

## ***12. Institutional and Organizational Issues***

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### ***12.1 Background***

This chapter addresses the institutional arrangements that will help support the engineering, implementation and overall management of the MWRRS. This topic was initially addressed in the 1998 Midwest Regional Rail System Technical Report. The sections that follow trace the progress made from the initial study in 1998 through the end of the current study plan.

Institutional arrangements relate to the organizational structure and agreements between participating entities (*e.g.*, states) responsible for undertaking or overseeing project-related activities. Institutional arrangements may take many forms throughout the planning, engineering, construction and operating plans of the MWRRS.

The 1998 Technical Report discussed, at a general level, the concept of institutional arrangements and how these arrangements might be incorporated into MWRRRI planning, management and implementation-related activities. Institutional arrangements can now be addressed in detail. This chapter is *descriptive* as opposed to *prescriptive* in identifying the most appropriate and effective institutional arrangements for the MWRRRI.

### ***12.2 MWRRS Project Objectives***

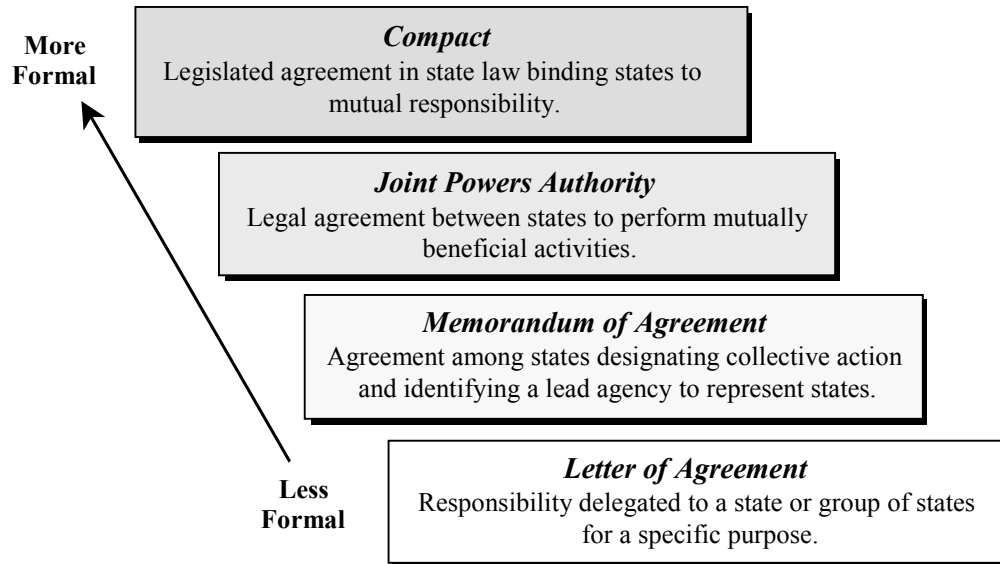
Under many circumstances, institutional arrangements will be needed to provide the structure necessary to achieve multi-state objectives stemming from the MWRRRI. While many of these objectives will be achieved through informal arrangements between states, achieving others might require formal, multi-state agreements.

As the MWRRRI progresses to more detailed planning – and ultimately to pursuing funding, particularly federal funding for implementation – a number of diverse activities will most likely require multi-state participation and cooperation. As MWRRS implementation activities progress, the need will exist to define the institutional arrangements that will best facilitate the implementation and development of the project, as well as meet the needs of project participants including freight and commuter railroads, contractors and federal funding agencies.

As noted in the studies conducted in 1998 through 2000, there is a wide range of institutional arrangements that can be made. Exhibit 12-1 illustrates a continuum and definition of institutional arrangements which range from less formal arrangements such as a letter of agreement to a more formal multi-state legislated compact arrangement. The level of arrangement selected will reflect the administrative needs of the states and the degree of complexity of the issues involved.

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**Exhibit 12-1**  
**Continuum of Institutional Arrangements**



### ***12.3 Guiding Principles in Selecting Institutional Arrangements***

Certain guiding principles should be taken into account when considering and ultimately selecting institutional arrangements to support MWRRI activities. The overall objective is to achieve project goals and to neither expand nor create new bureaucracies. Foremost among these is ensuring that institutional arrangements are designed so that intrusion upon states' powers and immunities is minimized. While the form of arrangement is important, equal attention must also be given to identifying when such multi-state arrangements are necessary and what needs to be incorporated into these arrangements. Another guiding principle in selecting institutional arrangements is to determine if existing arrangements are sufficient to meet the current need.

#### ***12.3.1 Multi-State Participation Activities***

Previous studies confirmed that activities for the MWRRI requiring multi-state participation fall into three broad categories – project planning, business arrangements, and policy and operational oversight. Exhibit 12-2 lists these activities by project category.

**Exhibit 12-2**  
**MWRRS Activities by Category**

<b>Project Planning</b>	<b>Business Arrangements</b>	<b>Policy Oversight Arrangements</b>
Hire consultants Oversee project planning Conduct environmental review Garner project support	Issue and retire state debt Federal grant activities Major procurements System construction Outsourcing decisions	Train operator oversight Capital investments Service quality standards Receipt of revenue Payment to contractors Disbursements to states

**12.3.2 Project Planning**

Project planning requires arrangements that support joint funding and collective oversight of the planning process among the states. An institutional arrangement defined and formulated by a joint, signed letter, or *Multi-State Contract* by each of the participating states and/or agencies proved sufficient thus far to successfully proceed with MWRRS project planning.

An institutional arrangement for the collective governance of many of the activities involved would enhance the effectiveness of project oversight, as well as provide more efficient, comprehensive project management by the states. It is important that policy governance be defined as more than just advisory. The governing entity must have authority to direct action. It is anticipated that these objectives can be met through an interstate agreement.

The states can enter into agreements to establish the contractual arrangements necessary to achieve intercity service within the jurisdictions of the contracting states. A contract can be established quickly and without legislative approval. It is flexible in design, allowing states to form a legal arrangement that is tailored to their needs and project-specific objectives.

**12.3.3 Business Arrangements**

Business arrangements entail contractual agreements with lending institutions, investors, suppliers, contractors and freight and commuter railroads. As such, provisions must be made to protect the interest of states, define fiduciary responsibilities and achieve objectives according to a schedule and within limits of affordability. Likewise, investors and contractors will seek clarity regarding identification of the contracting entity and financial responsibility. The federal government, in particular, will require that a Designated Recipient be named by states submitting grant applications, receiving grant funds and being responsible for protecting and maintaining the federal assets resulting from the MWRRS. The following describes the different kinds of arrangements possible between states.

***State-to-State Contract***

The states may enter into agreements amongst themselves to make the contractual arrangements that would be necessary to achieve intercity service within the jurisdictions of the states. Such agreements may be established without prescribing the precise form or content, and may not require separate enactment by each participating state. Cooperative agreements have been authorized in many states. In entering into agreements with participating states, each state would have to assure the others that it would enact all necessary legislation and regulations to implement the plan for the MWRRS.

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The advantages of a contract are the speed and flexibility of establishing the agreement structure, since legislative approval is unnecessary, and the ability of such a contract to hold a state harmless from legal liability. The disadvantage of such a contract is that it may not fully reflect the collective good and credibility that might be achieved with a more formal agreement.

### ***Interstate Compact***

Congress has from time to time agreed to allow states, or agencies or authorities created by states, to enter into specific agreements that involve interstate commerce. The most recent consent was made in blanket form as part of the Amtrak Reform and Privatization Act passed in 1997. This act grants the consent of Congress for states to enter into interstate compacts to promote the provision of intercity passenger rail service including:

- Retaining existing service or commencing new service;
- Assembling rights-of-way; and
- Performing capital improvements, including:
  - The construction and rehabilitation of maintenance facilities and intermodal passenger facilities
  - The purchase of locomotives
  - Operational improvements, including communications, signals and other systems.

The terms of a compact for the MWRRS would provide that the states join to establish a unified system that would operate across state lines, and cooperate and share jointly the administrative and financial responsibilities of operating such a system. For example, an MWRRRI compact could describe the manner of adoption of the compact by the states and provide for broad authority to implement a business plan. The compact could also describe the institutional framework, such as a policy board consisting of members from each of the participating states directing an operator. It could identify the terms for enactment, such as providing that the compact could become effective upon the adoption or enacting into law by two or more participating states.

The agreed-upon compact language must be identical for each state. However, each state would most likely enact its own enabling legislation that conforms or accommodates formation of a compact. This enabling legislation may include, but not necessarily be limited to, zoning, insurance, bonding authority, rates, tariffs and fares, labor, safety and the environment.

### ***Compacts and Sovereign Immunity***

States enjoy sovereign immunity. Some states have waived some of their sovereign immunity in order to conduct business. Waiving of immunity is usually tailored to a specific action, such as contracts, provision of public services or certain types of torts. For example, the State of Maryland waived sovereign immunity with respect to the operations of the Mass Transit Administration.

The nature and extent of liability concerning a compact depends upon the content of the compact agreement, and what level of liability, if any, would be assumed by the state. The determination of how much sovereign immunity is waived is dictated by the terms of the compact. For example, a state's indemnification limits can be proportional to its financial contribution to

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operating and capital or to other factors. In the Washington Metropolitan Area Transportation Authority (WMATA) compact, the states assume no direct liability but assume responsibility to finance the organization, with the result that each state indirectly pays for a portion of the liability.

A compact for the MWRRS would join the states in a structure that would be recognized by Congress for seeking federal funding for significant infrastructure improvements. The compact would provide the states with a formal structure that would operate across state lines and allow the states to cooperate and share jointly the administrative and financial responsibilities of implementing the system. A disadvantage of a compact is the timeframe and requirements for state legislative approval.

### ***12.3.4 Policy Oversight Arrangements***

Institutional arrangements would identify the responsibilities of the states in deciding MWRRS policy and broad service delivery issues. It would also outline responsibilities for management oversight of the rail operator, including periodic review of operating performance and contractor performance.

The establishment of a policy oversight entity could also be an appropriate arrangement. The authority of the policy board could be derived from an agreement among the member states. The policy board would interact with the rail operator through the provision of required funds and the specification of service plans.

- The policy board would follow all the normal procedures of a governmental entity by allocating funds for the greatest public benefit; allowing public participation in all decision-making; and by making complete and detailed financial disclosure.
- The rail service provider would operate in a commercial environment as a strictly private sector, for-profit business enterprise. The service provider would make its decisions on a commercial basis, and would be allowed to protect the confidentiality of its proprietary business data.

It is essential to the future of the MWRRS to separate the policy board's requirement for service and funding oversight from the operator's business requirements to be profitable. As pointed out by the Amtrak Reform Council in 1997, the current Amtrak structure by combining governmental and non-governmental functions in a single entity does not do this. Amtrak might serve as an operator of the system, but authority and control over the allocation of capital dollars should be vested in the states and the FRA, rather than in the operator.

In summary, while some MWRRS activities can be accomplished by the individual states, others will require varying levels of institutional arrangements. These institutional arrangements will range from informal cooperative state agreements, to complex arrangements such as multi-state contracts or multi-state compacts. Informal agreements are adequate for planning, but as the system moves towards implementation, more formalized arrangements may become necessary. Exhibit 12-3 provides a table of required MWRRS actions and potential types of institutional arrangements. The exhibit shows that MWRRS activities relating to planning can be accomplished through cooperative agreements and memoranda of agreement.

**Exhibit 12-3 MWRRS  
Actions and Potential Institutional Arrangements**

<i>MWRRS Potential Actions and Responsibilities</i>			
<i>Multi-State Compact</i>			
<i>Multi-State Contract</i>			
<i>Informal Cooperative Agreement</i>			
<i>Level of Institutional Action Required</i>			
Agency Approval	X	X	X
Legislative Approval			
<i>Arrangements Supporting Planning Activities</i>			
System Plan	X	X	X
Service Plan	X	X	X
Service Standards	X	X	X
<i>Arrangements Supporting State Management Activities</i>			
Stakeholder Support	X	X	X
Procurements		X	X
System Construction Oversight		X	X
Vendor Selection		X	X
System Implementation Oversight		X	X
Full Time Administrative Support		X	X
System Accounting		X	X
<i>Arrangements Supporting State Financial Responsibilities</i>			
Federal Grant Applications and Awards		X	X
Capital Program Development/Monitoring		X	X
Multi-State Cost Sharing		X	X
Multi-State Revenue Distribution		X	X

As the project moves toward activities involving funding, procurement and construction, more formal arrangements such as multi-state contracts will be required. These arrangements, however, must be defined to minimize any intrusion to existing state powers and immunities, and care must be taken to ensure that these arrangements do not become new bureaucracies. Within this context, the role of a Joint Powers Authority could play in MWRRRI policy, management, funding, implementation and operations oversight was assessed.

#### **12.4 Joint Powers Authority**

A Joint Powers Authority (JPA) provides for the joint exercise of powers of two or more public agencies. State law establishes the authority for state agencies to establish a JPA, and they can be

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established in a relatively short period through administrative action. A Joint Powers Authority can be established under a multi-state contract. JPA agreements specify the responsibilities and powers of the new entity. The powers of the JPA are derived from existing powers of the member states and not through legislative action specific to the JPA. Consequently, JPA powers are limited to activities common to the JPA partner states. Such powers could include: hiring employees and contractors, procuring equipment, exercising eminent domain, and in some instances, levying taxes. JPAs are also associated with the delivery of a defined service and the creation of a special district relating to its purpose.

Wisconsin, for example, put enabling legislation in place permitting multi-state agreements. The following is an excerpt from the Wisconsin State Code Section 85.06(2)(c), (f), (g), (h) relating specifically to expanding and improving rail passenger service:

“The Department (of Transportation) shall administer a rail passenger service assistance and promotion program and may do the following:

- Consult with other states for additional rail passenger service in the state
- Apply for and accept funds for rail passenger service
- Acquire equipment or facilities.
- Provide rail passenger service or support for rail service
- Enter into agreements with other states to assist or promote rail passenger service”

In contrast to a JPA, the creation of a multi-state compact requires passage of identical state law by each member state. The multi-state compact is usually associated with the creation of a district in which a certain activity is provided and regulated. Withdrawal from the compact also requires the passage of state law. In contrast to the powers of a JPA, the powers granted to the compact can differ from its member states. Once established, a multi-state compact usually results in a new organization that contains all of the activities necessary to operate a self-contained agency or business (e.g., administrative, technical, financial, legal, personnel). Member involvement is formalized at the board level, thus leaving daily responsibilities to the compact staff.

#### ***12.4.1 JPA Case Study – Altamont Commuter Express***

The Altamont Commuter Express (ACE) is a new commuter rail service operating between Stockton and San Jose, California. ACE utilizes Union Pacific right-of-way and Herzog Transit Services, Inc. operates daily service between nine stations. ACE is operated and managed under the aegis of a JPA governed by a Joint Powers Board created by the San Joaquin Regional Rail Commission, Alameda Congestion Management Agency and Santa Clara Valley Transportation Authority.

This JPA was initially established for a 36-month period. The agreement between the entities stipulated membership and powers, financial commitment of members relating to ACE operation and administrative procedures. Three board members represent each member entity. ACE operations are primarily supported by fares, CMAQ funds and operating subsidy from each member entity defined as the daily percentage of boardings and alightings occurring in each

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county. Sharing of capital costs is agreed upon on a per-case basis. Stations remain the responsibility of the local jurisdictions. For the 36-month demonstration period, the San Joaquin Regional Rail Commission served as the managing agency for ACE service, providing management, planning, finance and support services. The service and the JPA arrangement continue to be successful.

#### ***12.4.2 Case Study Summary***

From these and other case studies reviewed for MWRRI applicability, the following common elements and benefits were extracted:

- The administrative and operational efficiency of the transportation service system is enhanced through a formal coordinating arrangement particularly as it relates to coordination with private and public funding entities and managing contractor activity
- A single managing entity enhances system recognition by the public and in building and sustaining broad stakeholder support
- Inherent to the institutional arrangement are shared service-delivery decisions and mutual transportation and financial benefits
- The absence of physical ownership of the system right-of-way does not preclude establishing a formal multi-state arrangement
- The arrangements served as a forum for continuing service design, deliver, and quality

### ***12.5 MWRRI Institutional Arrangement Recommendation***

At this stage in the MWRRI planning process, establishing a formal managing entity through a Joint Powers Agreement (JPA) for MWRRS implementation and operation activities could provide increased focus, visibility and support for the MWRRI.

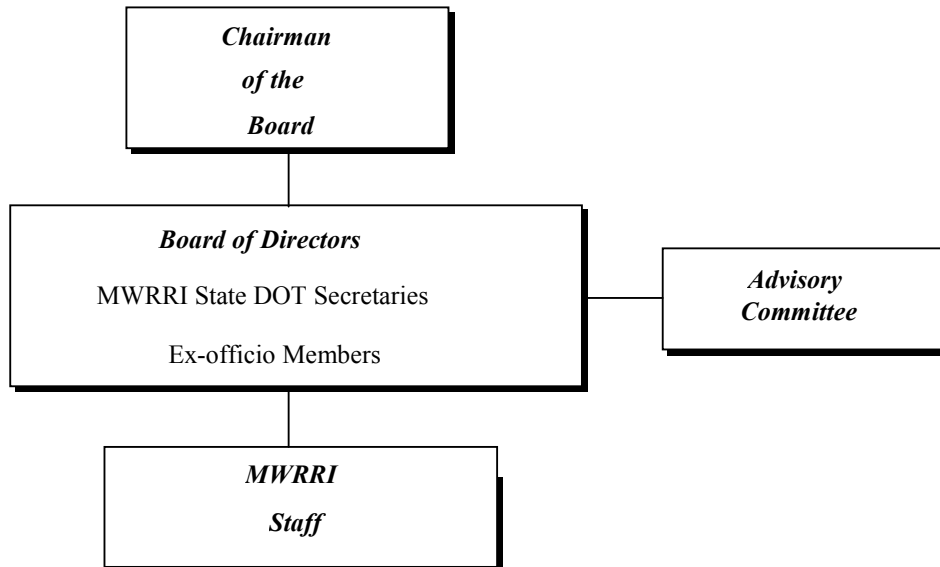
The MWRRI JPA could provide coordinated oversight and management responsibility for MWRRS planning, funding, financial and service-related elements. Additionally, it could serve as the entity to formally and collectively set MWRRI policies, priorities and direct actions, *e.g.*, financial, service related, etc., and provide ongoing implementation and operations-related oversight.

#### ***12.5.1 Example: MWRRI Organizational Arrangement***

A board of directors would govern the MWRRI JPA. Both voting and non-voting members would comprise this board. Voting members would consist of the State Department of Transportation Secretaries from each MWRRI state. As shown in Exhibit 12-4, supporting the board would be a small MWRRI staff and an Advisory Committee.

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**Exhibit 12-4**  
**Example Institutional Arrangement – MWRRI-JPA**



### **12.5.2 MWRRI-JPA Responsibilities**

While the MWRRI-JPA would coordinate and augment MWRRI activities specifically performed by each state, the JPA would also perform responsibilities specified in the JPA agreement. Responsibilities might include:

- Securing project funding and serving as the designated recipient for federal assets
- Performing financial activities including coordination of grant-related activities, management of system revenues, calculation and collection of state financial support, distribution of system revenue
- Solicitation and selection of contractors for construction projects, system operations and maintenance, and station and on-board services
- Monitoring and enforcing service standards
- Performing operations oversight
- On-going coordinated system planning
- Assisting states in generating stakeholder support
- Coordinating state MWRRI/MWRRS activities and related transportation projects and services

A key responsibility of an MWRRI-JPA would involve the flow of federal funds to support system construction and managing system generated revenue.

### **12.5.3 MWRRI-JPA Staff Responsibilities**

A small staff would support the JPA. Staff responsibilities and activities may include:

Board of Directors support

Construction management

Carry out Board policy  
 System-wide budgeting  
 Fund management and accounting  
 MWRRS advocacy

Service operator oversight  
 Operations planning  
 Contract management  
 Ongoing system evaluation

MWRRI-JPA staff size is intended to remain small, and given the changing nature of MWRRS focus – particularly during the implementation years – it is conceivable that staffing size and responsibilities will be modified periodically to reflect project and system needs. Alternative staffing arrangements could include the hiring of staff, engaging contract management and rotating of staffing responsibility to each member state. Exhibit 12-5 describes each of these potential staffing arrangements.

**Exhibit 12-5  
 Alternative Staffing Arrangements**

<i>Hire Board Staff</i>	<i>Contract Management</i>	<i>Rotating State Responsibility</i>
Three full-time employees as core: <ul style="list-style-type: none"> <li>▪ Executive Director</li> <li>▪ Secretarial support</li> <li>▪ Consultant support as needed</li> <li>▪ Increase permanent staff size as needed</li> <li>▪ Secure office space/equipment</li> <li>▪ Salaries/Benefits</li> <li>▪ Directly supervised by Board</li> </ul>	<ul style="list-style-type: none"> <li>▪ Firm hired for Board services, program management and oversight</li> <li>▪ Senior consultant assigned to direct efforts</li> <li>▪ Staff expands and decreases in size in response to MWRRS needs</li> <li>▪ Skills of staff modified to best respond to MWRRS needs</li> <li>▪ Contracting mechanisms used by state to retain consultant</li> <li>▪ Office space and equipment optional</li> </ul>	<ul style="list-style-type: none"> <li>▪ Executive Director with core staff provided by state</li> <li>▪ Increase direct involvement of states</li> <li>▪ Requires dedicated full-time state employee for one- year</li> <li>▪ Potentially requires shifting of financial, contractual responsibilities annually</li> </ul>

## **12.6 Summary**

The MWRRI is a complex undertaking that, through the joint activities of nine states, has developed a proposed regional passenger rail system that will greatly enhance travel options throughout the Midwest region. While some advanced planning, funding, implementation and operating activities will be performed by individual states, many activities will require multi-state coordination. Ongoing partnership is integral to the successful implementation and operation of the MWRRS.

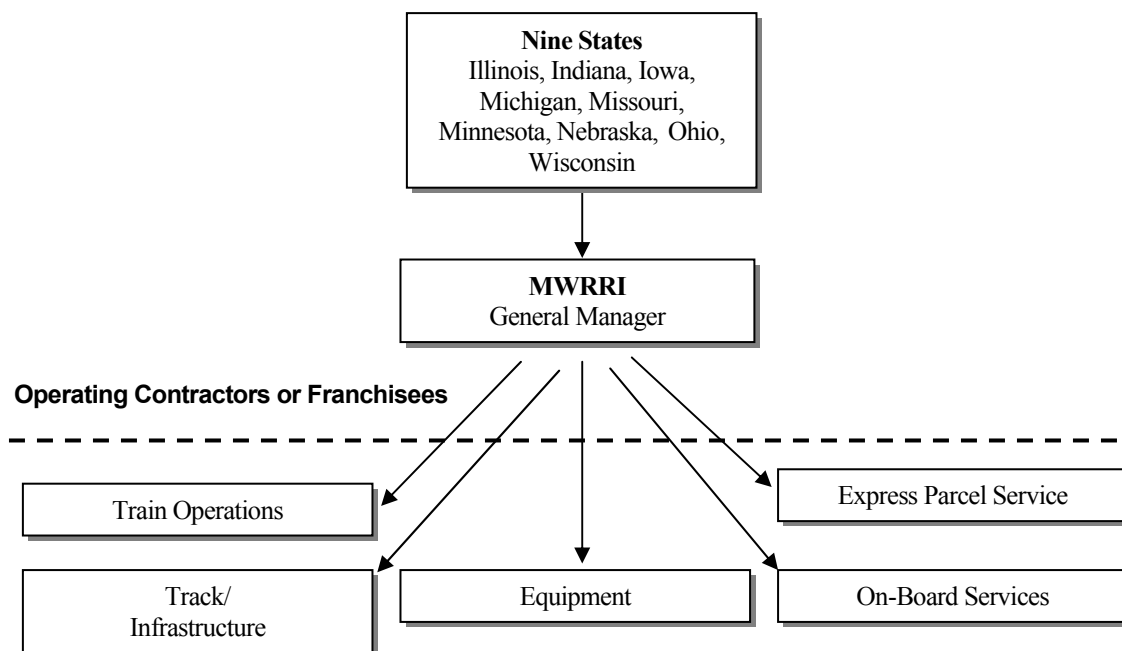
Additional analysis of arrangements and substantial discussion among the participating states is required to effectively define institutional arrangements for the MWRRI and the passenger rail system that will ensue. As part of this continued dialogue, the following questions should be considered within the context of the MWRRI:

- Where does a state’s responsibility cease and multi-state responsibilities begin?
- What are the functional responsibilities?

- What are the funding-related responsibilities?
  - Capital
  - Operating
  - Grants and other sources
  - Distribution of revenue
- What role(s) should the states assume regarding policy development?
- What role(s) should the states play pertaining to program management?
- What responsibilities should the states assume regarding operating arrangements with freight and commuter railroads and the selection of the MWRRS passenger rail operator?
- What levels of oversight should the states assume during implementation and operation?

Implementation of the MWRRS will remain the responsibility of the states. Once operational, the states might find it advantageous to either broaden the roles and responsibilities of the MWRRS Steering Committee or take action to establish a formal organization charged with operations and system oversight. Various institutional structures in the Midwest region and in other parts of the U.S. can serve as models for multi-state coordination. These models range from ad hoc multi-state committees, to committees established by multi-state agreement, to a Joint Powers Authority established through legislative authority. So far, the discussion has focused on the institutional arrangements facilitating interstate cooperation to allow smooth operation of the MWRRS. Exhibit 12-6 illustrates a practical structure for an overall organization for MWRRS.

**Exhibit 12-6  
Potential MWRRS Organizational Oversight**



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## 12.7 Operator Selection Criteria

As shown in Exhibit 12-6, MWRRS could develop several different contract or partnership relationships to obtain the full range of services needed to operate a modern passenger rail service. A train operator would develop the authorized service, and operate the system to a high standard but need not be responsible for equipment or track maintenance. The MWRRRI could contract directly with freight railroads for track access, maintenance and infrastructure improvements; with equipment manufacturers for train maintenance services; with hospitality firms to provide on board service and with a freight courier firm to develop express parcel service.

In this contract model, an MWRRRI general manager would establish service criteria, administer federal and state capital funding, and select and monitor the performance of the operating contractors. Amtrak performs this supervisory role today, but under the proposed MWRRS plan, this overall management responsibility would be vested in the MWRRRI-JPA.

It appears that Amtrak would have only a minor role concerning train dispatch and track maintenance, since host freight railroads will continue to perform these functions as they do today. If desired, Amtrak could compete for the other four operating contracts in rolling stock maintenance, train operations, on-board services and express parcel service.

Innovative models of service delivery should be carefully considered for application to the MWRRS. By eliminating the role of train conductors, VIA Rail Canada has achieved very high levels of customer satisfaction. This type of structure has the added potential of simplifying the contractual relationship between MWRRS and the freight railroads. By expanding the scope of an on-board service contract to assume all customer-care responsibilities, freight railroads could take over all train operations by providing the operating train crews. This would simplify lines of accountability for on-time performance, clarify cost accounting and avoid disputes over track access rights. This arrangement, which is well established in commuter operations, could be extended to intercity rail systems as well.

Key requirements for selecting operating contractors may include, but not be limited to:

- *Experience*: The existence of an operating entity that has demonstrated knowledge and capabilities in the management, scheduling, maintenance, planning and financial control of rail equipment and/or facilities.
- *Service*: The ability to provide high quality, reliable, on-time service combined with an affordable rate structure based upon an appropriate grant of resources and investment.
- *Planning*: The experience and capability to plan for effective operations, maintenance, engineering and mechanical requirements.
- *Insurance*: The ability to develop and manage safety programs, negotiate and maintain adequate insurance coverage at an acceptable cost, handle claims and administration, and oversee litigation where necessary.
- *Labor*: The ability to negotiate with organized labor, and maintain constructive relationships that would not threaten system performance. This includes the ability to work with labor to derive mutually beneficial productivity agreements.

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- *Governance*: A proven capability to provide the management for business operations, with accountability for delivering quality service at the authorized cost.

Regardless of the contracting structure, the MWRRS concept mandates cost-effective provision of services and a high quality of service, to achieve the operating results projected in this study. To that end, the MWRRS represents a paradigm shift toward a well capitalized, efficiently operated and highly developed passenger rail system, which offers an opportunity for innovation in both technology and organization. As such, it cannot be compared to the passenger rail service that exists today in the Midwest region.

## **12.8 Cost and Revenue Allocation**

Because of the geography of the nine MWRRS states and the prominence and location of Chicago, it is clear that a Chicago hub system offers the most effective means of developing a passenger rail network. While several states have sought to develop their own intercity rail systems, the role of Chicago in these corridors means an interstate component is inevitable. This is true even of the Chicago-St. Louis line, which terminates in Missouri. By creating a single system and realizing both revenue and cost economies of scale, the MWRRS has created a project that can justify extensive federal involvement in development of a modern passenger rail service.

Indeed, one purpose of the MWRRS has been to unify the states' interests to ensure that the MWRRS can obtain its fair share of federal funding. The Northeast Corridor (NEC) has benefited for many years from extensive federal investment, in many cases without even requiring a local or state funding match. In contrast, several MWRRS states have been investing their own funds in passenger rail often without any federal assistance. With a reasonable level of investment in infrastructure, the Midwest region can begin an incremental approach to building its own modern passenger rail system that can return an operating surplus like the NEC already does.

Only by working in collaboration with each other can the MWRRS states expect to achieve a successful passenger rail system. A key part of this collaboration will be the way in which states work together in sharing the costs and revenues for both the development and operation of the system. Following a series of discussions and workshops dealing with the cost and revenue allocation process, a *near* agreement (*i.e.* agreement in principal but without formal ratification) has been reached on a number of issues. The following is a summary of allocation issues considered since the 1998 MWRRS Technical Report was finalized:

- Allocation goals and objectives
- Form of the State Match: Infrastructure or Equipment
- Shared Assets: Chicago Terminal and Equipment Maintenance Facilities
- Joint-Benefit Segments and Bilateral Agreements
- Allocation methodology

### **12.8.1 Objectives for Cost Allocation**

A sound cost allocation system acknowledges certain basic principles, and seeks to maintain system integrity while protecting equity interests among participating states. Any allocation

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solution must represent a combination of logic, equity, accommodation and negotiation. Basic principles agreed upon among the states during earlier discussions included the following:

- Allocate capital investment and operating costs of the system among stakeholders in a fair and equitable manner
- Incorporate the minimum level of complexity necessary to meet the needs and objectives of the MWRRI
- Determine the best performance metrics on which to determine allocation of costs and revenues, acknowledging that individual corridor solutions may vary based on ridership potential, fare levels, speeds and frequencies, and hence each states' level of financial participation may also vary
- Acknowledge that asset ownership, whether it is common (*e.g.*, fleet) or individual (*e.g.*, stations) is to be subordinate to system-controlled use
- Preserve freedom of action for the states, *e.g.*, the ability to join the plan at any time or leave at will, wherever possible, acknowledging there may be a corresponding cost for doing so
- Identify criteria for defining common or shared system costs

The major objectives of an allocation system are to encourage operating efficiencies of scale, to promote the desired actions and to avoid unintended consequences. For the MWRRI, the main objectives were to:

- Encourage deployment of cost-effective services
- Maximize operating cash flow
- Satisfy requirement to minimize or eliminate operating subsidies

Cost-effective services have been defined as those exhibiting a positive net present value (NPV) of revenues minus direct operating costs over a 20-year time horizon. Under these criteria, some initial operating losses during the ramp-up years may be acceptable, provided those losses can be recouped from operating surpluses later. The minimum threshold of a positive NPV should be achieved for the system as a whole, for each state as a responsible entity, and for each corridor or line as an entity. Strategies that support these objectives include:

- Limiting service expansion to reasonable levels, consistent with demand
- Maintaining control over operating costs
- Establishing and maintaining fares at market levels

Corridor responsibility implies financial responsibility for rolling stock costs, station costs, operating costs, operating revenues and, by extension, initial operating deficits and distribution of subsequent operating surpluses. Infrastructure costs are also identified on a corridor basis, but may be treated somewhat differently, based on the availability of federal capital assistance.

### ***12.8.2 Form of the State Match: Infrastructure or Equipment***

MWRRI project funding is assumed to comprise primarily federal funds of up to 80 percent of the total capital project costs, including infrastructure and rolling stock. The remaining 20 percent state and local match can be made up of rolling stock purchases, improvements to stations and other improvements made within state boundaries.

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Rolling stock purchases are clearly needed for each corridor, based on anticipated service and levels of ridership. The states can negotiate among themselves their share of trains needed to start service on each corridor. Therefore, the purchase of rolling stock can become the majority of each state's matching share for federal infrastructure funding.

It is anticipated that states can purchase rolling stock using bonds guaranteed by the full faith and credit of states, and associated with specific revenue streams such as a gasoline or sales tax. This type of bond has the lowest rates. It may also be possible for states to directly finance their purchase through equipment vendors, which would come at a slightly higher interest rate. It is expected that the strongest corridors will have enough free cash flow to repay their equipment cost, while the weaker corridors will not be able to do this. All corridors however, are projected to generate a positive operating ratio by 2025, which is one of the FRA's key prerequisites for obtaining federal capital.

Amtrak was able to privately finance its Acela Express equipment purchase, so it is not unreasonable to expect the strongest MWRRS corridors will also cover their own equipment costs. Making a commitment to use passenger revenue streams to repay rolling stock costs, even though those revenue streams are not the dedicated funding source for the bond issuance, encourages fiscal responsibility. States will be less likely to encourage excessive amounts of service or hold fares below market levels, if there is an anticipated revenue target to achieve.

States may retain title to their rolling stock, so long as such an ownership does not give any state the right to interfere with appropriate maintenance and operating practices. In other words, a state would not be permitted to restrict cars from traveling on any MWRRS corridor, but each state may retain title to a certain number of rail cars. A state's ability to invest in rolling stock would eliminate the need to invest one state's funds in the infrastructure of another state.

### ***12.8.3 Shared Chicago Terminal and Equipment Maintenance Facilities***

The Chicago hub is central to the MWRRS. Chicago is the site of extensive passenger and equipment transfer activity since all trains, except for the St. Louis-Kansas City service, either originate or terminate there. In addition, Chicago generates and attracts the majority of passengers since it is by far the largest population center in the region.

Because of the need for complex construction in an urban environment, Chicago-area improvements also happen to be the most expensive work of the whole MWRRS. In addition to line improvements, Union Station and equipment maintenance facilities are a system, rather than a route-specific, expense. The total cost of all of these investments would be \$1.19 billion.

The most expensive single component of this investment, costing \$656 million, would be for the *South-of-the-Lake* improvement from Chicago to Porter, IN. This would establish a dedicated passenger corridor from downtown Chicago to the south and east.

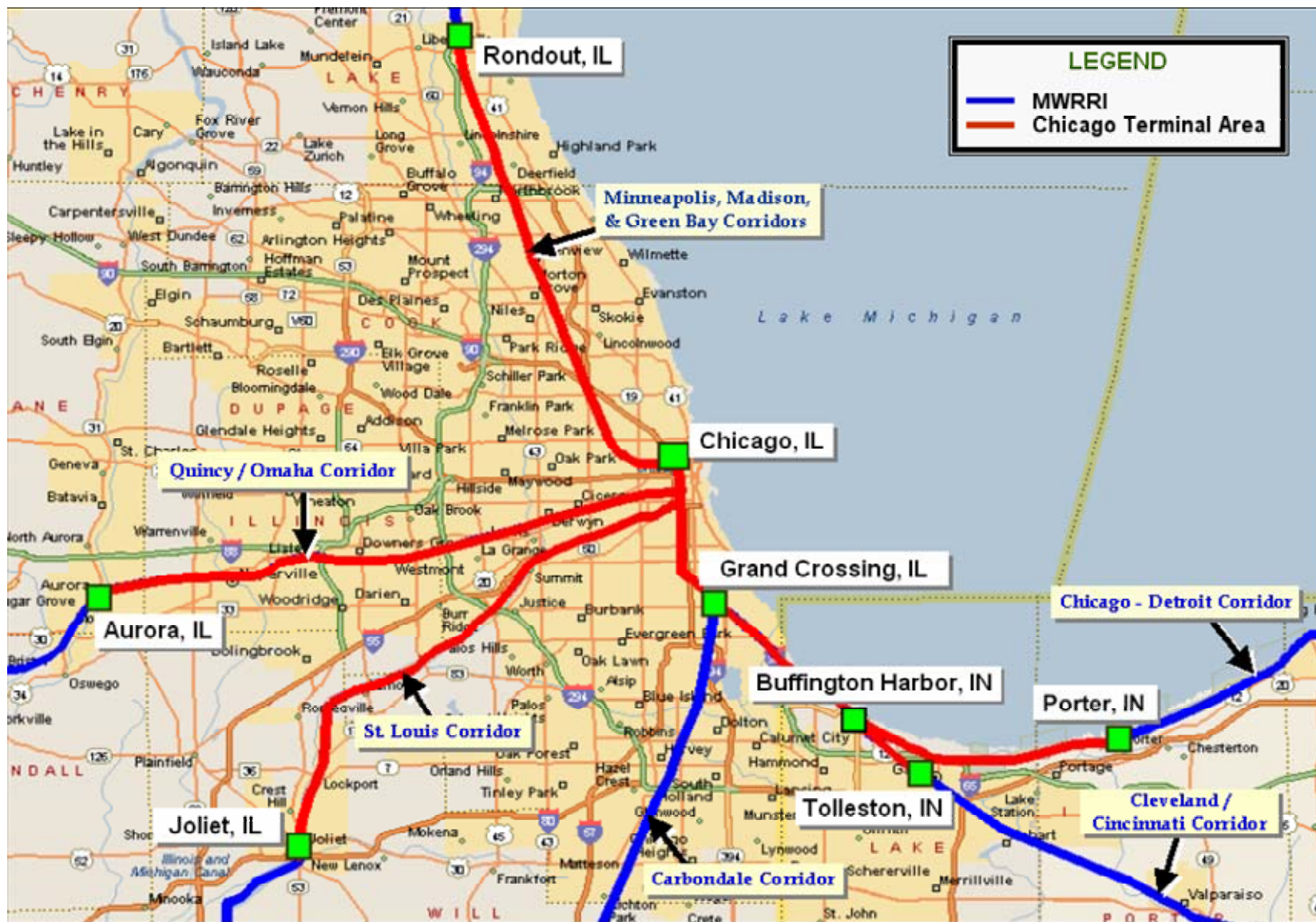
Although completion of the South of Lake improvement is critical to the business success of MWRRS, the benefits of many corridor investments in infrastructure cross state lines. This is particularly true of Chicago-area improvements. For example, the proposed investments in Indiana and Illinois will do little to benefit the residents of those states but Michigan will benefit

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greatly. Likewise, track improvements between Indianapolis and Cincinnati will primarily benefit Ohio residents, even though most of the track is in Indiana. Furthermore, these improvements will be made on infrastructure that is mostly owned by freight railroads. This combination of cross-state boundary investments and private-entity ownership makes a compelling case for a strong federal role in financing track and infrastructure investment.

Thus, it has been proposed that the cost of the shared Chicago terminal improvements be treated as a system responsibility, not just a responsibility of the State of Illinois. Exhibit 12-7 identifies those areas of proposed federal responsibility for track improvements, signals, station improvements, administration, dispatching and station operations as have previously been agreed upon by the MWRRI states.

Exhibit 12-7  
Chicago Terminal Area



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The City of Chicago, the Metra commuter railroad, Amtrak's long-distance trains service and the freight railroads will significantly benefit from the Chicago-area improvements proposed for the MWRRS. Indeed, some of the proposed MWRRS improvements have already been included in the CREATE Chicago Rail Improvement Plan<sup>1</sup> recently announced by the Association of American Railroads. Although the MWRRRI might fund some of these Chicago improvements, it is clear that the benefit of these investments goes far beyond the need for providing MWRRS passenger service.

### *Allocation of Shared System Expenses*

Since Chicago Terminal improvements are to be treated as a system expense, the capital costs of these improvements have been assigned in accordance with each state's train-miles. However, the St. Louis-Kansas City line does not use the Chicago-area improvements, and the Omaha/Quincy lines gain little benefit from them. Funds for rerouting Carbondale trains off the St. Charles Air Line are being provided so Chicago can accomplish its urban redevelopment goals, and this will occur whether MWRRS passenger-related improvements proceed or not. Therefore, in this analysis, these three routes do not contribute any funds for the capital costs associated with the Chicago-area improvements.

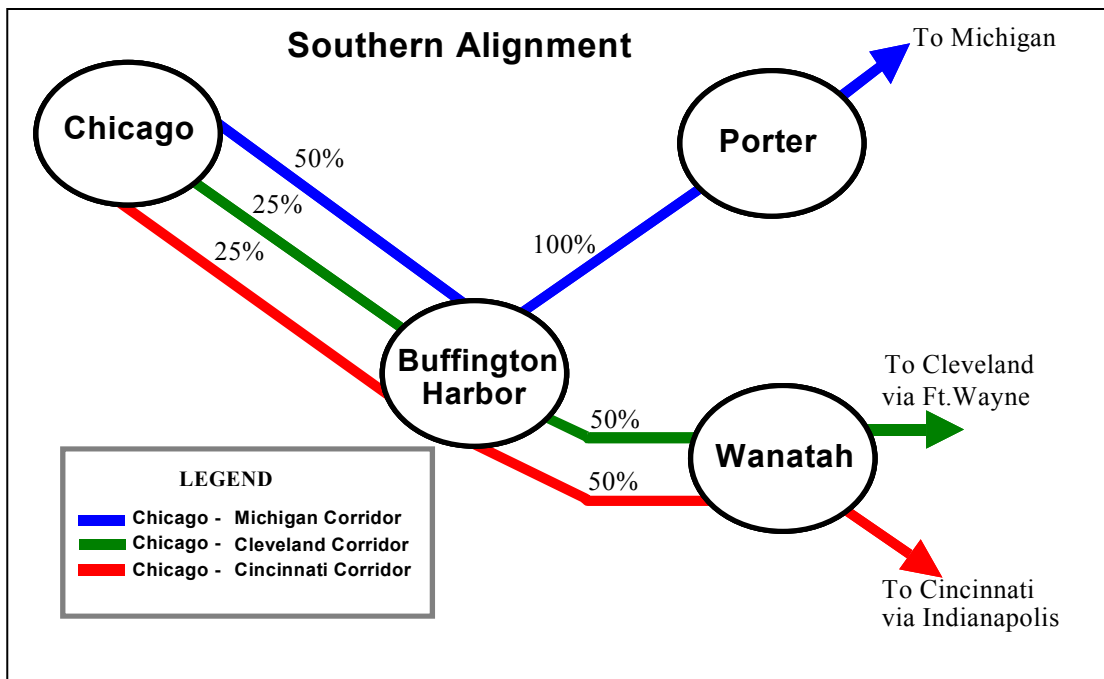
There is a need for sharing the costs of the South of the Lake improvement between the Michigan, Cleveland and Cincinnati routes. While capital costs are assumed 100 percent federally funded, track maintenance costs (both operating and cyclical) still have to be shared between these three routes. As shown in Exhibit 12-8, the MWRRRI states have previously agreed to allocate these costs based on relative train miles:

- From Chicago to Buffington Harbor
  - 50 percent to Michigan
  - 25 percent to Cleveland
  - 25 percent to Cincinnati
- From Buffington Harbor to Porter, IN
  - 100 percent to Michigan
- From Buffington Harbor to Tolleston and beyond to Wanatah, IN
  - 50 percent to Cleveland
  - 50 percent to Cincinnati

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<sup>1</sup> For a description of the proposed public/private partnership to address Chicago rail congestion problems, see: [http://www.aar.org/ViewContent.asp?Content\\_ID=1566](http://www.aar.org/ViewContent.asp?Content_ID=1566)

**Exhibit 12-8**  
*South-of-the-Lake Cost Allocations*



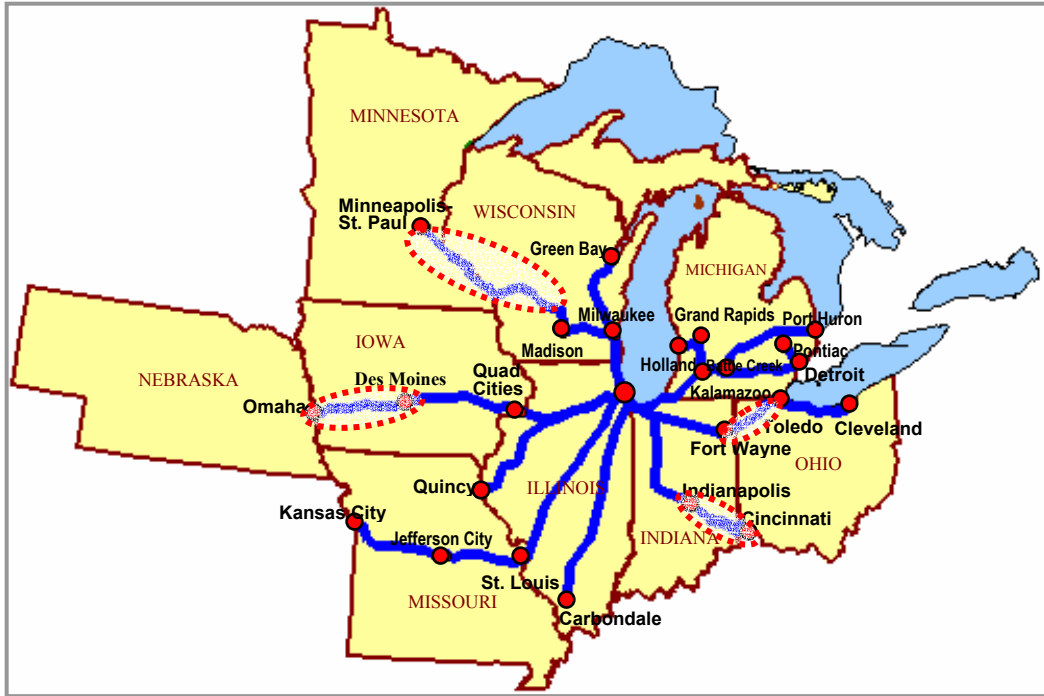
**12.8.4 Joint-Benefit Segments and Bilateral Agreements**

Of special concern are four MWRRS corridors in which one state clearly benefits from infrastructure improvements made in another state, but where the relative benefit is not clearly indicated, *i.e.*, where one state has not declared responsibility for the entire corridor. Exhibits 12.9 and 12.10 identify the segments that may require bi-lateral cost and revenue sharing agreements.

**Exhibit 12-9**  
**Corridors/Segments Possibly Requiring Bi-lateral Agreements**

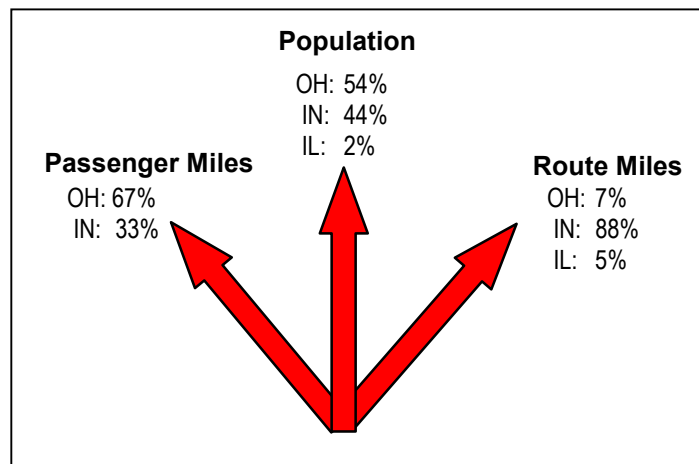
<i>Corridor/Segment</i>	<i>States Involved</i>
Madison-Twin Cities	Wisconsin and Minnesota
Fort Wayne-Toledo	Indiana and Ohio
Indianapolis-Cincinnati	Indiana and Ohio
Des Moines-Omaha	Iowa and Nebraska

**Exhibit 12-10  
Joint-Benefit Corridors and Areas of Responsibility**



A shown in Exhibit 12-11, 54 percent of the population served by the Cincinnati-Chicago line consists of *Ohio* residents, who generate 67 percent of the passenger miles. However, 88 percent of the route mileage is in Indiana. It may therefore be reasonable to expect Ohio to contribute at least a portion of the cost of developing this route. However, as the following discussion shows, accounting-based methods for allocating revenues all have significant practical problems:

**Exhibit 12-11  
Allocation Variations by Method for the Cincinnati-Chicago Line**



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### ***Population Based***

- Population does not directly equate to costs incurred or benefits received. Service levels and/or accessibility to rail or alternative transportation modes may be markedly different from one population center to another – even within the same corridor.
- Population is only a surrogate for rail demand and does not necessarily translate directly to rail demand.
- The U.S. Census is collected every ten years. Consequently, population data may not be as reliable in intervening years. Further, these data are not necessarily available in the desired segmentation or level of aggregation.

### ***Passenger Counts by State of Origin or Residence***

Two possible methods were identified for allocating costs and revenues:

- Option A: Using ticket counts, allocate costs and revenues based on passengers by station of boarding within each state.
- Option B: Survey riders and split costs and revenues based on passengers by state of residence, *e.g.*, consider only Ohio and Indiana residents for the Chicago-Indianapolis-Cincinnati and the Chicago-Cleveland routes and ignore residents of Kentucky, Illinois, Pennsylvania, Michigan, etc. It is presumed that Illinois passengers, at least those from Chicago, might also be excluded, while passengers from Kankakee might be included. The potential complications are numerous.

While both methods provide a measure of benefit to state residents, results are not available until after operations start, making this system hard to plan and budget for. This measure only marginally relates to the cost or benefit of providing service, and does not take into account the length of trips.

### ***Passenger Miles by State of Origin or Residence***

Again using either ticket counts or surveys of riders, passenger counts could be weighted based on trip length, fare paid or some other measure.

### ***Amtrak's Base-Increment System***

Amtrak uses a service junction-based system, called Base-Increment, to allocate revenues and costs between route segments of some trains. Base-Increment accounting is not used on all trains, and is generally used only when the route of a core system train is extended at a state's request under a local subsidy agreement. Then the state subsidy will not be supporting the entire cost of the train, but only the service extension the state has requested. Base-Increment accounting allows Amtrak to determine the revenues (and corresponding costs through RPS allocation) associated with each segment of a train's route. Base-Increment accounting is a standard Amtrak accounting method that states have readily accepted, since it tends to increase the revenues allocated to their state-supported trains.

In the Midwest region, for example, the Chicago-St. Louis-Kansas City *Anne Rutledge* has been set up as a Base-Increment train with two segments – the Chicago-St. Louis leg and the St. Louis-Kansas City leg that includes all stations beyond St. Louis to Kansas City. Each leg defines an accounting *bucket* into which ticket revenues are credited on an all-or-nothing basis. One hundred percent of the revenue, riders and passenger miles originating or terminating at

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stations west of St. Louis are attributed to the St. Louis-Kansas City leg. Only local traffic between Chicago-St. Louis is assigned to the Chicago-St. Louis leg. Amtrak's Base-Increment methodology therefore, assigns connecting revenue earned between St. Louis and Chicago to the St. Louis-Kansas City segment.

Since the St. Louis-Kansas City segment was established as a separate MWRRS route, a Base-Increment approach was used to attribute incremental Chicago-St. Louis connecting revenues. This is a sensible progression since all ticket revenues associated with stations west of St. Louis would be lost to MWRRRI if St. Louis-Kansas City service were not operated. Service extensions on Michigan branch lines are beneficial to the MWRRRI for the same reason. No adjustments were needed for Michigan as Michigan revenues are only reported on a consolidated basis in the MWRRRI financials.

### ***Meeting in the Middle***

Since results are unavailable until actual operations begin, accounting-based definitions are unsuitable for determining capital share allocations. Capital shares have to be agreed before construction starts based on the best available information. States retain the authority to negotiate bi-lateral or tri-lateral agreements to allocate funding responsibilities and revenues in a given corridor. If states on shared corridors are unable to agree on an appropriate mechanism for sharing costs and revenues and, as a result, require additional formality or evaluation, they may wish to engage in a mediation assessment to investigate the relative values of:

- Economic benefits such as jobs and economic development
- Financial benefits
- Travel benefits of regional mobility

An equitable manner of apportioning a route's revenues and operating costs might be based simply on the relative train-mile share. Essentially, a fixed percentage table would be agreed upon upfront that would determine each state's share of operating surplus (or subsidy requirement) for each route. Since operating surpluses may be used to repay state revenue bonds, the level of each state's investment might also influence the level of revenue allocated to each state.

It is the states' responsibility to develop bilateral agreements that best meet their goals and objectives. However, until such agreements are reached, a working assumption is required for analysis purposes.

- For this analysis, it was assumed that each state would take responsibility for completing its own infrastructure between Madison-Twin Cities and Fort Wayne-Toledo.
- A 50/50 capital cost sharing between Iowa and Nebraska was assumed for Des Moines-Omaha, and a 50/50 cost sharing between Indiana and Ohio for the Indianapolis-Cincinnati segment. State revenue allocations also represent this 50/50 cost split on the joint benefit segments.

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Exhibits 12-12 and 12-13 show capital costs, revenues and operating cost responsibility allocated to each state, based on:

- Each state's relative share of capital investment in the corridor, or
- An allocation based on train miles *outside* the Chicago Terminal area. Since the capital cost of shared Chicago Terminal assets would be federally funded with a matching share provided by all of the states, it would be inequitable to include those train-miles in Illinois' revenue share calculation.

Exhibit 12-12 shows that, under the capital share methodology, Illinois and Ohio fare better since their routes tend to be more costly to develop. Under a train-mile methodology, Iowa and Michigan fare better since they operate many train miles over infrastructure that is relatively inexpensive to develop. However, the results are very close whether the simple train-mile or a more complex capital share methodology is used.

Exhibit 12-13 reports the level of capital investment allocated to each state. The "Surplus/20% State Ratio" column compares the level of state contribution with the passenger revenue stream that will ultimately be available to service the debt. While this analysis stops short of developing a state-specific financing plan, it appears that Illinois, Michigan, Minnesota and Wisconsin should have sufficient operating surpluses to fully cover their equipment capital costs.

The *Rolling Stock minus 20% State* column in Exhibit 12-13 compares the rolling stock capital to an assumed 20 percent match requirement for the federal-funding grant. Since the current estimates for infrastructure costs have been significantly increased, the rolling stock cost no longer comprises 20 percent of the project total. Overall, \$452 million or about 30 percent of the total state match will need to be directly invested in infrastructure; the balance of \$1,071 million is in equipment making up the remainder of the state's total required contribution.

Individual states, however, still have the latitude to decide whether to make their contribution in the form of equipment or infrastructure investment. States can minimize the need to build infrastructure in other states by buying rolling stock instead. Nebraska, for example, could contribute its 20 percent match by purchasing trains and using federal dollars to pay for the Des Moines-Omaha infrastructure improvements. Some states may not want to own any equipment and prefer to make their investment totally in infrastructure. Other states, particularly Nebraska and Ohio, may choose to make up the difference by providing their entire matching shares in the form of equipment.

**Exhibit 12-12**  
**Allocation of 2025 Operating Costs and Revenues by State**  
**(Millions of 2002\$)**

<i>State</i>	<i>Allocation by State Capital Invest</i>				<i>Allocation by Train Miles</i>			
	<i>Operating</i>				<i>Operating</i>			
	<i>Costs</i>	<i>Revenue</i>	<i>Surplus</i>	<i>Ratio</i>	<i>Costs</i>	<i>Revenue</i>	<i>Surplus</i>	<i>Ratio</i>
Illinois	\$111.0	\$141.8	\$30.8	1.28	\$108.0	\$137.7	\$29.7	1.28
Indiana	\$56.5	\$76.6	\$20.1	1.36	\$61.4	\$82.4	\$21.0	1.34
Iowa	\$22.7	\$23.1	\$0.3	1.02	\$23.4	\$23.8	\$0.4	1.02
Michigan	\$85.1	\$112.7	\$27.6	1.32	\$91.2	\$120.8	\$29.6	1.32
Minnesota	\$18.7	\$31.0	\$12.3	1.65	\$18.9	\$31.2	\$12.3	1.65
Missouri	\$35.3	\$46.6	\$11.3	1.32	\$35.3	\$46.6	\$11.3	1.32
Nebraska	\$6.7	\$6.8	\$0.1	1.02	\$5.5	\$5.6	\$0.1	1.02
Ohio	\$50.7	\$62.0	\$11.3	1.22	\$43.3	\$52.9	\$9.6	1.22
Wisconsin	\$79.3	\$131.3	\$51.9	1.65	\$79.1	\$130.8	\$51.8	1.65
<b>Total MWRRS</b>	<b>\$466.1</b>	<b>\$631.8</b>	<b>\$165.7</b>	<b>1.36</b>	<b>\$466.1</b>	<b>\$631.8</b>	<b>\$165.7</b>	<b>1.36</b>

**Exhibit 12-13**  
**Allocation of Capital Costs by State**  
**(Millions of 2002\$)**

<i>State</i>	<i>Total Capital</i>	<i>Infra-structure</i>	<i>Rolling Stock by Train-Miles</i>	<i>Funding</i>		<i>Rolling Stock minus 20% State</i>	<i>2025 Operating Surplus*</i>	<i>Surplus / 20% State Ratio</i>
				<i>Federal 80%</i>	<i>State 20%</i>			
Illinois	\$1,356	\$1,038	\$318	\$1,085	\$271	\$47	<b>\$30.8</b>	<b>11.4%</b>
Indiana	\$1,070	\$908	\$162	\$856	\$214	(\$52)	<b>\$20.1</b>	<b>9.4%</b>
Iowa	\$298	\$240	\$58	\$238	\$60	(\$2)	<b>\$0.3</b>	<b>0.6%</b>
Michigan	\$873	\$682	\$191	\$698	\$175	\$16	<b>\$27.6</b>	<b>15.8%</b>
Minnesota	\$352	\$313	\$38	\$281	\$70	(\$32)	<b>\$12.3</b>	<b>17.4%</b>
Missouri	\$978	\$892	\$85	\$782	\$196	(\$110)	<b>\$11.3</b>	<b>5.8%</b>
Nebraska	\$88	\$74	\$14	\$70	\$18	(\$4)	<b>\$0.1</b>	<b>0.6%</b>
Ohio	\$1,197	\$1,097	\$100	\$958	\$239	(\$139)	<b>\$11.3</b>	<b>4.7%</b>
Wisconsin	\$1,490	\$1,329	\$161	\$1,192	\$298	(\$137)	<b>\$51.9</b>	<b>17.4%</b>
<b>Total MWRRS</b>	<b>\$7,700</b>	<b>\$6,572</b>	<b>\$1,128</b>	<b>\$6,160</b>	<b>\$1,540</b>	<b>(\$412)</b>	<b>\$165.7</b>	<b>10.8%</b>

\* The 2025 operating surplus is based on allocation by capital cost.

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### 12.8.5 Allocation Methodology

A proposed methodology for revenue and cost allocation is provided:

- Calculate direct operating expense for the system by corridor
  - Assign each major direct cost category to an appropriate operating unit, *e.g.*, train crew and track maintenance right-of-way to train miles; station costs and marketing to passengers
  - Calculate the system operating cost for each major direct cost category
  - Sum the units for the system, *e.g.*, train miles and passengers
  - Calculate the unit cost for each direct cost category, *e.g.*, train crew cost per train mile, marketing cost per passenger
  - Multiply the unit costs by the units (miles, passengers) for each corridor
  - Calculate the direct operating cost for each corridor
- Calculate system-wide costs
  - Calculate the system-wide costs for administration, Chicago hub, operations, etc.
  - Divide the system-wide costs by total direct costs to yield an overhead percentage
  - The system operator takes a guaranteed 10 percent profit margin based on certain budgeted costs under its direct control. Alternatively, an equivalent amount can be allocated as a percentage of revenue.
  - Multiply the direct operating cost for each corridor by the overhead percentage plus one to determine the operating cost for each corridor
- Identify revenue by corridor
  - Calculate corridor revenue based on ticket sales and riders by corridor
  - Reserve 3 percent of net operating surplus (revenues exceeding costs) for system requirements for infrastructure, route development, etc.
  - The remainder of the operating surplus reverts to the states to repay revenue bonds or to establish reserve for future capital investments

### 12.9 Summary

There is no simple or single cost allocation method that will ensure complete fairness and equity to each state. As was depicted in Exhibit 12-9, four of the corridors traverse two or more state lines, clearly provide service to more than one state, and are without clear designations as to areas of responsibility. As such, the process designed for the MWRRI has sought to minimize the impact of cost allocation.

In most other cases, corridor segments are clearly *owned* by their respective states. Areas of possible contention – the Chicago hub issue, for example – are most easily dealt with by ensuring only federal dollars are used to build infrastructure in that area, and that any revenues and operating costs or losses are carried by the individual corridor trains operating into the Chicago hub. It is anticipated that this will be a profitable segment for each corridor.

The allocation methodology is based on corridor-level responsibilities, with capital and operating costs and revenues allocated to each corridor. Simplicity in data collection and calculation would

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again be key to the approach used, while maintaining accountability for service and fare decisions. Various methods for allocating costs and net revenues within each corridor have been discussed:

- Split costs and revenues based on the population of the major cities served
- Split costs and revenues based on a service junction, *e.g.*, all costs from Indianapolis to Cincinnati become the responsibility of Ohio, based on track and/or train miles, or by using Amtrak's Base-Increment methodology
- Identify a mutually agreeable sharing of responsibility. For example, Illinois currently provides 25 percent of the funding for the state-supported service between Chicago and Milwaukee.
- Survey riders, split costs and revenues based on passengers by state of origin, *e.g.*, Ohio vs. Indiana, for the Chicago-Indianapolis-Cincinnati route
- Use survey data and/or ticket sales to split costs and revenues based on passenger or train miles, adjusted for service levels

Each case has unique characteristics. The recommendation is that each set of states creates their own bi-lateral or tri-lateral agreement for sharing costs and net revenues. However, it is believed that the advantages of a negotiated, fixed percentage allocation mechanism outweigh the disadvantages. Allocating the operating surplus based on each state's capital contribution is a simple mechanism to ensure an equitable allocation.