9. Funding Alternatives

9.1 Background

Implementation of the MWRRS will require the states to develop a financing plan to fund capital costs. There are financial resources from federal, state and local governments that are worthy of consideration. At state and local levels throughout the U.S., many innovative financing concepts for transportation projects are being proposed and accepted. These include privatization or turnkey operations such as design-build-operate projects, public/private partnerships, the incorporation of federal funds and federal credit enhancements in state and local projects, and the establishment of state infrastructure banks. In addition, bond issuance and leasing are options for increasing or leveraging funds to finance the required state contributions.

There are a number of federal programs that fund passenger rail research, planning and corridor development that are administered by the Federal Transit Administration (FTA) and the Federal Railroad Administration (FRA). The genesis for many of these programs was the Intermodal Surface Transportation and Efficiency Act (ISTEA) and the Swift Rail Development Act (particularly the Next Generation High-Speed Rail Program).

The information below is based on The Transportation Equity Act for the 21st Century, which was enacted June 9, 1998 as Public Law 105-178, since a new bill has not yet been signed by the President. Therefore, the programs described below are all based on Public Law 105-178, the 1998 Transportation Equity Act for the 21st Century. Since TEA-21 has not been renewed at the time of the writing of this section, features of the original TEA-21 will be used as the basis for discussion.

9.2 Federal Funding Programs

The FTA funds capital and operating programs of public transit services throughout the U.S. There are two major types of FTA grant programs: formula grants, which fund operations and maintenance and capital programs – predominately for system preservation; and discretionary grants, which fund larger capital projects such as new starts, system rehabilitation and system expansion. Discretionary grants, particularly for major fixed guideway projects, are limited to available funding and many transit agencies compete for these funds. Typically, the total funds requested by transit agencies for capital purposes greatly exceed the available funding. Grants are awarded partially based on relative cost-effectiveness, level of state and/or local funding contributions and other quantitative performance factors.

9.2.1 Federal Transit Administration Funding Programs

Major Capital Investment Program – Section 3009

Under TEA-21 Section 3009, funding is limited to major capital investment programs (New Starts) and will be the only discretionary capital program (renamed Capital Investment Grants and Loans Program) under TEA-21. The New Starts funding program is designated for the construction of new fixed guideway (rail and bus) projects and extensions to existing fixed guideway systems. New start funding is generally available for only transit projects and not intercity passenger rail. Exceptions might be made for shared use facilities such as passenger rail stations. Funding is reserved annually by Congress based on the authorization/reauthorization process. Grants made to states and local agencies fund up to 80 percent of the new project costs,

based on negotiations between the federal, state and local agencies. Projects must compete for funding using federal criteria to justify the major investments involved. Competition for New Starts funding is intense. The potential to receive Section 3009 funds improves as the cost-effectiveness of the project and the level of state and local funding for the project increases. The latter is referred to as "overmatching." The effect of overmatching is that the level of state and local funding increases above the 20 percent minimum and federal funding levels decrease proportionately.

Flexible Funds

TEA-21 continues the 1991 ISTEA provision that provides state and local governments with the ability to transfer a portion of federal highway funds to transit use based on local needs. These funds include Surface Transportation Program (STP) and Congestion Mitigation and Air Quality Improvement Program (CMAQ).

- STP is the largest category of flexible funds and may be used for all projects eligible for funding under current FTA grant programs except the formula grant program. STP funds can be used to upgrade rail facilities that are used to support local or regional commuter rail or connecting transit services. However, the funds *cannot* be used for intercity passenger rail projects at present, so funding available for the MWRRS under this program may depend on which capital investments meet the requirements. Safety set aside funds equivalent to the funds made available for FY1991 for the Hazard Elimination and Railway-Highway Crossing Programs (23USC 130 and 152) may not however be transferred. Under TEA-21, the Surface Transportation Program increased the set aside for Railway-Highway Crossing Hazard Elimination in High-Speed Rail Corridors from $5 million per year to $5.25 million per year, adding three additional high-speed rail corridors, expanding one of the original five corridors and authorizing the Secretary of the USDOT to select up to three additional corridors (1103-c).
- CMAQ funds, which are used to support transportation projects in air quality non-attainment areas, may also have some applicability in funding the MWRRS. A CMAQ project must contribute to the attainment of the national ambient air quality standards by reducing pollutant emissions from transportation sources.

9.2.2 Federal Railroad Administration Funding Programs

TEA-21 contains provisions for two funding categories relating to passenger rail and high-speed rail programs. These programs include Section 7201: High-Speed Rail and Section 1103-c: High-Speed Rail Grade Crossings.

High-Speed Rail (Section 7201)

The high-speed rail provisions of TEA-21 extend authorizations of appropriations for the existing high-speed rail assistance program created in the Swift Rail Development Act of 1994 (49 U.S.C. 26101 et seq.). An important modification in TEA-21 Section 7201 to ISTEA is the definition of high-speed rail. In particular, high-speed rail is now defined as train units that are *reasonably expected to reach* 125-mph or more. In ISTEA, the definition of high-speed rail was more absolute in that it required train sets to achieve at least 125-mph or more. This broader definition in TEA-21 is believed to make elements of the MWRRS, which is designed to operate primarily at speeds lower than 125-mph, eligible to pursue funding under this TEA-21 provision, provided they could show a long-term potential for higher speeds.

The TEA-21 authorization covers fiscal years 1998 through 2003 and is a General Fund authorization. This means that the funds must be made available in an Appropriations Act before the program can be implemented. The U.S. Secretary of Transportation is authorized to provide financial assistance for up to 50 percent of the publicly financed costs of corridor planning activities and up to the full cost of technology improvements.

These funds are to provide financial assistance to public agencies for high-speed rail corridor planning activities and certain other pre-construction activities, including right-of-way acquisition. Authorizations in Section 7201 are subject to budget appropriations. TEA-21 authorizes planning and pre-construction funding (including right-of-way acquisition) at $10 million/year with the federal government contributing up to 50 percent of a project's cost, and the remaining 50 percent being provided by the local government. Section 7201 also provides funding to any U.S. business, educational institution, state or local government, public authority, or federal agency to support the development of high-speed rail technology improvements. Funds for technology development and demonstrations are authorized at $25 million per year. There is no local match requirement when using funds for technology development purposes.

Funding authorizations for TEA-21 Section 7201 are provided in the table below:

Exhibit 9-1
Funding Authorizations for TEA-21 Section 7201

Year	*1997*	*1998*	*1999*	*2000*	*2001*	*2002*	*2003*
Planning	$45M	$10M	$10M	$10M	$10M	0	0
Technology	$40M	$25M	$25M	$25M	$25M	0	0

Source: FHWA, TEA-21 Fact Sheet, www.fhwa.dot.gov/tea21/factsheets November 2003

High-Speed Grade Crossing Program (Section 1103-c)

Section 1103-c extends and expands the program established under Section 1010 of ISTEA relating to grade crossing hazard elimination in designated high-speed rail corridors.

The purpose of the high-speed rail grade crossing improvement program is to reduce or eliminate the hazards at highway-rail grade crossings in designated high-speed corridors as provided in Section 1103-c of TEA-21. The U.S. Secretary of Transportation is authorized to provide financial assistance to the states, or authorities designated by one or more states, to fund crossing improvements that range from improved warnings to physical closure or grade separation. It is a two-part program that first designates passenger rail corridors as eligible for funding, and subsequently provides funds for improvements at specific highway-rail grade crossings.

To be eligible for designation, a corridor must be a rail line where speeds of at least 90-mph are occurring or can reasonably be expected to occur in the future. Grade crossing improvements identified as part of the MWRRS are eligible for this funding program under this provision.

Work eligible for Section 1103-c funding may include any of the following to eliminate hazards of highway-rail grade crossings, in the selected corridors:

- Installation or improvement of warning devices
- Improvement of track circuitry which activates warning devices
- Other crossing improvements such as improved crossing surfaces, improved sight distances, crossing illumination, closure of crossings with or without attendant highway relocations, grade separation construction or reconstruction
- Combining crossing warning systems with advanced train control and/or intelligent highway traffic control systems, and
- Any combination of these project areas

The federal share of the costs of improvements funded under Section 1103-c may be up to 100 percent of the costs of engineering and construction. However, before allocating funds, the extent to which other private, state, local and federal entitlement, *e.g.*, Surface Transportation Program, funds are being committed to corridor improvements in conjunction with these funds will be considered.

Contract authority from the Highway Trust Fund, other than the Mass Transit Account, is provided for fiscal years 1998 though 2003 totaling $31.5 million. An authorization for any appropriation is provided for an additional $75 million over fiscal years 1999 to 2003. Authorizations for the High-Speed Rail Grade Crossing Improvement Program are provided in Exhibit 9-2.

Exhibit 9-2
TEA-21 Authorizations – High-Speed Rail Grade Crossing Improvement Program

Year	*1998*	*1999*	*2000*	*2001*	*2002*	*2003*
Trust Funds	$5.25M	$5.25M	$5.25M	$5.25M	$5.25M	$5.25M
Authorized		$15M	$15M	$15M	$15M	$15M

Source: FHWA, TEA-21 Fact Sheet, www.fhwa.dot.gov/tea21/factsheets November 2003

Midwest Corridors eligible for Section 1103-c funding include the Chicago hub linking St. Louis, Twin Cities, Milwaukee and Detroit. The FRA map of designated High-Speed Rail Corridors is provided below:

Exhibit 9-3
FRA-Designated and Proposed High-Speed Rail Corridors



Source: Federal Railroad Administration Chronology of High Speed Rail Corridors Designations and Extensions, http://www.fra.dot.gov/Content3, November 2003

Federal Credit Programs

TEA-21 contains provisions for two credit programs to assist in the funding of large infrastructure projects relating to passenger rail and high-speed rail programs. These programs include Section 1503: Rail Passenger Eligibility under the Transportation Infrastructure Finance and Innovation Act (TIFIA), and Section 7203: Rail Passenger Eligibility under Railroad Rehabilitation and Improvement Financing (RRIF). The strategic goal under both programs is the use of credit rather than grants to help advance projects of national significance. As such, any funding under the programs is loans and must be repaid.

Transportation Infrastructure Finance and Innovation Act (TIFIA)

The Transportation Infrastructure and Finance Act (TIFIA) is a program under TEA-21 that provides federal assistance in the form of credit, *e.g.*, direct loans, loan guarantees and standby lines of credit, rather than grants to help fund major transportation investments of critical regional or national importance. The TIFIA credit program is designed to fill funding gaps and to leverage substantial private co-investment by providing supplemental and subordinate capital in the form of long-term loans. TIFIA could serve as a significant financing source for the MWRRS. In particular, TIFIA's ability to cover operating shortfalls during the early years of operation (ramp-up costs) might prove pivotal to obtain the multi-state decision to move forward with MWRRS implementation. The MWRRS, its market and service areas, and the transportation role that it will play in the Midwest in particular, and nationwide in general, are highly consistent with TIFIA eligibility requirements.

The TIFIA credit program consists of three different types of financial assistance designed to address projects' varying requirements throughout their life cycles:

- Secured loans are loans in a debt obligation involving the U.S.DOT as the lender and a non-federal sponsor as the borrower. The interest rate is "not less than" the yield on marketable Treasury securities of similar maturity on the date of execution of the loan agreement. A TIFIA loan matures no later than 35 years after the date of substantial completion of the project.
- Loan guarantees ensure a "federal government full-faith-and-credit guarantee" to institutional investors making a loan for a project.
- Standby lines of credit represent secondary sources of funding in the form of contingent federal loans that may be drawn upon to supplement project resources, if needed during the first ten years of project operations.

A corporation, joint venture, partnership or governmental entity may provide investment funds. The amount of federal credit assistance may not exceed 33 percent of total project costs.

Projects eligible for federal financial assistance through regular surface transportation programs (Title 23 or Chapter 53 of Title 49) are eligible for the TIFIA program. In addition, regionally or nationally significant projects such as intercity passenger rail facilities and vehicles, including Amtrak and Magnetic Levitation Systems, publicly owned intermodal freight facilities on the National Highway system, border crossing infrastructure, and other large infrastructure projects are examples of projects that could qualify under the TIFIA umbrella.

To qualify, projects must cost at least $100 million or 50 percent of a state's annual apportionment of federal-aid funds, whichever is less. In addition, the project must be supported in whole or in part from user fees or other non-federal dedicated funding sources, *e.g.*, tolls, and must be included in the state's transportation plan.

$530 million of contract authority is provided to pay the subsidy cost of supporting federal credit under TIFIA (to cover anticipated losses). The maximum amount of credit that may be provided is capped at $10.6 billion over the 6-year authorization period. Exhibit 9-4 provides annual contract authority and the maximum amount of credit available through 2003.

Exhibit 9-4
Federal Credit Authorizations under TIFIA

Year	*1998*	*1999*	*2000*	*2001*	*2002*	*2003*	*Cumulative*
Contract Authority	0	$80M	$90M	$110M	$120	$130M	$530M
Maximum Amount of Credit	0	0	$1,800M	$2,200M	$2,400M	$2,600M	$9B

Source: FHWA, TEA-21 Fact Sheet, www.fhwa.dot.gov/tea21/factsheets November 2003

The U.S. Secretary of Transportation has developed selection criteria to guide the selection of TIFIA-candidate projects. These criteria include:

- The extent to which the project is nationally or regionally significant in terms of generating economic benefits, supporting international commerce or otherwise enhancing the national transportation system
- The creditworthiness of the project, including a determination by the Secretary that any financing for the project has appropriate security features, such as a rate covenant, to ensure repayment
- The extent to which the project will foster innovative public/private partnerships and attract private debt or equity investment
- The likelihood that assistance would enable the project to proceed to an earlier date than the project would otherwise be able to proceed
- The extent to which the project uses new technologies, including Intelligent Transportation System (ITS) that enhances the efficiency of the project
- The amount of budget authority required to fund the federal credit instrument made available
- The extent to which the project helps maintain or protect the environment
- The extent to which assistance would reduce the contribution of federal grant assistance to the project

The Secretary must require each project applicant to provide a preliminary rating opinion letter from at least one rating agency indicating that the project's senior obligations have the potential to achieve an investment-grade rating. Before entering into an agreement, the Secretary, in consultation with the Director of the Office of Management and Budget and each rating agency providing a preliminary rating opinion letter, must determine an appropriate capital reserve subsidy amount for each secured loan, taking into account the opinion letter.

The secured TIFIA loan must be payable, in whole or in part, from tolls, user fees, or other dedicated revenue sources; and include a rate covenant, coverage requirement, or similar security feature supporting the project obligations; and may have a lien on revenues. The Secretary establishes a repayment schedule for each secured loan based on the projected cash flow from project revenues and other repayment sources. Scheduled loan repayments of principal or interest on a TIFIA loan shall begin not later than 5 years after the date of substantial completion of the project. The final maturity date of the secured loan is no later than 35 years after the date of the substantial completion of the project.

Railroad Rehabilitation and Improvement Financing (RRIF)

The Railroad Rehabilitation and Improvement Financing Program, in Section 7203 of TEA-21, is intended to make funding available through loans and loan guarantees for railroad capital improvements. No direct federal funding is authorized in TEA-21; however, the Secretary is authorized to accept a commitment from a non-federal source to fund the required credit risk premium. The aggregate unpaid principal amounts of obligations for direct loans and loan guarantees cannot exceed $3.5 billion at any one time, of which not less than $1 billion shall be available solely for other than Class 1 carriers.

The Secretary is authorized to provide direct loans and loan guarantees to State and local governments, government sponsored authorities and corporations, railroads, and joint ventures

that include at least one railroad to be used to acquire, improve, develop or rehabilitate intermodal or rail equipment or facilities, including track, bridges, yards and shops.

The Secretary is to give priority in selecting projects to those that enhance public safety and the environment, promote economic development, enable U.S. companies to be more competitive in international markets, are endorsed in state and local transportation plans, or preserve or enhance rail or intermodal service to small communities or rural areas.

The total unpaid principal amount of direct loans and loan guarantees cannot exceed $3.5 billion at any one time, of which not less than $1 billion is to be available solely for smaller (non-Class 1) carriers.

The Secretary is allowed to accept a commitment from a non-federal source to fund in whole or in part the required credit risk premium. Credit risk premiums fund the costs associated with a potential default on the loan/loan guarantee. The private commitments can be used in lieu of or in combination with any appropriations of federal funds for this purpose that might be provided in the future. The Secretary (in consultation with the Congressional Budget Office) is to determine the amount required for credit risk premiums for each loan/loan guarantee on the basis of the circumstances of the applicant, including the collateral offered, the proposed schedule for disbursing the funds, historical data on the repayment history of similar borrowers, and any other relevant factors.

No direct Federal funding is authorized in TEA-21; however, the Secretary is authorized to accept a commitment from a non-Federal source to fund the required credit risk premium[1]. The term of any loan may not exceed 25 years; the assistance must be justified by the present and probable future demand for rail services or intermodal facilities; the applicant must provide reasonable assurance that the facilities or equipment to be acquired, rehabilitated or established will be economically and efficiently utilized; and the obligation must be reasonably expected to be repaid, taking into account an appropriate combination of credit risk premiums and borrower collateral.

No direct federal funding is authorized or provided in TEA-21, however, as noted above, the Secretary is authorized to accept a commitment from a non-federal source to fund the required credit risk premium.

9.3 State and Local Financing

Federal funding under the programs described above usually requires a minimum local match of 20 percent at the state and local levels. Several provisions are included in TEA-21 that provides greater flexibility to states and local governments in satisfying the non-federal matching requirements of a project.

The states may use FTA grant funds, or assets acquired with federal assistance, to enhance the effectiveness of their capital investment program with the use of innovative financing techniques.

[1] TEA-21 Fact Sheet, see: http://www.fhwa.dot.gov/tea21/factsheets/r-rrehab.htm

Several alternative approaches to infrastructure financing that have been advocated in recent years may be of particular relevance to the MWRRS.

9.3.1 State Infrastructure Banks

The Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) authorized states to provide loans or other forms of credit enhancements utilizing federal funds a state has received. This program continues under TEA-21. A state can provide simple or leveraged loans through a State Infrastructure Bank (SIB), which functions as a state-level revolving loan fund. Federal funds can be used as seed capital or equity, and other non-federal funds can also be transferred directly into the bank. The bank could make loans to private project sponsors for any revenue-generating transportation project. After being repaid to the bank, the funds from the loan payments may be re-loaned to other projects. The revolving loan fund can grow in size as principal and interest payments are accumulated.

Through a SIB, a state can use its initial capital (provided by its federal-aid highway apportionment, federal transit allocations, and non-federal funds) to provide loans and for a variety of other financing arrangements. Activities by a SIB include financing arrangements to provide credit enhancements, serve as a capital reserve for bond or debt financing, subsidize interest rates, issue letters of credit, finance purchase and lease agreements, provide debt financing security, or provide other forms of financial assistance for the construction of projects qualified under the federal-aid highway program and transit capital projects. As the funds are repaid or compensation is provided, the SIB can make new financial assistance available to other projects, continually recycling and leveraging the initial funds available.

9.3.2 Leveraged Loan Fund

A leveraged loan fund increases its available resources by using the loan repayment stream and/or the initial capital base as collateral for a bond issue. The state leverages these funds by placing the seed capital into a reserve fund and then issues bonds against the fund, potentially tripling the amount of money it is able to lend. When repayments from the revenue-generating facility are repaid, these funds go into the reserve fund to be used to leverage more funds for the bank. However, leveraged funds may need to rely on the government's credit rating and backstop revenue sources to secure a bond rating high enough to permit loan offerings at affordable terms.

9.3.3 Revolving Loan Funds

Capital for revolving loan funds can be assembled from several sources, including dedicated taxes and user fees, government grants, legislative appropriations, bond proceeds, loan repayments, interest earned from loan operations, and interest on cash balances. The capital base of the revolving loan fund may be designed either to remain self-sufficient during its lifetime or to require future infusions of funds from external sources to remain operational.

The terms of repayment for the loans, including the interest rate, term of the loan, percentage of costs financed, payment schedule and grace period, may also vary to match the borrower's profile. The loan could be repaid on terms very favorable compared to those of most revenue and general obligation bonds funded from the capital markets. The loan could be structured, for

example, with no interest and payments deferred until after the completion of construction or, perhaps, several years thereafter. The net savings to the implementing agency (in terms of interest cost saved) could be more than 30 percent, depending on how the loan is structured.

SIBs can provide a flexible source of financing for privately sponsored transportation projects. These mechanisms provide more capital for transportation projects with less reliance upon federal apportionment. In a turnkey or build-operate-transfer (BOT) project, the project company could receive a loan for a portion of the cost of the project and repay the loan through revenues generated by land development, lease payments, payments from operating agreements, or fare revenues.

9.3.4 Delayed or Tapered State/Local Match

The FTA permits grantees to defer payment of the state/local share of transit projects. The Secretary may allow the federal share to vary up to 100 percent on individual progress payments on a project as long as the final contribution of federal funds does not exceed the maximum federal share authorized for the project. The states may wish to delay the application of their matching funding, particularly if they are trying to maximize the use of available state/local funds. This could occur because the funds are invested in a short-term security, for example, or otherwise encumbered. However, there may also be a situation where the grantee is seeking to arrange construction period financing or some other innovative financing mechanism, which could be facilitated through an uneven expenditure of federal and matching funds. Additional benefits could be generated through innovative project financing or other means.

The FTA grants process generally is based on a level outflow for a specific project. For example, for every 20 percent expended by the state/locality, 80 percent in federal funds are expended. Little value can be added to such a cash stream through the assistance of private capital markets. However, if the federal dollars are expended first, *e.g.*, for 100 percent of the design, engineering or environmental reviews, then the construction period can be financed with some private participation. In this instance, state/local funds can be "banked," or pledged as additional security for the construction period financing. This is all possible because there are no arbitrage concerns with state/local funds as there might be with the federal funds. The benefit of a delayed state/local match is that it may help assure the smooth progress of a major transit infrastructure project without any increase in federal outlays.

It should be clear that while FTA may allow a delayed match, FTA funding programs do not directly support intercity passenger rail. It does however establish a precedent for a delayed match provision in a new multi-year 80/20 Federal funding program for intercity passenger rail, as is recommended by this plan update.

9.3.5 Credit for Acquired Land

TEA-21 expands the law relating to donated property to also allow the fair market value of land lawfully obtained by the State or local government to be applied to the non-federal share of project costs.

9.3.6 Using Federal Funds as Match

For transportation enhancement projects, the states may apply funds from other federal agencies to the non-federal share of the project.

9.4 Local Funding

Financial support for the system may also come from local sources, which at present typically contribute a share of certain costs of surface transportation projects, *e.g*., freeway interchanges. In the case of the MWRRS, endorsement of local funding for station construction or improvements, *e.g.,* as part of an urban renewal or downtown development program, can be justified given the economic benefits that will accrue to new development in station areas because of the increased ridership of the MWRRS.

Frequently, local communities have encouraged businesses to enhance station facilities with such activities as travel agencies, convenience stores, restaurants and cafes. In addition, some communities have used their stations as transportation multimodal hubs with integrated bus and taxi operations. For these reasons, it is likely that funding for station facilities could be obtained from local communities. Local contributions could expand the matching capabilities of the states and could generate as much as five percent or more of the total capital costs.

9.5 Private Sector Contributions

Private sector contributions may be used to fund public works projects. The level of contribution depends on the willingness of private parties to participate. Private developers may be willing to provide cash and in-kind contributions to support transportation improvements from which they expect to benefit. Businesses and individuals may have a strong interest in promoting certain types of development, and they may be willing to contribute money, property or services to enhance the feasibility of the project. Special benefits may accrue to private contributors in the form of projects sited near property owned by the developer, the creation of access points between the developer's property and the project, zoning concessions, development rights, or public recognition.

The freight railroads will be a major recipient of benefits because of all the infrastructure investments in track, signaling and rights-of-way for the MWRRS. As a result, they will experience substantial productivity gains within their operations and significantly lower track maintenance and renewal costs. Therefore, the freight railroads may contribute to the costs of implementing the MWRRS, although the match potential and form of benefit cannot be estimated now.

9.6 Joint Private/Public Development

Joint development is similar to private sector contributions. However, joint development involves the development of adjoining facilities shared by the public and the private developer, such as a transit station adjoining office or retail space. Developers may be granted development rights for stations in exchange for contributions towards funding a transportation project. Contributions could include on-time payments towards the transit project or annual payments that can be applied to project costs or operating costs. Project viability depends on real estate market conditions and the ability of the public agency to provide necessary inducements for

development. Inducements may include land, favorable zoning changes, lower financing costs or improved public access to the developer's property.

9.7 Debt Financing

The use of debt financing provides the ability to advance project implementation by borrowing against projected future revenues. Several forms of debt financing are discussed below.

9.7.1 Bond Issuance

The issuance of bonds and availability of up-front bond proceeds enables projects, such as the MWRRS, to proceed in an uninterrupted fashion since project funding is secure. Additionally, the use of bond financing allows major capital projects, which are long-lived assets, to be paid for over their useful lives rather than by current users. Tax-exempt debt represents bonds issued by a public agency or authority and backed by a specified source of revenue. The taxable debt represents bonds issued under structures in which the project costs are not eligible under the Internal Revenue Code for funding by tax-exempt bonds. Taxable debt would be issued at an interest rate approximately 1.5 to 3.0 percentage points higher than tax-exempt debt, because the interest income from these bonds would be subject to federal, state, and local income taxes which in turn affect investor returns. The basic structure of bonds is the same, whether tax-exempt or taxable.

9.7.2 Tax-exempt Bonds

There are two major categories of tax-exempt bonds - general obligation and revenue. The full faith and credit of the issuer with taxing power secures general obligation bonds. Revenue bonds are payable from specific revenue sources and do not permit bondholders to force taxation or legislative appropriation of funds not pledged for payment of debt service. Revenue bonds are non-recourse to the taxing power of the state in which the issuing authority is located. The only source of repayment and security for bondholders is the specific revenues that are pledged under the bond indenture.

Under certain conditions as defined in the Internal Revenue Code, state agencies and authorities would be able to issue tax-exempt governmental use bonds for a project. Exemption of the interest income on the bonds from federal taxes will lower the bonds' interest costs, because investors can still achieve the same effective return on tax-exempt bonds issued with a lower interest rate, as they would otherwise achieve on taxable bonds at higher rates. For the bonds to obtain tax-exempt status, certain criteria must be met. Funded assets must be publicly owned. The operating contract must be a short-term contract that satisfies certain conditions, including termination rights by the public authority, and compensation cannot be based on a percentage of gross or net revenues.

If a long-term operating contract is employed, and consequently the operating contract conditions discussed above are not met, tax-exempt governmental use bonds cannot be issued. For different reasons, again defined in the Internal Revenue Code, a second type of state-issued, federally tax-exempt bond, the private activity bond, also cannot be used. Under current law, these bonds may generally be used in private concessions for high-speed rail projects, except for the acquisition of rolling stock, for a system with operating speeds that exceed 150-mph. Thus,

the MWRRS would not qualify for this type of funding, as its operating speed is not expected to exceed 110-mph.

Use of Proceeds and Source of Repayment

The revenues that are pledged to repay debt generally include portions of a state's motor fuel taxes, motor vehicle registration fees and motor vehicle license or permit fees, and sometimes a portion of the state sales tax. While net revenues from the operation of the proposed system could be pledged to repay the bonds, the interest rate for an untested entity such as the MWRRS would probably be substantially higher than those available to the individual states.

Establishment of New or Expanded Debt

States have constitutional or legislative restrictions on the issuance of debt. In addition, the enactment of a transportation bond program may require legislative action to establish the size of the program, identify existing or new revenue sources that will be pledged over a multi-year period to repay debt, and develop guidelines for the types of projects to be financed. The development of each new or expanded financing program must be tailored to meet specific legal, political and financial constraints. In this study, it has been assumed that each state will have, or will secure, the necessary bonding capability.

Structuring Considerations

Tax-exempt bonds can be structured as long-term, fixed-rate debt, where the interest rate is established at the time of sale. Potential investors and the rating agencies carefully evaluate the credit strength of a bond issue. The key credit factor is the expected strength and stability of the pledged revenues.

9.7.3 Grant Anticipation Notes

Grant Anticipation Notes (GANs) or similar instruments (such as GARVEEs) offer states an additional mechanism to raise up-front capital on the basis of receiving future federal funds. The term GAN refers to a debt-financing instrument that permits its issuer to pledge future FTA funds to repay investors. GANs are generally short term, usually less than one year to maturity but sometimes as long as two to three years to maturity, and intended only to meet short-term financial needs.

When the GAN is issued, the main form of security backing this debt-financing instrument is the state's obligation of future federal-aid apportionments based on a Letter of Intent or a Full Funding Agreement from the FTA. Short-term GANs are defined as notes that are backed by future obligations of a currently authorized Full Funding Agreement. Therefore, assuming that a state issued the GAN in the second year of a five-year authorization period, the term of the notes–or at least that portion backed by federal funds–could not exceed four years.

Federal tax law presently prohibits tax-exempt bonds from being guaranteed either directly or indirectly by the federal government (*i.e.,* Full Funding Agreement). Therefore, to enhance the credit rating of the issuance, additional security for the GANs is often required. Because of the shorter maturity and the additional security pledged, GANs usually are issued at a rate that is approximately one percent less than that for general obligation bonds. Accordingly, they could

be a potential source of funding during the implementation period, when the amount of funds received from federal grants does not meet the capital requirements of the construction program.

9.7.4 Leasing

There are two potential funding mechanisms for financing rolling stock and possibly maintenance facilities. One option is offshore or cross-border leasing, and the other is the issuance of Certificates of Participation (COPs). There must be a separation of federal and state interest in the equipment or facility in order to use cross-border leases or COPs to leverage additional funds, or when using short-term lending or debt subordination where arbitrage issues could be involved. For example, the portion of a fleet or facility without federal interest could be financed and the proceeds used to earn interest or act as a credit enhancement on a bond issue supporting a major investment, thus generating savings for the state. Any legislative package proposed for the MWRRS should include the powers necessary to enter into such leases.

Off-shore or Cross-border Leasing

Off-shore or cross-border leasing is a mechanism by which the state purchases rolling stock, such as railcars, then simultaneously sells them to a non-U.S. investor who would be allowed to take investment tax credits or tax depreciation write-offs on the value of the equipment. The investor in turn leases them back to the state, and the tax benefits are shared with the state through reduced leased costs. The foreign investor pays the state an up-front consideration usually ranging from five to ten percent of the cost or value of the vehicles. The balance of the proceeds is deposited in a trust account to prepay or decease the lease payments.

Cross-border leasing is an ideal market for railcars because of their long life and "resale ability." The market has a proven advantage but it is volatile with uncertainties as to the availability and amount of savings. At a given point in time, there may be more demand than supply. While this mechanism has been used by Amtrak to privately finance equipment purchases and to obtain operating cash, it is not clear that such cost reduction measures will be available to States in conjunction with other Federal funding programs.

9.7.5 Certificates of Participation

Certificates of Participation (COPs) are a method of issuing debt, similar to bonding, secured by the value of the vehicles and/or facilities of the project. The investors become the technical owner of the vehicles/facilities and *lease* them back to the state. The lease payments become the service on the debt and, at the end of the lease period, the debt is retired and ownership reverts to the state or issuing agency.

COPs represent an interest in the payments the issuer has promised to make, but which are subject to annual appropriation by the issuer's governing body. The issuer must actually appropriate the funds each year; therefore, there is an element of risk not present in bonds. Although COPs can be insured, the interest rate is usually higher because of the increased risk.

9.8 State Funding Programs

Each state member of the MWRRI has distinct state programs where funding may be available for contributions to the MWRRS. Potential funding sources may be available through numerous state programs. The state programs may include:

- State Rail Programs
- State Highway Programs
- State Transportation Budgets

Each state in the MWRRS has its own distinct funding programs such as dedicated funding sources for public transportation including rail passenger programs; rail assistance programs; state funding and/or low interest loan programs for rail improvements or infrastructure; and state transportation budgets. These funding vehicles can be an appropriate source of financing for the MWRRI project, if the coalition deems these sources suitable.

9.9 Required Financial Thresholds

The MWRRS financial plan developed in Chapter 10 assumes a dedicated multi-year Federal funding program providing an 80/20 federal/state share. The Federal Railroad Administration (FRA) is likely to be the federal agency responsible for such a new program. The 1997 *Commercial Feasibility Study*[2] describes two conditions that are essential for receiving federal funding support for proposed intercity passenger rail projects:

1. A Benefits/Cost ratio greater than 1.0, and
2. An operating cost ratio of at least 1.0, defined as a precondition for an effective public/private partnership.

The *Feasibility Study* report also makes it clear that "Federal consideration of specific High-Speed Ground Transportation project proposals could apply additional criteria that could differ from, and be much more stringent than, this report's threshold indicators for partnership potential."

The definition of "operating ratio" used in this study is consistent with its definition by FRA in the *Commercial Feasibility Study*. It is different from the commercial "Operating Ratio" calculation that is typically presented by freight railroads and intercity bus companies. There are two key differences:

1. The "operating ratio" as calculated here includes *direct operating costs only*. Consistent with the FRA's requirement, the operating ratio calculations presented in this document do not include capital costs, depreciation or interest.
2. The "Benefit/.Cost ratio" presented here is defined as Revenues/Costs. Freight railroads and intercity bus companies typically define it as the reciprocal Costs/Revenues. Thus, they are seeking the lowest possible operating ratio while the passenger service would be seeking to maximize it.

As defined in the *Commercial Feasibility Study,* a positive operating ratio does not imply that a passenger service can attain "commercial profitability" by covering its capital costs. Since "operating ratio" as defined here does not include any capital-related costs, this report shows that

[2] U.S. Federal Railroad Administration, *High-Speed Ground Transportation for America*, pp. 3-7 and 3-8, September 1997

the proposed MWRRS network meets the requirements of the *Commercial Feasibility Study* by covering at least its direct operating costs and producing a cash operating surplus.

9.10 Conclusion

Many states are exploring opportunities to increase the private sector involvement in the implementation of rail projects. The magnitude of the capital requirements of the MWRRS, and the lack of a proven regional system of this size in the Midwest region would make the potential for full private sector participation challenging. Thus, it is currently assumed that each state will fund its portion of the capital costs separately using one or a combination of the project funding alternatives discussed above. Specific funding strategies and structures, based on the funding requirements and abilities of the individual states are outside the scope of this study. However, it has been assumed that the likely mechanisms are those presented above. These include:

- 80 percent federal funds (discretionary grant)
- 20 percent state/local funds (bonds)
- Cash flow management (TIFIA, GANs)
- Cost reduction techniques (cross-border leases, COPs)