

BUILDING FOR TOMORROW

Innovative Infrastructure Solutions



NATIONAL ASSOCIATION OF HOME BUILDERS

Innovative Infrastructure Solutions

The need to expand and maintain infrastructure is straining resources of many cities, towns and counties. Driven by fiscal crisis, local governments are looking for alternatives to traditional methods of financing, building and managing infrastructure. This document presents a compendium of innovative alternatives that might be applied by public and private entities in search of solutions.

Based on research conducted by:

Wendell Cox, Wendell Cox Consultancy

Ronald Utt, The Heritage Foundation

Janet Corcoran, The Corcoran Network

Funding provided by:



The National Association of Home Builders



The National Association of Realtors



The National Council of the Housing Industry



The National Housing Endowment

On the Cover: The Oyster School, an elementary school in Washington, DC, created through a public-private partnership. Photo by August Scheele.

Table of Contents

Building for Tomorrow	2
Infrastructure Solutions	5
Bonds	5
Tools at a Glance	6
Leasing	7
Case Study—Tax Increment Financing	9
Case Study—GARVEE Bonds	10
Special Districts	12
State and Federal Funding	14
Case Study—Design-Build	14
Case Study—Charter Schools	17
Case Study—Community-Based Wastewater Systems	18
Case Study—Public-Private Partnership	20
Tax Incentives and Tax Credits	21
Privatization	22
Other Alternatives	26
Innovative Finance Checklist	28
Making it Happen	29
Additional Resources	31

Building for Tomorrow

At a time of severe budget problems at the state and local level, many jurisdictions are finding it increasingly difficult to finance needed infrastructure. With tax increases considered taboo in many communities and less funding available today from other levels of government, the challenge of maintaining and expanding infrastructure becomes even more difficult. Driven by crisis, many local governments are left to seek alternatives to traditional infrastructure financing and service-delivery mechanisms.

As citizens demand a broader range of services from their local governments, and as the costs of maintaining and expanding infrastructure rise, local governments are looking for ways to satisfy competing demands. The imbalance between demand for services and willingness to pay is exacerbated because many local governments have not kept up with innovations in financing, constructing and managing infrastructure. The vast majority of local governments manage their infrastructure needs using the same tools and

assumptions they used three decades ago. Given the budget problems facing so many state and local governments, it is clear that it is time to update the way state and local governments deliver infrastructure-intensive public services.

Furthermore, there are innovative options, including alternative financing mechanisms, privatization of infrastructure development and operation and the development of new technologies. Forward-thinking jurisdictions seeking innovative ways to better leverage community resources to meet current and future infrastructure needs will be encouraged to learn that many promising alternatives have been tried and proven successful in communities across the country.

This publication explains many of these innovative solutions. It is based on research conducted by Wendell Cox of Wendell Cox Consultancy, Ronald Utt of The Heritage Foundation and Janet Corcoran of The Corcoran Network. The research was funded by the National Association of Home Builders (NAHB), the National Association of REALTORS®, (NAR), the National Council of the Housing Industry (NCHI) and the National Housing Endowment (NHE).

The alternatives include financing mechanisms such as tax increment financing (TIFs), state bond banks, tax-exempt municipal lease finance, GARVEE bonds and special purpose corporations. Other approaches, such as design-build strategies, public-private partnerships and small-scale water and wastewater systems, offer new ways to get infrastructure built. Still other innovations—asset sales, privatization and competitive contracting of operations—focus on more efficient long-term management of infrastructure.



FINDING A BALANCE

The challenge of providing infrastructure is not new. This has been an issue in America's cities, towns and counties for over 50 years. But things have changed. Three changes, in particular, have made it more difficult for local governments to keep up with infrastructure needs.

First, citizens want—and expect—local governments to provide a broader range of services. They want their government to provide higher-quality roads, parks and schools, as well as other services previously viewed as amenities. They want lower student-teacher ratios. They want more law enforcement officers on the streets and shorter fire response times.

Second, citizens are less willing to give local governments the authority to seek tax revenues commensurate with the expectations placed on government. To put it more clearly, the voting public, in general, is not willing to pay more for the higher level of service it demands from its local government.

Third, contributions to local needs from state and federal governments have declined. Federal contributions for local infrastructure, in particular, have fallen dramatically over the last 20 years. While contributions have fallen, unfunded federal mandates have increased resulting in additional demands placed on local governments. Dozens of state governments, facing tremendous budget shortfalls, are less prepared than ever to help local jurisdictions meet their obligations.

Local governments are squeezed. Citizens want more, they're reluctant to pay more for it, and state and federal contributions are falling. It is no surprise, then, that local governments find it increasingly difficult to keep up with infrastructure needs.

Unable to raise the revenues needed to meet the growing demand for public goods and services, many local governments have sought instead to “manage” growth with regulatory and pricing policies. This regulatory approach to growth has led to the development of a number of restrictive

growth management strategies, such as impact fees, downzoning, permit caps and urban growth boundaries.

However, government regulatory and pricing policies designed to restrict development have not succeeded by any objective measure. They have failed to deliver the promised efficiencies to local jurisdictions. They have also failed to safeguard for future residents the opportunities for homeownership and its attendant benefits. As public demands grow, so too does the cost of providing public goods and services. Forced to make choices amid scarcity, too many jurisdictions are sacrificing the choices and opportunities that should be available to future residents.

Advocates of restrictive growth management policies promised that such policies would yield tremendous cost savings while, at the same time, preserving choices for future residents. That hasn't proven to be the case. A more realistic, disciplined appraisal of where we are and what we are trying to accomplish leads us to conclude that a full inventory of infrastructure financing tools should be considered. Communities must find—and use—more effective ways to maximize their resources so that state and local governments can meet current and future infrastructure needs.

REAL INNOVATION

The purpose of this document is to highlight a variety of tools that local governments can use to better maintain the balance between current and future needs and available financial resources.

Municipal bonds are the most important and traditional way state and local governments finance capital investments. The tax-exempt market provides jurisdictions with a cost-effective, efficient source of funds for large, capital-intensive projects. Bonds are a unique and attractive financing mechanism because they generate large sums of up-front cash that jurisdictions can use to acquire or construct needed infrastructure assets immediately and pay for them over time.

There are, however, fiscal and legal constraints on how much debt a jurisdiction can issue. A jurisdiction must be fiscally healthy and it must have sufficient revenues to make future debt service payments without jeopardizing essential public services. In addition, issuing bonds generally requires legislative and/or voter approval, which may result in political constraints. Many states also have laws or constitutional provisions placing a ceiling on the amount of debt a jurisdiction can incur.

Jurisdictions generally rely upon revenues from property, income, use and sales taxes to pay debt service on their bonds. Issuing additional bonds may require an increase in tax rates or an expansion of the tax base, which many local public officials are reluctant to champion.

For these reasons, a growing number of jurisdictions are using various alternative mechanisms to construct and pay for their infrastructure needs. These may involve new taxes and other revenue sources, new financing structures and mechanisms that attract new sources of capital, alternative facility ownership arrangements or some combination of these features.

Finance innovations are important, but public finance is not the only arena that has benefited from new ideas in infrastructure delivery. In the Boston area, for example, the Massachusetts Highway Department is using a design-build process under which a private company is constructing a major highway expansion in half the time it would have taken the state. In Oakland, Florida, the local government is working with a private education firm to help finance a privately managed public charter school.

These are just two examples of the dozens of innovative options that forward-thinking jurisdic-

tions have initiated. Enticed by the growing body of evidence that these alternatives bring tangible results, more and more jurisdictions are turning to innovative strategies to pay for, build and manage their much needed infrastructure. Many of these approaches can be used by private builders or developers through a public-private partnership with a local government.

The particular innovations in finance, construction and management available to any particular jurisdiction will depend upon its financial history, the size and nature of the infrastructure to be financed and built, as well as state laws, investor and bond insurer requirements and the local political climate.

This publication is designed to help state and local governments and other stakeholders to identify and better understand the range of solutions that can be used to provide infrastructure in the most effective way. On the pages that follow, you will find an inventory of innovative financing, construction and management strategies that have been used in at least one state or local jurisdiction. Furthermore, the case studies highlighted in this publication demonstrate how particular tools are applied.

The utility of these alternative infrastructure solutions depends on a range of factors including the size and needs of the community, its fiscal health and state and local laws and regulations, among others. Not all of these ideas will work for every community, and many challenges lie ahead. Building for tomorrow is not easy, but for enterprising jurisdictions, successful application of the right infrastructure strategies can yield significant benefits for local governments and their citizens. ■

Infrastructure Solutions

State and local jurisdictions can use a wide range of tools in the effort to provide cost-effective infrastructure. The options include established and innovative methods of financing, constructing and managing infrastructure. In the pages that follow are brief explanations of 23 strategies that have been tried and proven successful by state and local governments, public-private partnerships and private-sector enterprises. Case studies highlight particular tools and illustrate how some have been used.

BONDS

Over the last five decades, bonds, especially general obligation bonds, have been the financing mechanism of choice for most local governments. In recent years, a number of bond market innovations and federal regulations have provided local governments more flexibility and enabled more extensive private sector participation in municipal bond issues. Bond banks and revenue bonds are among the most promising alternatives.

GENERAL OBLIGATION BONDS (GO BONDS)

General obligation bonds are the most traditional form of debt issuance by state and local governments. These bonds are also referred to as “full-faith-and-credit bonds” because they are secured by the issuer’s pledge to levy the taxes necessary to make timely payments of principal and interest. These payments are commonly referred to as “debt service” payments.

A general obligation bond is essentially a loan taken out by a state or local government against the value of the taxable property in its jurisdiction. Unlimited-tax GO bonds legally obligate the municipality to levy taxes on all assessed property

within its jurisdiction at whatever level necessary to meet the debt service payments. By contrast, limited-tax GO bonds are backed only by specific revenue sources, such as a sales tax.

► **Benefits of GO Bonds.** In addition to a low, tax-exempt rate of interest, the advantages of GO bonds are that they allow for the immediate purchase of a project and they distribute the costs of acquisition and construction over the useful life of the facility.

► **Limitations of GO Bonds.** GO bonds typically require voter approval—sometimes by two-thirds of the electorate—or legislative approval, or both. There may also be state law or constitutional limitations on the amount of debt the jurisdiction can have outstanding. Finally, there is typically a great deal of competition for GO bonds among the many public projects in need of financing.

BOND BANKS

Bond banks are state-sponsored entities that make local infrastructure projects feasible by providing access to the municipal bond market and direct and indirect financial subsidies to local jurisdictions. Bond banks work by issuing their own debt securities, typically enhanced by some form of state

Infrastructure Tools at a Glance

BONDS

- ▶ General Obligation Bonds
- ▶ Bond Banks
- ▶ Revenue Bonds

LEASING

- ▶ Tax-exempt Municipal Lease Finance
- ▶ Certificates of Participation (Lease) Financing

SPECIAL FINANCING DISTRICTS

- ▶ Tax Increment Financing
- ▶ Special Districts
- ▶ Community Development Authorities (CDA)
- ▶ Community Development Districts (CDD)

STATE AND FEDERAL FUNDING

- ▶ State Revolving Funds
- ▶ GARVEE Bonds
- ▶ TEA-21
- ▶ State Infrastructure Banks

TAX INCENTIVES AND TAX CREDITS

- ▶ Federal Tax Credits

PRIVATIZATION

- ▶ Privatization and Competitive Contracting (Outsourcing)
- ▶ Design/Build Strategies
- ▶ Asset Sales
- ▶ Public/Private Partnerships
- ▶ Partnership Schools
- ▶ Small-Scale Water and Wastewater Systems

OTHER TOOLS AND TECHNOLOGIES

- ▶ Electronic Road Pricing
- ▶ Financing Equitable Impact Fees
- ▶ Special Purpose Corporations

credit support. Bond banks act as conduits, re-lending bond proceeds to local jurisdictions to finance water and sewer, school, transportation, solid waste and economic development projects. By pooling a number of smaller issues and backing them with the state's credit, bond banks reduce the cost of

borrowing for local jurisdictions.

▶ **How Do Bond Banks Work?** The administration and financing of bond banks varies from state to state. Most bond banks operate as independent, self-supporting authorities, although a few rely on state appropriations to subsidize their operations. Self-supporting bond banks generally rely on local borrower fees for support, charging either a lump-sum fee at closing or an annual fee. Most bond banks are established as independent authorities by state law, although some bond banks are located within and subordinate to other units of government such as the state treasurer's office, an industrial commission or economic development department.

The most common forms of financing offered by bond banks are long-term bond pools, including refunding, cash flow financing, and equipment lease financings. Other less common forms of financing include payment of costs of issuance and funding of debt service reserve fund requirements, and revolving loan programs.

Under a long-term bond pool program, a bond bank issues bonds under a master agreement—commonly known as a master indenture—which establishes the terms of the agreement. Proceeds of the bonds are used to purchase debt obligations of local jurisdictions. Bondholders are secured by the loan repayments from the pool of local borrowers, and may have the added security of credit enhancement of the state. Given the diversification of the pool, bondholders generally require lower interest rates than they would if they had purchased the debt obligation of a single local jurisdiction. The pooling feature also provides certain economies of scale by spreading fixed costs of issuance (e.g., rating agency fees, printing, bond insurance) across several borrowers.

▶ **The Benefits of Bond Banks.** Smaller issuers often are not rated or have lower credit ratings than other issuers in the municipal bond markets. Small issuers often use bond banks because they provide such jurisdictions with a lower cost of capital, in

terms of both interest rates and costs of issuance. Bond banks also provide smaller issuers with better market access. They are of particular benefit to jurisdictions with projects that are too small to be sold publicly; the fixed issuance costs would be too great to make it cost effective to go to the market alone. Finally, bond banks provide local jurisdictions with technical and administrative expertise with respect to the complexities of debt issuance.

► **The Limitations of Bond Banks.** In order to qualify for a bond bank loan, the local jurisdiction must satisfy the bond bank's credit requirements. As a condition to making the loan, the bond bank may require a general obligation bond pledge, and/or requirements relating to debt service coverage and the issuance of additional bonds. Bond banks sometimes lack flexibility for local borrowers. They may not be suitable for use by larger jurisdictions and those with higher-quality credit ratings.

REVENUE BONDS

Revenue Bonds are limited-liability obligations. The security for revenue bonds is a pledge of a specific revenue stream, usually associated with the project being funded or the enterprise system of which the project is a part. Since they are not backed by the issuing jurisdiction's taxing power, revenue bonds are not included in the usual debt limitations on the issuance of GO bonds. Another advantage of revenue bonds is that they typically do not require voter or legislative approval. Because of the limited nature of the issuer's repayment obligation, however, revenue bonds typically bear a higher interest rate than general obligation bonds.

LEASING

TAX-EXEMPT MUNICIPAL LEASE FINANCING

Tax-exempt municipal lease financing is an effective way for jurisdictions to finance capital improvement projects or to purchase essential

equipment. Although typically used for equipment acquisitions, lease financing has become an increasingly important component of both state and local governments' capital improvement programs. The purposes for which a jurisdiction may lease property will depend upon the provisions of applicable state law. This type of financing is now common in at least 33 states. Schools, courthouses, prisons, libraries, parking facilities, municipal buildings, recreational facilities, and wastewater treatment systems have been financed using municipal leases.

► **How Do Leases Work?** Municipal leases are structured as a series of one-year renewable obligations that are subject to the municipality's ability to appropriate funds for the making of lease payments. The lessee will be the jurisdiction that seeks to acquire the particular leased property. The lessee's agreement under the lease to pay rental payments (representing principal and interest components) is the basis for treating the inter-



est component of the rental payments as federally tax-exempt. If the lease is properly structured, the interest component of the jurisdiction's rental payments is treated as tax-exempt for federal income tax purposes to the owner of the lease. For state tax purposes, the tax treatment of a lease depends on the state's income tax laws.

The lessor entity in a municipal lease financing arrangement depends upon state law and the particular lease financing structure. Generally, however, the lessor is either an independent leasing company or a leasing subsidiary of a bank, a trustee bank, a constituted authority created under applicable state law to act on behalf of that state's municipalities for such purposes (e.g., a redevelopment agency, a building ownership authority) or a non-profit corporation or public benefit corporation organized under applicable state law acting on behalf of the municipality for that purpose. The jurisdiction generally grants the lessor, or a trustee as assignee of the lessor, title or a first lien on the leased property for the life of the bonds.

Depending upon the applicable state appropriation and budgeting laws, lease payments are made from moneys appropriated annually or biennially from the municipality's general, operating, or capital improvement funds or other legally available funds. To avoid having the agreement classified as debt for state and local law purposes, most tax-exempt leases include a "non-appropriation clause" whereby the jurisdiction can terminate the lease, without penalty, if it decides in any given year not to appropriate sufficient funding to make the rental payment. In the event the jurisdiction chooses to exercise its right of non-appropriation, the lessor or the trustee has the right to take possession of the leased asset. They may then lease the asset to another party or repossess and sell the asset.

Federal tax law determines the maximum lease term; it may not exceed 120 percent of the average reasonably expected economic useful life of the property being financed.

► **The Benefits of Leasing.** By leasing, a jurisdiction is able to finance projects without incurring a "debt" or "indebtedness" for purposes of the voter approval and debt limitation requirements of state law. Leasing is a flexible, cost effective alternative financing option to bonds. It allows a jurisdiction to still take advantage of low-cost tax-exempt rates and spread the cost of financing over time, rather than paying for property with cash, on a pay-as-you-go-basis or depleting existing reserves. Since leases do not require a bond referendum, it may be possible to bring a lease financing to market more expeditiously than general obligation debt.

Another advantage of leasing is that it is a way to finance facilities for which obtaining voter approval of general obligation debt is difficult, such as prisons, law enforcement facilities, and, in communities with predominantly older populations, public schools.

► **The Limitations of Leasing.** Lease obligations do not bear the same legal protections as general obligation bonds. Under a lease financing, repayment is subject to the issuer's ability to appropriate funds in order to make lease payments. Consequently, the interest costs associated with municipal leasing are higher when compared with the issuer's general obligation debt for the same term.

CERTIFICATES OF PARTICIPATION (COPs)

Certificates of participation (COPs) are the most commonly used form of municipal lease obligations. Like other forms of lease financing, COPs provide jurisdictions with an alternative financing mechanism to cash purchases or bonded debt. COPs have become an increasingly important financing mechanism for jurisdictions because they do not require voter approval and do not count toward a jurisdiction's debt limitations. Like other forms of lease financing, the issuer's lease payments are subject to annual appropriations.

► **How Do COPs work?** In a COP financing
continued on page 10

Tax Increment Financing

TIFs Bring Billions in New Investment to Chicago

Tax increment financing (TIF) is one of the most productive and commonly used redevelopment tools available to local governments. The City of Chicago, for example, has more than 120 “TIF districts” that have collectively generated more than \$6 billion in public and private investment over the last 15 years.

For a thorough explanation of TIF districts, see page 12. In a nutshell, property taxes within a TIF district are frozen at a baseline level. The difference between the baseline tax assessment and the taxes that would otherwise be assessed on an improved property is the “tax increment,” which goes to the administrators of the TIF district. The TIF district can borrow against the anticipated incremental increase in property taxes to make improvements, such as rehabilitation of a building or construction of a parking garage.

“Federal and state funding has fallen in recent years, and cities have had to retool their economic development funding,” said Peter Scales, communications director for Chicago’s Department of Planning and Development. “TIFs have worked very well for Chicago.”

Chicago’s Central Loop TIF is an interesting example. Created initially in 1984 as the North Loop TIF, the district was expanded in 1987 and renamed the Central Loop TIF. The district is bounded by Wacker Drive on the north, Michigan Avenue on the east, Congress Parkway on the South, and Dearborn and Franklin streets on the west.

“It’s hard to imagine now, but in 1984



that was a very blighted area,” Scales said. “State Street at that time was closed to traffic. It was a pedestrian mall, but it was very poorly done. There were many dilapidated properties and not much commerce—not much activity of any kind. The area needed a lot of help.”

TIF funds were used for a lot of infrastructure work, Scales said. State Street was reopened to traffic. TIF funds were also used to install new lighting, new streetscaping, and new entrances to the subway stations, as well as for the construction of new buildings and parking facilities.

Tax increment financing was used to renovate three historic theaters on Randolph Street—the Oriental, Goodman and Palace theaters. Each of the

theaters got about \$10 million in TIF assistance. Buildings that were once closed and in disrepair now host plays and Broadway-style productions. The Lion King is just beginning a long run at the Palace Theater, Scales said

The mix of public and private investment has helped make the area Chicago’s downtown theater district and it has established State Street as one of the city’s premier destination areas, Scales said.

The Dearborn Center, an office tower on the west side of the District, received \$10 million in TIF assistance and is expected to return about \$53 million in tax revenue to the city over the life of the TIF, Scales said.

“Central Loop TIF is a bit atypical because it is a downtown area,” Scales said. “We have many other TIFs that are nowhere near downtown. We have industrial TIFs, neighborhood retail TIFs.”

Larger TIFs are individually negotiated. Chicago now has a streamlined application process for TIF requests below \$2 million.

For every \$1 the City of Chicago has invested in the TIF program, the private sector has invested \$6.50. And, in addition to generating a total of \$6 billion in public and private sector investment, the city’s TIF districts have helped Chicago create or retain 60,000 jobs, Scales said.

More information about Chicago’s tax increment financing program can be found on the web at <http://www.ci.chi.il.us/PlanAndDevelop/Programs/TaxIncrementFinancing.html>, or you can contact Peter Scales at 312-744-2976. ■

arrangement, the jurisdiction enters into a lease agreement to pay a fixed amount annually to a third party lessor, usually a nonprofit agency or a private leasing company. The lessor raises funds through the sale of COPs to investors, which provides the funds needed to pay for the purchase of the asset. The distinguishing characteristic of a COP is that the lease agreement is divided and sold to multiple investors in fractions, usually in \$5,000 denominations. Each certificate represents a fractionalized or proportional interest in the rental payments that will be made by the jurisdiction. The jurisdiction pays yearly rental payments (consisting of principal and interest) to the

certificate holders until the debt is repaid.

The lessor assigns all of its right, title and interest in the lease, including the right to receive rental payments, to a trustee under a trust agreement. The trust agreement includes provisions with respect to the trustee's responsibilities, as well as provisions with respect to the terms and security for the certificates and the funds and accounts to be administered. The trustee is obligated to make distributions with respect to the certificate only to the extent that it actually receives rental payments from the jurisdiction.

One of the trustee's most important responsibilities is to hold title to the leased asset. During

GARVEE Bonds

Alabama Borrows Against Future Federal Funds To Replace Old Bridges

Alabama's old timber-pile bridges were showing their age. School buses were being routed around the countless weight-restricted county bridges, adding as much as an hour a day to the bus ride for some children.

"We had many places where bridges were posted with such low weight limits that all you could drive over them was a car," said Bill Flowers, assistant director of finance for the Alabama Department of Transportation. "It got to the point that we didn't want to hear from the bridge inspectors because we didn't want to be scared when we were driving down the county roads."

Alabama officials knew they had to replace the bridges. But with 1,300 inadequate bridges across the state's 67 counties, the question was how quickly could they get the job done. The estimated cost of the project was \$250 million—money the state didn't have.

So they decided to borrow against future federal bridge replacement funds

to finance the project on a much shorter timeline.

The financing mechanism is known as Grant Anticipation Revenue Vehicles, or GARVEE bonds. Most often used when a state has a compelling short term need that requires a large amount of capital, GARVEE bonds enable the state to borrow against anticipated future federal funds.

In the spring of 2000, the Alabama legislature approved the bond sale, contingent on passage of a constitutional amendment for selling \$50 million of general obligation bonds to finance the local matching share. In November 2000, Alabama voters approved the constitutional amendment and the bridge replacement program began.

The first three GARVEE-funded projects were approved for advance construction in December 2000, and there are now approximately \$68 million of advance construction projects underway.

Under the \$250 million program (\$200

million of GARVEE bonds for the Federal share and \$50 million of general obligation bonds for the non-Federal matching share) Alabama will replace roughly 1,300 county bridges across the state. The state's general obligation bonds were sold in November, 2001. The GARVEE bonds were sold in April, 2002 on a competitive basis. The GARVEE issue was rated A by Standard & Poor's and achieved a total interest cost of just over 4.65 percent.

While the GARVEE bonds are making it possible for the state to replace a great many bridges in a relatively short timeframe, the bonds do have a downside, Flowers said.

The total cost of the GARVEE bonds is \$286 million, including \$86 million in interest. The state must also pay interest on the general obligation bonds. The whole program could cost a little more than \$350 million, including interest, over 15 years.

"The biggest problem is that we are incurring debt to pay for ongoing infra-

the lease term, title may be vested in the name of the jurisdiction, with the lessor retaining a security interest in the asset. Upon repayment, ownership of the asset is transferred to the jurisdiction. If, however, the jurisdiction defaults on its rental payments, the trustee is responsible for selling the asset and using the sale proceeds to reimburse the certificate holders.

► **The Benefits of COPs.** Since payments are made year to year, the main advantage of COPs is that the transaction is not considered “debt” and therefore not subject to either voter approval or debt limitation requirements under state law.

Although COPs are a relatively new financing

mechanism, they are now used in more than half the states. In some states, special districts may not be authorized to issue bonds but may issue COPs backed by equipment.

► **The Limitations of COPs.** COPs are not permissible in all states. They are generally more expensive to issue than bonds due to the involvement of a third party. Investors generally require higher interest rates for COPs than for bonds because they are considered a riskier investment; in any given year the jurisdiction can terminate the lease, without being considered in default.

A COP financing is typically used to finance large equipment or real estate involving a relatively

structure needs,” Flowers said. The state DOT will end up paying approximately \$86 million in interest over 15 years. But over those 15 years the state of Alabama will have other infrastructure needs that could have been paid for with the \$86 million used to finance the bridge project, he added.

As long as the state DOT has a funding mechanism to tap into for cash if needed, and as long as the cash flow is adequate to pay the bills, there is no need to sell the GARVEE bonds, he said. The program could be financed on a pay-as-you-go basis using available federal funds.

“I think we could have done this project without incurring the GARVEE debt, but it would have taken us longer to do it,” Flowers added. “There were compelling arguments for and against the use of GARVEE bonds.”

The bookkeeping, Flowers said, has been the major headache of the program.

“We have to make decisions about when and how much to draw down from our general obligation issue and when to draw down from the GARVEE issue as well as when and how to allocate the debt service cost,” Flowers



said. “We’re also dealing with 67 different counties, and they all have their own bookkeeping issues.”

The bookkeeping is further complicated by the fact that the GARVEE bonds were backed by federal funds that have not yet been allocated. TEA-21, the current federal transportation legislation, expires this year. The legislation to reauthorize federal transportation spending is just now being debated in Congress. “And that legislation covers five years,” Flowers said,

“so five years from now we’ll be going through the same concerns.”

“Our local Federal Highway Administration (FHWA) reps have been very good about working with us and the folks in Washington to help us through the challenges,” Flowers added. “But there are some of us here in Alabama who are ready to retire. Now.”

For more information about Alabama DOT’s use of GARVEE bonds, contact Lamar McDavid, Alabama DOT, 334-242-6360. ■

substantial principal amount. This allows the distribution of certificates to be made more broadly than with a simple lease financing, which would be placed with a limited number of investors.

SPECIAL FINANCING DISTRICTS

TAX INCREMENT FINANCING (TIF)

Tax increment financing (TIF) allows a jurisdiction to capture, for a pre-determined number of years, the tax revenues generated by the enhanced valuation of properties within a “TIF district” resulting from various improvement projects.

► **How Do TIFs Work?** TIF allows a jurisdiction to recapture increased taxes attributable to redevelopment. The tax revenues yielded, which exceed the taxes collected prior to redevelopment, constitute the “tax increment” and the TIF captures that gain to reinvest in and support the redeveloped area.

Since its inception, TIF has been associated with urban redevelopment projects. Over time, however, many states have expanded the use of TIF for most development projects. As TIF has grown in popularity, so has the list of eligible public and private uses of tax increment financing. Some states have expanded the uses of TIF to in-

clude a broader range of projects, including public improvements such as golf courses and parks and private projects such as hotels and skywalks.

► **The Benefits of TIFs.** The proceeds collected from a TIF district can be used for a broad range of public purposes such as infrastructure, property acquisition, demolition, rehabilitation and related services. TIF is an equitable financing technique because the costs and benefits of the improvements to the district are borne by all property owners in the TIF. TIF generates tax revenues without increasing tax rates or imposing any new taxes or special assessments on the project area.

► **The Limitations of TIFs.** Revenues for the TIF district can drop when the economy slows or if property values fail to appreciate. Furthermore, revenues are dependent upon the success of the TIF.

SPECIAL DISTRICTS

A special district is a form of local government that delivers specific public services within defined boundaries. Special districts deliver highly diverse services such as water, fire protection, police protection, and flood control.

► **How Do Special Districts Work?** Most special districts serve just a single purpose, such as sewage treatment, but there are some multi-function districts that provide two or more services. Service district areas vary in size, ranging from a single city block to vast districts that cut across city and county lines. Although they enjoy many of the same governing powers as cities and counties, special districts remain legally separate, autonomous government entities. Depending on state law, special districts can be established by a local community or by voter initiative. The governance and authority of special districts vary depending upon the type of district and state law requirements. Special districts enjoy many of the same governing powers as other jurisdictions. They can enter into contracts, employ workers, acquire real property, issue debt, impose taxes, levy assess-



ments, and charge fees for services.

Depending on state law, special districts can be established by a local community or by voter initiative. The governance and authority of special districts vary depending upon the type of district and state law requirements. Independent districts are generally governed by a separate board of directors elected by the district's own voters. A dependent district is usually governed by an existing legislative body, such as a city council or a county board of supervisors.

There are also non-enterprise districts, those providing services such as enhanced police protection, libraries and pest abatement, which are not conducive to fees because their services benefit an entire community, not just certain residents. Non-enterprise districts rely overwhelmingly on traditional tax revenues, such as property taxes, to fund their operations. Under most states' laws, enterprise and non-enterprise districts typically have authority to issue either general obligation or revenue bonds to help pay for capital improvements.

► **The Benefits of Special Districts.** A primary advantage of special districts is that they focus costs only on those benefiting from the services, allowing local residents to obtain the expanded quality or range of services they want at a price they are willing to pay. Special districts enjoy the advantage of being "self-financing"—they have the ability to raise a predictable stream of revenues from the residents who benefit from the services provided.

► **The Limitations of Special Districts.** Business and property owners may view them as a redundant, performing basic public services that, in their opinion, should routinely be performed by local governments. Special districts add another layer of government including related taxes and taxing districts. Depending upon how the district's boundaries are defined and on the nature of services provided, special districts can be an inequitable financing method. For example, poorer neighborhoods are not likely to benefit from special districts,

as residents cannot afford to tax themselves at a higher rate to pay for additional public services.

COMMUNITY DEVELOPMENT AUTHORITIES (CDA) AND COMMUNITY DEVELOPMENT DISTRICTS (CDD)

CDAs can be viewed as quasi-governmental entities, whose private sector creation is governed by state laws. Property owners within the boundary of the authority (CDA) or district (CDD) are provided a limited number of public services. These services usually include infrastructure such as sewer and water, roads, and storm water collection. The authorities preside over these special taxing districts that allow developers to issue tax-exempt debt to fund infrastructure improvements. CDAs are permitted in 30 to 47 states and, depending on state law, can be approved by municipal or county governments.

A CDD is sanctioned by state law where permitted and is essentially public in nature. They are often permitted the right to issue tax-exempt debt to fund the infrastructure they build. In effect, this process may be viewed as the converse of privatization (a governmentalization) of certain government functions. It should be noted that the origin of these special districts dates back to the late 1970s in California, when the passage of Proposition 13 induced municipalities to look for alternative sources of infrastructure funding. That search led to the creation of special taxing districts, which came to be known in California as Mello-Roos districts. Since then, California developers have raised an estimated \$20 billion dollars through these districts to fund infrastructure. An estimated 90 percent of all planned unit developments in the state utilize Mello-Roos districts to fund infrastructure within the development. CDDs are permitted in more than 30 states and, depending on state law, can be approved by municipal or county governments.

► **How Do CDAs and CDDs Work?** In effect, the developer-created CDA performs a quasi-governmental function in cooperation with the local gov-

ernment within the boundaries of the established district. A tax surcharge is added to homes within the CDD. These taxes, other fees and revenues are set at a level to service the debt and cover administrative fees.

► **The Benefits of CDAs and CDDs.** This concept offers lower-cost tax-exempt borrowing and obviates the need to add infrastructure costs and/or impact fees to the price of a house.

► **The Limitations of CDAs and CDDs.** Depending upon the enabling law, these authorities and districts vary in the services they are permitted to provide, how they can be formed, who can join, how

they raise revenues and how autonomous they can be from the local municipality. State laws also limit these authorities' and districts' formation and purpose. They are costly to establish and are therefore limited to larger developers and builders.

STATE AND FEDERAL FUNDING

STATE REVOLVING FUNDS (SRFs)

SRF programs make low-cost loans available to jurisdictions and loan repayments are recycled back into the program to fund additional projects.

Design-Build Saves Time and Money

Timeline for Highway Expansion Cut in Half

Relying for the first time on a design-build process, The Massachusetts Highway Department (MassHighway) is finding that this unique method of designing, financing and building a highway expansion can save money and shave years off the time needed to complete a big project.

In August, 2000, the highway construction company Modern Continental won the contract to expand Route 3 North, a 21-mile highway that runs from the I-95/Route 128 highway around Boston north to the New Hampshire border. The project includes the addition of one travel lane in each direction, the addition of a median shoulder and the replacement of 42 bridges. The design work began in August, 2000.

"We decided to use a design-build process on this project because it offered a much shorter timeline and it enabled us to use an alternative financing method," said John McDonnell, MassHighway's senior project manager for the Route 3 North Project. "Normally, we fund a highway or bridge construction project with state and/or federal funds. In this case, the project was funded through a private,

non-profit corporation, a quasi-government entity that had the authority to issue tax exempt bonds."

The Route 3 North project serves as a good example of how the design-build process can be used. It also offers lessons regarding the conditions under which such a process is most appropriate.

"We accepted the proposal on this project in August, 2000, and the expected completion date is February, 2004—less than four years," McDonnell said. "We're less than a year from completion and some of the new lanes are already in use. We wouldn't have even had a shovel in the ground at this point if we had used the traditional design-bid-build process. We'd be looking at a project timeline of 10 to 12 years, including at least four or five years just for the design."

Before it could seek private sector bidders for a design-build highway expansion, MassHighway first had to receive authority from the state legislator to use the design-build process.

"This project enjoyed strong support from the seven communities involved," McDonnell said. "Those communities

engaged their state legislators and asked them to expedite this project. We did the research and found that design-build offered the fastest timeline. The state legislature then gave us special authority to use design-build for the expansion of Route 3 North."

Once the design work began, representatives of MassHighway and Modern Continental met on a monthly basis with the seven communities served by Route 3. At the same time, the team was working on financing for the project.

With a price tag of \$385 million, a traditional bond issue by MassHighway was out of the question. MassHighway has a limit on how much bond debt it can incur, and this one project would have used up that capacity and left no money for other necessary projects. Instead, MassHighway set up a quasi-governmental, non-profit corporation—a 63-20 corporation known as the Route 3 North Transportation Improvements Association—to issue the bonds. The special financing was part of the design-build arrangement approved by the state legislature, and there are limits on the financing. Although the use of an IRS 63-20 quasi-

► **How Do State Revolving Funds Work?** SRF loans are repaid with principal and interest by the loan recipient, which allow the SRF to maintain or increase funding levels. At the state level, the most common revolving funds are the Clean Water State Revolving Fund (CWSRF) and the Drinking Water State Revolving Fund (DWSRF). The CWSRF example is used to illustrate the process, benefits and limitations of SRFs. Under the CWSRF, each state and Puerto Rico maintain revolving loan funds to provide financing assistance for water-quality infrastructure projects. Funds to establish or capitalize the CWSRF programs are provided through an-

nual federal government grants to states and state matching funds (20 percent of the federal government grants). The dollar amount of each state's annual capitalization grants is determined through a funding allocation formula in Title II of the Clean Water Act. The grant amount can fluctuate from year to year depending on Congressional appropriations. In fiscal year 2003, the CWSRF received an estimated \$1.2 billion in funding from Congress. States can meet their 20 percent match requirement through direct appropriation or by issuing general obligation or revenue bonds.

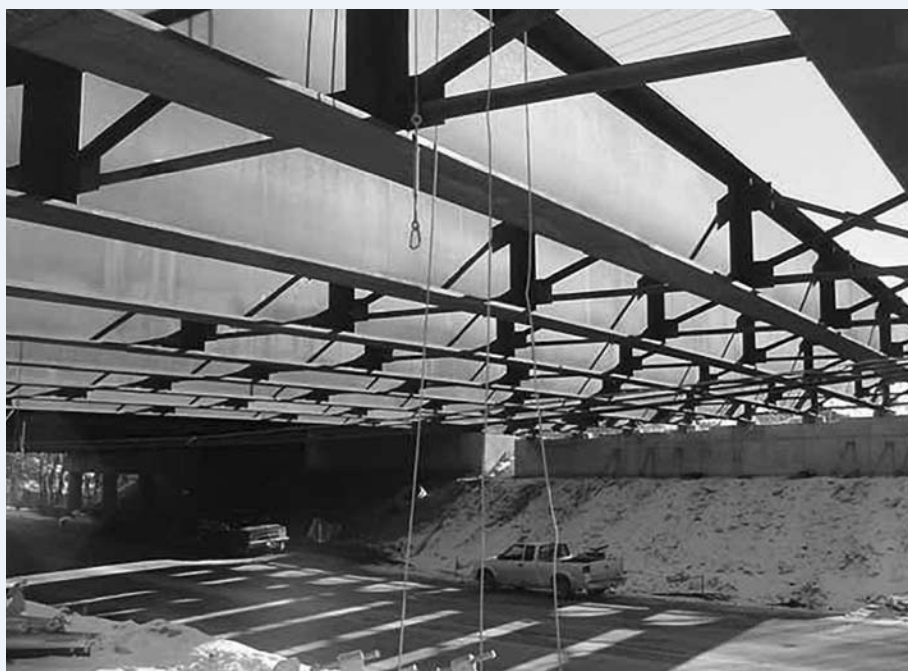
► **The Benefits of SRF (CWSRF):** The revolving

government entity does provide more flexibility in terms of bond issues, MassHighway will face limits in funds available for projects of this sort.

The process worked in this case, McDonnell said, because the communities involved were willing to sacrifice some flexibility in terms of design in exchange for a significant reduction in the completion time. Under the traditional design-bid-build process, each community might have sought design changes—an on-ramp here, a new interchange there. Such changes can add years to the design timeline and millions to the project cost. But with total funds limited to \$385 million, the seven communities knew that special changes were not possible.

Because it controlled both the design and construction aspects of the project, Modern Continental was better able to introduce construction process efficiencies that helped reduce project costs. And the guaranteed price of the project offset the inflation-related cost increases that occur with longer-term projects.

Still, MassHighway has learned some lessons along the way. "We need to get



better at integrating the design and the building process," McDonnell said. "We have a lot more experience with designing for a design-bid-build process. The demands on the designer are different in design-build. The timeline is so much shorter. And Mass Highway—the buyer—is no longer in the middle between the designer and the builder."

MassHighway is now evaluating the Route 3 North project to determine if design-build is an effective way to build a highway. So far, they like what they see,

McDonnell said. MassHighway will probably do one or two more design-build projects and then the legislature can decide if it wants to give MassHighway the authority to do design-build projects without special legislative approval.

More information about the Route 3 North design-build project can be found on the web at <http://www.route3construction.com/contact.asp> or you can contact Mary Carrier, MassHighway's spokesperson for the project, at 978-589-1750. ■

nature of these programs, combined with annual capitalization grants to the states from EPA and required state matches, has ensured a perpetual and growing source of funds for water quality projects. CWSRF gives states flexibility in administering their programs and in determining funding priorities, loan terms and project eligibility. States also have the flexibility to target resources to their particular environmental needs, including contaminated runoff from urban and agricultural areas, wetlands restoration, groundwater protection, brownfields remediation, estuary management and wastewater treatment. States are able to customize loan terms to meet the needs of small and disadvantaged jurisdictions. In 2001, 65 percent of all loans (26 percent of funding) were made to communities with populations less than 10,000.

► **The Limitations of SRFs.** The federal government's commitment to funding the CWSRF has declined in recent years. In fiscal year 2002, the program received \$1.35 billion. Funding dropped to \$1.21 billion in fiscal year 2003, and, for fiscal year 2004, the Bush Administration's proposed budget for CWSRF was \$850 million, representing the largest cut proposed in the EPA's budget.

The CWSRF has been a highly effective and innovative way for states to stretch annual capitalization grants and to provide a perpetual and growing source of financial assistance for their priority water quality projects. But the demand for SRFs as a funding source for water and wastewater quality projects far exceeds available fund capacity.

GARVEE BONDS

In recent years, federal law has expanded states' ability to tap federal-aid highway funds as another potential repayment source. In this variation of a grant anticipation note, states can pledge a share of future federal highway funding toward payment of debt service on a long-term bond issue. Bonds repaid with future federal funds are commonly referred to as Grant Anticipation Revenue Vehicles, or "GARVEE bonds."

► **How Do GARVEEs Work?** Any project that seeks GARVEE financing must first be approved by the Federal Highway Administration (FHWA) as a federal-aid debt financed project. The project must appear on the state transportation improvement plan (STIP). The state must then select a method for matching the federal contribution, either through an up-front non-federal contribution or a payment-by-payment match. The state may also issue a separate series of bonds to satisfy the non-federal matching requirement.

Debt is issued by the state or its designated financing agent. Proceeds from the construction and GARVEE issue fund eligible costs. Funds are obligated as debt service comes due, generally through the use of partial conversion of advance construction (PCAC). PCAC is an especially appropriate technique, since debt service payments will be spread over a number of years and the state can consume only the necessary amount of obligation authority each year.

Federal law requires that GARVEEs be issued by a state, a political subdivision of a state or a public authority. These categories include SIBs and 63-20 corporations. GARVEEs are special obligations of the issuing state or transit authority. They do not constitute general obligations of the issuing entity or of the federal government.

► **The Benefits of GARVEEs.** GARVEEs are an increasingly popular state debt instrument issued to implement construction of certain highway projects sooner than would otherwise be possible. The best candidates for GARVEEs are projects for which the costs of delay outweigh the costs of financing. Such projects must be large enough to merit borrowing rather than pay-as-you-go grant funding and they must be projects that do not have access to a revenue stream, such as local taxes or tolls, and other forms of repayment, such as state appropriations.

► **The Limitations of GARVEEs.** By issuing a GARVEE today, a jurisdiction places claims on future federal funding, thereby foregoing other

continued on page 19

Charter Schools

Partnership Brings School On-Line—Faster

In August, 2003, the town of Oakland, Florida, will open the doors of West Orange Charter Elementary School, a new \$8.1 million K-through-5 elementary school spread over 10 acres and equipped to educate some 700 students. What makes this 40,000 square-foot start-up school so special is the approach Oakland used to make West Orange Charter Elementary School available—in a short timeframe—as an excellent education option for area residents.

West Orange Charter Elementary School is a new charter school being managed by Chancellor Beacon Academies. A charter school is a public school operated by an independent board that has a charter contract with an authorizer to operate independent of the local school district. In this case, the Town of Oakland applied for and received a charter from the Orange County School Board.

Like many communities, Oakland, Florida, faces large financing and planning challenges in meeting its growth and education crunch. According to

Kevin Hall, senior vice president for Business Development for Chancellor Beacon Academies, Oakland solved the problems by working with the local school board to secure a charter and financing the building of the school through the issuance of tax-exempt bonds.

Working in partnership with Chancellor Beacon Academies, which will manage West Orange Charter Elementary School, its bank partner, New York City's Commerce Bank, and the New Jersey-based school developer Workstage, Oakland purchased land and was able to complete financing over an 18-month time span that ended in December, 2002.

Tax-exempt bonds are usually considered the lowest cost option for a borrower—a local government, charter board or non-profit—planning to build a school. But charter schools have some key differences. According to Hall, “generally, a school district is able to borrow at a lower rate than a charter school—it can pledge its tax proceeds to pay debt service. In the case of our

schools, you pay more on your borrowing but you are getting your building sooner, and we have been able to deliver a building less expensively and capacity comes on faster, so it relieves over-crowding.”

There are challenges inherent in establishing a charter school that local governments and developers must work to overcome. Charter schools have a limited operating history and that makes it difficult for potential creditors to evaluate them. And the only revenues typically available to charter schools are per-student allocations from the local school district and these funds are often just enough to cover operating and maintenance costs.

What advice would Hall give local governments and developers trying to build a new charter school from scratch? Be flexible, listen to the desires of the community and be ready to deliver on a first-class education.

“Our approach has been a partnership,” Hall says. “You need cooperation from many different parties to make this work and you need a school product that is going to be attractive—something high-quality to attract parents. From the developer's perspective, there is clearly a value to having a school ready to go and the ultimate sales price of a home when we know what the community is going to look like. Oakland's elected leaders, home builders and education authorities have looked at their local area and said this [education] is the most important thing in our community, so it is important to do this.”

More information about charter schools and Chancellor Beacon Academies can be found at <http://www.chancelloracademies.com/>. ■



Community-Based Wastewater Systems

Small Systems Offer Big Advantages

In the mid-1980s, Edward Clerico and Andrew Higgins pioneered the next generation in small wastewater systems: decentralized, community scale wastewater systems known as “Community On-Site Wastewater Systems” (COWS) designed to provide advanced levels of treatment to ensure water quality and protection for communities.

Their company, Applied Water Management (AWM), now a subsidiary of American Water Works Company and led by CEO Alexander Maxwell, has been growing ever since and COWS are gaining a reputation in states ranging from Massachusetts to Delaware as a cost-effective water quality option for developers and communities.

Historically, communities have employed large, regional wastewater systems to reduce water pollution, but these systems have drawbacks. They have often depended on large amounts of federal and state grants and loans which are becoming increasingly short in supply. And in cases where development has exceeded the capacity of the system, planning and implementing expansion can be cumbersome and time consuming.

COWS provide an alternative because they are smaller, well constructed and managed systems that can address these and other concerns. In the past, smaller facilities—often referred to as “package plants”—have come under criticism for less-than-stellar compliance practices and durability. But with its COWS approach, Applied Water Management has focused not only on design and construction but also on long-term management and operation of the facilities.

COWS can be brought on-line in a

number of ways. In many cases, the developer finances the needed plant and collection system and Applied Water Management takes over as owners after construction is complete and makes payments to the developer.

The timeline can vary greatly from state to state. In some, the needed permits to construct a plant can be obtained within 6 months, in others the process can take years. The total cost can also vary greatly depending upon the size of the plant, quality requirements for the treated effluent, location of the plant relative to the site and the degree of difficulty inherent in



constructing an effluent disposal system. In most cases, discharge is directed into suitable soils where additional treatment takes place and the groundwater table is ultimately recharged.

COWS can be more expensive than traditional wastewater systems because, as a private utility, they do not have access to tax-free or subsidized funding as many regional systems do. However, from the developer’s perspective, COWS can be an attractive option because Applied Water Management is willing to buy back the wastewater system in areas where private utility ownership is allowed, so the developer can recoup a portion

of his investment. With most publicly owned systems, there usually is no return on the investment.

COWS have other tradeoffs. In some jurisdictions, there are regulatory barriers to private utility ownership of COWS and an institutional distrust of smaller plants based on negative prior experiences with other companies. COWS also sometimes have high operating costs, which necessitates assigning rates higher than those typically charged by larger regional systems. Private developers, who are AWM’s primary partner, are also sometimes reluctant to invest more than the absolute minimum necessary in plant and equipment, even at the expense of durability and operability.

What COWS do provide is something that all developers and communities are in need of: a dependable, manageable water quality facility. According to Mark Strauss, Applied Water Management’s vice president/corporate counsel, COWS and other AWM-designed/built and/or operated plants “have consistently met regulatory requirements and have allowed developers the flexibility to proceed with their projects without the need to tie into regional systems. This approach has utility where income levels can support the higher operating costs of smaller systems and the imbedded costs of building the required infrastructure.” Most importantly, COWS “allow an environmentally sound, sustainable approach to development in many cases.”

More information about small-scale water and wastewater systems can be found at Applied Water Management’s website: <http://www.appliedwater.com/awm.htm>. ■

future uses of those anticipated federal revenues. Some states may need enabling legislation to issue GARVEEs and some states limit the volume of GARVEE debt that can be issued.

A key risk to GARVEEs is federal reauthorization, since surface transportation typically operates under six-year authorization cycles. GARVEEs maturing beyond 2003, the current federal transportation funding cycle, face this federal funding reauthorization risk.

TEA-21

TEA-21 authorized the Federal surface transportation programs for highways, highway safety and transit for the six-year period 1998-2003. TEA-21 has been the largest public works funding measure in U.S. history; when it expires on September 30, 2003, TEA-21 will have funded more than \$220 billion for highway and mass transit projects around the country.

► **How Does TEA-21 Work?** TEA-21 created a new paradigm for funding surface transportation programs. This is achieved by ensuring that, for the first time, spending from the Highway Trust Fund for infrastructure improvements would be linked to highway revenues. The financial mechanisms of TEA-21 provide greater equity among states in federal funding—a new minimum guarantee ensures that highway funds are distributed equitably among the states. New Highway Trust Fund “firewalls” provide greater certainty and reliability in transportation funding and enhance the ability of state and local officials to plan, finance and implement their programs. State and local jurisdictions have an incentive to increase their funding levels to match the federal commitments.

► **The Benefits of TEA-21.** TEA-21 built on the initiatives established in the Intermodal Surface Transportation Efficiency Act of 1991 (“ISTEA”), which was the last major authorizing legislation for surface transportation. Together these two acts revolutionized the nation’s approach to surface transportation. ISTEA established a new set

of federal transportation program principles including partnerships with local and state officials to advance capital investment; flexibility in the use of funds; a commitment to strengthening intermodal connections; expanded investment in, and deployment of, new information technologies for transportation services; and a heightened sensitivity to the positive impact that transportation has on quality of life issues.

Funding flexibility, first allowed in ISTEA and continued in TEA-21, has allowed state and local decision makers to consider a variety of transportation options and tailor solutions which address their area’s particular traffic conditions, congestion patterns, air pollution levels, growth patterns, economic development, and quality of life concerns. In addition, TEA-21’s innovative loan and grant programs have encouraged public-private partnerships and further augmented highway and transit funding.

► **The Limitations of TEA-21.** The reauthorization of TEA-21 comes at a time of dramatically different budgetary conditions for the federal government and for states. Although transportation infrastructure has historically benefited from widespread support on Capitol Hill, economic and budget conditions will make it difficult for Congress to increase federal investment in highway and transit over TEA-21 levels. Even if TEA-21 program funding is increased, until economic conditions improve, the current severe conditions of states’ own budget woes could make it difficult for states to come up with the matching funds needed to pay their share of highway project costs and local share on transit projects.

STATE INFRASTRUCTURE BANKS (SIBs)

The National Highway System Designation Act of 1995 (the “NHS Act”) authorized the U.S. Department of Transportation to establish a State Infrastructure Banks Pilot Program. A SIB is a state or multi-state revolving loan fund that, much like a private bank, can offer a range of loans and credit

assistance enhancement products to public and private sponsors of Title 23 highway construction projects or Title 49 transit capital projects.

► **How do SIBs Work?** SIBs are intended to complement the traditional federal aid highway and transit programs, by supporting certain projects that can be financed—in whole or in part—with loans, or that can benefit from the provision of credit enhancement. As loans are repaid, or the financial exposure implied by a credit enhancement expires, a SIB's initial capital is replenished, and it can support a new cycle of projects. By leveraging the federal government's capital contribution, SIBs represent an important new strategy

for maximizing the purchasing power of federal surface transportation funds.

The critical feature of a SIB is that it is capitalized with federal funds but operated by the administering state. The types of assistance that may be provided by SIBs include loans (which may be at or below-market rates), loan guarantees, standby lines of credit, letters of credit, certificates of participation, debt service reserve funds, bond insurance, and other forms of non-grant assistance. As loans or other credit assistance forms are repaid, a SIB's initial capital is replenished and can be used to support a new cycle of projects.

► **The Benefits of SIBs.** SIB loans and credit

Public-Private Partnership

Multifamily Development Funds New Public School

In a tremendous demonstration of outside-the-box thinking, a public-private initiative has delivered much-needed housing and a well-designed public elementary school in Washington, D.C.

In 1998, LCOR Incorporated, a real estate development company, teamed with the District of Columbia Public Schools to build the James F. Oyster Bilingual Elementary school, a 47,000-square-foot facility on Calvert Street in the Northwest section of the District. The facility, the first new school built in Washington, D.C. in twenty years, cost \$11 million.

Under the innovative public-private partnership, the cost of constructing the school was financed with an \$11 million, 35-year, tax-exempt bond package issued by the District of Columbia. LCOR is now repaying those bonds with revenue from a 211-unit, \$29 million apartment building that LCOR and its partner, Northwestern Mutual Life, constructed on the school property's excess land.

"The key to the deal was economic balance," said Tim Smith, senior vice president of LCOR. "We had to balance



the cost of a 47,000 square-foot school against the return from 211 apartment units in a terrific neighborhood. The economics worked because of the neighborhood and the size of the school."

The District and its taxpayers will pay nothing for the school. LCOR built a luxury apartment building—The Henry Adams House—on the unused part of the school property. The apartment building partnership is paying off the \$11 million in tax exempt bonds through payment in lieu of taxes (PILOT).

"We had never done a deal like this

one, but we were intrigued by the economics of the proposal," Smith said. "It's rare that it works, but it's great for all the parties when it does."

The Oyster School, a public, bilingual elementary school, opened in fall, 2001. The old school, built in the 1920s, was torn down.

"When the [request for proposal] was issued in 1998, the District of Columbia was not the hot market that it has since become," Smith said. "It was not considered a terrific place to build apartments. But we saw the potential and we worked a deal that has been very satisfactory."

"The activism and dedication of the parents made all the difference," he added. "I'm happy to take credit for recognizing the economic opportunity. But I have to give credit to the parents and the school district for structuring a proposal that made sense economically and met their objectives."

More information about the Oyster School and the public-private partnership can be found at <http://www.lcor.com/oysterschool1.html>. ■

options provide flexibility to tailor financial assistance to meet a project's specific needs. These options may include low-interest flexible term loans, debt service guarantees, lines of credit, and other capital financing support. Repaid SIB loans can be "recycled" as a source of funds for future transportation projects. SIBs can enable projects to start sooner by using diverse sources of funds to acquire necessary capital. The use of SIBs to finance projects with revenue-producing potential also can free federal and state funds for non-revenue producing projects.

By lowering the financial risk, SIBs can help attract private developers wishing to take an equity interest in projects. And SIBs can help create a stronger market for transportation bonds. Federal and state funds committed to projects help assure private investors of the likely success of projects. In turn, private investment can help close the gap in transportation funding and also attract transportation-related economic development.

► **The Limitations of SIBs.** Congress has not made all states eligible for SIBs. The pace of SIB implementation has been affected by insufficient capitalization—TEA-21 placed limitations on federal capitalization, and the economic downturn has affected the capacity of states to provide new infusions of capital to existing SIBs. Although the use of SIBs is widespread across the nation, over 90 percent of the dollar amount of all SIBs is concentrated in six states: Arizona, Florida, Missouri, Ohio, South Carolina, and Texas.

TAX INCENTIVES AND TAX CREDITS

Tax incentives include a wide array of public taxation tools and mechanisms jurisdictions can use to encourage development or redevelopment in certain geographic areas or sectors. These traditionally take the form of tax credits or tax deferrals. By crediting or deferring taxes to be paid on

property, income or sales, jurisdictions can provide private developers with the financial incentives needed to undertake projects.

FEDERAL TAX CREDITS

Two well-established federal tax credits are the low-income housing tax credit (LIHTC) and the investment tax credit (ITC).

The LIHTC is a federal tax credit for providing affordable new or rehabilitated rental housing. It is administered jointly by the Internal Revenue Service and state agencies. Each state receives an annual tax credit allocation from the IRS equal to an amount per state resident. The process of securing tax credits is very competitive and awards are made according to project criteria specified in a Qualified Allocation Plan (QAP) prepared by each state. Once the state allocates tax credits to a project, the developer often offers the credits to investors. The credits available for a project are determined by the costs of development, the proportion of low-income units and the credit rate.

The ITC offers a major financial incentive for rehabilitation, especially of historic neighborhoods. A federal ITC of 10 percent is available for the rehabilitation of nonresidential properties built prior to 1936. A 20 percent ITC can be applied for the renovation of historic residential or nonresidential properties. There are various restrictions that govern use of the credits and, in the case of the historic ITC, requirements for landmark designation and review of appropriateness of the planned renovation.

► **Qualified Zone Academy Bonds.** In recent years, the federal government has also employed tax credits to help state and local governments address the school facility needs facing school districts. One of these is a federal program piloting tax credit bonds known as Qualified Zone Academy Bonds (QZABs).

At least 46 states and the District of Columbia have used QZABs. Under federal law, participating states allocate bonding authority to "Quali-

fied Zone Academies”—schools or school districts that are located in an empowerment zone or enterprise community or have at least 35 percent of students eligible for free or reduced lunches. School districts can then issue these special taxable bonds, but they must raise private contributions worth at least 10 percent of the bonding authority they receive. Bond proceeds may be used to repair or renovate existing school buildings, but not to build new facilities. Unlike traditional municipal bonds, for which school districts must pay interest over the life of the bond, QZABs are interest-free; school districts must still repay principal, but the purchasers of QZABs receive a federal tax credit in lieu of periodic stated interest.

While the overall results of the QZAB program to date have been disappointing, many small, rural, and innovative schools, have used QZABs effectively as a source of aid for critical repairs that could not have otherwise been undertaken.

► **New Markets Tax Credits.** The New Markets Tax Credit (NMTC) is a new tax credit established by the federal government to stimulate economic and community development and job creation in the nation’s low-income communities. In March 2003, the U.S. Department of the Treasury announced the selection of 66 organizations to receive the first tax credit allocations under the NMTC program. These 66 entities are authorized to issue to their investors, on the aggregate, \$2.5 billion in equity as to which NMTCs can be claimed. Throughout the life of the NMTC program, up to \$15 billion of tax credit allocations will be available. The NMTC is administered by the United States Department of the Treasury’s Community Development Financial Institutions Fund.

The NMTC program permits individual and corporate taxpayers to receive a credit against federal income taxes for making “qualified equity investments” in privately managed investment vehicles known as Community Development Entities (CDEs). The credit provided to the investor totals 39 percent of the cost of the investment and is

claimed over a 7-year allowance period. CDEs are required to invest the proceeds of the qualified equity investments in low-income communities, defined as those census tracts with poverty rates of greater than 20 percent and/or median family incomes that are less than or equal to 80 percent of the area median family income. Examples of expected projects include small business financing, improved community facilities and increased homeownership opportunities. For more information about the NMTC program, see www.cdfifund.com.

PRIVATIZATION

PRIVATIZATION AND COMPETITIVE CONTRACTING (OUTSOURCING)

To the extent that existing public service costs are seen as an obstacle to growth, there are a number of opportunities for communities to lower such costs without diminishing services by establishing alternative delivery mechanisms on competitive principles. In most municipalities, basic public services such as education, facilities management, libraries, water supply, wastewater treatment, roads, transit, law enforcement, fire protection and emergency rescue services are provided by government departments, publicly owned municipal authorities or by the public authorities created by special districts.

Competitive contracting can be applied to any of the above infrastructure related services in cases where the infrastructure is already in public ownership. In those cases, day-to-day operations are contracted out to qualified operators for defined periods of time—often for no more than three-to-five years—to allow for periodic opportunities to re-compete the contract and sustain competitive pressure on providers.

Unlike virtually all other services that Americans consume each day, the services provided by these public monopolies are protected from com-

petition from alternative supply sources, whether public or private. For the most part, the above services are funded by general revenues accumulated through the collection of a variety of taxes including sales, property, special fees and income taxes that are levied on the citizens and businesses in that community. As a consequence, if a citizen chooses to acquire any one of the above services from an alternative supplier, such as sending children to a parochial or private school, they must still pay for that alternative service out of the household budget, while still paying that share of taxes dedicated to fund the provision of the public service one chooses not to utilize.

► **How Does Privatization Work?** The municipality introduces public services to the competitive market, seeking bids from the private sector to provide services under approaches such as competitive contracting. This method enables the municipality to outsource the operation of infrastructure to a private-sector management firm that wins the contract through a competitive bidding process.

► **The Benefits of Privatization.** Many argue that the protection of these public services from exposure to competitive forces has led many municipal services to be more costly and of a lower quality than what might otherwise occur in a competitive market. In addition to the absence of any competitive threat to keep providers on their toes, municipal service and infrastructure provision are also subject to procedural requirements imposed by statute or regulation that can add to delays and costs in changing, improving or expanding the service. For example, a number of communities have competitively contracted their water and wastewater systems with cost savings from 10 to more than 30 percent. Savings of this magnitude would be more than sufficient to comfortably accommodate the additional housing units that a growing population requires.

► **The Limitations of Privatization.** Requires a shift in municipal procedural requirements imposed by statute or regulation to financing

changes, improvements and expansions to infrastructure. There is internal political opposition to relinquishing control over otherwise public infrastructure and services to the private sector.

DESIGN/BUILD STRATEGIES

Where permitted by law, design/build is becoming an increasingly popular infrastructure delivery process because it can allow developers and governments to reduce costs and shorten the time needed to complete a major capital project. By way of contrast, traditional construction methods separate the design and construction phases and often require that the designer and the builder be fully independent entities. By separating the design and the construction process in this way, the time needed to complete the project is lengthened and project costs rise. Public costs also rise because elected officials have to spend more time overseeing and approving the extra steps involved in this lengthy, bifurcated process.

► **How Does Design/Build Work?** Under this process, both the design of the facility and the construction are performed by the same business entity. With an important variant, Design/Build/Operate (DBO), a community solicits a single bid for the construction of the project and for its subsequent operation over an extended period of time, usually 15 to 20 years for most large, capital-intensive projects.

► **The Benefits of Design/Build.** By looking at minimizing costs over an extended period of time, bidders have a powerful incentive to include design and construction efficiencies and more advanced technologies and automation that might yield higher up-front costs but which are more than offset by future operating cost savings and asset duration. These savings, of course, are passed on to the community in the form of lower total project costs, better quality services, lower rates for existing customers and less financial burden on new homebuyers.

► **The Limitations of Design/Build.** However ben-

official the design/build process might be in satisfying community infrastructure needs in a faster and cheaper manner, its application is often limited in many states and communities by laws and regulations that prohibit its use, limit its use to certain types of projects or limit its use to a certain number of projects. As a consequence, many communities are forced by law to use traditional construction processes that are slower and more costly.

ASSET SALES

Asset sales refer to the sale of water and wastewater systems to a private sector entity. The sale of such assets relieves the local government of the perceived political burden of providing such infrastructure for a growing community. Once the water and wastewater systems have been privatized, companies can accommodate growth in the same way as other private infrastructure companies expand telecommunications, natural gas and electricity service.

► **The Benefits of Asset Sales.** Asset sales relieve government of the burden of infrastructure expansion and service delivery. They can provide cost savings and produce an infusion of cash to the government that sells the assets.

► **The Limitations of Asset Sales.** Enabling laws and regulations in many states restrict the sale of public assets. There is also sometimes political resistance to privatization of functions that have traditionally been publicly managed.

PUBLIC/PRIVATE PARTNERSHIPS

Technically, a Public/Private partnership is any contractual arrangement whereby a facility or some physical infrastructure is provided to the community by a private sector partner.

► **How Do Public/Private Partnerships Work?**

Using this process, communities have the opportunity to form partnerships with private sector providers to design, finance, build and sometimes operate key elements of a community's infrastructure; including roads, transit, school facilities, pub-

lic buildings, water supply and wastewater treatment. Public/private partnerships typically involve private ownership of the physical assets or a long-term lease arrangement of the infrastructure, as well as the right to operate on a fee-for-services basis on behalf of the community. More often than not, such partnerships have their origin with the development and construction of the facility or with its substantial renovation and/or expansion. Although there are many forms such partnerships can take, in its simplest form, a municipality would issue a Request For Proposals (RFP) to provide a specified infrastructure-related service.

► **The Benefits of Public/Private Partnerships.**

In addition to the potential for lower-cost services, one of the chief advantages to the community of public/private partnerships is the infrastructure can be built and placed in operation faster than if accomplished by the public sector. In some cases, the responsibility for financing the infrastructure is shifted to the private partner, thereby helping the community to stay within its debt limit, to devote existing borrowing authority to other purposes, or to avoid having to seek voter approval to issue more debt. The cost advantages are in part a result of the municipality's ability to finance their community-owned infrastructure by issuing tax-exempt debt, which provides a 30 percent capital cost advantage. Coupled with the expertise and the competitive efficiencies of the private sector, construction costs will generally be much lower than public sector construction costs with savings ranging between 10 and 30 percent. Furthermore, unencumbered by the multitude of regulations that govern public sector bond offerings, voter approval, design reviews, review of competitive bids and construction, infrastructure can be built in a much shorter period of time than with the traditional method.

► **The Limitations of Public/Private Partnerships.**

As with Design/Build, the Public/Private Partnership process is often limited in many states and communities by laws and regulations

that prohibit its use, limit its use to certain types of projects, or limit its use to a certain number of projects. As a consequence, many communities are forced by law to use traditional construction processes that are slower and more costly.

PARTNERSHIP SCHOOLS

Under new federal legislation, the Economic Growth and Tax Relief Reconciliation Act of 2001, a public school system can negotiate with a developer to build a public school facility in accordance with designs and standards set by the community or state, and lease the facilities to the school system under a long-term arrangement at a predetermined rent.

► **How Do Partnership Schools Work?** The developer/investor would be responsible for constructing the physical structure of the public school. To ensure the quality of services, the school system would still operate the school with its own teachers and administrators, curricula, educational guidelines and standards and other such requirements pertaining to the educational process. The new law requires that the lease term must coincide with the term of the tax-exempt bonds issued to finance the facility and, at the end of the lease term, the physical structure must automatically become the property of the public school system.

► **The Benefits of Partnership Schools.** This arrangement allows for the local government to take advantage of the lower costs and quicker site development processes of the private sector while retaining full policy control. The public sector construction process can take as long as five years to fund and build a public school compared to as little as a year or less in the private sector. Cost savings are also achieved because the interim private owner can make the facility available for other allowable uses when it is not needed for educational purposes.

► **The Limitations of Partnership Schools.** The Economic Growth and Tax Relief Reconciliation Act of 2001 is a demonstration program that is limited to \$3 billion in new school construction per year.

SMALL-SCALE WATER AND WASTEWATER SYSTEMS

Significant technological advances have allowed for the implementation of small-scale, community-based water and water treatment facilities.

► **How Do They Work?** Small-scale water and wastewater systems are usually financed by the builder and added to the price of the house. A private sector company assumes responsibility for their operation and bills home owners and other users a fee for service in the same way that homeowners are billed by public water and sewer authorities. Depending upon the size of the development, the development buys back the facility from the developer in an installment purchase plan as homes are built and sold and customers are added. Some of these same companies are also developing systems that recycle for use the community's treated wastewater in an EPA-approved dual water supply system that will yield further cost savings and substantially economize on the available water supply. At present, several of these systems are in operation at a few commercial facilities and schools and at least one multifamily apartment building. Operators believe that at current technology and cost, they would be economical to install in multifamily facilities.

► **The Benefits of Small-Scale Systems.** These advancements in technology permit developers and builders of communities with as few as 100 homes to economically provide their own services independent of any existing public service. The costs are kept competitive through innovative strategies such as remote operating and monitoring that save on labor costs. Many facilities are wholly private and are financed by tax-exempt debt. These innovations have the potential to overcome limits based on real capacity constraints and building limits based on sewer moratoria.

► **The Limitations of Small-Scale Systems.** The facilities are proportionately more costly for smaller developments and there have been some problems with abandoned systems.

OTHER ALTERNATIVES

ELECTRONIC ROAD PRICING

The principal revenue source for road building, the gasoline tax, is not a sustainable long-term source of funding. Virtually all planning agencies project traffic increases at least consistent with the nation's strong population growth and new financing options will be required. A promising alternative is road pricing which is already being used in Singapore and some central cities in Europe. Efficient implementation would require a revenue neutral transition, with future roadway expansion financed by tolls charged electronically—there would be no toll booths. It is conceivable that entire municipalities or sections of municipalities could franchise maintenance and expansion of their roadways systems to the growing international private road industry.

► **How Does It Work?** Electronic road pricing is a user-fee system in which the people who use new roads—or new lanes—pay for the construction and maintenance of those roads. There are no toll booths. Instead, the payment for road use is automated with traffic electronically recorded and billed periodically.

► **Benefits of Electronic Road Pricing.** Electronic road pricing largely removes roadway provision as a government burden. It allows communities to competitively franchise roadway systems, which helps depoliticize roadway provision and improve efficiency and effectiveness.

► **Limitations of Electronic Road Pricing.** Electronic road pricing is costly to establish and enabling laws and regulations in many states restrict its use. There is some opposition to greater reliance on tolls for financing roads and highways and there are privacy issues regarding the use of transponders that are a necessary part of the automation process.

FINANCING EQUITABLE IMPACT FEES

Impact fees have become increasingly common and can be as high as \$60,000 per new house. Impact fees are ostensibly imposed to recoup the additional public sector costs that a new house and household impose on the community. Most studies have found such costs to be relatively modest and substantially less than the dollar amount of the typical impact fee. Among the chief reasons for this disparity is the absence of any quantitative standards guiding calculation and, as a result, many communities overestimate the costs through flawed calculation methodologies. To impose a measure of integrity on the calculation of such fees, several states have enacted procedures to ensure that impact fees are no higher than necessary.

► **How Do Financing Equitable Impact Fees Work?**

Financing impact fees, when present, provides a mechanism for making impact fees more accountable to the fee payer and therefore more affordable for the homebuyer. This technique finances net new infrastructure that a new development will require through a Capacity Unit Assessment (CUA) program. With a CUA, the municipality finances the pro rata share of the infrastructure associated with each new housing unit and imposes an annual surtax on the new owner to service the associated debt. Instead of charging an impact fee to the builder which, in turn, would be passed on the new buyer in the form of higher housing prices, under a CUA, the new housing unit instead carries with it a liability for its share of the infrastructure and the owner of the new unit extinguishes this liability over time through the annual tax surcharge. Impact fees often appear to be higher than appropriate and impose financing burdens on both developers/builders and homebuyers. Legislative and administrative strategies ameliorate these difficulties.

► **The Benefits of Financing Equitable Impact Fees.**

The benefit of this approach is that the municipality finances the impact fee and adds it to annual tax resulting in less of a financing burden and thus a savings for home buyers. Furthermore,

this method does not require costly organizational fees that are a surcharge to the homebuyer. This helps reduce the effect of impact fees as a barrier to housing affordability.

► **The Limitations of Financing Equitable Impact Fees.** Even more equitable impact fees add to the price of a home and decrease affordability.

SPECIAL PURPOSE CORPORATIONS

It is not unusual for an innovative financing structure to include a special purpose corporation, a nonprofit corporation formed under states nonprofit corporation law.

► How Do Special Purpose Corporations Work?

A not-for-profit entity (NFP) can be established for any lawful purpose other than for pecuniary profit. NFPs are regulated by state tax authorities with respect to their state tax exemption and by the Internal Revenue Service (IRS) with respect to their federal income tax exemption and their issuance of tax-exempt debt backed by revenue sources such as tolls, regular lease payments from the governmental unit, tax revenues or a combination of sources.

Historically, NFPs were used as a way to finance the construction of public projects and avoid statutory debt limitations and other restrictions on a jurisdiction. In recent years, public agencies and private developers have used the NFP structure to facilitate major projects involving innovative contracting and public-private partnerships.

The NFP Corporation functions as an intermediary between private developers and a governmental unit, thus enabling the public entity to enter into agreements for private development and/or operation of a project.

► The Benefits of Special Purpose Corporations.

The NFP structure preserves the ability of the project to be financed on a tax-exempt basis while, at the same time, retaining the benefits associated with private development and implementation of the project.

► The Limitations of Special Purpose Corporations.

Bonds issued by NFP corporations are not backed by the “full faith and credit” of the issuer. These bonds are more expensive than general obligation bonds. ■

Innovative Finance Checklist

Is Innovative Financing Right for a Project?

THE PROJECT

- ▶ What are the jurisdiction's facility needs and objectives? Are they realistic in light of projected revenues? Is there adequate demand for the facility?
- ▶ Why is the facility being built? Is the facility essential or necessary?
- ▶ What are the jurisdiction's constraints: time, money, space, expertise or some combination of these factors?
- ▶ Has an appropriate site been secured for the project? Are there any environmental, zoning or permitting issues?
- ▶ Are the proposed design and construction plans adequate? Are they consistent with the project's timetable? Is the scale of the project consistent with the amount of available financing?

THE JURISDICTION

- ▶ Is the jurisdiction comfortable with innovation? Have they participated in other projects that were procured or financed on an innovative basis?
- ▶ What are the jurisdiction's financing needs and objectives? How important are cost-effectiveness, speed and efficiency?
- ▶ What risks is the jurisdiction seeking to shift? How much control over the project do they need or want to retain? Are they comfortable with being the user or beneficiary of the facility, but not its owner?
- ▶ Is there strong political leadership and sufficient public support for the project? Who could potentially oppose, delay or halt the project?
- ▶ What public approvals will be required and what are the various approval processes? Does the jurisdiction have the requisite legal authority to engage in an innovative procurement and project financing?

THE FINANCING

- ▶ What revenues will be generated from the project? What are the anticipated sources and uses of funds? Will cash flow be sufficient to construct and operate the facility, service the debt and compensate equity investors?
- ▶ What public sector financing vehicles, such as low-interest loans, grants, tax credits or guarantees, might be available to support the project?
- ▶ What credit and risk issues will be of concern to lenders and investors? What do the market research, feasibility reports and stress tests indicate about the project's economics?
- ▶ Is tax-exempt financing an option? Does the public jurisdiction have tax-exempt debt capacity available for the project? What type of private sector involvement with the project is contemplated and how will such involvement impact the availability of tax-exempt funding?
- ▶ Have lenders and equity investors shown an interest in the project? Is this type of facility financing a good fit with their portfolio?
- ▶ Will the sources of financing be able to work effectively with a public jurisdiction? Do they have experience underwriting public infrastructure projects? Are they familiar with public procurement and approval processes?

THE DEAL TEAM

- ▶ Are the private sector deal team members capable of delivering a quality project, on time and on budget?
- ▶ What is their track record, individually and as a team, with this type of project?
- ▶ Are they willing and able to take on the risks the public jurisdiction is seeking to shift? Most importantly, can they arrange private financing for the project?

Making It Happen

Every community—every state, county, city, town and village—needs infrastructure. That infrastructure must be maintained, expanded, updated or renovated as a community transitions or ages. Each jurisdiction must wrestle with questions about how to best meet the community’s needs in a way that optimizes its resources.

Who makes these decisions? Each community has movers and shakers who make things happen. They are elected and appointed government officials, business leaders, educators, lenders, builders and developers, community activists and other stakeholders. These are the people who must consider the variables and weigh the options. They must make difficult decisions, often in a harsh political climate. Money is scarce. Time is limited. Mistakes are costly.

Working in the glaring light of the public arena and knowing that the stakes are high, decision-makers sometimes prefer to make the safe choice—to “structure the deal” the way it has always been done before. But, in an era of limited revenues and changing technology, doing things the same old way can be a costly mistake.

Fortunately, there are a number of successful innovations in the way communities develop and finance infrastructure. Innovations are needed and may become commonplace as severe budget shortfalls force more state and local governments to consider alternatives that save time and—most importantly—money. As more of these alternative infrastructure tools are implemented, either singularly or packaged together, they will develop a history—a track record—that will make them easier to use.

The reality is that innovative alternatives make a tangible difference. Creative project-structuring techniques can shave years off a construction timeline without adding to the cost. And new financing methods have helped some jurisdictions

cut 30 percent from the total cost of a much-needed project. The options and opportunities are seemingly endless.

But they are available only to those communities willing to work to make them happen.

Before a state or local jurisdiction can take advantage of innovations, its leaders must first be aware of these less familiar techniques and understand how they work. How have they been used elsewhere? Under what conditions do they work best? What variables affect their effectiveness?

The summary of financing, construction and management innovations contained in this report is not exhaustive, but it does present a broad range of some of the most viable alternatives for providing infrastructure. How—or even whether—these innovations are used is up to the stakeholders in each community. Each jurisdiction must determine if any of these alternatives are suitable to effectively meet their needs. Stakeholders may



have to advocate for new state and local policies that allow and encourage innovation in financing, construction and infrastructure management.

It requires knowledge, attention to detail and, most importantly, leadership.

Community leaders need to understand that these alternative mechanisms have been tried, they have been successful and they have provided a competitive return on investment. The case studies found in this report offer a tiny sample of the many ways these innovations have been used effectively.

That's not to say it's easy. The going tends to get tougher as a community approaches a decision point. The leaders—those movers and shakers—must do their homework. They've got to run the numbers and consider the relationships between a seemingly endless number of variables.

What are the community's needs? What will the needs be in the future? How much does the

community expect to grow? What resources are available? What are the constraints—money, time, space? How do state and local laws affect the decision? What is the political climate? Where will the community find the money?

For every infrastructure project, decision-makers must work through each of these questions and consider the hundreds of details contained within each one. Then they must consider the range of available tools to determine which options will—in the most effective way—enable them to finance the infrastructure, get it built and manage it over the long term.

Adoption of alternatives may be slow in coming. But, in the long run, these innovations have the potential to revolutionize the way state and local governments finance, build and manage infrastructure. If applied well, these new concepts will enable communities to better leverage their limited resources to meet the needs of their citizens. ■



Additional Resources

NATIONAL ASSOCIATION OF HOME BUILDERS

<http://www.nahb.org/>

NATIONAL ASSOCIATION OF REALTORS

<http://www.realtor.org>

AMERICAN LEGISLATIVE EXCHANGE COUNCIL

<http://www.alec.org/>

AMERICAN PUBLIC WORKS ASSOCIATION

<http://www.apwa.net/>

THE ASPEN INSTITUTE: CHARTER SCHOOLS

<http://www.aspeninstitute.org/Programt3.asp?bid=795>

ASSOCIATION FOR GOVERNMENTAL LEASING AND FINANCE

<http://www.aglf.org/>

THE BOND MARKET ASSOCIATION

<http://www.bondmarkets.com/>

COUNCIL OF INFRASTRUCTURE FINANCING AUTHORITIES

<http://www.cifanet.org/>

FHWA'S INNOVATIVE FINANCE (MAIN PAGE)

<http://www.fhwa.dot.gov/innovativefinance/index.htm>

FHWA'S INNOVATIVE FINANCE PRIMER

<http://www.fhwa.dot.gov/innovativefinance/ifp/ifprimer.pdf>

FHWA AND TEA-21

<http://www.fhwa.dot.gov/tea21/>

GOVERNMENT FINANCE OFFICERS ASSOCIATION

<http://gfoa.org/>

THE HERITAGE FOUNDATION

<http://www.heritage.org>

THE NATIONAL ASSOCIATION OF BOND LAWYERS

<http://www.nabl.org/>

NATIONAL ASSOCIATION OF COUNTIES (NACO)

<http://www.naco.org/>

NATIONAL COOPERATIVE HIGHWAY RESEARCH PROGRAM

<http://www.innovativefinance.org/>

REASON PUBLIC POLICY INSTITUTE: PRIVATIZATION

<http://www.privatization.org/>

SCHOOL CONSTRUCTION NEWS

<http://www.schoolconstructionnews.com/>

TRANSPORTATION INFRASTRUCTURE FINANCING ALTERNATIVES

<http://www.wsdot.wa.gov/partners/tifa/>

ACKNOWLEDGMENTS

NAHB wishes to thank the following individuals who helped produce this report.

NAHB MEMBER OVERSIGHT

Gary Garczynski

NAHB SMART GROWTH ADVISORY GROUP

John Delaney, Marsha Elliott, Gary Garczynski (chair), Bob Jones, Ken Klein, Bill Kreager, Bob Morris, Martin Poretsky, Creigh Rahenkamp, Bob Rivinius, Barry Rutenburg, Greg Schwinn, Bill Warkentin, Bob Weiss.

REVIEWERS

Bruce Boncke, Jon Chandler, Dan Dressman, Bob McNamara, Creigh Rahenkamp, Mike Toalson, Paul Wilms

PROJECT OVERSIGHT STAFF

Debbie Bassert, Bill Killmer, Rob Pflieger, Jay Shackford

PROJECT MANAGER

Blake Smith

AUTHORS, INFRASTRUCTURE TOOLS

Keyvan Izadi and Ed Tombari

AUTHOR, CASE STUDIES ON CHARTER SCHOOL AND WASTEWATER

Neil Gaffney

COPY EDITORS

Jackie Jackson, Michelle Persinger Matuga

ADDITIONAL SUPPORT

Tim Ahern, Samantha Ehrhart, Elliott Finkelstein

PUBLICATION DESIGN AND PRODUCTION

BonoTom Studio, Inc.

This publication is based on research conducted by Wendell Cox, Ronald Utt and Janet Corcoran.

► **Wendell Cox** is principal of the Wendell Cox Consultancy in Belleville, IL. Cox has served as a consultant on urban policy and transportation projects in the United States, Canada, Australia, New Zealand, Australia, Japan and France. He is currently serving as a visiting professor of demographics and transport at the Conservatoire National des Arts et Metiers in Paris. He also served eight years as a member of the Los Angeles County Transportation Commission.

► **Ronald Utt** is a senior research fellow at the Heritage Foundation in Washington, D.C. Utt has served in policy positions at the U.S. Office of Management and Budget (OMB), the U.S. Chamber of Commerce, the Senate Subcommittee on Governmental Affairs, the National Association of Real Estate Investment Trusts and the U.S. Department of Housing and Urban Development (HUD).

► **Janet Corcoran** is principal of the Corcoran Network, a financial services consulting firm in New York City. She has served as general counsel for GE Capital, and as bond counsel and underwriters counsel at Squire, Sanders & Dempsey in Washington, D.C., Palmer & Dodge in Boston and Mayer, Brown & Platt in New York. She has also served as an attorney for EPA, Region 1 and the Port Authority of New York.

NAHB Staff Contacts

REGULATORY AFFAIRS AND HOUSING POLICY

David Crowe 202-266-8383

LAND DEVELOPMENT

Debbie Bassert 202-266-8443

Thais Austin 202-266-8343

PUBLIC AFFAIRS

Robert Pflieger 202-266-8403

Jay Shackford 202-266-8406

Blake Smith 202-266-8583

STATE AND LOCAL POLITICAL OPERATIONS

Steve Gallagher 202-266-8319

Carlos Gutierrez 202-266-8242

Brooke Ransom 202-266-8584

2007 NAHB Senior Officers

PRESIDENT

Brian Catalde
El Segundo, California

FIRST VICE PRESIDENT

Sandy Dunn
Point Pleasant, West Virginia

VICE PRESIDENT/TREASURER

Joe Robson
Broken Arrow, Oklahoma

VICE PRESIDENT/SECRETARY

Bob Jones
Bloomfield Hills, Michigan

IMMEDIATE PAST PRESIDENT

David L. Pressley, Jr.
Statesville, North Carolina

EXECUTIVE VICE PRESIDENT AND CEO

Jerry Howard
Washington, DC

ABOUT NAHB

The National Association of Home Builders is a Washington-based trade association representing more than 225,000 members involved in home building, remodeling, multifamily construction, property management, subcontracting, design, housing finance, building product manufacturing and other aspects of residential and light commercial construction.

Known as “the voice of the housing industry,” NAHB is affiliated with more than 800 state and local home builders associations around the country.

NAHB’s builder members construct about 80 percent of the nation’s new homes. Residential construction accounts for about 14 percent of the U.S. economy, making home building one of the largest and most influential industries in the country.

For more information about Smart Growth, please call NAHB’s Public Affairs office at (202) 266-8583.