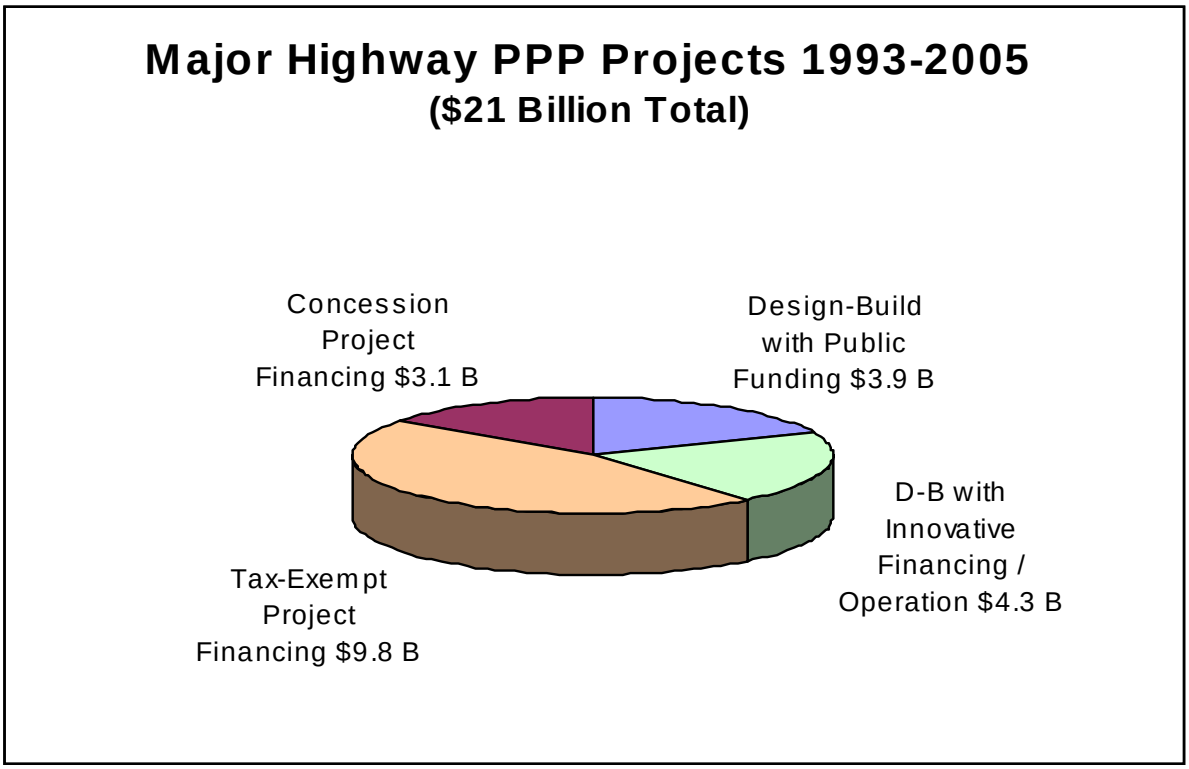


Exhibit II: Private Highway Investment in Context



Sources: Federal Highway Administration, Public Works Financing

Exhibit III: Summary of Major Highway PPPs



Source: Public Works Financing

Attachment 1: Supplemental Sheet

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Outline of Testimony

I. Facing the Growing Challenge of Infrastructure Investment
   a. The national surface transportation investment gap
   b. Recent increases in and enhancements to federal assistance programs

II. Assessing the Nature and Potential of Public-Private Partnerships
   a. What types of PPPs are being employed and why?
   b. How much "private investment" can be generated by PPPs?
   c. Why might a concession approach make sense for some projects?

III. Basic Types of Public-Private Partnerships
   a. Traditional governmental delivery
   b. Design-build with public funding
   c. D-B with innovative public financing and/or private operation
   d. User-backed project financing with government control
   e. User-backed project financing with private control (concession)

IV. Private Investment through User Charges
   a. Overview of U.S. highway investment
   b. Recent history of major highway PPP projects

V. Financing Highways through Long-Term Concessions
   a. Rationale for the concession model
   b. Limitations of the municipal model

VI. Conclusion: Considering a Strategic Role for PPPs

Attachment 2: Curriculum Vitae

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Overview

Mr. Grote has over 15 years of experience in government finance and infrastructure policy. As a principal of Mercator Advisors, he specializes in helping clients develop, implement and assess transportation policies and programs. This includes consulting with federal agencies on legislative and public policy initiatives designed to encourage infrastructure investment. It also entails helping public and private sponsors of major transportation projects design their plans of finance and identify sources of capital. Utilizing his background in federal budget issues, credit policies and financial management practices, Mr. Grote performs a broad range of financial policy analyses for various government agencies and project sponsors.

Finance Tools

Prior to joining Mercator Advisors, Mr. Grote headed the U.S. Department of Transportation's TIFIA Joint Program Office and served as financial policy advisor to the Assistant Secretary for Budget and Programs / Chief Financial Officer. In that capacity, he coordinated legislative proposals, financial policies, special projects and new programs for the USDOT – including the credit assistance program authorized under the Transportation Infrastructure Finance and Innovation Act of 1998 (TIFIA).

As a policy analyst for the Federal Aviation Administration's Office of Policy and Plans, Mr. Grote was responsible for evaluating proposals for financing airport capital improvements and modernizing the air traffic control system. He worked with FAA and congressional staff to develop mechanisms to lease aviation equipment and facilities, target federal assistance to small and non-hub airports lacking ready access to the capital markets, and enable airports to issue debt backed by formula funds and receive credit assistance from a revolving fund capitalized by federal grants.

Also, as a program coordinator for the Federal Highway Administration's Office of Budget and Finance, Mr. Grote helped develop and implement the various "innovative finance" initiatives such as the State Infrastructure Bank (SIB) program and the Grant Anticipation Revenue Vehicle (GARVEE) bond program. Mr. Grote continues to advise public and private clients on the analysis and potential use of these finance tools.

Transportation Policies

Mr. Grote works with a variety of federal, state, local and private entities on developing financial policies that support infrastructure investment. Much of this work involves drafting or reviewing legislative or regulatory provisions. Prior to joining Mercator Advisors, Mr. Grote helped coordinate the development of finance-related proposals in authorizing legislation for both the Federal Aviation Administration and the Federal Highway Administration.

Infrastructure Issues

Mr. Grote draws upon his knowledge of federal budgeting, credit accounting and infrastructure financing to help federal agencies and other clients assess the feasibility of proposals or the effectiveness of programs. Mr. Grote's relevant professional experience with federal agencies includes working at the Federal Aviation Administration, the Federal Highway Administration, the Office of the Secretary of Transportation, the Congressional Budget Office, the Office of Management and Budget and the General Accounting Office. In addition, he has provided consulting services to the Federal Highway Administration, the Transportation Security Administration, the Rural Utilities Service, the Department of Education, and the Local Television Loan Guarantee Board.

Education

Mr. Grote graduated from the University of Minnesota / Humphrey Institute in 1990 with an M.A. in Public Affairs (concentrations in Economics and Policy Analysis). He graduated from the University of North Carolina in 1986 with a B.A. in Geography (emphasis in Economics).