Idaho State Rail Plan

Adopted by the Idaho Transportation Board

June 21, 1996

Prepared by

Idaho Transportation Department
Transportation Planning Division

3311 West State Street
PO Box 7129
Boise, ID 83707-1129

With assistance from

Wilbur Smith Associates

March 1996

ACKNOWLEDGMENTS

Idaho Rail Advidory Council

Jim Hawkings, Chair, Idaho Department of Commerce
Mike Everett, Idaho Department of Agriculture
Mary Hartung, Office of the Governor
Ron Law, Idaho Public Utilities Commission
Ray Mickelson, Idaho Transportation Department

Other Rail Council Participants and Support Staff

Charles Clark, Union Pacific Railroad
Tonya Clark, Idaho Public Utilities Commission
Don Howell, Idaho Public Utilities Commission
Pat Keim, Burlington Northern Railroad
Ron Kerr, Idaho Transportation Department
Kelly Olson, Idaho Barley Commission
Karl Tueller, Idaho Department of Commerce

Idaho Transportation Department Rail Plan Task Force

Ron Kerr, Transportation Planning
Bryan Loftin, District 3
Steve Loop, Materials
Lee Wilson, Traffic
Jim Witherell, Economics and Research

The Idaho State Rail Plan was prepared by the Idaho Transportation Department, Transportation Planning Dividion, with assistance from Wilbur Smith Associtates, Richard S. Taylor, Project Manager.

The Department was dependent upon railroads, rail users, trade associations and various governmental agencies for assistance in gathering data and information for the rail plan. The Department wishes to acknowledge this valuable assistance and to express its appreciation for the interest and support offered by many indivuals in government and private industry.

TABLE OF CONTENTS

TABLES

FIGURES

APPENDICES

Chapter 1
INTRODUCTION

Overview

The 1996 Idaho Rail Plan Update serves as the railroad modal plan for the Idaho Transportation Plan (ITP). The ITP was completed and published in April 1995 and is a statewide intermodal long-range transportation plan that is to guide the state's transportation decisions into the 21st century. The ITP proposes a vision for transportation in the year 2015 and beyond and sets goals, objectives and strategies that need to be carried out in order to achieve the vision. As such, it sets broad strategic direction to transportation system improvements based on a continuing planning process. The plan focuses on the development and maintenance of a true multimodal transportation system to meet the state's transportation needs, not to promote any one mode at the expense of others.

Also, the State Rail Plan, prepared pursuant to Section 5(g) of the Department of Transportation Act as amended by the Local Rail Service Reauthorizing Act, December 11, 1989, is a prerequisite for eligibility to receive local rail freight assistance. The act requires "an adequate plan for rail services in such State, including a suitable process for updating, revising and amending such plan; and that such State plan is administered or coordinated by a designated State agency and provides for the equitable distribution of resources."

Designated Agency

Section 803 of Public Law 94-210 (The Railroad Revitalization and Regulatory Reform Act of 1976 -- predecessor legislation) requires that an agency of the State of Idaho be designated the authority and administrative jurisdiction to receive and expend such federal assistance. Governor Andrus designated the Idaho Transportation Department as the agency responsible for Local Rail Service Assistance in 1976; subsequent Governor’s Executive Orders and legislative changes to Idaho Code have kept the designation current through the present.

Local Rail Freight Assistance

The purpose of the federal Local Rail Freight Assistance (LRFA) program is to provide rail service assistance funds to states in order to develop, promote, supervise and support safe, adequate, and efficient rail freight transportation services.

The intent of Congress was that each state should:

1) Establish a state rail planning process which shall be based on a comprehensive, coordinated and continuing planning process for all transportation services within the state.
2) Preserve rail service when it is in the public interest.
3) Anticipate the impact of rail abandonments and assess the relative benefits of rail or highway system improvements.
4) Implement programs that invest in railroad projects which are justified on their own merit and/or cost-effective alternatives to other improvements.

Idaho has participated in the federal assistance program since 1977, with the first project grant in 1980. Federal funding from the Federal Railroad Administration (FRA) has provided the basis for a comprehensive state rail planning and project assistance program.

State Transportation Goals and Objectives

The State's rail planning efforts have been conducted within the broad goals of the Idaho Transportation Plan (ITP).

ITP Goals

The ITP goals and objectives are summarized in Table 1-1 . More detail is available in the ITP.

Goal 1: Transportation Improvement Will Promote and Sustain Safe and Efficient Movement of People, Goods, Services, and Information.

Objectives A and B are particularly applicable to the rail mode. Certain transportation demands can only be efficiently met by the rail when considering distances, volumes and interchange costs . The commodities comprising Idaho’s rail traffic and origins/destinations are shown in Table 2-3 and Figures 2-3 through 2-9 in Chapter 2. Meeting the transportation

Table 1-1

IDAHO TRANSPORTATION GOALS, OBJECTIVES AND STRATEGIES

GOAL 1: TRANSPORTATION IMPROVEMENTS WILL PROMOTE AND SUSTAIN SAFE AND EFFICIENT MOVEMENT OF PEOPLE, GOODS, SERVICES AND INFORMATION.

OBJECTIVE A: Stimulate economic growth and job creation through transportation investments.

- Strategy 1: Create jobs through transportation investments and transportation products and services,
- Strategy 2: Secure defense conversion and other funds,
- Strategy 3: Employ advanced transportation technology,
- Strategy 4: Provide for tourists.

OBJECTIVE B: Support the economy by aiding efficient goods movement.

- Strategy 1: Improve coordination of statewide intermodal goods movement,
- Strategy 2: Modify project programming criteria, to more equitably include goods movement,
- Strategy 3: Foster technological and operations innovations,
- Strategy 4: Foster efficient small package delivery,
- Strategy 5: Plan for goods movements in transportation projects,
- Strategy 6: Include goods movements in Intermodal management system.

OBJECTIVE C: Provide a reasonably safe and secure travel environment.

- Strategy 1: Provide safety & security measures for pedestrians & transit users,
- Strategy 2: Ensure the personal safety of passengers on transit vehicles by assessing risk and security factors,
- Strategy 3: Provide bicycle security racks and other accommodations on buses,
- Strategy 4: Provide a reasonably safe roadway environment,
- Strategy 5: Develop a highway safety management system,
- Strategy 6: Provide driver licensing measures that promote safety.

OBJECTIVE D: Utilize new technologies to promote alternatives to transportation and improve safety and the environment.

- Strategy 1: Encourage the use of telecommunications to reduce vehicular travel,
- Strategy 2: Encourage revision of zoning regulations,
- Strategy 3: Encourage review of communication regulations,
- Strategy 4: Research and develop automated tracking and detection devices,
- Strategy 5: Identify emerging new transit technologies and assess their practical use,
- Strategy 6: Utilize telecommunications to provide important route and trip planning information.

GOAL 2: TRANSPORTATION PLANS AND PROGRAMS WILL INTEGRATE THE INTERMODAL TRANSPORTATION NEEDS OF THE STATE.

OBJECTIVE A: Plan, manage, maintain and improve the Intermodal transportation system.

- Strategy 1: Take reasonable actions to make each trip flow smoothly,
- Strategy 2: Preserve and improve the system by prioritizing funding programs,
- Strategy 3: Implement management systems to improve the transportation system,
- Strategy 4: Analyze various modal alternatives to upgrade the transportation system,
- Strategy 5: Give special consideration for intermodal access to the Port of Lewiston.

OBJECTIVE B: Manage transportation demand.

- Strategy 1: Increase multiple occupancy vehicle use,
- Strategy 2: Coordinate all modes and provide public information,
- Strategy 3: Improve outreach programs for ridesharing & TSM/TDM strategies,
- Strategy 4: Promote public transport,
- Strategy 5: Consider multi-modal alternatives in high density corridors,
- Strategy 6: Develop and implement new transportation technologies,
- Strategy 7: Develop and implement congestion management system,
- Strategy 8: Implement the Intermodal management system.

OBJECTIVE C: Coordinate land use and transportation decisions.

- Strategy 1: Reduce transportation demand by land use design,
- Strategy 2: Strengthen interagency plan coordination and responsibilities.

OBJECTIVE D: Develop and maintain roadway, bicycle, and pedestrian facilities.

Roadway Strategies:

- Strategy 1: Complete reconstruction & relocation of deficient segments,
- Strategy 2: Annually update the Recommended Roadway Widths Map,
- Strategy 3: Maintain existing system,
- Strategy 4: Apply new technology to improve rural transportation systems,
- Strategy 5: Coordinate federal lands projects with state and local projects to effectively utilize resources.

Bicycle and Pedestrian Strategies:

- Strategy 1: Develop and maintain bikeway networks,
- Strategy 2: Provide for pedestrian circulation and connection with other modes,
- Strategy 3: Encourage developers to: 1) design mixed use and increased density, 2) facilitate the use with other transportation services, 3) reduce distances between destinations, and 4) provide for convenience and safety,
- Strategy 4: Give priority for state/private funding to projects drawn from adopted bike/pedestrian plans.

OBJECTIVE E: Develop and improve access to the transit system.

- Strategy 1: Improve service efficiency and safety,
- Strategy 2: Provide assistance in new technologies and marketing,
- Strategy 3: Improve coordination of transit services with community activities,
- Strategy 4: Expand transit program marketing to educate the general public,
- Strategy 5: Improve reliability and safety by better equipment and training,
- Strategy 6: Promote reasonable security in high-risk areas,
- Strategy 7: Respond to needs of disabled, elderly, & culturally diverse population,
- Strategy 8: Facilitate transfers between transportation modes,
- Strategy 9: Encourage transit to and from recreation sites and rural areas,
- Strategy 10: Implement the Public Transportation Management System,
- Strategy 11: Plan and develop park and ride lots where appropriate.

OBJECTIVE F: Preserve essential rail freight and passenger service.

- Strategy 1: Work with major and shortline railroads and shippers to provide efficient and competitive service, economic stability, market access, and preservation of essential rail service,
- Strategy 2: Develop and implement an Intermodal Management System.
- Strategy 3: Cooperate with AMTRAK to improve service and facilities.

OBJECTIVE G: Preserve/expand aviation network.

- Strategy 1: Implement the Idaho Aviation System Plan,
- Strategy 2: Improve Intermodal service to Idaho's major airports.

Table 1-1 (Continued)

IDAHO TRANSPORTATION GOALS, OBJECTIVES AND STRATEGIES

GOAL 3: TRANSPORTATION DECISIONS WILL PROTECT THE ENVIRONMENT AND PROMOTE ENERGY EFFICIENCY.

OBJECTIVE A: Protect and enhance the environment.

- Strategy 1: Conduct environmental studies early-on,
- Strategy 2: Protect sensitive wildlife habitats,
- Strategy 3: Reduce or avoid impacts of toxic materials on the environment,
- Strategy 4: Manage impacts on water quality,
- Strategy 5: Expand use of effective mitigation and enhancement techniques,
- Strategy 6: Recycle materials used in constructing, maintaining & operating the transportation system.

OBJECTIVE B: Integrate air quality and transportation decisions.

- Strategy 1: Provide coordination between transportation and air quality agencies,
- Strategy 2: Implement transportation control measures (TCMs) as identified in air quality plans and seek full funding of transit and air quality programs,
- Strategy 3: Develop new and expanded vehicle emission control programs,
- Strategy 4: Pursue modifications to the state and private-owned vehicle fleets,
- Strategy 5: Assist transit operators in promoting public transportation as an alternative to the private vehicle.

OBJECTIVE C: Optimize the use of energy resources in transportation.

- Strategy 1: Apply new and existing technologies to improve traffic flows,
- Strategy 2: Promote use of public transit, vanpooling and carpooling,
- Strategy 3: Increase use of alternate-fuel vehicles,
- Strategy 4: Increase energy conservation research and development.

GOAL 4: FUNDING AND LICENSING MECHANISMS WILL REFLECT BROAD AND INNOVATIVE PUBLIC AND PRIVATE INVESTMENT STRATEGIES.

OBJECTIVE A: Provide stable and flexible funding for transportation.

- Strategy 1: Utilize all available funds to carry out the STIP,
- Strategy 2: Study feasibility of collecting alternative user revenues,
- Strategy 3: Update the Highway Cost Allocation Study biennially,
- Strategy 4: Complete and distribute transportation financial reports,
- Strategy 5: Continue integrating and automating the collection of vehicle and driver fees,
- Strategy 6: Determine ways and means to collect transportation impact fees,
- Strategy 7: Evaluate flexible funding and legislative options for public transportation,
- Strategy 8: Vigorously campaign for full funding of ISTEA,
- Strategy 9: Consider state funding for rail-service projects,
- Strategy 10: Utilize all available licensing fees for transportation improvements,
- Strategy 11: Seek reimbursable funding program whereby local governments can borrow funds to match federal-aid for highway and bridge projects,
- Strategy 12: Provide information and education programs regarding the importance of efficient transportation systems to the well-being of the state's economy.

GOAL 5: TRANSPORTATION DECISION-MAKING PROCESS WILL PROVIDE OPPORTUNITIES FOR INTERAGENCY COOPERATION, COORDINATION, PUBLIC INVOLVEMENT AND PRIVATIZING PUBLIC WORKS AND SERVICES.

OBJECTIVE A: Provide a continuing and cooperative planning process between state and local jurisdictions.

- Strategy 1: Initiate a cooperative transportation planning process with local elected officials for the non-metropolitan urban and rural areas of the state,
- Strategy 2: Continue the cooperative transportation planning process for the metropolitan areas of the state.

OBJECTIVE B: Achieve transportation goals through public involvement and effective partnerships with capability to resolve conflicts.

- Strategy 1: Provide for early and ongoing public and governmental involvement by all affected and interested parties,
- Strategy 2: Cooperate on quickly resolving land use, transportation, and air quality concerns.

OBJECTIVE C: Promote privatization.

- Strategy 1: Pursue agency partnerships in planning, developing, and delivering transportation services,
- Strategy 2: Explore means to improve and increase public/private partnerships in privatizing public services.

OBJECTIVE D: Achieve county involvement in licensing strategies.

- Strategy 1: Insure an efficient automated driver's license processing system that directly meets the needs of ITD and the counties,
- Strategy 2: Maintain continuous contact and interaction with the county licensing offices through the use of regular meetings, training seminars, newsletters, and on-line services.

demand of industrial prospects is often paramount to their location and if rail is not the primary mode, it provides a viable alternate in today's mobility concerned climate. Even where direct rail service is not available, shipments in containers and trailers, the use of reload centers and other transfer facilities, makes rail service available to any business needing to transport freight.

Goal 2: Transportation Plans and Programs Will Integrate the Intermodal Transportation Needs of the State.

This Idaho transportation goal directly addresses rail in Objectives A and F, the maintenance and improvement of the intermodal system and preservation of essential freight and passenger service, respectively. The state's ability to impact the rail system is somewhat limited, however, due to a lack of funding. The state has depended on the federal Local Rail Freight Assistance Program (LRFA) for the preservation of local rail service, but the program has been a target of federal budget cuts since 1981. Funding for Fiscal Year 1995 totaled $10 million nationwide, while at one time the program was funded on a much higher level. The future of Amtrak rail passenger service is also in jeopardy as described in Chapter 2. The indication here is also that state funding and more flexibility in expending Intermodal Surface Transportation Efficiency Act funds, not total reliance on LRFA funding, will be required in the future.

Goal 3: Transportation Decisions Will Protect the Environment and Promote Energy Efficiency.

While the rail mode and the movement of freight are not specifically mentioned in this goal, railroads are capable of moving tonnage with more fuel efficiency than other modes with the exception of water which has limitations on origins and destinations. Fuel efficiency equates to a corresponding reduction in the generation of particulate matter and other pollutants. Rail transportation has been effectively used in areas with air quality problems as a mitigation tool and should be fully considered in environmental and fuel conservation planning.

Goal 4: Funding and Licensing Mechanisms Will Reflect Broad and Innovative Public and Private Investment Strategies.

Addressing rail issues in the public arena has been a problem at times as it is largely domiciled in the private sector and the public has had little influence in decisions and in fact, the two sectors more often than not have different objectives given the for-profit orientation of private enterprise. On the other hand, the private sector does provide a viable transportation system, often without the need for public investment.

The involvement of the public sector in the rail mode is required when it desires the institution or maintenance of a non-profitable operation such as passenger service or freight lines with little traffic. These needs are recognized in strategies associated with Objective A concerning legislative options for funding public transportation, campaigning for full funding for ISTEA, and considering state funding for rail-service projects.

Goal 5: Transportation Decision-Making Process Will Provide Opportunities for Interagency Cooperation, Coordination, Public Involvement and Privatizing Public Works and Services.

Objective E is to promote privatization through partnerships in the provision of transportation services. This is, in fact, the manner in which the rail program has operated since its inception in Idaho. The Department has acted as a broker in matters concerning the abandonment/preservation of rail service and has leveraged relatively few public dollars with sizeable private investment to maintain/improve local rail service.

Rail-Specific Goals and Objectives

As the rail system in Idaho is controlled and operated by the private sector, the influence and role of the public sector in rail transportation is limited. The state of Idaho recognizes this fact will continue its present reliance upon privately owned railroads where possible in providing essential intra- and interstate rail services. However, it also recognizes and accepts the principle that individual lines must earn sufficient revenues to cover maintenance and operating expenses and provide the owning railroad with a reasonable return on the investment, but where this is not possible, there is a potential role for the public sector. It is within this basic philosophical framework that the following rail program goals and objectives have been formulated.

Goal I: A viable, competitive and safely operated rail system to serve the citizens of the state of Idaho.

Objectives:

- To remove outdated public institutional and regulatory barriers.
- To level the playing field between transportation modes.
- To coordinate rail planning and implementation activities with state and local land use policies and advocate mutually beneficial practices such as the preservation of industrial sites which can be served by rail.
- To reduce the potential for at-grade rail-highway crossing accidents.

- To promote the development and improvement of rail-served intermodal transportation service throughout the state, freight and passenger.

Goal II: The retention and maintenance of operations over all lines of the rail system which serve as essential components of the state's transportation system.

Objectives:
- To identify endangered components of the rail system, define problems and causes, and formulate solutions.
- To assure local decision makers understand the importance of retaining rail service and railroad economics.
- To identify all potential sources of federal funds for application in problem situations.
- To define a dedicated source of state funds for rail service preservation and to encourage the use of local funds.

Goal III: The preservation of rights-of-way of rail lines for which the prior goal can not be met for future rail or alternative uses.

Objectives:
- To assure local decision makers are aware of the potential to preserve rights-of-way through the federal Public Use and Interim Trail Use procedures.
- To encourage localities to examine alternative uses of rights-of-way of endangered or abandoned rail lines.
- To identify potential funding sources--federal, state and local--for right-of-way preservation.

Rail Planning Process

In order to ensure eligibility for federal funds, the Idaho Rail Plan is developed in accordance with the rules and regulations of the Federal Railroad Administration (FRA). While the rail plan addresses a number of appropriate rail-related issues, priority is placed on addressing those rail lines which are potentially subject to abandonment or reduced service levels in the short or long term. Emphasis is also placed on lines with substantial volumes of low revenue commodities (e.g. sawlogs), the abandonment of which could cause serious impacts on highways in terms of roadway damage, safety and congestion.

Abandonment candidates typically are derived from the universe of branch or light density lines. As the name implies, rail traffic is usually light on these lines. It may have always been that way, or more than likely, it is a result of erosion to competing modes over time. Regardless of the cause, the result is a revenue-cost relationship which sometimes does not permit the operator to earn an adequate return on its investment. The low level of revenue also means that costs have to be cut and this usually results in reductions in service and deferred maintenance which in turn causes deterioration of the physical plant and further erosion in service which translates to even less business.

The poor track conditions which result from long-term deferral of maintenance have to be corrected at some point, and when that occurs, there is some reluctance on behalf of the carrier to devote resources, for which there are many demands, to an expenditure with the prospects of marginal return. At this point, a true abandonment candidate could be developing and/or service levels are reduced due to poor track conditions.

Data Collection

Extensive data and information are gathered from rail users, railroads, industry representatives, published sources, etc. to perform detailed economic analysis. Potential capital improvement projects are prioritized through economic benefit-cost analysis.

Analyses

The analyses performed in the planning process attempt to determine the potential in economic impacts of railroad actions such as abandonments, spinoffs, mergers, and other actions on rail users, communities and the overall transportation system, including any impacts on highways.

Project Development and Administration

Once potential projects are identified and prioritized in the rail planning process, extensive negotiation takes place between the involved railroad and the Department. An overall rehabilitation plan must be developed and agreed upon which makes the best use of limited financial resources.

A detailed application to the FRA must be prepared, along with an agreement with the railroad. Once the application is approved and agreements executed, the railroad project is administered in a manner similar to highway projects (i.e., labor, material, and equipment charges must be verified; specifications must be met; schedules are to be kept; etc.). Detailed records are maintained and reports to FRA are required.

Special Activities

Rail program staff are constantly involved in railroad issues, problems, and policy questions on the local, state, and national levels, such as rail mergers and consolidations, rail passenger service, rail safety, short line railroads, tourist railroads, and special projects such as the railroad relocation project in Sandpoint. In the case of the latter, approximately 3.5 miles of the former Spokane International Railroad now Union Pacific (UP), will be abandoned and trains will run over Burlington Northern Railroad (BN) trackage. The UP cuts the town in half and causes delay and potential accident problems due to 22 crossings with passive protection only. Most of the problems will be solved with relocation, and the abandoned right-of-way is to be purchased for future transportation improvements.

Projects Implemented

The major rail project accomplishment in Idaho has been the rehabilitation of 71 miles of trackage of the St. Maries River Railroad. This railroad, a common-carrier railroad running from Plummer to St. Maries to Bovill, was formed from the lines of the bankrupt Milwaukee Road, which abandoned or sold all its trackage in Idaho in 1980. Over $4.5 million in federal funds and the local match provided by the St. Maries River Railroad have been invested to literally pull this railroad out of the mud. A massive tie replacement, rail relay, and bridge rehabilitation program have turned the railroad from a 5-10 mph operation with frequent derailments to a 25-mph railroad.

This project has not only enhanced the competitive position of the beleaguered forest products industry in northern Idaho, but it has provided jobs and opportunities for economic expansion. Approximately 300 jobs at Idaho lumber mills and 25 railroad jobs were maintained because the assistance made a crucial difference in continuing essential rail services to the mills that are dependent on it. In addition, several mills on the railroad have expanded production knowing that the railroad will be there to move their products to distant markets not reachable by truck. Hundreds of thousands of rail carloads of logs and other commodities have been moved by rail instead of over state highways.

Railroad - Highway Crossing Program

The National Railroad-Highway Crossing Program, which includes all such crossings within the state, is maintained by the Idaho Transportation Department (ITD) in accordance with Federal Railroad Administration regulations. The ITD is responsible for entering updated information received from railroad companies into the state inventory.

A list of priority crossings is developed from the National Railroad-Highway Crossing Program, using the following criteria:

- Existing protection
- Average Daily Traffic
- Number of trains per day
- Number of tracks per crossing
- Through night trains
- Number of accidents

All crossings are arranged by accident potential from high to low, and those having a potential of one or more within the next ten years are reviewed every year. When these crossings are under local jurisdiction, the agencies are contacted to see if they would care to develop projects to improve the crossings with federal aid. If a local agency desires a project, it must make a formal request to the ITD through the Department's district office.

When a crossing is being considered for improvement, a diagnostic study team is set up. This team includes professional people associated with the disciplines of administration, design, operations, maintenance and law enforcement, and represents railroad companies, highway agencies, and state and local government. To ensure appropriate representation on the team, members are chosen from the following disciplines:

- Traffic Engineer with Highway Safety experience
- Railroad Signal Engineer
- Railroad Administrative Official(s)
- State Government Official(s)
- Local Government Official(s)
- School Official(s)
- Law Enforcement Officer(s)
- Federal Highway Administration Official(s)

The study team conducts a field review of the crossings in question and decides whether additional warning devices (i.e., railroad signing, signals and other safety improvements) are warranted, and if so, which should be used and what design standards should be established. After the field review, the sponsoring local agency is advised as to whether the project is eligible for federal aid, or not, and if it is, what the next steps are to develop the project.

To start a project, any Local Public Agency (LPA) wanting federal participation on Railroad-Highway Crossing projects may contact the Local Roads Coordinator at the nearest ITD district office for help. Ultimately, the LPA must make formal application through the ITD district office by submitting a letter, requesting federal participation, and enclosing form ITD-2435, "Local Federal Aid Project Request", and a vicinity map.

Once the eligibility for federal aid has been confirmed and the project description has been reviewed by ITD staff and management, the project is presented to the Idaho Transportation Board for approval. If approved, it will be included in the Board approved Highway Development Program. An agreement is then prepared, to be entered into by the ITD and the LPA. By signing and returning the agreement along with a remittance covering the LPA's deposit, project development is initiated.

The State/Local Agreement (Preliminary Engineering) describes the responsibilities of each party and the amount of deposit required of the LPA to pay for the incidental services to be provided by the ITD in developing the project. The State/Local Agreement (Preliminary Engineering) will be prepared by the Roadway Design Section and forwarded to the LPA for signature. A resolution is necessary if there is less than a quorum signing the agreement. A copy of the standard agreement form is available from ITD district offices or ITD's Local Roads Engineer.

A listing of Board-approved Railroad-Highway Crossing projects is contained in the current State Transportation Improvement Program (STIP).

Past Planning Efforts

ITD feels one of the key responsibilities under this program is to provide a proactive and systematic review and analysis of possible future rail abandonments in order to determine if the circumstances leading to abandonment can be corrected before the problems of a line become unsolvable. Once conditions for an abandonment exist, finding a cure and the time to develop it can be very difficult. As a result, increased emphasis on longer range planning has occurred. While it is still important to have a handle on factors involving rail lines which have been announced by the railroad as being subject to abandonment, more emphasis is being placed on trying to identify which lines might be endangered in the future. Therefore, in addition to project implementation, the Department has been engaged in major rail planning efforts in the past.

Palouse Regional Studies

Since 1970, nearly 300 miles of track in north central Idaho and southeastern Washington have been abandoned. With an eye toward preventing such losses in the future, the Department, in conjunction with the Washington State Department of Transportation, completed the Palouse Empire Regional Rail Study in 1987.

The Palouse study evaluated the economics of the remaining rail system and identified alternative methods for retaining essential rail service. It served as a tool for shippers, communities, and local officials who have a stake in preserving rail service in their regions.

As an outgrowth of that study, the Department has worked for several years with the Camas Prairie and Burlington Northern railroads, shippers, and communities to determine the actual financial feasibility of a Palouse regional railroad. This effort has been crucial to any hopes of retaining rail service in the region in the long term.

Railroad Restructuring

While line abandonments will still occur where continuation of service is just not justified, current railroad rationalization programs also consist of packaging and selling light density lines to regional or local railroads or short lines as they are often called. There is a nationwide increase in the formation of "short line" railroads. These are usually formed from line segments spun off from Class I railroads such as the Burlington Northern or Union Pacific. The primary advantages of short line operation are a lower labor cost base and with a local presence, the ability to develop additional business resulting in operating viably where larger railroads could not.

In the Fall of 1990, UP had over 1,900 miles in the process of being spun off. Included in this total was the 321 Idaho miles in the so called Boise Group that was to be acquired by Intermountain Western Railroad, the first Idaho spinoff. Concerned about possible future abandonment, the Department performed an evaluation of the UP - Intermountain Western proposal. The Department's study verified the marginal nature of the rail operations to be conveyed.

This sale subsequently fell through but some of the properties eventually were spun off for operation by the Idaho Northern and Pacific (see Chapter 2 for a more detailed description). The UP continued line spinoffs in Idaho with a number of lines in eastern Idaho now operated by the Eastern Idaho Railroad (see Chapter 2). In late 1994, both railroads submitted lines to be analyzed for rehabilitation utilizing FY 1995 Local Rail Freight Assistance funding, the results of which are contained in Chapter 4.

In January 1996, the Burlington Northern Santa Fe (BNSF) railroad announced that the company is considering the sale of approximately 4,000 miles of light density lines. The BNSF said the company is putting together line segment packages for prospective buyers that would create a better opportunity for viable, long-term rail service to shippers and keep revenue flowing to BNSF.

Among the lines that will likely be made available in 1996 are the following lines in the Palouse Area: Marshall (Spokane), WA to Palouse, WA; Palouse to Bovill, ID; Palouse to Moscow, ID; Moscow to Arrow, ID; Cheney, WA to Davenport, WA; Davenport to Coulee, WA.

Unfortunately, the abandoned Moscow to Arrow line segment and parts of the Palouse to Bovill line were seriously damaged by flooding in February of 1996. There is some question as to whether these lines will ever be put back into service because the high costs of repairing the lines may not be justified for BNSF nor a short line carrier.

Public Review Process

This rail plan is one modal element of the overall statewide transportation plan. Potential rail projects are identified in the 1996 Statewide Transportation Improvement Program (STIP) and subsequent updates as encouraged by ISTEA. The STIP is updated annually and will identify rail project funding needs for at least a two-year period. The STIP goes through an extensive statewide public involvement process. Amendments to the rail plan will be developed periodically, as the needs arise. In the past, the statutory deadline for submitting Local Rail Freight Assistance (LRFA) project applications for entitlement and discretionary funding to FRA is October 1 and January 1 for each fiscal year, respectively. (No LRFA funds were available for fiscal year 1996 and beyond at the time this document was printed.)

At a minimum, for the State Rail Plan, updates and amendments thereof, the Department shall hold a public hearing if, on the basis of reasonable public notice appearing in the press (including the press in any area where a project is proposed), there is sufficient public interest to justify a hearing. Public notice shall be given, in accordance with applicable State law and practice concerning comparable matters, that a draft of the State Rail Plan is available for public inspection at a reasonable time in advance of the hearing. The Department shall enable local and regional governmental bodies, railroads, shippers and others with an interest in rail transportation to review and comment on appropriate elements of the State Rail Plan.

The Idaho Transportation Department, in April 1996, sent out letters, news releases and legal notices announcing the availability of the 1996 Rail Plan and opportunity for a public hearing. Copies of the plan or letters announcing availability of the plan and opportunity for a hearing were forwarded to local and regional governmental agencies, libraries, railroads, shippers and others with an interest in rail transportation to review and comment on appropriate elements of the plan. The legal notice was published throughout the state in nineteen newspapers. No one requested the department to hold a public hearing on the plan.

A summary of public comments received on the Draft Idaho State Rail Plan is included as Appendix E.

Chapter 2
STATE RAIL SYSTEM

Railroad Companies

Idaho is served by two Class I Railroads,[1] the Burlington Northern and the Union Pacific. In addition, service is provided by six regional or local railroads: Montana Rail Link, the Camas Prairie Railroad, the St. Maries River Railroad, the Eastern Idaho Railroad, the Blue Mountain Railroad, and the Idaho Northern and Pacific Railroad. Together they comprise a 1,940-mile state rail system (see Table 2-1). The state's railroads are illustrated on Figure 2-1.

Burlington Northern (BN)

In 1994, BN operated 368 miles of a 22,189-mile system in Idaho, including 174 on the Camas Prairie Railroad. Idaho is one of the 25 states (and two Canadian Provinces) served by the carrier. The BN operates a vast national system from the Pacific Northwest to the Midwest and Gulf Coast. The BN's main line from Chicago to Spokane passes through the northern Idaho Panhandle via Sandpoint. The railroad's local service territory is limited to the northern portion of the State. Lumber or wood and farm products comprise its principal Idaho commodities.

Union Pacific (UP)

The state's largest railroad operated 1,096 miles within Idaho in 1994 (plus trackage rights over the Camas prairie) and owns another 25 miles which were not operated in 1994. The total system operates 17,499 route miles in 19 states. Similar to the BN, the UP operates a vast national system from the Pacific Northwest and California to the Midwest and Gulf Coast. The UP's main line between the Pacific Northwest and the Midwest generally follows the Snake River in Southern Idaho, where there is also a network of feeder lines. Another main line runs from Silver Bow, MT to Ogden, UT via Pocatello. Although the state's UP mileage is concentrated in southern Idaho, some branch lines are operated in the northern portion of the state, as well as UP's line from Spokane to Eastport, Idaho, that provides a connection with the Canadian Pacific Railroad.

[1] Carriers having revenues in excess of $250 million annually.

Table 2-1

RAIL MILEAGE IN IDAHO
1995

Union Pacific Railroad	1,096
Burlington Northern Railroad	194
Montana Rail Link	34
Camas Prairie Railroad	174
St. Maries River Railroad	71
Eastern Idaho Railroad	267
Idaho Northern and Pacific Railroad	102
Blue Mountain Railroad	2
Total Mileage:	**1,940**

Source: Idaho Transportation Department

Montana Rail Link (MRL)

This railroad was created as a BN spin-off of 943 miles of track. It operates in three states, Montana, Idaho and Washington, reaching the latter over trackage rights over the BN from Sandpoint, Idaho to Spokane. The carrier operates over 84 miles of track in Idaho including the trackage rights.

Camas Prairie (CSP)

The Camas Prairie is jointly owned and operated by BN and UP. Most of the railroad trackage in Idaho, however, is owned by BN having been built by its predecessor Northern Pacific. Of CSP's total 244 miles, 174 miles are located in Idaho. The railroad is located in northern Idaho and its operations are centered around Lewiston. Principal traffic consists of logs, lumber, and wood products and grain.

St. Maries River Railroad (STMA)

Formed from trackage abandoned by the Milwaukee Road in 1980 as a result of its bankruptcy, the carrier's entire 71 miles are located in Idaho (Plummer to St. Maries to Bovill). This common carrier railroad is owned by the Potlatch Corporation. Principal traffic consists of logs, lumber and wood products.

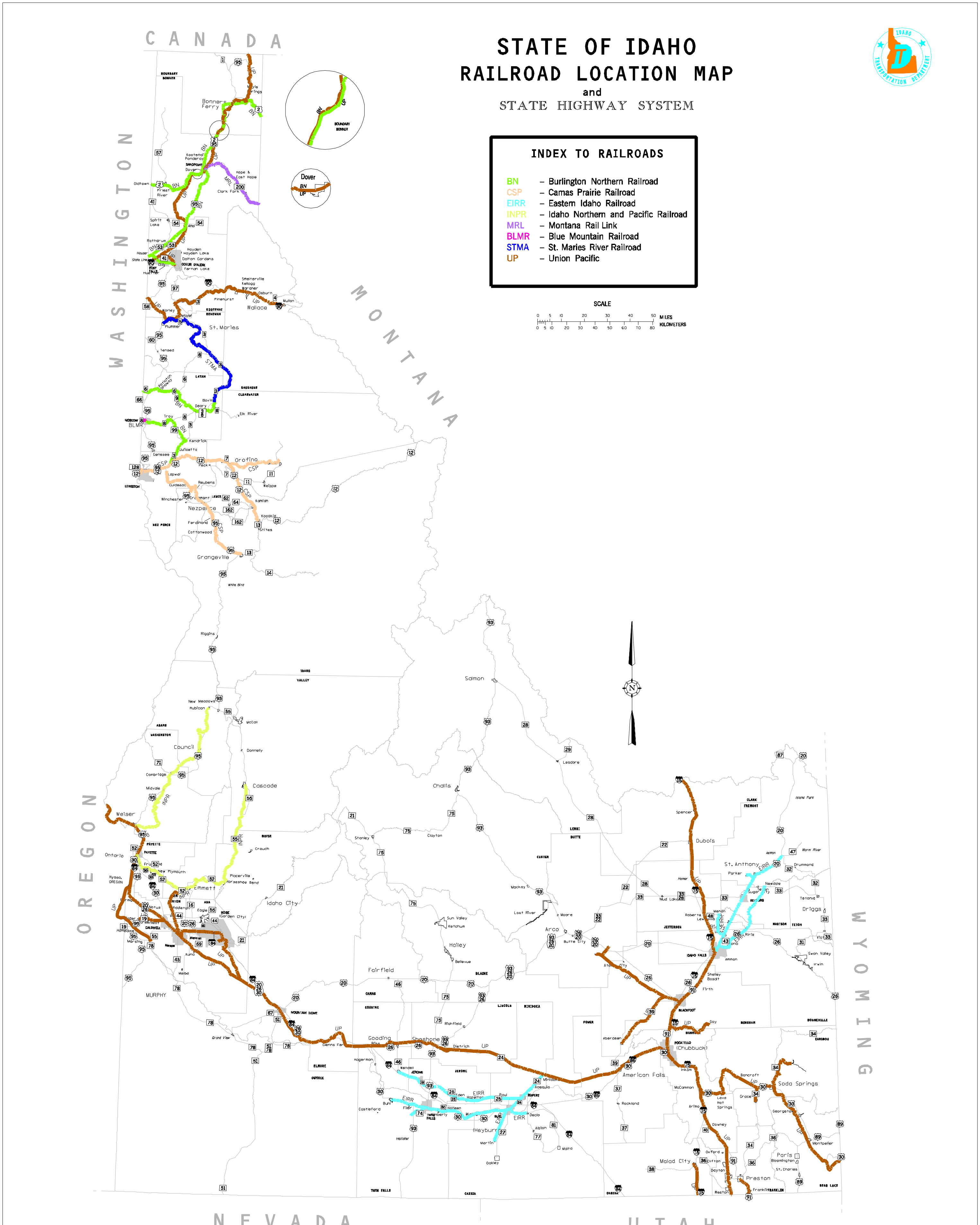

STATE OF IDAHO
RAILROAD LOCATION MAP
and
STATE HIGHWAY SYSTEM
INDEX TO RAILROADS
BN – Burlington Northern Railroad
CSP – Camas Prairie Railroad
EIRR – Eastern Idaho Railroad
INPR – Idaho Northern and Pacific Railroad
MRL – Montana Rail Link
BLMR – Blue Mountain Railroad
STMA – St. Maries River Railroad
UP – Union Pacific
SCALE
MILES
KILOMETERS
CANADA
WASHINGTON
MONTANA
OREGON
WYOMING
NEVADA
UTAH
Bonners Ferry
Dover
Wallace
St. Maries
Orofino
Grangeville
Salmon
Council
Cascade
Weiser
Ontario
Emmett
Idaho City
Challis
Arco
Hailey
Fairfield
Gooding
Shoshone
American Falls
Dubois
St. Anthony
Driggs
Soda Springs
Paris
Preston
Malad City
hqqicw02: d:\id_state_dist_maps+\rail\rr_loc.dgn
GIS - 9/23/96

Figure 2–1

Eastern Idaho Railroad (EIRR)

The Eastern Idaho Railroad was formed from two clusters comprised of several Union Pacific branch lines that the carrier spun off in south central and eastern Idaho in 1993. The lines total 267 miles in length. One group of lines serves the area north of Idaho Falls including the communities of Newdale, Menan, St. Anthony and Ashton, while the other group serves the Twin Falls area, including the communities of Burley, Rupert, Buhl, Wendell and Twin Falls. Farm products, principally grain, beans and potatoes, are the major commodities transported by the railroad, combined with fertilizers, aggregates and lumber. The railroad is affiliated with WATCO, Inc. of Pittsburg, Kansas.

Idaho Northern and Pacific Railroad (INPR)

This short line operation was also formed from branch lines spun off by the UP in southwestern Idaho and northeastern Oregon. The Idaho lines total 102 miles in length. The Idaho lines consist of lines from Emmett to Horseshoe Bend to Cascade, and Emmett to Payette. Another line from Weiser to Council to Rubicon was approved for abandonment in late 1995 following the closure of the Boise Cascade mill at Council. The operating company is owned by the Rio Grande Pacific Corporation of Fort Worth, Texas. Primary traffic consists of logs, lumber and wood products.

Blue Mountain Railroad (BLMR)

The Blue Mountain Railroad is comprised of two separate segments, both of which are UP spinoffs. One serves southwest Washington State with a line which crosses the Oregon border, and the other the Palouse Region of Eastern Washington with a line segment which crosses into Idaho at Moscow. The railroad in Idaho is two miles long and serves many of the same rail users as the BN in Moscow. The railroad is also affiliated with WATCO, Inc. like the EIRR.

Railroad Mergers

BN/SF

During 1995, the $4.7 billion merger of the Burlington Northern Railroad Company (BN) and the Atchison, Topeka and Santa Fe Railway Company (SF) was approved by the Interstate Commerce Commission. The new railroad, the Burlington Northern Santa Fe (BNSF), now has a single line system with approximately 31,000 route miles, and expected revenues exceeding $8 billion per year.

Because the BNSF only serves Northern Idaho, the impacts of the merger on Idaho will probably not be overly significant. Northern Idaho shippers will see some benefits by single-line service to California, Arizona, and the Gulf of Mexico ports. However, the percentage of BN traffic (primarily forest products) originating in Northern Idaho (prior to the merger) that terminated on the SF was quite small compared to terminations on other railroads.

UP/CNW

In February of 1995, the Interstate Commerce Commission authorized the acquisition of control of the Chicago Northwestern Railway (CNW) by the Union Pacific (UP). The UP exercised it's right to control the CNW later that year. The primary advantage to Idaho shippers are a shorter route and single line service to Chicago and interchange with major eastern rail carriers. However, service levels on the combined railroads actually declined for some commodities during the start up period, but these problems are being addressed by the UP.

UP/SP

The Union Pacific and Southern Pacific Railroads (UP/SP) submitted a merger application to the Interstate Commerce Commission, now Surface Transportation Board, on November 30, 1995. The proposed UP/SP railroad would become North America's largest railroad with 34,000 miles of track in 25 states and combined revenues of $9.5 billion. The UP/SP merger will create a more efficient, stronger railroad that would appear to offer rail shippers a competitive alternative to the recently combined Burlington Northern/Santa Fe Railroad (BN/SF) that neither UP nor SP could offer on its own. The new UP/SP system will offer faster transit times, more reliable service, shorter routes, improved equipment supply, new market opportunities and increase competition to many shippers.

Because the UP/SP merger would result in only two major railroads west of the Mississippi, many western rail shippers expressed concerns about loss of rail competition. In an effort to allay those concerns and ward off opposition from shippers and BN/SF, the UP/SP and BN/SF entered into an unprecedented trackage rights and line sale agreement on September 26, 1995, which will allow BN/SF to serve only those shippers who currently have access to UP and SP and would lose two railroad competition. Because the SP does not serve Idaho, there are no such "2-to-1" situations in the state.

Clearly, this merger offers some opportunities for Idaho shippers, particularly faster and shorter single-line service to numerous points including Oregon, California, Arizona, Colorado, Texas, Louisiana, the Midwest and Mexico. A number of Idaho shippers, the Governor, and other

elected officials have filed statements in support of the merger. But there has been concern expressed by some Idaho shippers and associations that those Idaho shippers currently captive to only one railroad should have similar consideration on the BN/SF UP/SP agreement as those in the potential "2-to-1" situation, and have two railroads serving Southern Idaho.

A final written decision is expected by August 1996, if the Surface Transportation Board follows the same expedited schedule used in processing the BN/SF application. States, shippers, railroads, and others will have the opportunity to comment and request conditions during the proceedings.

Passenger Service

Both north and south Idaho are served by passenger trains operated by Amtrak. The routes are the subject of Figure 2-2. An excerpt from Amtrak's National Timetable is shown on Page 2-6.

Amtrak Routes

Service in Northern Idaho is provided over BN's main line track through Bonners Ferry, Sandpoint and Rathdrum. Amtrak trains 7 and 8, the west and eastbound Empire Builder, are scheduled in Sandpoint at 12:18 a.m. and 2:52 a.m., respectively. The train formerly operated on a daily basis but became a subject of Amtrak cutbacks in February 1995 to four days per week west of St. Paul, Minnesota. Sandpoint is the only stop in Idaho for the Empire Builder which runs between Chicago and Portland/Seattle. Service is also available at Spokane, Washington for northern Idaho passengers.

Southern Idaho is also served by a Chicago to Portland/Seattle train, the Pioneer (Amtrak trains 25 and 26). The Pioneer's route in Idaho takes it from Ogden through Pocatello, Shoshone, Boise, Nampa and Weiser. Idaho stops are scheduled at Pocatello, Shoshone, Boise and Nampa. Service is also available at Ontario, Oregon for southern Idaho passengers. The westbound train is scheduled to pass through Idaho in the early morning and the eastbound in late evening. Its schedule was reduced several years ago from daily to three days per week. The three days are coordinated with the days the Empire Builder does not run to provide the equivalent of daily service between Chicago and the Pacific Northwest.

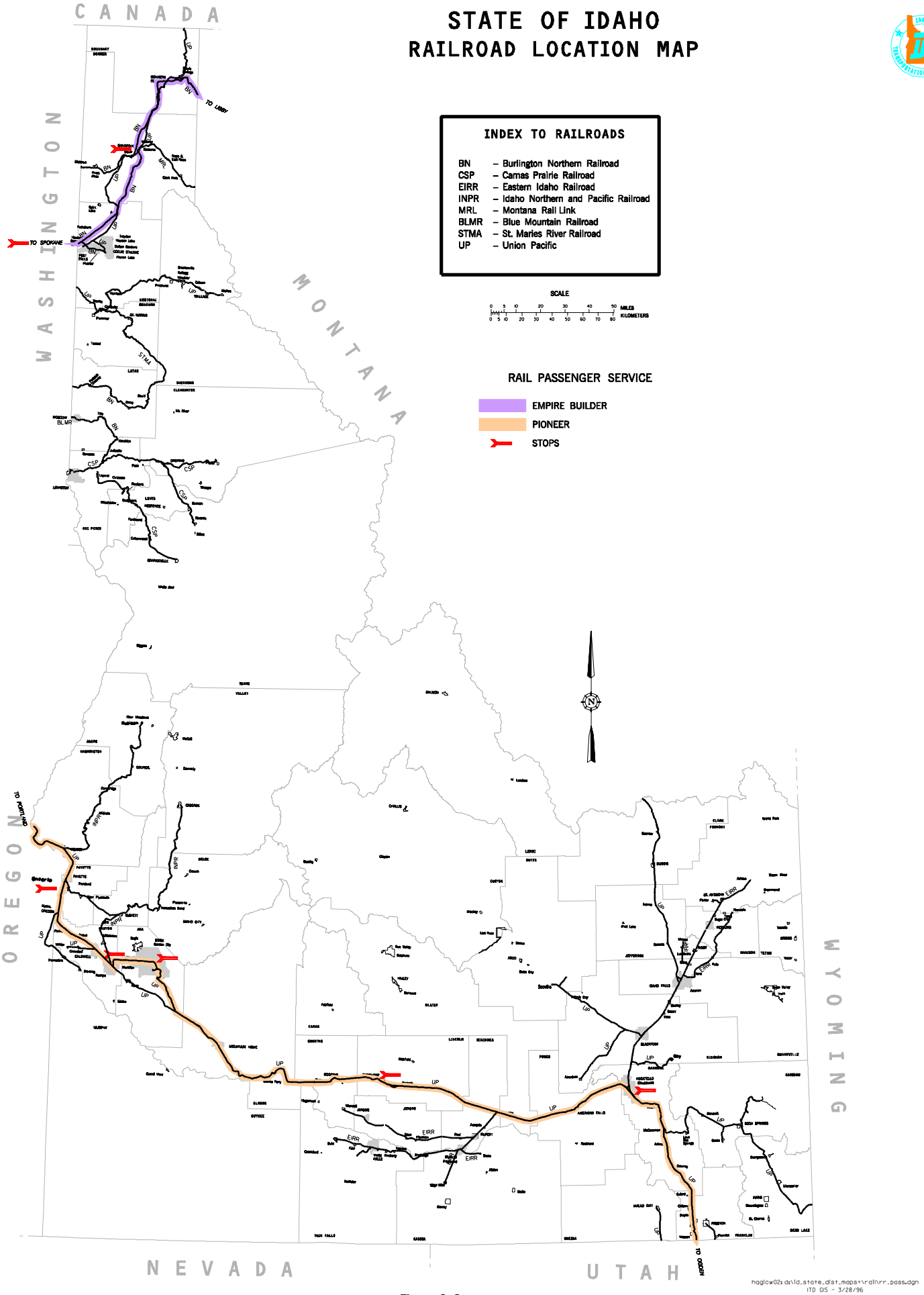

STATE OF IDAHO
RAILROAD LOCATION MAP
INDEX TO RAILROADS
BN – Burlington Northern Railroad
CSP – Camas Prairie Railroad
EIRR – Eastern Idaho Railroad
INPR – Idaho Northern and Pacific Railroad
MRL – Montana Rail Link
BLMR – Blue Mountain Railroad
STMA – St. Maries River Railroad
UP – Union Pacific
SCALE
MILES
KILOMETERS
RAIL PASSENGER SERVICE
EMPIRE BUILDER
PIONEER
STOPS
CANADA
WASHINGTON
MONTANA
OREGON
WYOMING
NEVADA
UTAH
TO SPOKANE
TO PORTLAND
TO OGDEN
hqglcw02s:dv\id_state_dist_maps+\rail\rr_pass.dgn
ITD GIS - 3/28/96

Figure 2–2

Ridership

The number of passengers boarding and alighting Amtrak trains in Idaho is the subject of Table 2-2. After exhibiting an increase from 1987 to 1988, Idaho ridership has displayed a constantly decreasing trend from a high of 44,548 in 1988 to a low of 17,327 in 1995. The most significant decline occurred between 1993 and 1995. The only Idaho stop on the route of the Empire Builder, Sandpoint, has been more consistent than the remainder of the state, but even it suffered a significant loss of patronage between 1993 and 1995.

The most utilized station in Idaho is Boise, which has accounted for almost 40 percent of the state's ridership over the nine years of record. It is followed by Pocatello with 27 percent, Sandpoint with 15 percent and Nampa with 12 percent. However, the ridership in Boise and Nampa has recently decreased more than other locations in Idaho.

Service Concerns

In October, 1995, Amtrak officials advised that rail passenger service on the Pioneer, serving Southern Idaho is being considered for elimination. The reason is that Amtrak is facing budget cuts from Congress, and Amtrak officials are examining their less productive routes. Ridership on the Pioneer in Idaho has fallen about 50 percent in the last few years, from 35,000 in 1990 and 1991 to 17,500 in 1994.

Decreased ridership in Idaho could be attributed to four factors:

1) Service was reduced from daily to tri-weekly several years ago;

2) The west bound train was also rescheduled several years ago resulting in a 4:00 a.m. departure from Boise;

3) Cheap airline fares (e.g. Southwest Airlines) to/from larger cities on the route (ridership down much more in Boise/Nampa than other stations).

4) There is no public transportation available at Amtrak stations (this includes Sandpoint as well), since the Idaho stops are at night.

Department staff has been working directly with Amtrak and other states in developing strategies for retaining service in Southern Idaho and helping Amtrak reduce costs and increase ridership. These include train rescheduling, rerouting, route shortening, and other actions.

Table 2-2
IDAHO
AMTRAK RIDERSHIP
1987 - 1995

STATION	1987	1988	1989	1990	1991	1992	1993	1994	1995	TOTAL
Boise	14,405	17,900	19,273	18,314	16,913	14,680	13,059	7,226	5,481	127,251
Nampa	6,246	6,631	6,342	4,846	4,877	3,828	3,231	1,611	1,201	38,813
Pocatello	10,993	11,492	10,684	9,413	10,693	10,489	10,605	7,073	5,272	86,714
Sandpoint	5,200	5,626	5,196	5,030	5,761	6,015	5,911	4,909	4,123	47,771
Shoshone	2,471	2,899	2,829	2,707	2,955	2,914	2,538	1,664	1,250	22,227
TOTAL	**39,315**	**44,548**	**44,324**	**40,310**	**41,199**	**37,926**	**35,344**	**22,483**	**17,327**	**322,776**

Source: National Railroad Passenger Corporation

In November 1995 Amtrak staff developed a marketing plan intended to increase ridership and reduce costs on the Pioneer. This marketing plan was approved by the Amtrak Board of Directors on December 5, 1995. This plan is effective through Federal Fiscal Year 1996, after which the future of the train will be reassessed. There will be increased ad campaigns and in-station events in the cities along the route, plus sponsorship/participation in local events along the route. Some of the ads will be keyed to site-specific attractions (e.g. skiing).

Because of significant reductions in Amtrak's budget in the DOT Appropriations Bill, Amtrak is seeking financial, technical and partnering assistance from the states and communities to make the marketing plan a success and hopefully save the train.

Freight Traffic

The description of rail freight in Idaho is organized under the following headings:

- Commodities transported;
- Traffic patterns;
- Through traffic; and,
- Traffic Density

Commodities Transported

As shown in Table 2-3, almost 19 million tons of freight traffic were originated or terminated by Idaho's two Class 1 railroads in 1994. Just over 60 percent of the total tonnage was originated in the state, led by farm products (3.8 million tons), nonmetallic minerals (3.0 million tons), lumber or wood products (2.1 million tons), food products (1.6 million tons), and chemicals or allied products (1.1 million tons). These five major commodities comprised 96 percent of all originating commodities.

Major terminating commodities were three of the same ones mentioned above, nonmetallic minerals (3.3 million tons), farm products (1.3 million tons) and chemicals or allied products (0.85 million tons) comprising 76 percent of total terminating tons.

Traffic Patterns

The movement patterns of Idaho rail commodities, the tonnages involved and the origin and destination states are the subject of the following paragraphs. The data used in these discussions are derived from a different source (the 1993 ICC Waybill Sample) than the

Table 2-3

IDAHO RAIL TRAFFIC

1994 SUMMARY

COMMODITY		TONNAGE		
STCC	Description	Originating	Terminating	Total
1	Farm Products	3,768,335	1,285,578	5,050,913
10	Metallic Ores		344,067	344,067
14	Nonmetallic Ores; Except Fuels	2,951,501	327,891	6,223,392
20	Food or Kindred Products	1,631,004	333,635	1,964,639
24	Lumber or Wood Products	2,143,312	259,781	2,403,093
25	Furniture or Fixtures		1,058	1,058
26	Pulp, Paper, or Allied Products	99,431	188,716	288,147
28	Chemicals or Allied Products	1,094,083	849,673	1,943,756
29	Petroleum or Coal Products	2,708	496,371	499,079
30	Rubber or Miscellaneous Plastics Products		1,367	1,367
32	Clay, Concrete, Glass or Stone Products	203,434	17,071	220,505
33	Primary Metal Products	37,210	35,513	74,723
34	Fabricated Metal Products	769	1,116	1,885
35	Machinery; except Electrical	1,075	5,177	6,252
36	Electrical Machinery or Equipment	67	1,051	1,118
37	Transportation Equipment	6,680	10,295	16,975
40	Waste or Scrap Materials Not Identified by Producing Industry	95,775	30,287	126,062
42	Containers, Carrier or Devices, Shipping, Returned Empty	464	6,824	7,288
46	Miscellaneous Mixed Shipments	25,595	14,150	39,745
TOTALS		12,061,443	7,155,621	18,872,996

contents of Table 2-3 (the BN and UP railroads) and are also for a different year, and thus the absolute values are slightly different. Figure 2-3 reveals that overall Idaho was the largest destination for rail traffic that originated in the state. This traffic which both originates and terminates within the state is called intrastate traffic. The next biggest destination is Washington State, followed by Oregon, Montana, Illinois and Texas. Traffic that terminated in Idaho mostly originated in Idaho (the same intrastate traffic mentioned above), with Wyoming origins a distant second, followed by Nebraska, Montana and Washington State, as revealed in Figure 2-4.

It is apparent that the movement of Idaho commodities by rail reflects the resource-based economy of the state. As evidenced from Table 2-3, Idaho rail traffic is dominated by five major commodities.

Nonmetallic Minerals - This commodity group generates the largest volume of rail transportation in the state in that the vast majority of it both originates and terminates in the state as evident from inspection of Figure 2-5. Just over 98 percent of the originating traffic is phosphate rock, clay or sand. Virtually the same holds true for rail traffic terminating in the state although there is a significant amount of sulphur (15 percent of the total). Montana is the only state to which any significant volume is shipped from Idaho, and Wyoming is the only state that forwards any significant volume to Idaho. Rail transportation of nonmetallic minerals in Idaho is dominated by the state's agricultural chemical industry.

Farm Products - The shipment and receipt of farm products is more diverse geographically than nonmetallic minerals (see Figure 2-6). Outbound farm products, which are almost three times the volume of inbound products, are comprised principally of barley, wheat and potatoes with the largest commodity being wheat (41 percent). Sugar beets made up 14 percent of originating traffic in 1993, but the rail transportation of sugar beets has diminished in Idaho since then. Farm products shipped into Idaho are comprised of corn, barley and cotton seeds. Again in 1993, sugar beets were a large terminating commodity (37 percent) but have diminished as mentioned above. In addition to the large amount of intrastate traffic, significant shipments are made to the neighboring states of Washington and Oregon, presumably for export.

Lumber or Wood Products - Eighty-five percent of the rail traffic associated with originating tonnage for this commodity group is comprised of sawlogs, pulpwood chips, and lumber, roughly one half of it the latter. As shown on Figure 2-7, the major destination is Washington

State which receives about 25 percent of the shipments. Only insignificant volumes are received from outside of the state as terminating traffic is principally intrastate.

Food or Kindred Products - Rail transportation of this commodity group is dominated by outbound shipments and in 1993, there were no intrastate movements picked up in the Waybill Sample. Destinations for Idaho food products, frozen vegetables, sugar and malt comprise over 80 percent of shipments, are widespread as are origins of food products being shipped into the state (see Figure 2-8). Inbound products consist of a wide variety with soybean meal, beer and ale, prepared feeds and malt extracts comprising the largest tonnages (42 percent of the total).

Chemicals or Allied Products - Another commodity group with wide spread origins and destinations as evidenced in Figure 2-9, is chemicals and allied products. Traffic originating in Idaho is dominated by superphosphate and miscellaneous fertilizer compounds (almost 80 percent) with principal destinations in Oregon and California. Inbound chemicals are more diverse but 30 percent of totals are accounted for by ammonia and sulfuric acid and more than likely used in fertilizer production. Major origins lie in Washington State and Utah.

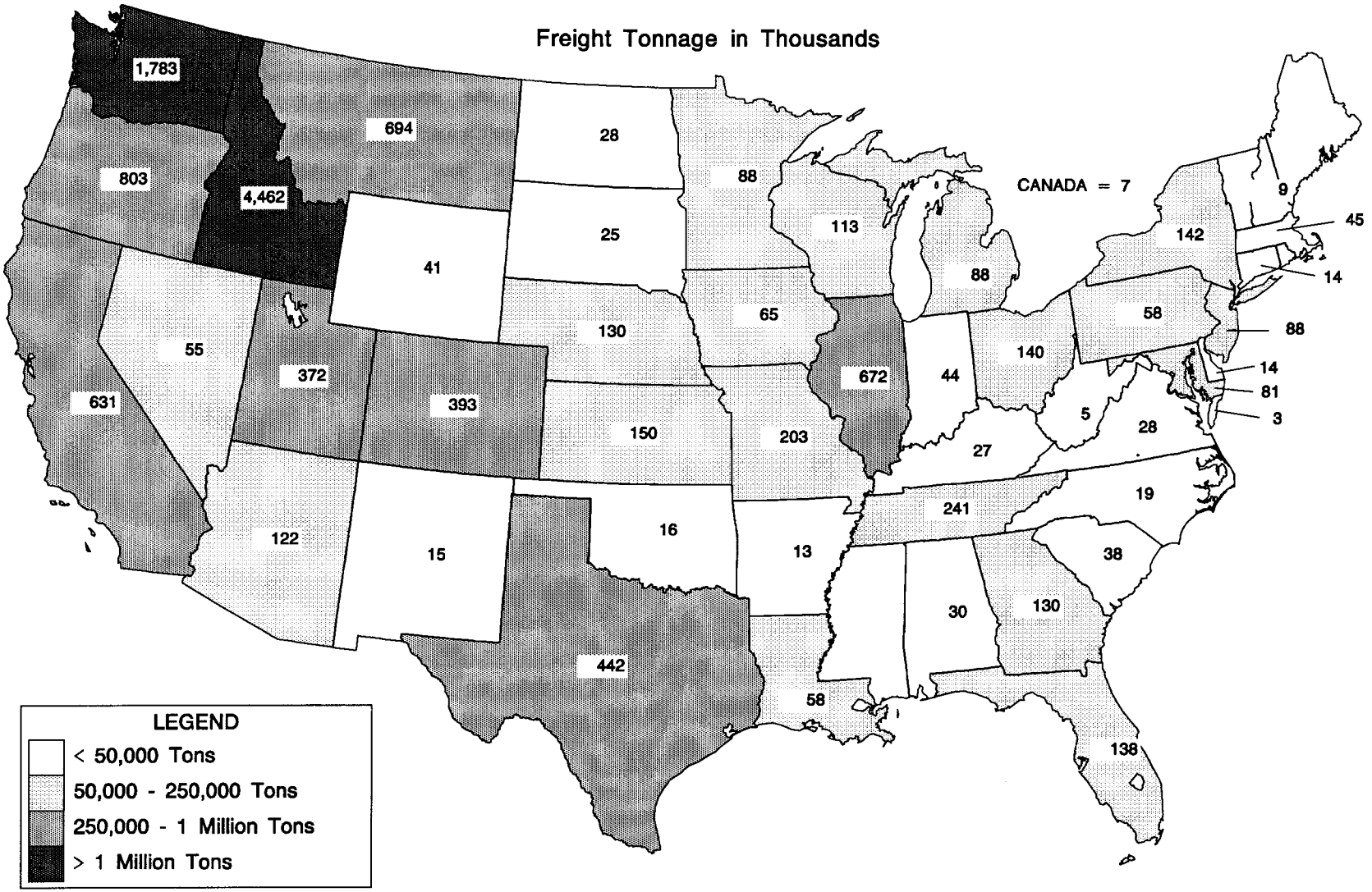
Through Traffic

In addition to the traffic discussed above, there is a large quantity of rail traffic which uses the state's rail system with neither origins nor destinations in Idaho. This through or overhead traffic comprised over 55 million tons in 1993 based on the ICC Waybill Sample. The dominant commodity was farm products, accounting for 18 million tons principally with west coast (Washington, Oregon and California) destinations, followed by miscellaneous mixed shipments with just over 8 million tons. The latter commodity group comprises the largest share of the rail intermodal traffic (trailers/containers) with 545,000 units of a total of 853,000, the difference falling into other commodity classifications.

The large amount of through traffic in Idaho is not surprising given the BN, MRL and UP main lines which pass through the state and the location of the state vis-a-vis the location of the major ports of the Pacific Northwest. All of these main lines are classified as principal lines in the FRA rail network.[2]

[2] The FRA has defined a core railroad system of approximately 80,000 miles known as the Principal Railroad Lines. These lines have one or more of the following attributes: Amtrak route; essential for defense (STRACNET and connections); or, transport in excess of 20 million gross ton-miles per mile annually.

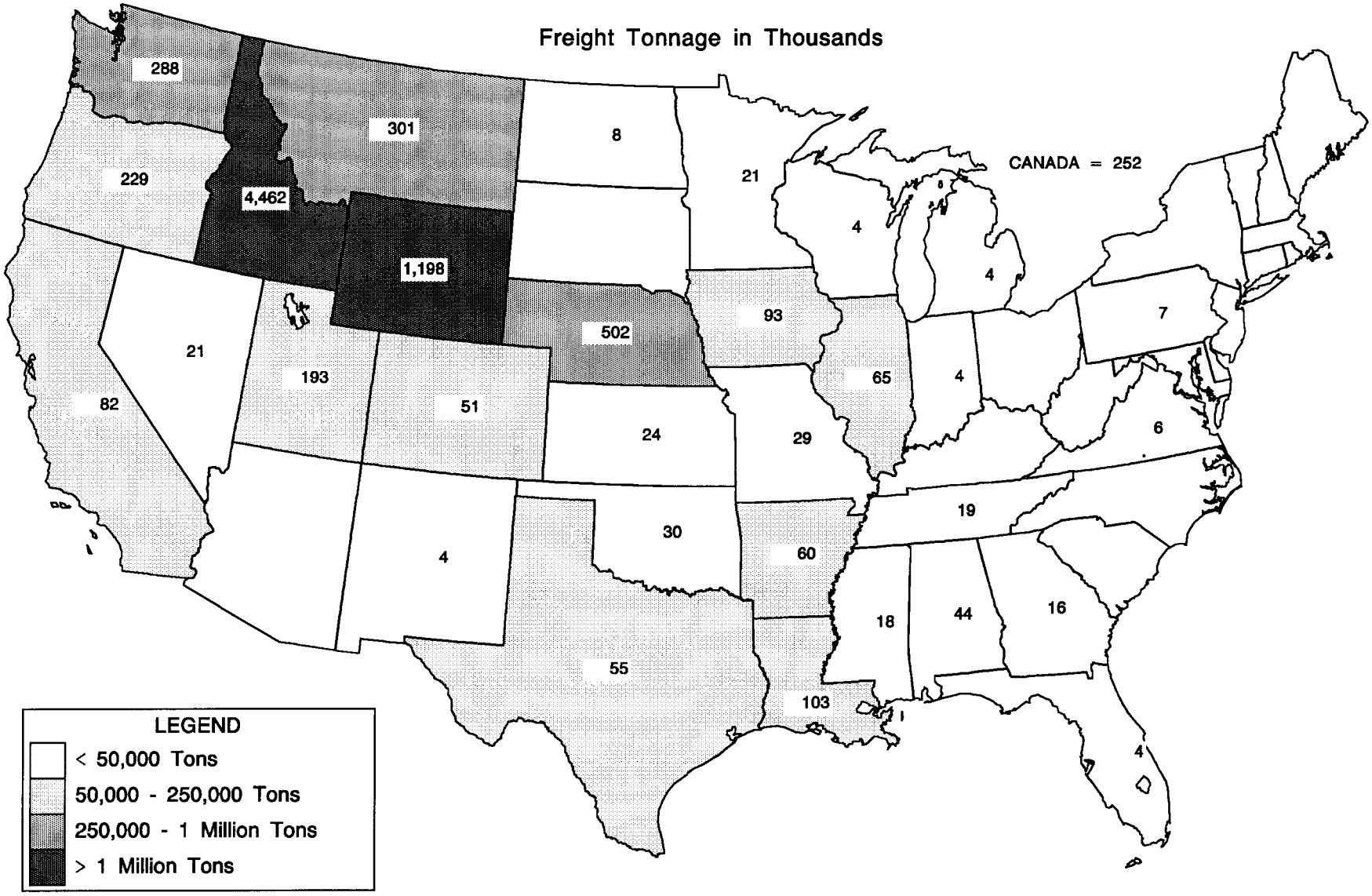
DESTINATION OF RAIL FREIGHT TONNAGE ORIGINATING IN IDAHO



DATA SOURCE: 1993 ICC Waybill Sample

Figure 2-3

ORIGINATION OF RAIL FREIGHT TONNAGE TERMINATING IN IDAHO



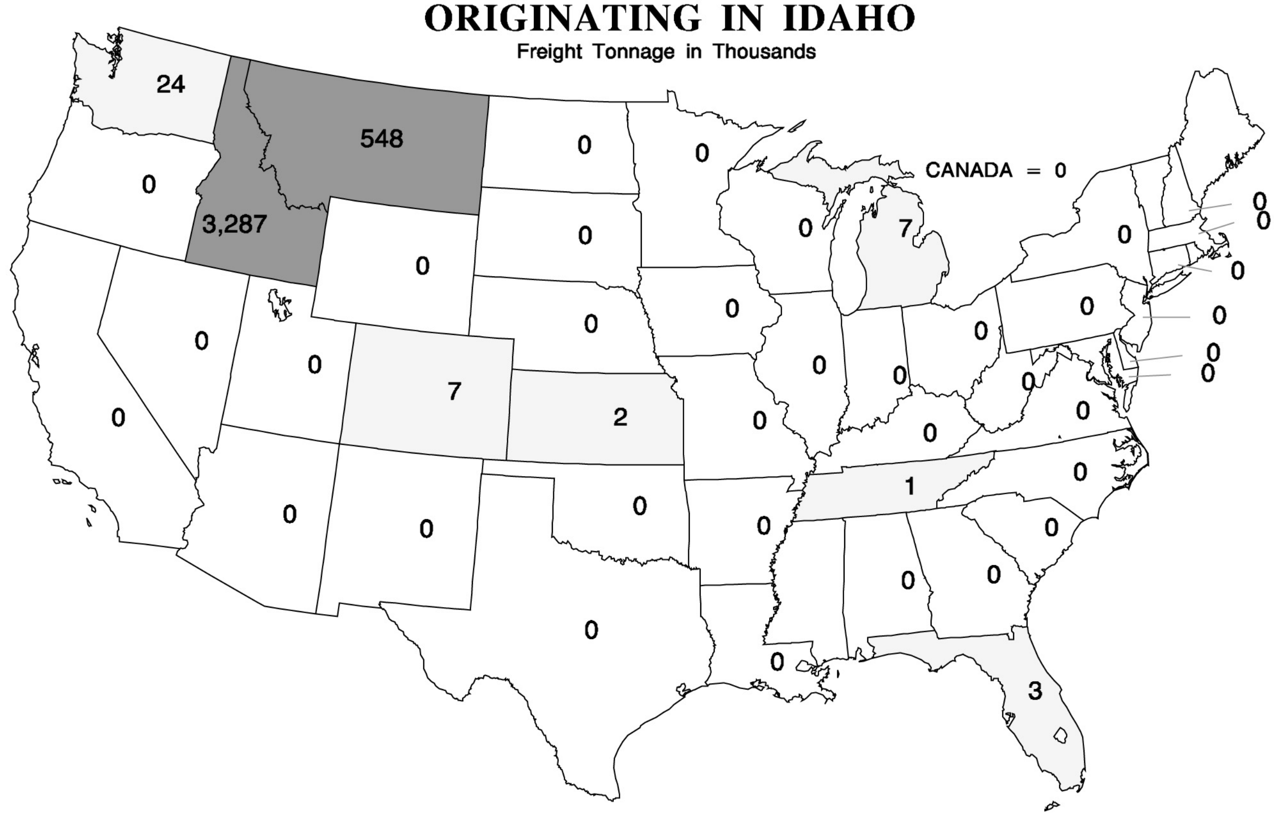
DATA SOURCE: 1993 ICC Waybill Sample

Figure 2-4

NONMETALLIC MINERALS;EXCEPT FUELS

DESTINATION OF RAIL FREIGHT TONNAGE ORIGINATING IN IDAHO

Freight Tonnage in Thousands



ORIGINATION OF RAIL FREIGHT TONNAGE TERMINATING IN IDAHO

Freight Tonnage in Thousands

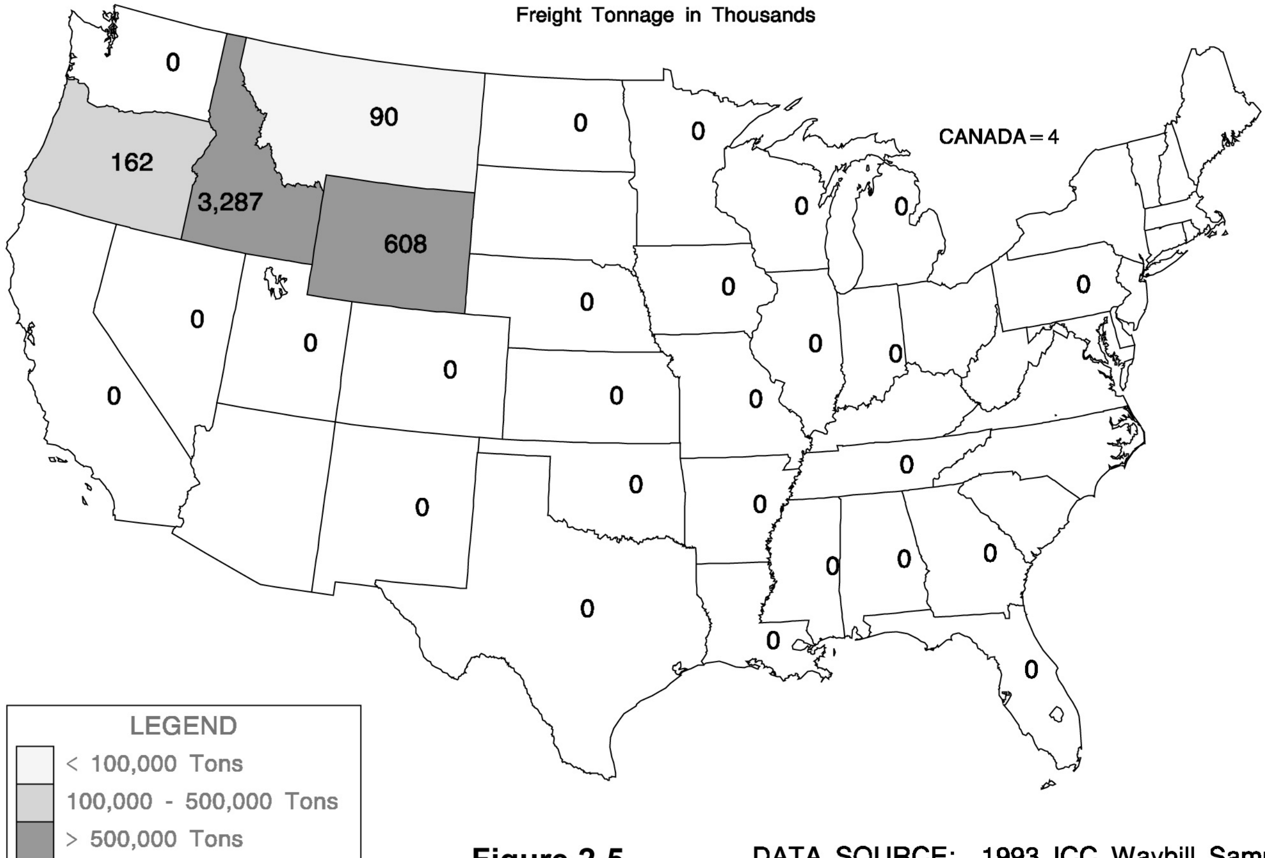


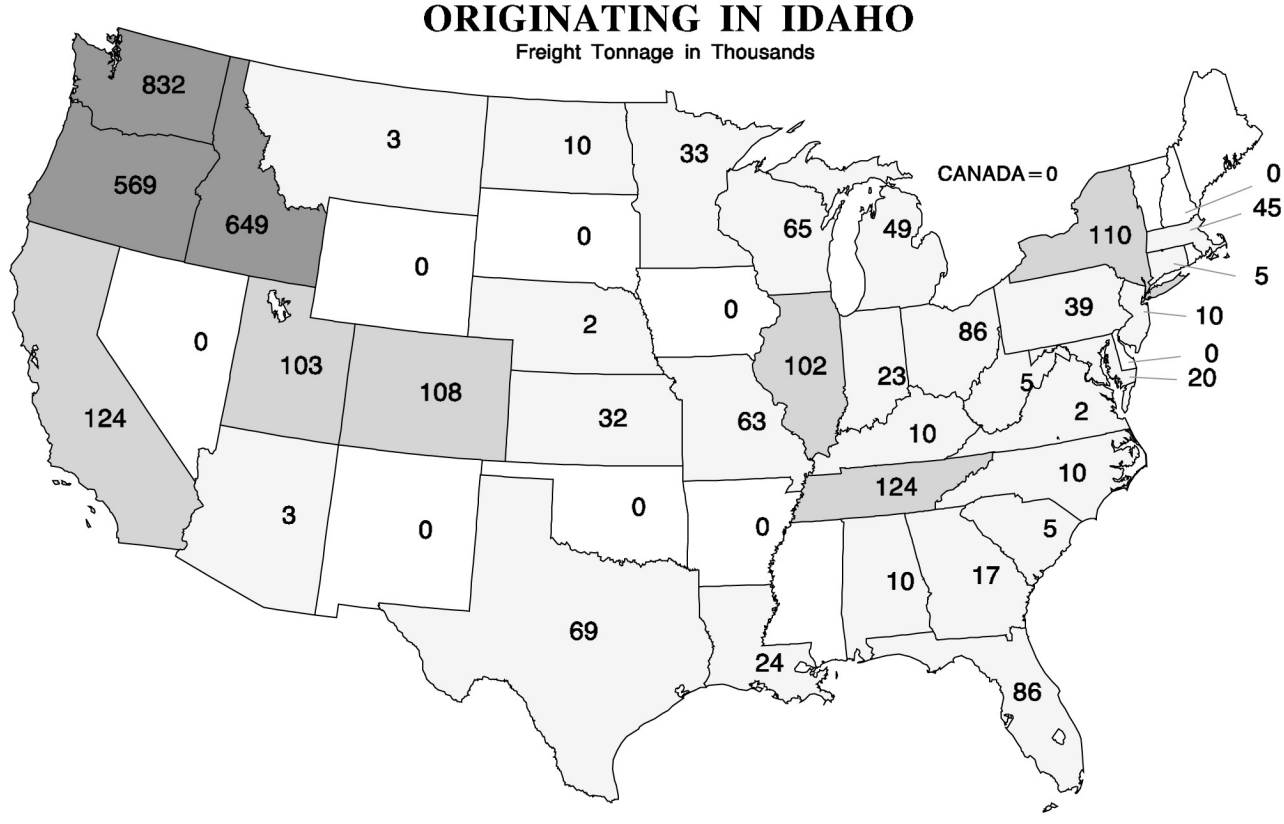
Figure 2-5

DATA SOURCE: 1993 ICC Waybill Sample

FARM PRODUCTS

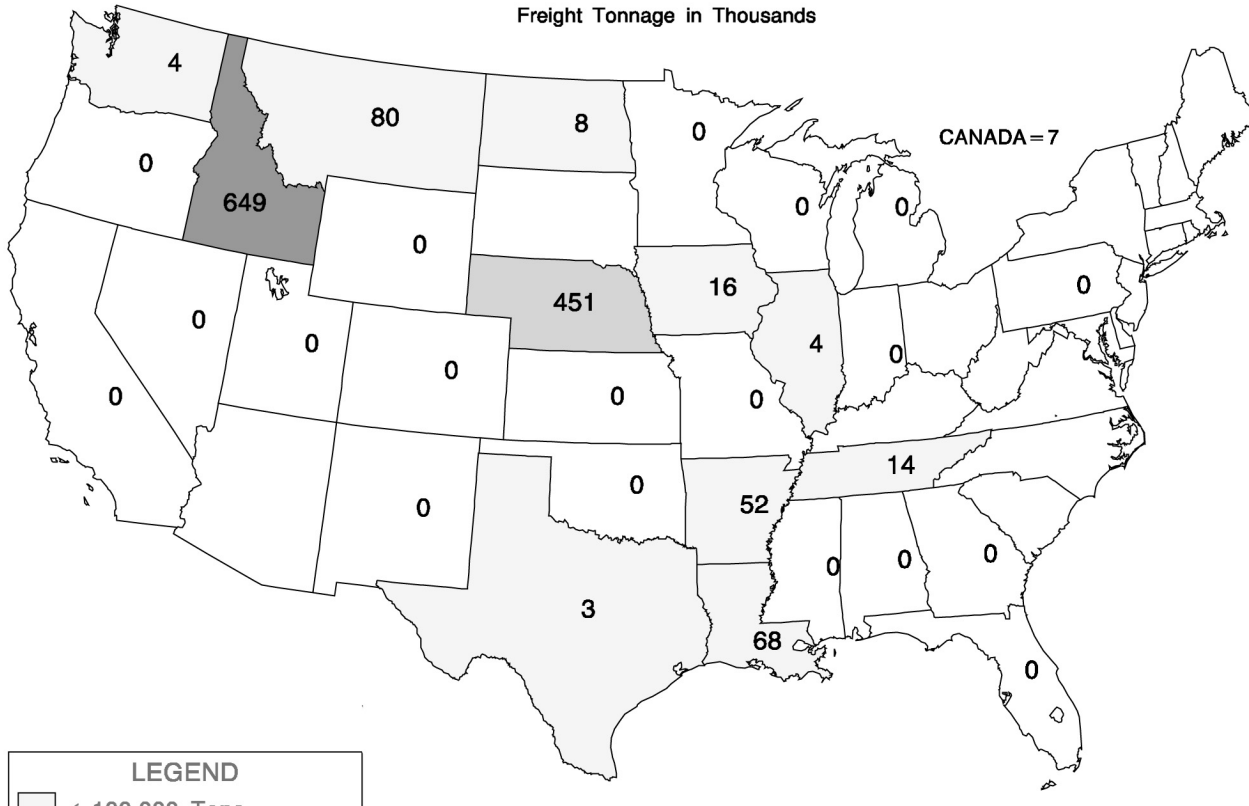
DESTINATION OF RAIL FREIGHT TONNAGE ORIGINATING IN IDAHO

Freight Tonnage in Thousands



ORIGINATION OF RAIL FREIGHT TONNAGE TERMINATING IN IDAHO

Freight Tonnage in Thousands



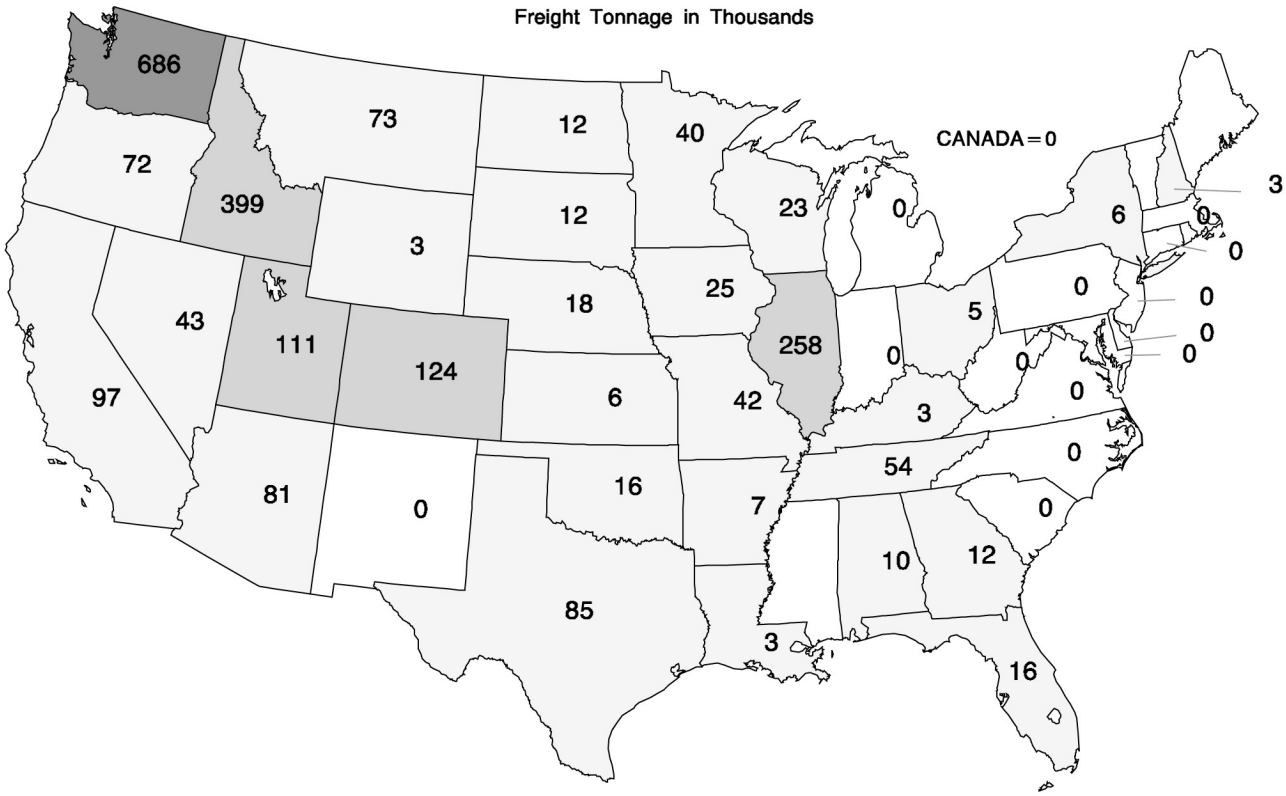
LEGEND

- < 100,000 Tons
- 100,000 - 500,000 Tons
- > 500,000 Tons

Figure 2-6 DATA SOURCE: 1993 ICC Waybill Sample

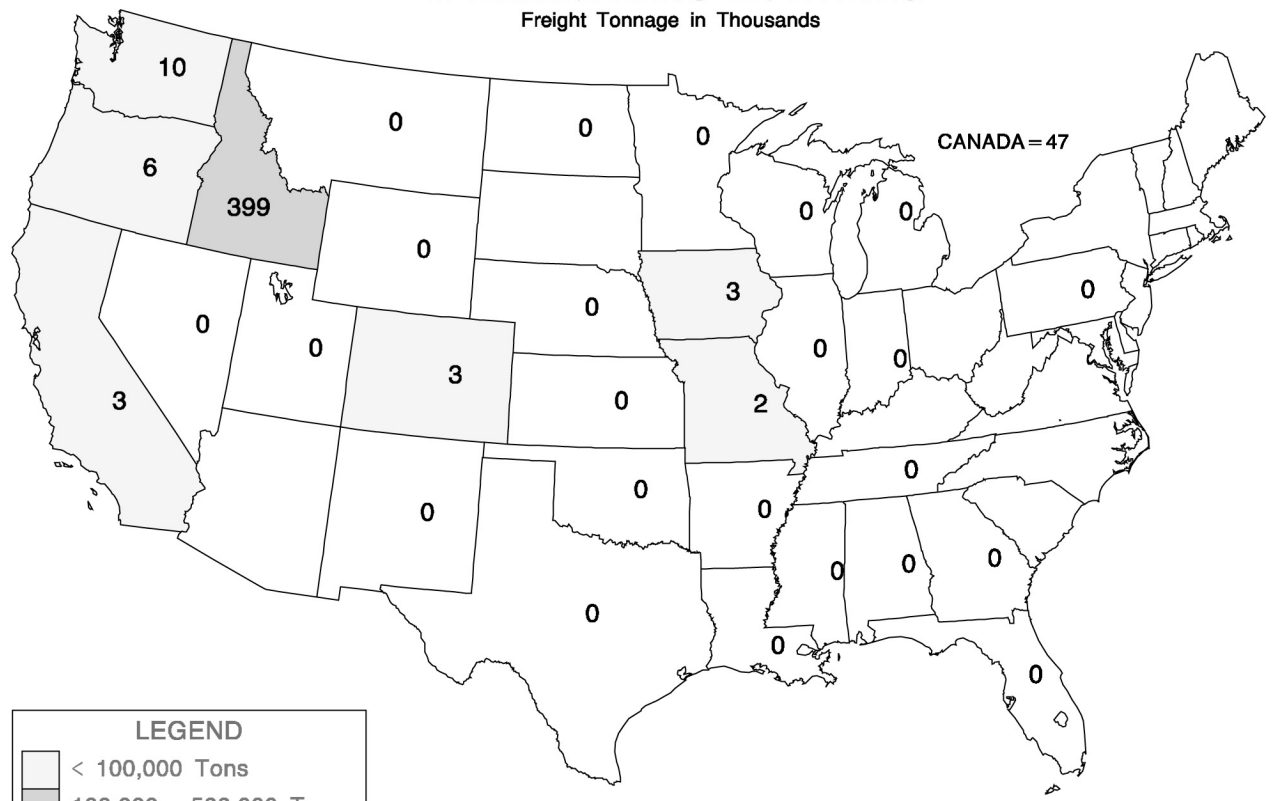
LUMBER OR WOOD PRODUCTS
DESTINATION OF RAIL FREIGHT TONNAGE ORIGINATING IN IDAHO

Freight Tonnage in Thousands



ORIGINATION OF RAIL FREIGHT TONNAGE TERMINATING IN IDAHO

Freight Tonnage in Thousands



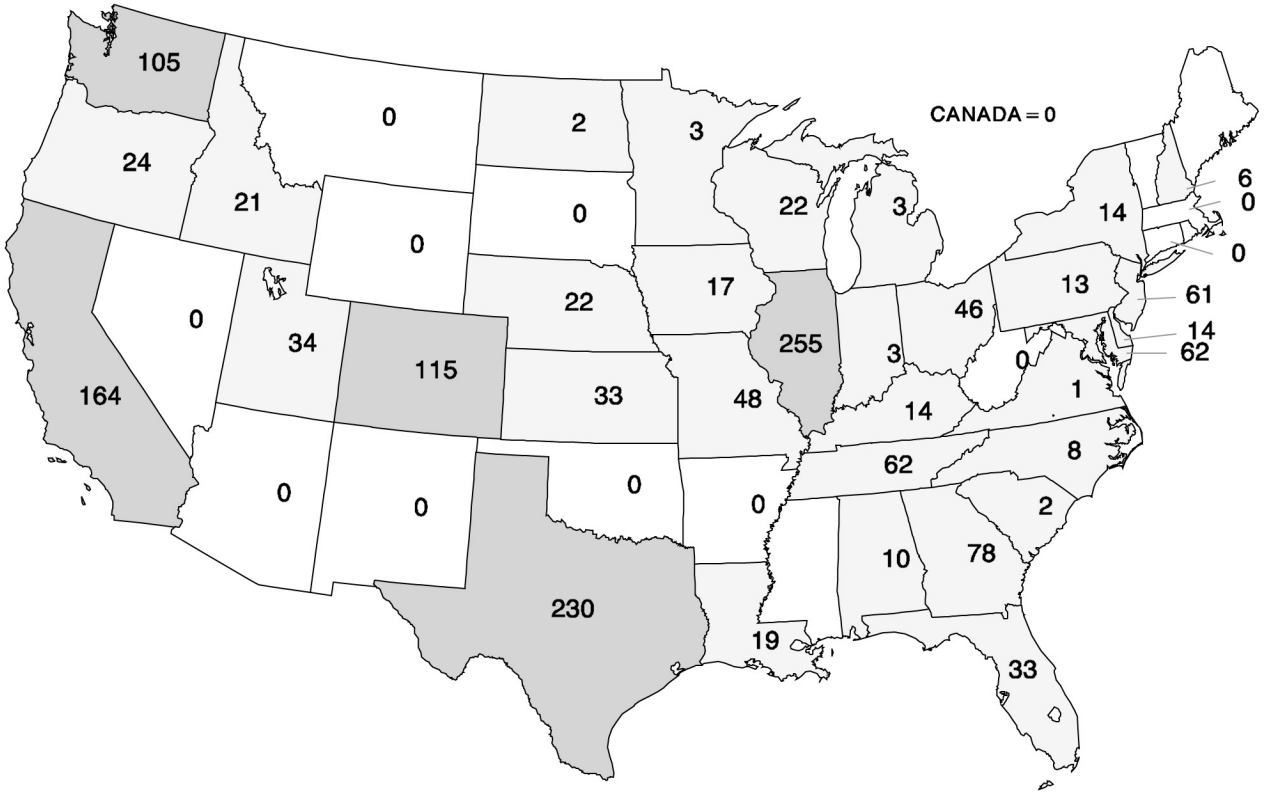
DATA SOURCE: 1993 ICC Waybill Sample

Figure 2-7

FOOD OR KINDRED PRODUCTS

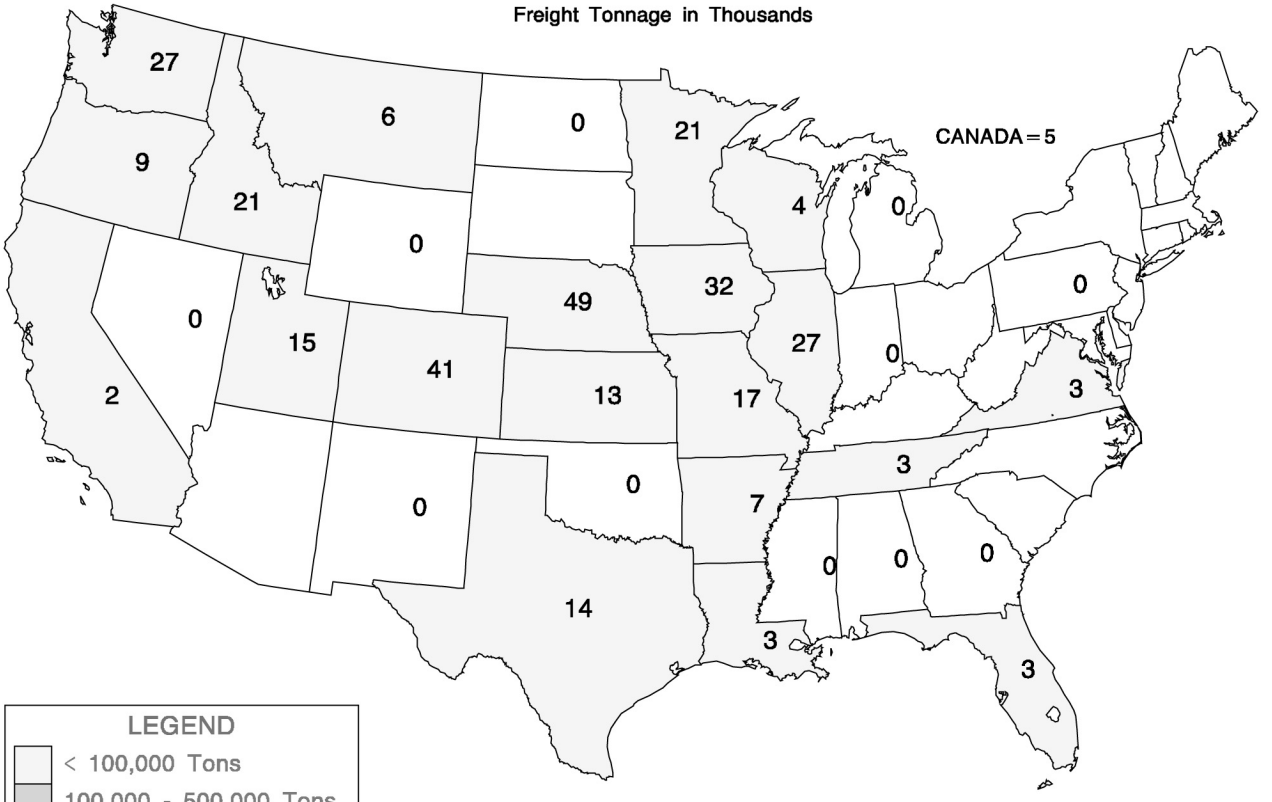
DESTINATION OF RAIL FREIGHT TONNAGE ORIGINATING IN IDAHO

Freight Tonnage in Thousands



ORIGINATION OF RAIL FREIGHT TONNAGE TERMINATING IN IDAHO

Freight Tonnage in Thousands



LEGEND

- < 100,000 Tons
- 100,000 - 500,000 Tons
- > 500,000 Tons

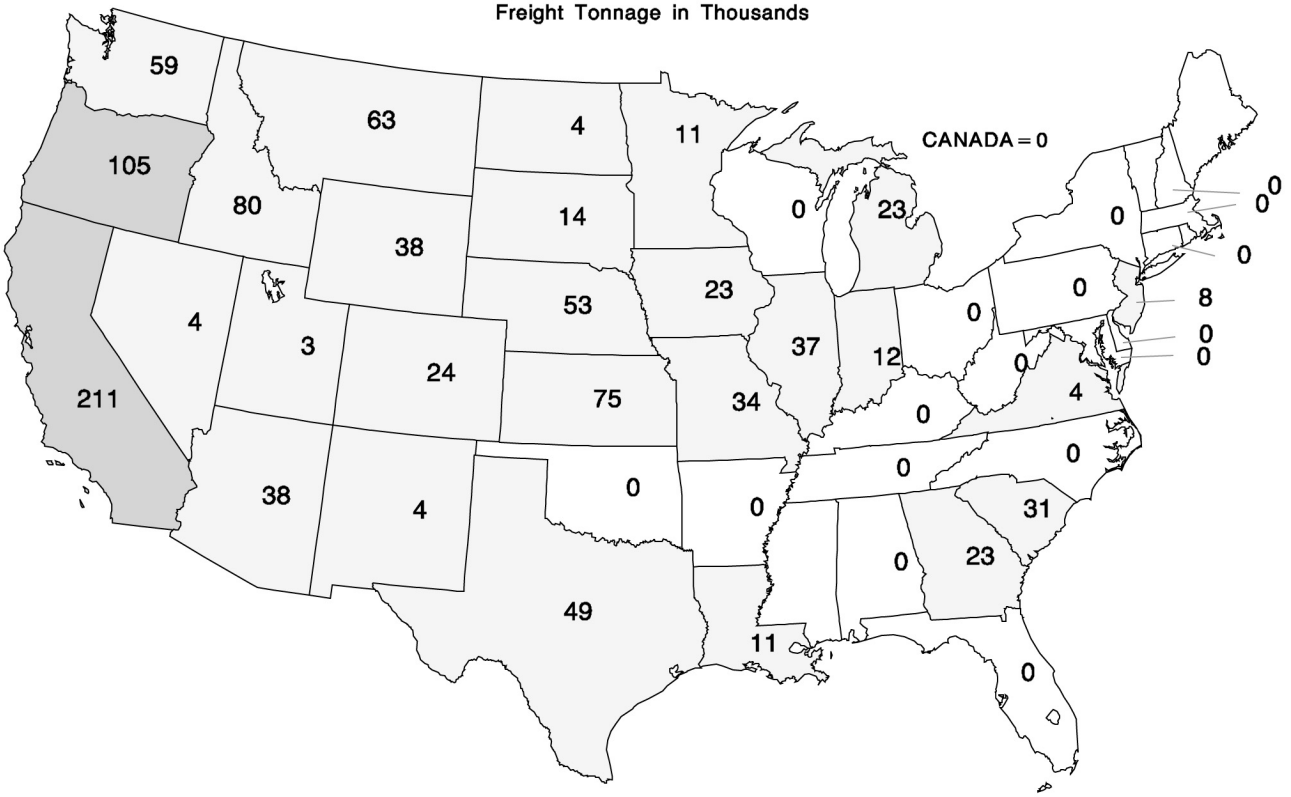
Figure 2-8

DATA SOURCE: 1993 ICC Waybill Sample

CHEMICAL OR ALLIED PRODUCTS

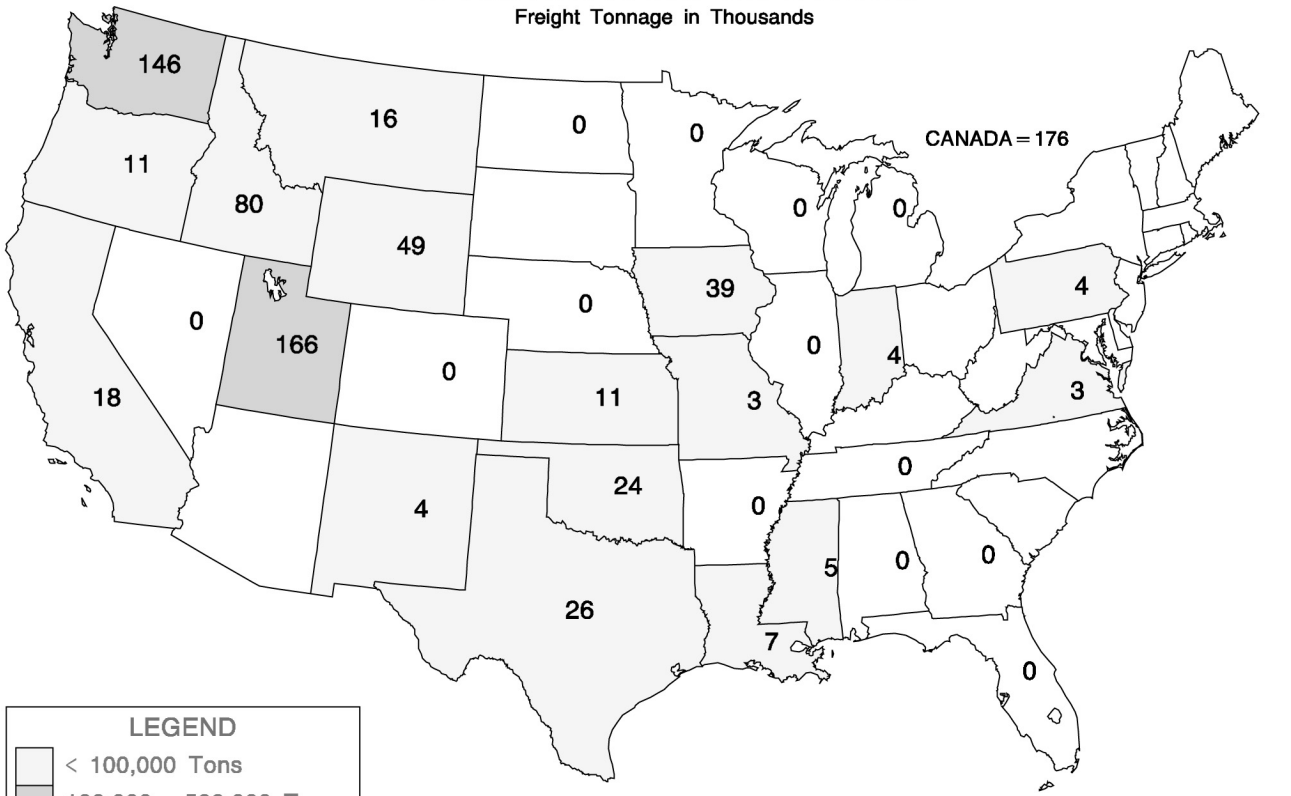
DESTINATION OF RAIL FREIGHT TONNAGE ORIGINATING IN IDAHO

Freight Tonnage in Thousands



ORIGINATION OF RAIL FREIGHT TONNAGE TERMINATING IN IDAHO

Freight Tonnage in Thousands



LEGEND

- < 100,000 Tons
- 100,000 - 500,000 Tons
- > 500,000 Tons

Figure 2-9

DATA SOURCE: 1993 ICC Waybill Sample

Traffic Density

Figure 2-10 reveals the utilization of the Idaho rail system in terms of traffic density on each rail line. The measure used to depict traffic density on Figure 2-10 is million gross ton-miles per mile of track. Gross tons are comprised of the weight of locomotives, rolling stock and lading (freight). A traffic density figure of 5.0 shown on the map, for example, indicates that 5.0 million gross ton-miles per mile moved over the particular line segment in the year of record.

Examination of Figure 2-10 reveals why the BN and MRL main lines in the northern part of the state are FRA principal lines as they transported in excess of 20 million gross ton-miles in 1993. The UP line which runs through the same area, the former Spokane International running from Spokane to the Canadian border at Eastport, is a secondary main falling into the between 5 and 20 million ton-mile category. Southern Idaho served by an east-west UP main which also transports in excess of 20 million gross ton-miles and a UP 5-20 million secondary main running north-south. Most of the remaining lines in the state fall into the FRA light density line category as they handled less than 5 million gross ton-miles per mile in 1993.

State Rail System Description by Districts

The Idaho Transportation Department has six jurisdictional districts, which correspond to the state's planning districts. Figure 2-11 shows the state rail and highway systems by District. A description of the rail system and traffic by district follows.

District 1

District 1 is located in the northern part of the Idaho Panhandle (see Figure 2-12) and is served by both the BN and UP as well as by the MRL and the STMA. The BN line between the Pacific Northwest and the Twin Cities runs through Rathdrum, Sandpoint and Bonners Ferry. The line is not only a very heavily traveled freight line, but is also home to Amtrak's Empire Builder. The UP has a secondary main (the former Spokane International) which originates in Spokane, Washington and is used to interchange traffic with the Canadian Pacific at Eastport, a border crossing. The MRL enters Idaho from Montana and its trackage terminates in Sandpoint, but it continues to operate to Spokane by way of trackage rights over the BN. Branch lines of both the BN and the UP serve Coeur d'Alene and a branch line of the UP reaches Plummer from Spokane where it interchanges traffic with the STMA which runs from Plummer through St. Maries to Bovill. Another branch line, this one the BN's, runs west from Sandpoint to Newport, Washington, where it connects with the Pend Oreille Valley Railroad. This line used to continue to Spokane, as it formerly served as the Great Northern Railroad's main line.

Table 2-4

RAIL TRAFFIC SUMMARY BY DISTRICT

1993

District	Originating (000 Tons)	Terminating (000 Tons)	Total (000 Tons)
1	1,475	420	1,895
2	583	174	757
3	1,769	1,569	3,338
4	1,545	1,183	2,728
5	6,299	4,635	10,934
6	1,094	215	1,309
Totals	12,765	8,196	20,961

Source: 1993 ICC Railroad Waybill Sample

The principal rail traffic originated in District 1, accounting for 95 percent of the total and 1.4 million tons (see Table 2-4), is lumber or wood products. It is also the largest commodity terminated in the District at 280,000 tons (66 percent of the total). This tonnage is attributed to the large number of saw and studmills located in the District along with veneer and panel (plywood, wafer board, and particle board) manufacturers. Thus, District 1's rail system is used principally to transport through traffic over the main lines of several railroads and to ship the area's lumber or wood products.

District 2

There are no rail lines in District 2, in the southern part of the Idaho Panhandle (see Figure 2-13), that are of the main line character of those in District 1. Rather, the rail lines in this District exist to serve local rail shippers. The lines are physically and operationally connected to the rest of the national rail system through Washington State. The BN in District 2 is comprised of three entrees: (1) The former P& L Subdivision from Marshall (Spokane) which now terminates in Moscow. Although its tracks still run to Arrow Junction east of Lewiston, that portion has been out of service for ten years; (2) The WI&M, a former Potlatch railroad and Milwaukee Road line, acquired after the Milwaukee went bankrupt, which connects with the STMA at Bovill; and (3) The Camas Prairie Railroad (CSP), the joint UP-BN operation which serves Lewiston and parts of District 2 to the east and south through branches that run to Revling (near Pierce), Kooskia and Grangeville. The UP also

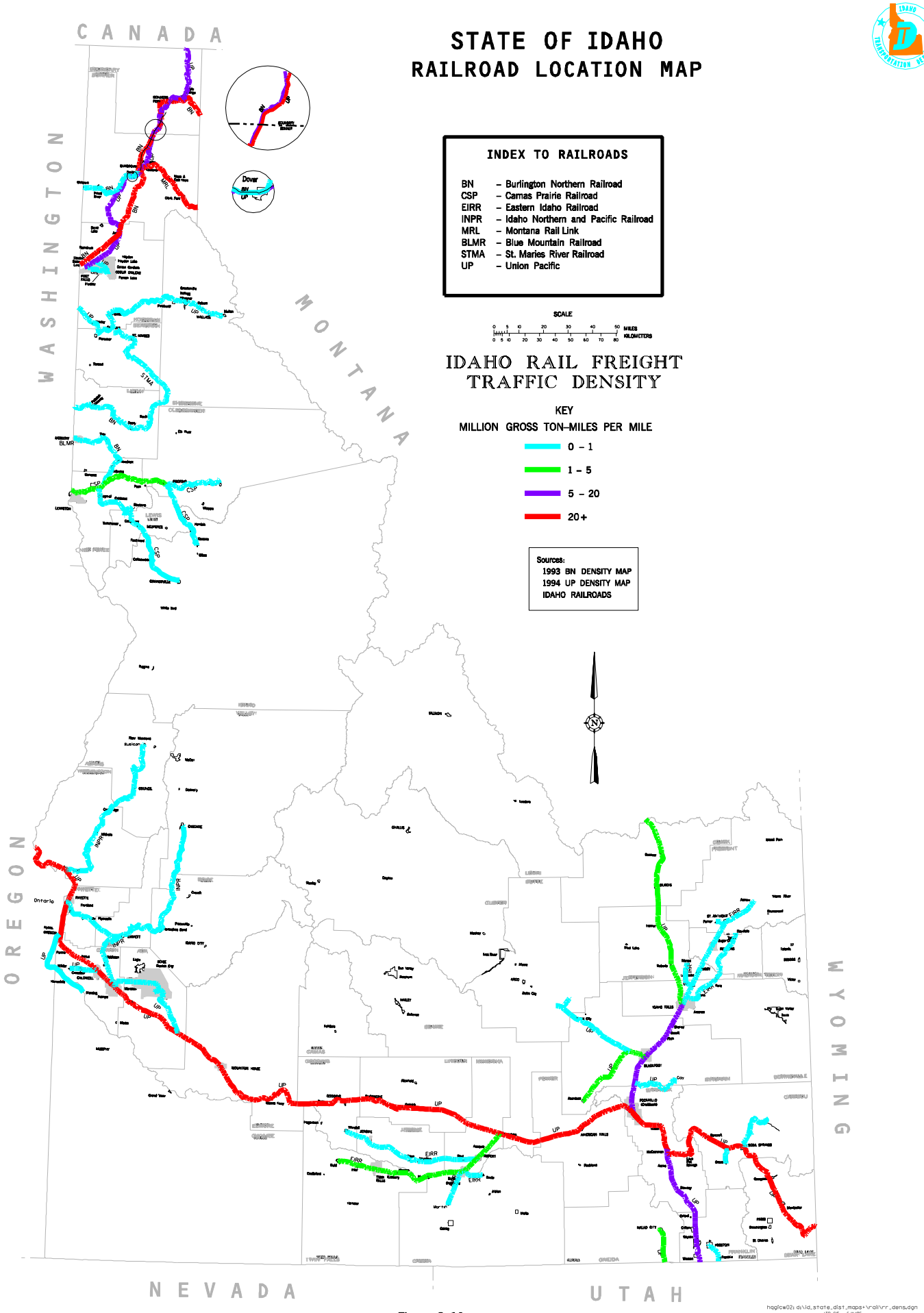

STATE OF IDAHO
RAILROAD LOCATION MAP
INDEX TO RAILROADS
BN – Burlington Northern Railroad
CSP – Camas Prairie Railroad
EIRR – Eastern Idaho Railroad
INPR – Idaho Northern and Pacific Railroad
MRL – Montana Rail Link
BLMR – Blue Mountain Railroad
STMA – St. Maries River Railroad
UP – Union Pacific
SCALE
MILES
KILOMETERS
IDAHO RAIL FREIGHT
TRAFFIC DENSITY
KEY
MILLION GROSS TON–MILES PER MILE
0 – 1
1 – 5
5 – 20
20+
Sources:
1993 BN DENSITY MAP
1994 UP DENSITY MAP
IDAHO RAILROADS
CANADA
WASHINGTON
MONTANA
OREGON
WYOMING
NEVADA
UTAH
Dover

Figure 2–10

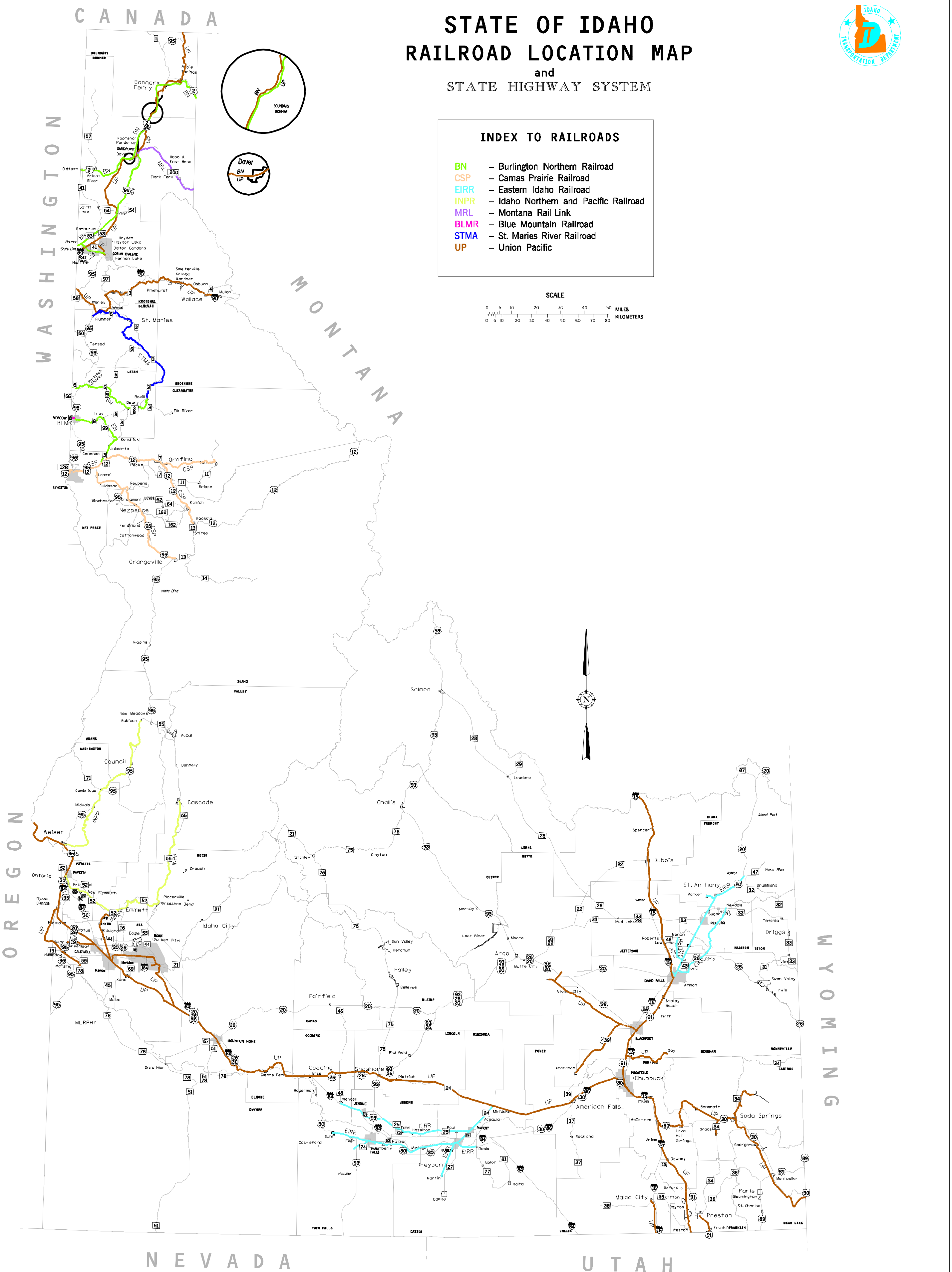


Figure 2–11

hqgicw02: d:\id_state_dist_maps+\rail\rr_loc.dgn
GIS - 9/23/96

District One

STATE OF IDAHO
RAILROAD LOCATION MAP

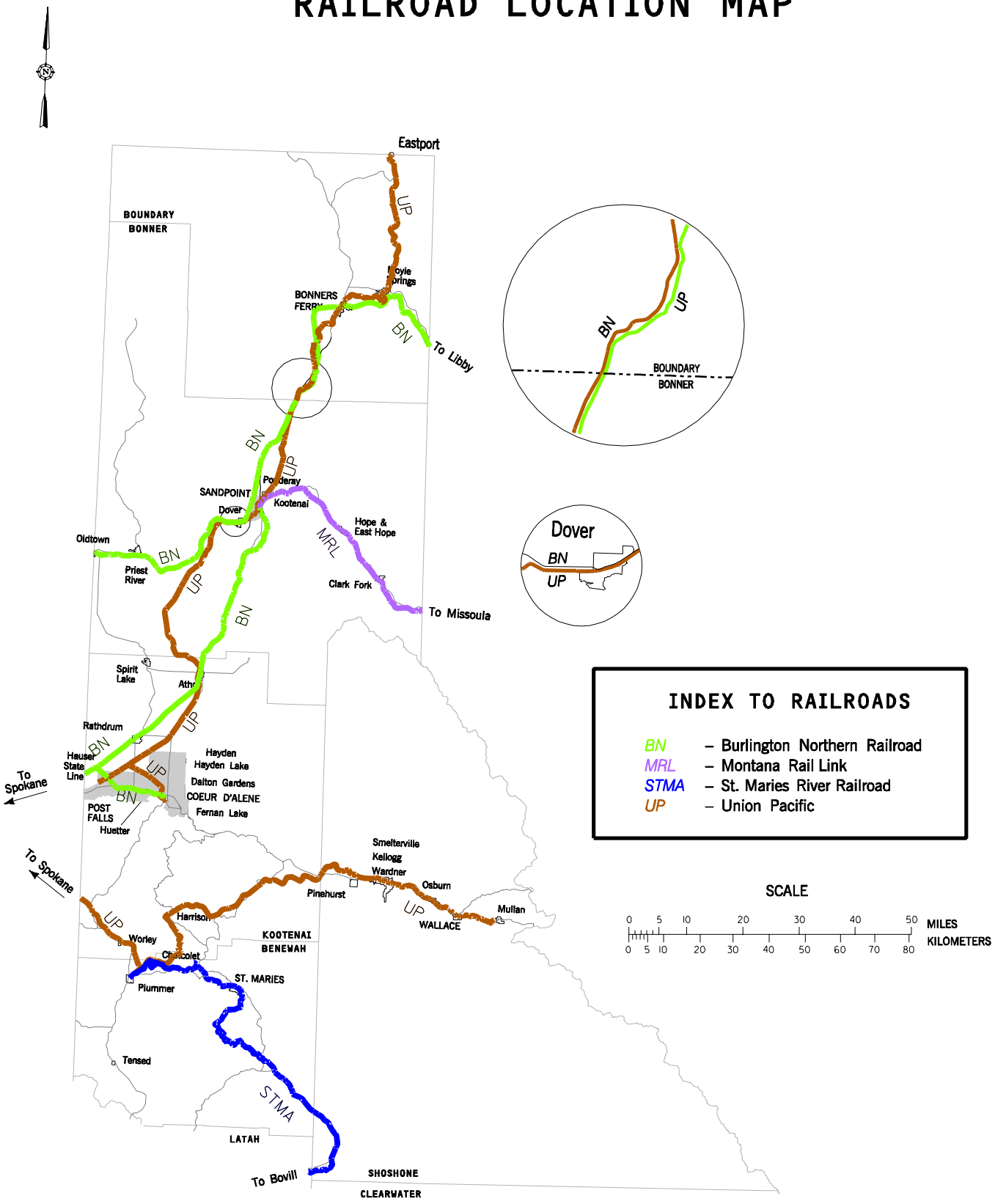


Figure 2–12

hqgicw02: d:\id_state_dist_maps+\rail\rr_di.dgn
ITD GIS - 6/11/96

District Two

STATE OF IDAHO
RAILROAD LOCATION MAP

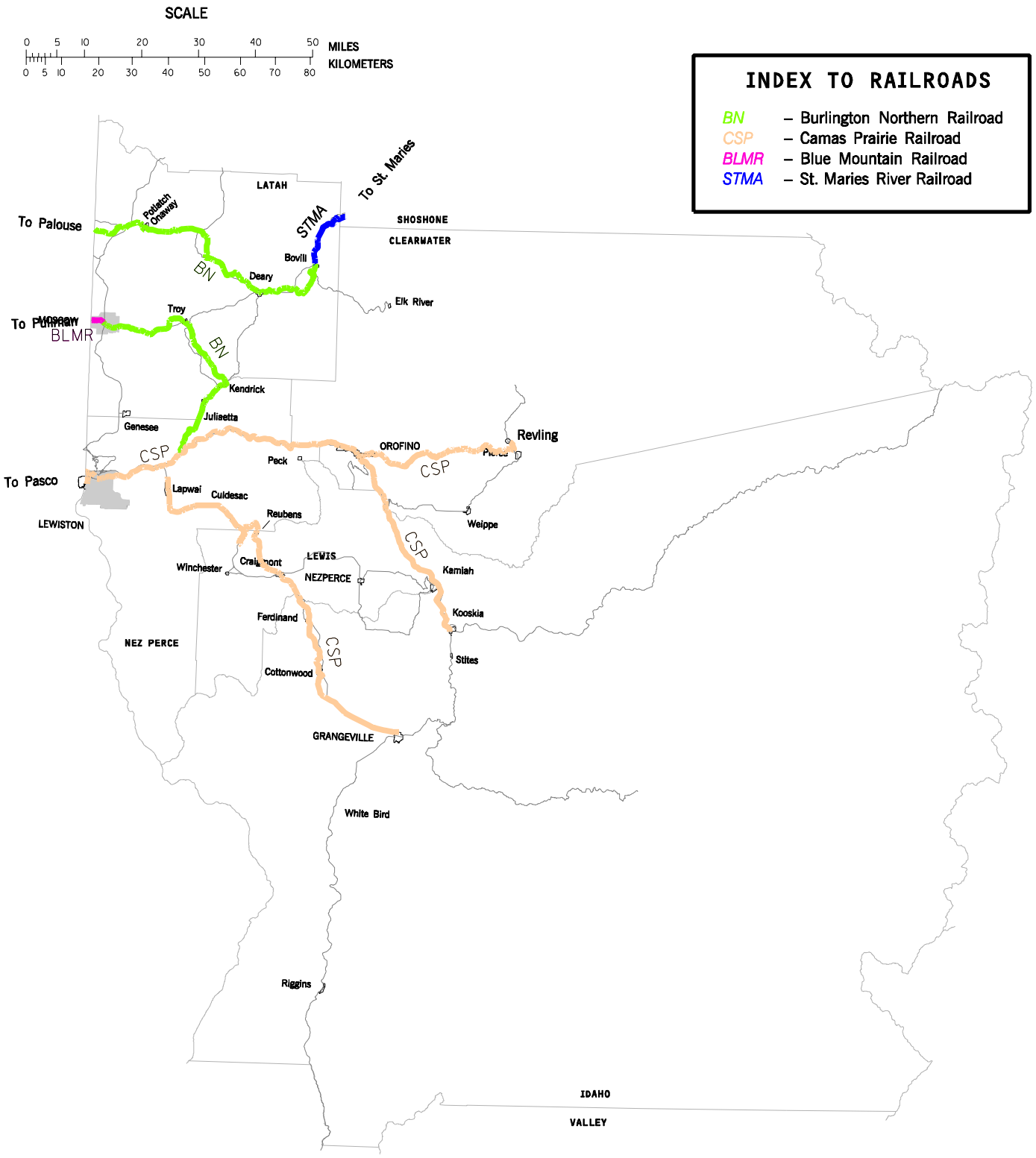


Figure 2–13

HQTP4: /usr/mapping/rr/rr_d2.dgn
GIS - 6/11/96

served the area with a line from Pullman, Washington to Moscow which is now being operated by the Blue Mountain Railroad, another short line operator.

The rail traffic of District 2 is a little more varied than that of District 1. While originating commodities are still principally lumber or wood products (49 percent at 280,000 tons) as lumber mills are still numerous, farm products and pulp, paper of allied products together make up 46 percent of that traffic. Farm products are derived from the Palouse and Camas Prairie, and Lewiston is the location of the state's only pulp and paper mill and the Port of Lewiston. Inbound commodities are dominated by chemicals at 65 percent of the 174,000 tons terminated which are destined for the farms of the area and the pulp mill.

District 3

District 3, in southwestern Idaho (See Figure 2-14), is served by the UP's main line track which runs between the Midwest and the Pacific Northwest and a variety of UP branch lines and former UP branch lines spun off to the INPR. The originating rail traffic in this District is dominated by a few commodities -- farm, food and lumber or wood products. The three commodities each roughly represent one third of the total traffic originated (1.8 million tons). The terminating traffic is diverse, probably due to the location of the Boise urban area, although almost 53 percent of it (825,000 tons) is attributed to one commodity, farm products. The area contains a number of sawmills and facilities which manufacture doors, beams and similar wood products. It also contains a number of food processing facilities which account for the outbound food products and some of the inbound farm products.

A UP branch serves Boise while the main line passes to the south of the city itself. The branch is also used by Amtrak's Pioneer to reach Boise using the UP main line for the rest of its trip through the District, with stops in Nampa and Ontario, OR. There are UP branches from Caldwell to Wilder and Nyssa, Oregon to Marsing. The latter has appeared on the ICC System Diagram Map for several years, so it is potentially subject to abandonment at any time. Nampa is an important location as the hub of branch line activities, as well as being a crew change point. The INPR has lines from Payette to Emmett, and Emmett to Cascade. A INPR line from Weiser to Rubicon was recently approved for abandonment, as well as the UP line from Maddens (north of Nampa) to Emmett over which the INPR formerly had operating rights.

District 4

The makeup of the rail system in District 4, south central Idaho (see Figure 2-15), is very similar to that of District 3 in that it is traversed by the same UP main line and also contains a number of former UP branch lines that have been spun off to a short line operator, in this case, the EIRR. The

branches spring from a common point on the main track, Minidoka, then to Rupert, with separate lines running from Rupert to Wendell, and Rupert to Burley to Buhl via Twin Falls and two shorter branches out of Burley. Amtrak's Pioneer moves over the main line with a stop in Shoshone.

Farm and food products comprise 99.3 percent (equating to just over 1.5 million tons) of the District's originating rail traffic. The originating rail traffic reflects the rural nature of the area and the location of numerous food processors. Inbound traffic consists of six principal commodities -- farm; food; pulp, paper; and chemical products; nonmetallic minerals; and coal. The six together comprise 95 percent of all inbound commodities.

District 5

The railroads of District 5, the southern part of southeastern Idaho (see Figure 2-16), are comprised of the same UP east-west main line as that passing through Districts 3 and 4 to the west and Granger, Wyoming to the east, along with two secondary main tracks and several UP branch lines. One of the secondary mains run from Pocatello north into District 6 and then into Montana where it connects with the Rarus Railway and the Montana Western at Silver Bow. The second runs from McCammon south into Utah where it connects with other UP lines and lines of other railroads at Ogden. Two branches reach into Idaho from Utah and terminate in the District at Malad and Preston. One branch line originates at Blackfoot and extends into District 6 where it terminates at Arco; another branch line from the same origin extends to Aberdeen. Shorter branch lines extend to the Gay mine, Conda mine and Grace. The Grace branch is pending abandonment before the Surface Transportation Board and the UP is expected to file a Notice of Exemption to abandon the Gay branch. Amtrak's Pioneer moves over the north-south main line between Ogden, Utah, and Pocatello and the east-west main line between Southwestern Idaho and Pocatello. Pocatello is the operational center for Union Pacific in the state. A major freight classification yard is located there, along with maintenance and repair facilities for locomotives, cars and track maintenance equipment.

Rail traffic in the District is the heaviest in terms of total tonnage of all the districts. It is comprised principally of nonmetallic minerals (almost 4 million tons originating and 4 million tons terminating) followed by farm products (1 million tons originating) and chemical products (1.3 million tons originating and terminating). The traffic is principally derived from the phosphate mining and related chemical production activity in the District.

District 6

The rail system in District 6, the northern part of southeastern Idaho (see Figure 2-17), is comprised of the secondary UP main that originated in District 5 and continues on to Montana along with a number of former UP branch lines that have been spun off to the EIRR. Branches extend from Idaho

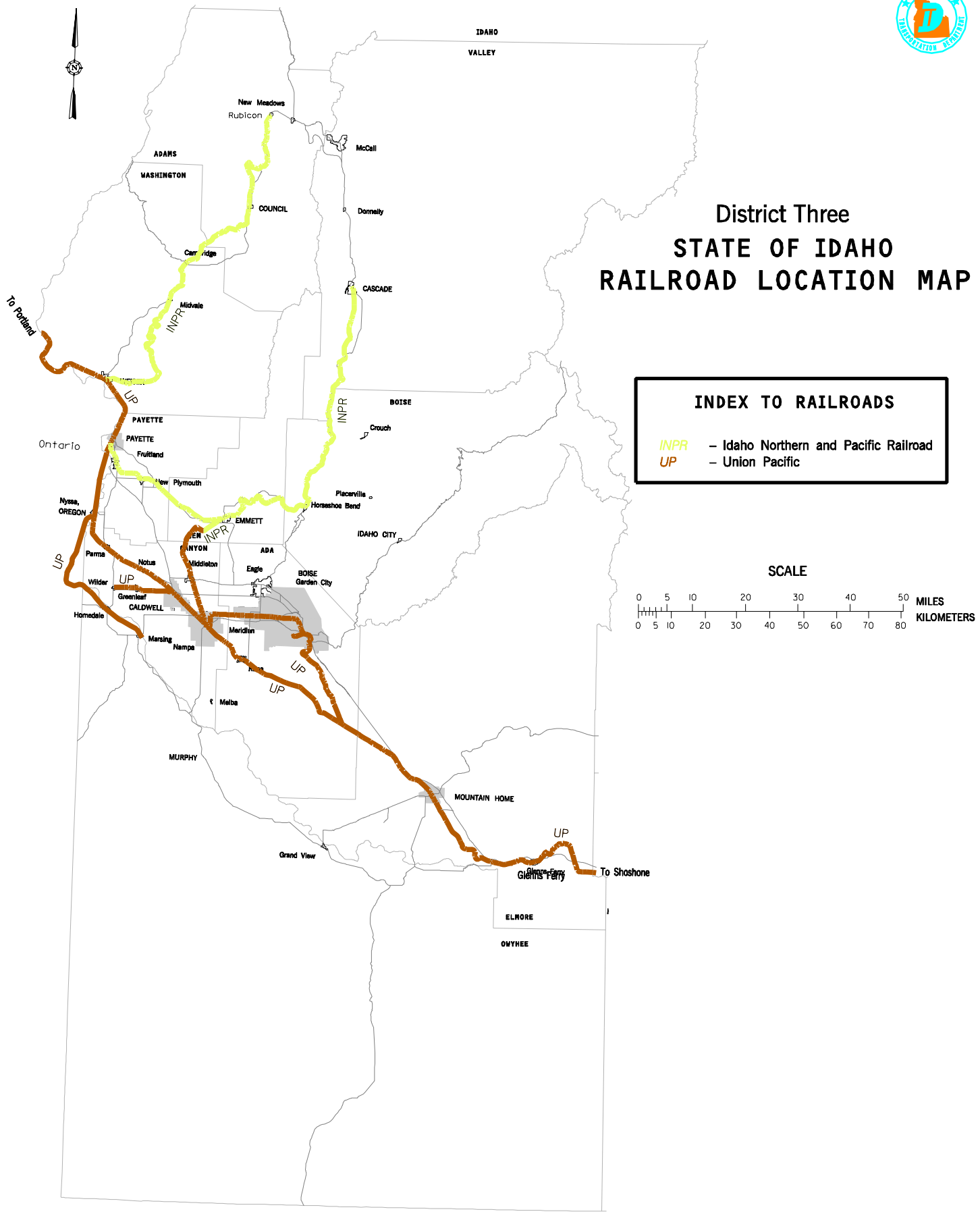


Figure 2–14

HOTP4: /usr/mapping/rr/rr_d3.dgn
ITD GIS - 6/11/96

District Four
STATE OF IDAHO
RAILROAD LOCATION MAP

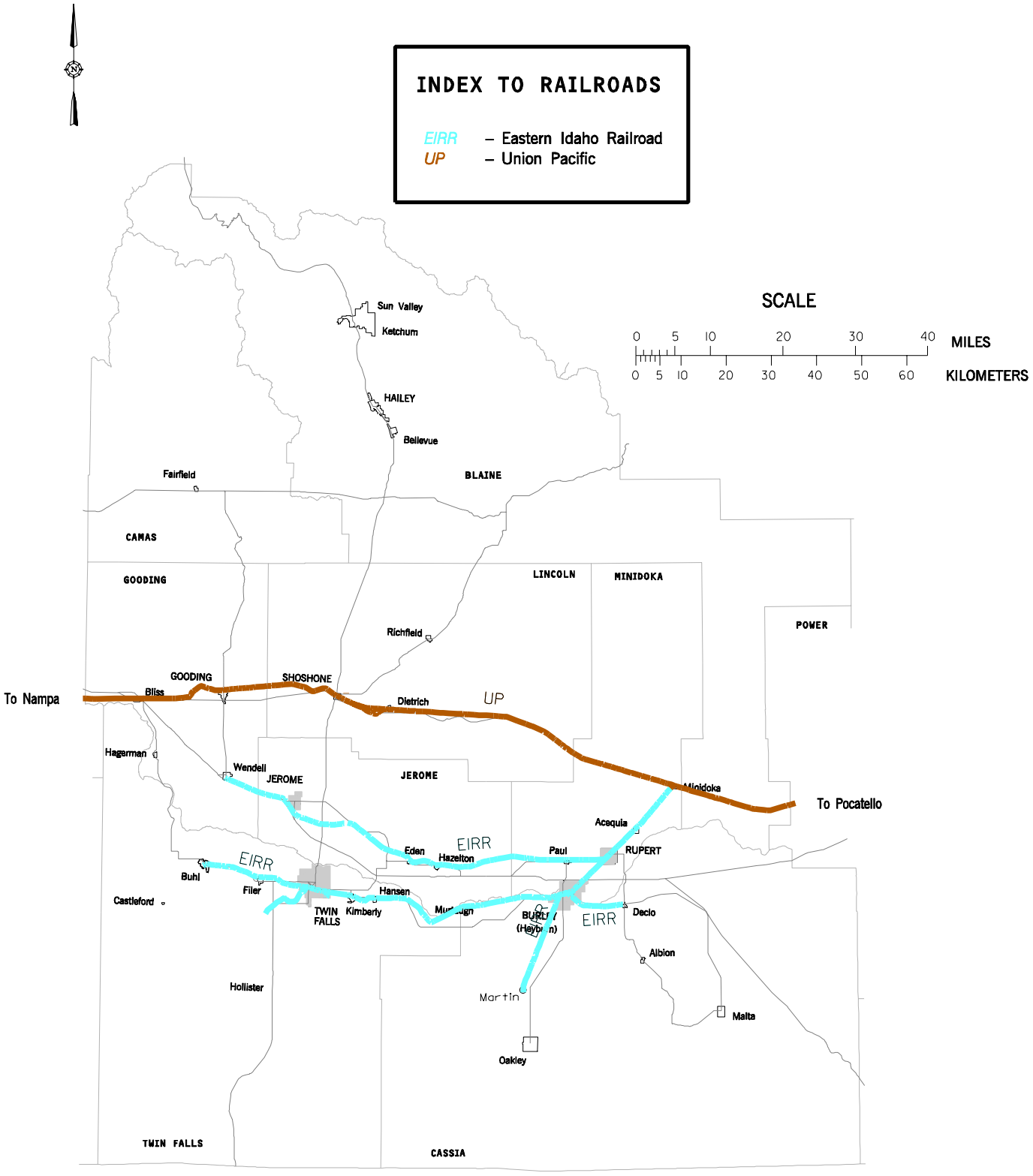


Figure 2–15

hqgicw02:d:\id_state_dist_maps+\rail\rr_d4.dgn
ITD GIS - 6/11/96

District Five

STATE OF IDAHO
RAILROAD LOCATION MAP

INDEX TO RAILROADS

UP – Union Pacific

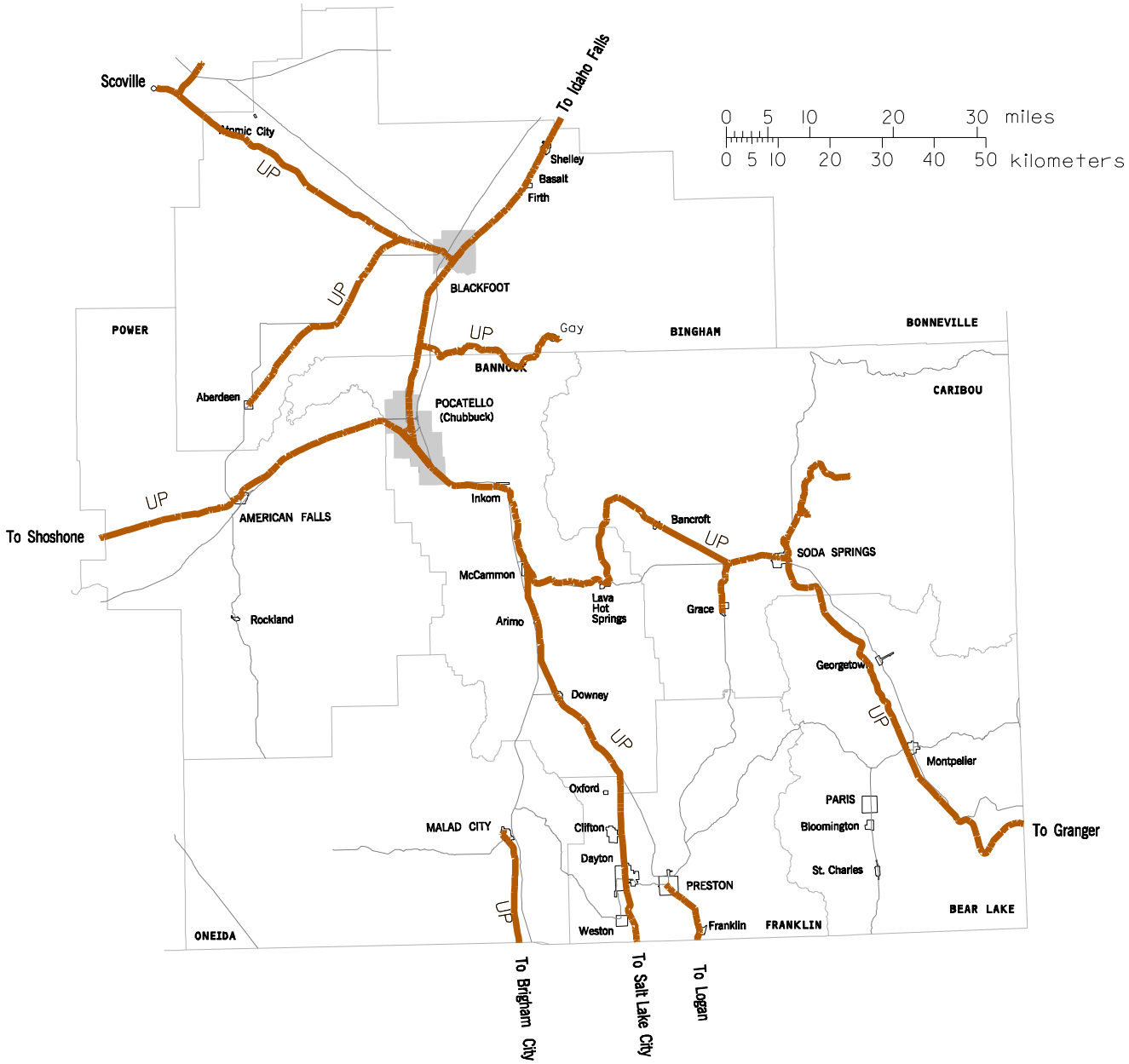


Figure 2–16

haglcw02: da\id_state_dist_maps+\rail\rr_d5.dgn
GIS - 6/11/96

District Six

STATE OF IDAHO
RAILROAD LOCATION MAP

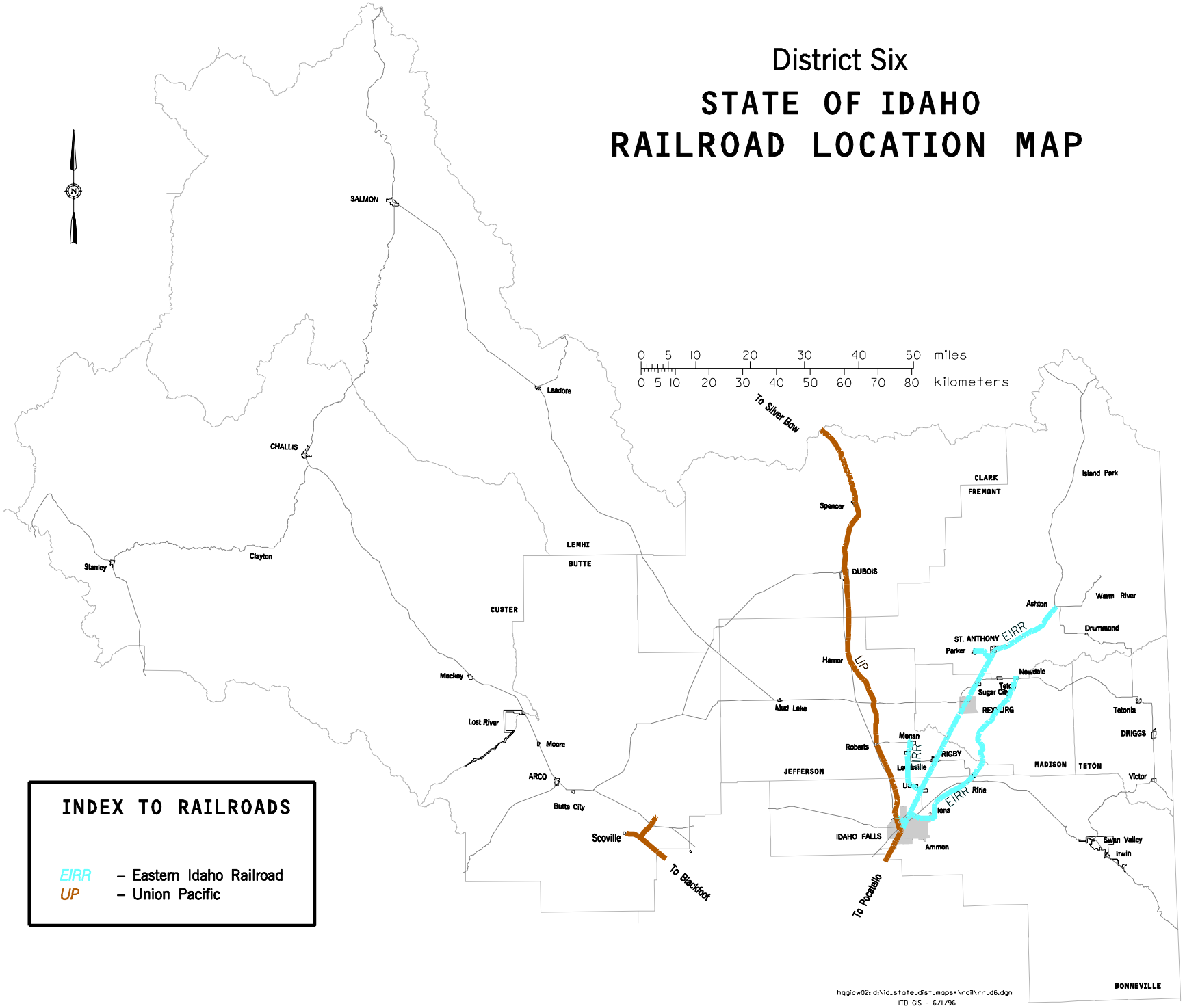


Figure 2-17

Falls to Ashton, Menan and Newdale. The District's rail traffic consists principally of farm and food products with a small amount of inbound chemicals, presumably agricultural in nature. Just over a million tons of rail freight are originated in the District and just over 200,000 are terminated.

Railroad Intermodal Facilities/Services

Railroad intermodal traffic in the form of containers and trailers on flatcars has been a rapidly growing part of the industry's traffic. The introduction of equipment permitting the transportation of containers stacked on top of each other (double stacked) and the resulting economics accelerated this growth. There are, however, other forms of intermodal traffic, including transfers of bulk commodities between modes, that also occur in Idaho.

Containers/Trailers

The only railway-operated intermodal facility currently being operated in Idaho for the transfer and transport of trailers/containers is located in Nampa on the Union Pacific Railroad. The same railroad also formerly operated one in Pocatello. The Nampa facility, until recently, had the capability to only handle trailers, but it was recently mechanized to handle containers.

A new facility is to be constructed in Twin Falls on the Idaho Eastern Railroad. It is part of a larger project involving the relocation of yard trackage that is now in the center of town. It will be mechanized and is expected to originate and terminate a variety of traffic types although the predominant flow is anticipated to be outbound traffic.

The trend in railroad intermodal transportation has been to consolidate small terminals into large "hub" operations where the traffic volumes necessary to justify the investment in equipment and facilities can be generated. A necessary part of this concept is draying (moving by truck to the intermodal terminal) trailers/containers, sometimes over long distances, to these facilities in order to accumulate the required volumes. Drays of up to 200-250 miles are not unusual. There are also railroad facilities of these types located in neighboring states which serve the needs of Idaho shippers. One such is the BNSF hub in Spokane, Washington and another is the UP facility in Salt Lake City. Other nearby railroad intermodal terminals are located in Hinkle, Oregon and Green River, Wyoming.

The Port of Lewiston

Located 465 miles from the open sea, the Port of Lewiston is located at the head of slack water on the Columbia Snake Inland Waterway. The waterway at Lewiston is a 14-foot deep barge channel which feeds the deep-water ports of the lower Columbia. While grain and forest

products are the principal commodities moving on the river, containerized cargo has also flourished. The latter traffic is somewhat unique in that container-on-barge movements have not been successful on other river systems.

The opening of the Waterway had a tremendous impact on rail transportation in the area as many of the commodities now moving on the river formerly were transported by rail. Some area products, however, principally grain, now move to the river by rail and are transloaded to barge.

In addition to grain and wood product terminals, the Port has a mechanized container terminal which loads/unloads both barges and rail cars. The mix of traffic between rail and barge is dependent on market and deep water shipping service available at the different Pacific Northwest ports. Containers to be handled at Portland, for example, tend to move by barge and those to use Seattle or Tacoma will be transported by rail.

Inland transportation in Lewiston and serving the Port consists of U.S. Highways 12 and 95, both located on the National Highway System, along with the Camas Prairie Railroad. As the CSP is a BNSF-UP joint property, rail users have access to both of the parent companies.

International Border Crossing

Eastport, located on the Canadian border near Kingsgate, B.C. is a rail and highway crossing. The highway is U.S. 95 and the railroad is the UP (former Spokane International) which connects with the Canadian Pacific at Eastport. In addition to the interchange of traffic between the two railroads, which takes place in a small yard, there is a privately operated lumber and wood products reload (transfer between rail and truck) facility. An application has been filed to establish a foreign trade zone in Eastport, which could eventually lead to Eastport becoming a major distribution center.

The border crossing is expected to undergo substantial growth in commercial traffic under NAFTA, especially truck traffic. Based on traffic density data contained in the UP-SP merger application, UP gross ton-miles per mile in 1994 totaled 5.3 million for the track segment at the crossing. This tonnage is just above the 5 million GTM/M used as the light density line threshold.

Other Intermodal Facilities

One of the most common intermodal facilities found in Idaho is the grain elevator. Grain is trucked to an elevator from a farm or from another elevator which might not be rail served or lack unit-train capabilities. The grain is transloaded to rail for further shipment usually after some period of storage.

The same process occurs with other commodities such as lumber. The facilities that handle lumber are typically called reloads and there are also a number of them located throughout the state. Several of them have been created in response to line abandonments and are substitutes for direct rail service.

Perhaps the greatest number of such railway facilities is the team track, so named for the teams of horses that pulled wagons before the truck came into common use. These facilities are located in just about every community and usually consist of a short track with room to pull a truck up adjacent to it for the transfer of freight from one mode to the other.

Chapter 3
ASSISTANCE ELIGIBILITY AND SELECTION

Only certain rail lines are eligible for assistance under the Local Rail Services Reauthorization Act. However, Over 1700 miles of former and active components of the Idaho rail system qualify for assistance under the existing program. The program also limits the types of assistance that can be provided. The universe of Idaho rail lines eligible for assistance under this legislation, the assistance available, and the process by which the lines are selected for evaluation comprise the contents of this chapter.

Lines Eligible for Assistance

The Local Rail Freight Assistance Program (LRFA) provides federal funds to states on a matching basis for rail planning and project implementation purposes on eligible lines. In general terms, eligible lines include:

- Abandoned lines or lines with service discontinued.
- Lines carrying less than 5 million gross ton-miles per mile (MGTM/M) per year.
- In either case above, the line has to have transported more than 20 carloads per mile in the previous year, or a contract exists that guarantees at least 40 carloads per mile in each of the first 2 years of operation after completion of the assistance project.
- Implementation of the assistance project will result in a ratio of benefits to costs greater than 1.0.

Abandoned Lines - Based on ITD records, 809 miles of line have been abandoned since 1976. The lines are depicted on Figure 3-1 and listed in Table 3-1. Needless to say, many of the rights-of-way have long been converted to other uses and are no longer realistically available for rail service. Although rail abandonments occur for several reasons, the basic reason is a revenue-cost relationship which does not permit the railroad to earn an adequate return on investment, if any at all. Consequently, light density rail lines become candidates for abandonment. Additional reasons for abandonments include:

Table 3-1

ABANDONED LINES ELIGIBLE FOR ASSISTANCE

RAILROAD (1)	TERMINI	LENGTH IN IDAHO (in miles)	ABANDONMENT DATE (month/year)
BN	Trackage in Coeur d'Alene	0.9	2-77
MILW	Bovill-Elk River	20.7	5-77
UP	Menan-Edmonds	16.3	9-77
UP	Trackage in Grace	1.1	10-77
UP	Rogerson-Wells, NV	20.0	8-78
UP	Ashton-West Yellowstone, MT	45.7	4-79
UP	Rubicon-New Meadows	5.4	5-79
UP	Cascade-McCall	33.9	1-80
UP	Firth-Ammon	17.6	2-80
MILW	St. Maries-MT State Line	77.2	5-80
MILW	Plummer-WA State Line	9.0	5-80
UP	Newdale-Belt	5.7	7-80
BN	Mullan-Haugan, MT	11.0	9-80
UP	Tetonia-Victor	16.0	9-81
UP	Near Declo	0.4	11-81
UP	Fairfield-Hill City	13.9	3-82
UP	Twin Falls-Rogerson	28.8	6-82
UP	Richfield-Ketchum	54.3	7-82
UP	Arco-Mackay	26.4	10-82
BN	Greenacres, WA-Post Falls	3.5	3-83
BN	Moscow-Estes	3.0	9-83
UP	Richfield-Fairfield	44.5	11-83
UP	Shoshone-Richfield	15.5	11-83
NEZPERCE	Craigmont-Nezperce	13.8	12-83
UP	Martin-Oakley	10.5	10-83
UP	Wallace-Burke	6.8	1-84
UP	Boise-Barber	6.9	5-84
BN	Atlas-Coeur d'Alene	2.7	4-84
BN	Pullman, WA-Genesee	7.0	7-84
BN	Moscow-Arrow	37.7	10-84
BN	Palouse, WA-Viola	2.4	10-84
CSP	Kooskia-Stites	3.2	3-85
CSP	Revling-Headquarters	10.0	5-85
UP	Bradley-Silver King	2.0	10-86
UP	Ashton-Tetonia	30.8	2-90
UP	Bliss-Wendell	14.3	4-90
UP	Edmonds-Egin	2.4	4-91
UP	Near Bliss	.7	5-92
UP	Nampa-Stoddard	15.9	10-93
UP	Scoville-Arco	16.4	11-94
UP	Plummer-Mullan	71.5	12-94
INPR	Weiser-Rubicon	83.1	11-95
		808.9	

---

(1) BN Burlington Northern
CSP Camas Prairie
MILW Milwaukee Road
UP Union Pacific
INPR Idaho Northern and Pacific

SOURCE: Idaho Transportation Department

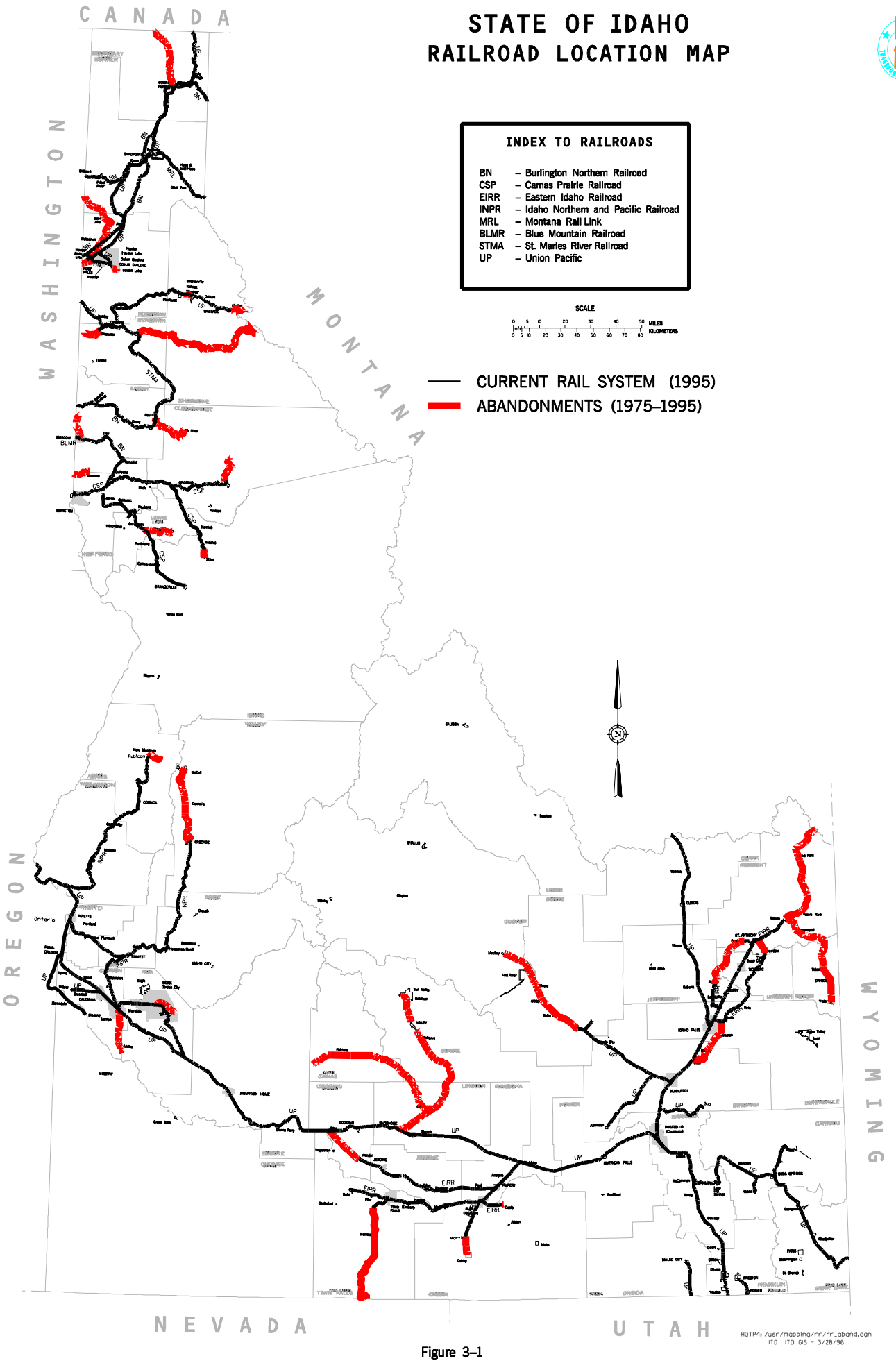

STATE OF IDAHO
RAILROAD LOCATION MAP
INDEX TO RAILROADS
BN – Burlington Northern Railroad
CSP – Camas Prairie Railroad
EIRR – Eastern Idaho Railroad
INPR – Idaho Northern and Pacific Railroad
MRL – Montana Rail Link
BLMR – Blue Mountain Railroad
STMA – St. Maries River Railroad
UP – Union Pacific
SCALE
MILES
KILOMETERS
CURRENT RAIL SYSTEM (1995)
ABANDONMENTS (1975–1995)
CANADA
WASHINGTON
MONTANA
OREGON
WYOMING
NEVADA
UTAH
HQTP4: /usr/mapping/rr/rr_aband.dgn
ITD ITD GIS - 3/28/96

Figure 3–1

- The poor condition of tracks/deferred maintenance and the resulting high cost of rehabilitation.

- The shift of freight from rail to other modes, primarily trucks and barges.

- Reluctance to devote limited financial resources for marginal returns.

- Labor protection agreements and laws.

- Lack of local contact and innovative marketing.

Communities and, particularly rail users, are usually distressed by the prospect of loss of rail service. Although some abandonments will continue to occur even under the most optimistic scenario, rail abandonments have slowed considerably in recent years, in Idaho and nationally. However, some country elevators and general commodity shippers and receivers located on light density rail lines may lose rail service and might sustain significant impacts.

As to the issue of service deterioration leading to fewer rail shipments and eventual abandonment, the shippers sometimes argue that their rail shipments have declined because of deteriorated or downgraded service provided by the railroad. The railroads argue that the service declines because the shippers have shifted their traffic from rail to truck or barge and service must be reduced to keep costs down.

Further, the railroads might argue that abandonment can be postponed or avoided, in some cases, if arrangements can be made with shippers to provide reduced service say, once weekly, rather than daily, so that operating costs can be reduced. For example, the Camas Prairie branch to Grangeville was on the System Diagram map as an abandonment candidate for 10 years, but was removed in 1994. Service has only been provided weekly, but the railroad has recaptured the grain shipments lost to trucks after the Port of Lewiston opened.

In any event, the truth probably lies somewhere between the railroads' and the shippers' arguments, but conditions vary and each potential abandonment should be examined on a case by case basis.

ITD monitors the status of the state's light density line system through the rail planning process and various analyses, and seeks alternatives to abandonment prior to Surface Transportation Board (formerly the Interstate Commerce Commission) proceedings, where feasible. The Idaho Public Utilities Commission (IPUC) intervenes in such proceedings when necessary to protect the state's interest. Under Idaho Code, Section 64-424, the IPUC is required to determine whether the abandonment: (1) would adversely affect

the area then being served; (2) whether there is reason to believe that the closure would impair the access of Idaho communities to vital goods and services and market access to those communities; (3) whether the line has a potential for profitability. If the IPUC finds that the foregoing criteria have been met, then it may transmit a report of its findings to the Surface Transportation Board on behalf of the people of the State of Idaho. ITD assists the IPUC when abandonments are being considered by the Surface Transportation Board.

System Diagram Lines - Current abandonment candidates are those lines classified in Categories 1, 2 and 3 on railroad system diagram maps. The railroads are required to file these maps with both federal and state agencies.

- Category 1: All lines which the carrier anticipates will be the subject of an abandonment or discontinuance application within three years;

- Category 2: All lines under study by the carrier which may be subject to future abandonment attempts;

- Category 3: All lines for which an abandonment application is pending before the Surface Transportation Board (formerly the Interstate Commerce Commission);

- Category 4: All lines that are being operated under the rail service continuation provisions in the 3R Act (Idaho not eligible under the 3R Act); and

- Category 5: All other lines the carrier owns or operates.

Lines in Categories 1, 2, and 3 are eligible for assistance to prevent abandonment or to mitigate abandonment impacts. As indicated in Table 3-2 and shown in Figure 3-2, two Idaho lines are currently shown in Category 1 and two are shown in Category 3. (The Maddens to Emmett line was approved for abandonment effective February 29, 1996.) The four lines, totaling 124 miles in length, are discussed in the following paragraphs.

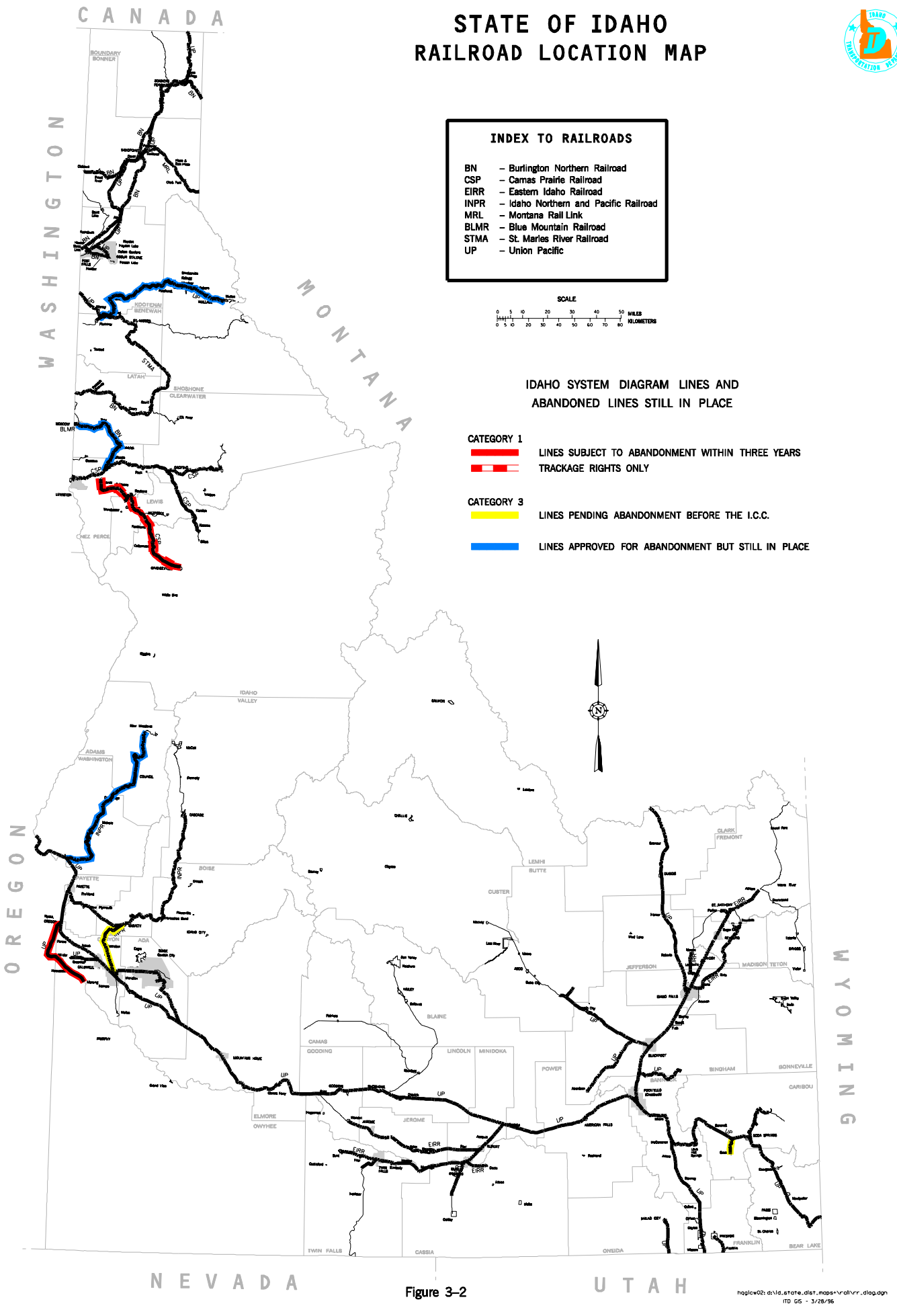

STATE OF IDAHO
RAILROAD LOCATION MAP
INDEX TO RAILROADS
BN – Burlington Northern Railroad
CSP – Camas Prairie Railroad
EIRR – Eastern Idaho Railroad
INPR – Idaho Northern and Pacific Railroad
MRL – Montana Rail Link
BLMR – Blue Mountain Railroad
STMA – St. Maries River Railroad
UP – Union Pacific
SCALE
0 5 10 20 30 40 50 MILES
0 5 10 20 30 40 50 60 70 80 KILOMETERS
IDAHO SYSTEM DIAGRAM LINES AND
ABANDONED LINES STILL IN PLACE
CATEGORY 1
LINES SUBJECT TO ABANDONMENT WITHIN THREE YEARS
TRACKAGE RIGHTS ONLY
CATEGORY 3
LINES PENDING ABANDONMENT BEFORE THE I.C.C.
LINES APPROVED FOR ABANDONMENT BUT STILL IN PLACE
CANADA
WASHINGTON
MONTANA
OREGON
WYOMING
NEVADA
UTAH
N
hqglcw02: dsld_state_dist_maps+\rail\rr_diag.dgn
ITD GIS - 3/28/96

Figure 3–2

Table 3-2
SYSTEM DIAGRAM MAP LINES

Category	Railroad	Termini	Length (miles)	County
1	UP	Nyssa, OR - Marsing, ID	33.5 15 in Idaho	Malheur, OR Owyhee
1	CSP	Spalding - Grangeville	66.8	Nez Perce/Lewis/Idaho
3	UP	Alexander - Grace	5.7	Caribou
3	UP	Maddens - Emmett	17.5	Canyon/Gem

Category 1 - Abandonment application anticipated within three years.

Homedale Branch

The Union Pacific's Homedale Branch, a 33.4-mile line from Nyssa, Oregon on the main line to Marsing, Idaho via Homedale, has been shown on the System Diagram Map in Category One for several years. It was part of a package the UP was trying to spin off in the late 1980's. After that deal fell through in December, 1990, the line was not included in the package subsequently sold to Idaho Northern and Pacific Railroad in November, 1993. The line is laid with light rail (primarily 75lb), but UP has not shown an interest in LRFA funding. The line does not need extensive rehabilitation. The primary shipments are onions, which primarily move in a seasonal operation from approximately August to January, but the traffic is light.

Grangeville Branch

The Grangeville Branch, the Second Subdivision of the Camas Prairie Railroad (owned jointly by the BN and UP) was on the System Diagram Map for BN and UP from 1985 to 1994. BN removed the line from the map in 1994, but the UP has kept it on the map as trackage rights (the line itself is owned by the BN). Once vulnerable to abandonment because grain was bring trucked to the ports in Lewiston and Clarkston, shipments have increased to 1300-1400 cars per year since the grain elevators started shipping grain to the ports by rail again over the last several years. A major shipper constructed a million-dollar multiple-car loading facility in Craigmont in 1994 demonstrating the commitment to use of rail for grain shipments. Lumber is also shipped on the line.

The 66.8-mile line runs from Spalding (along the Clearwater River) to Craigmont and on to Grangeville, rising nearly 3,000 feet in elevation. It is laid with primarily 90lb. rail and has 43 structures, some very massive, particularly the Half Moon and Lawyer's Canyon bridges. The BN and UP have kept the line on the System Diagram Map for many years in case a major structure

were to fail, despite the increased rail traffic. The BN and UP have not indicated an interest in LRFA funding for this line. Hopefully, abandonment of the line will not be progressed, particularly in light of the significant shipper investment and commitment. The line sustained some flood damage in February 1996 and was out of service until late March.

Category 3 - Pending abandonment before the Surface Transportation Board (formerly the Interstate Commerce Commission)

Grace Branch

The Union Pacific's Grace Branch, a 5.7-mile line from Alexander (on the UP main line west of Soda Springs) to Grace, is pending abandonment authority from the Surface Transportation Board. Shipments consisted of 65 railcar loads of grain in 1994 and 70 railcar loads in 1993[1]. No grain was shipped in 1995 due to the poor condition of bridges on the line. The shipper is utilizing a multiple-car loading facility at Bancroft, 15 miles away by truck, and did not oppose the abandonment. Upon review of the line in 1989, ITD felt that the benefits that would accrue from repair/replacement of the bridges on the line would not justify the cost under current traffic levels.

Maddens to Emmett

The Union Pacific Railroad and Idaho Northern and Pacific Railroad recently filed an Abandonment Exemption Notice for UP to abandon and INPR to discontinue service over 17.5 miles of rail line between Mile Post 7.0 near Maddens (north of Nampa) to milepost 24.5 near Emmett. There are no active rail users located on the abandoned portion of the line although it was formerly used by INPR to interchange traffic with UP at Nampa. All interchange between the two railroads has now been moved to Payette. The exemption became effective on February 29, 1996.

In some cases, a railroad can obtain approval to abandon a line without going through a more formalized, detailed abandonment process by filing a Notice of Exemption or a Petition for Exemption with the Surface Transportation Board. These are normally filed when there is little or no traffic on a line and no protests from shippers are expected. In these cases, a line does not necessarily have to appear on the System Diagram Map prior to filing the exemption notice. Both of the above cases were handled under exemption proceedings.

---

[1] Source - Interstate Commerce Commission - A-33(Sub-No. 01X), Union Pacific Railroad Company - Abandonment Exemption - In Caribou County, Idaho.

Light Density Lines - This last group of lines are those which carry relatively little traffic. Lines carrying less than 5 million gross ton-miles per mile (MGTM/M) per year. These are lines which are included with those in Category 5 meaning that abandonment is not imminent. However, due to the low traffic level, an abandonment could conceivably occur in the medium to long-term. Assistance for lines in this group is generally designed to improve the physical condition of a line so that more economical operations can be conducted.

A large amount of trackage in Idaho can be considered as light density according to this definition as shown in Table 3-3. A total of 936 miles in the state carry less than 5 MGTM/M. Density, of course, is only one measure of a particular line's contribution to a railroad system. Depending on the commodities carried, for example, many light density lines are in fact profitable. It is the state's intention to identify and evaluate lines in order to seek solutions before lines reach the Category 1, 2 and 3 stage.

Table 3-3

LIGHT DENSITY RAIL LINES

LINE	NAME	TERMINI	LENGTH	1989
BN	28th Subdivision	WA State Line - Moscow	2.8	0.05
BN	11th Subdivision	Hauser - Couer D'Alene	12.5	0.32
BN	10th Subdivision	Sandpoint - Newport	29.1	0.86
BN	29th Subdivision	WA State Line - Bovill	44.6	0.12
		Railroad Total	89.0	
EIRR	Yellowstone Branch	Ashton - Idaho Falls	51.6	0.75
EIRR	St. Anthony Branch	Egin - St. Anthony	9.7	0.07
EIRR	West Belt Branch	Ucon - Menan	10.7	0.12
EIRR	East Belt Branch	Orvin - Newdale	38.6	0.29
EIRR	Goshen Branch	Ammon - Lincoln Jct.	4.1	0.15
EIRR	Twin Falls Branch	Minidoka - Buhl	74.4	1.53
EIRR	Oakley Branch	Burley - Martin	11.6	0.11
EIRR	Raft River Branch	Burley - Declo	9.2	0.06
EIRR	Northside Branch	Rupert - Wendell	57.5	0.22
		Railroad Total	267.4	
UP	Montana Subdivision	MT State Line - Idaho Falls	79.3	3.12
UP	Scoville Branch	Aberdeen Jct. - Scoville	36	0.06
UP	Aberdeen Branch	Blackfoot - Aberdeen	35.4	0.38
UP	Gay Branch	Ft. Hall - Gay	21.5	3.34
UP	Stoddard Branch	Nampa - MP 1.75	1.8	0.33
UP	Wilder Branch	Caldwell - Wilder	11.4	0.19
UP	Boise Cut-Off	Orchard - Nampa	44.2	0.22
UP	Dry Valley Branch	Soda Springs - Dry Valley	23.5	3.12
UP	Conda Branch	Epco - Conda	5.6	3.88
UP	Grace Branch	Alexander - Grace	5.8	0.06
UP	Malad Branch	UT State Line - Malad	13.6	0.83
UP	Cache Valley Branch	UT State Line - Preston	8.4	0.19
UP	Homedale Branch	OR State Line - Marsing	23.4	0.11

Table 3-3
LIGHT DENSITY RAIL LINES
(Continued)

LINE	NAME	TERMINI	LENGTH (In Idaho)	1989 DENSITY/MILE (GTM/M)
UP	Wallace Branch	WA State Line - Plummer	13.5	0.24
UP	Coeur D'Alene Branch	Coeur D'Alene Jct. - CDA	8.8	0.33
		Railroad Total	332.2	
INPR	Idaho Northern Branch	Nampa - Emmett	23.4	0.59
INPR	Idaho Northern Branch	Emmett - Cascade	76.3	0.59
INPR	Payette Branch	Emmett - Payette	28.7	0.87
		Railroad Total	128.4	
BLMR	Moscow Branch	State Line - Moscow	2.5	0.13
		Railroad Total	2.5	
STMA	St. Maries River Railroad	Plummer - Bovill	71.0	0.83
		Railroad Total	71.0	
CSP	1st Subdivision	Lewiston - Kooskia	74.2	0.28
CSP	2nd Subdivision	Spalding - Grangeville	66.8	0.09
CSP	3rd Subdivision	Lewiston - WA State Line	2.0	3.01
CSP	4th Subdivision	Orofino - Revling	30.9	0.26
		Railroad Total	173.9	
		Grand Total	936.0	

Types of Assistance

Various types of assistance are available under LRFA depending on the status of the rail line.

Acquisition Assistance

This assistance form provides funds for acquisition of a rail line, or other rail property, by purchase, lease, or some other manner as appropriate for existing or future rail service. This funding is available for lines that have been abandoned or subjected to discontinuance of service. There is a minimum 50% local match for the federal funds.

Rehabilitation and Improvement Assistance

Under this category, funding is provided to rehabilitate or upgrade a rail line to the extent necessary to permit adequate and efficient rail service. Rail lines eligible for this form of assistance are those which carry 5 million gross ton miles of freight or less per mile. There is a minimum 30% local match for the federal funds. This has been by far the most common type of assistance used by the states.

Rail Facility Construction Assistance

Construction of rail, or rail-related facilities including new connections between two or more existing lines, intermodal freight terminals, sidings, and relocation of existing lines are covered under this form of assistance. Rail lines eligible for this assistance are the same as described under rehabilitation and improvement assistance. There is a minimum 50% local match for the federal funds.

Selection of Lines for Detailed Analysis

Since funding is limited and 48 percent of Idaho's existing rail system is eligible for assistance (plus certain abandoned miles), the rail planning program has adopted a screening process to select lines for detailed analysis. It is not a rigid procedure. Inquires are made of the state's railroads for project recommendations, the System Diagrams are examined each year for potential projects (see Table 3-2), and the situations surrounding past project candidates are revisited to determine if they have changed enough to warrant another look. Each candidate is then investigated to the extent necessary to gain some insight into its worthiness, and those with potential to be eligible projects are selected for detailed analysis.

Lines Selected for Evaluation

The selection of lines for detailed analysis in this Update followed the screening process described above. Requests for assistance were received from two of the state's short line railroads. All System Diagram Map Lines were also considered. The lines remaining to be evaluated, along with some of their characteristics, are shown in Table 3-4. The analysis of these lines is contained in Chapter 4.

Table 3-4
LINES TO BE EVALUATED

RAILROAD	TERMINI	LENGTH (miles)	COUNTY
Eastern Idaho	Ucon - Menan	10.4	Jefferson and Bonneville
Idaho, Northern and Pacific	Payette-Emmett	25.0	Payette and Gem

Chapter 4
LINE ANALYSES AND PROJECT SELECTION

Two project candidates were analyzed for funding assistance. The analyses were performed using the standard federal methodology which is contained in Appendix A.

The methodology uses present value summations of benefits and costs to arrive at a benefit-cost ratio. A candidate project must have a b-c ratio in excess of 1.0 in order to be eligible for assistance.

Benefits used in the analyses consist of primary transportation benefits (transportation cost savings) and secondary benefits relating to employment, relocations and highway impacts if businesses are forced to close, relocate or convert traffic to truck transport. The analyses are performed over a ten-year planning horizon using a discount rate which is established each year by the Federal Railroad Administration.

EASTERN IDAHO RAILROAD
REHABILITATION PROJECT

The Eastern Idaho Railroad was formed from two clusters comprised of several Union Pacific branch lines (totaling about 270 miles in length) that the carrier spun off in eastern Idaho in 1993. The line segment that is the subject of this analysis is the West Belt Industrial Lead (sometimes called the Menan Branch) of the Eastern Idaho which runs 10.4 miles between Ucon, just outside of Idaho Falls, and Menan in Jefferson and Bonneville Counties as shown on Figure 1. The line serves the stations of Coltman, Grant, Lewisville, and Midway in addition to its terminal points.

Service Area

The area served by the branch is an agricultural area producing principally potatoes. The line's rail traffic reflects this economic activity.

Line Condition

The condition of the track is such that it is currently classified as excepted track based on Federal Railroad Administration track safety standards with a maximum permissible speed of 10 mph. The majority of the rail on the line is 70-lb. jointed which is surface bent due to poor tie conditions. Surface and line are consistently poor over the entire length and cross tie conditions are poor with defective joint ties and numerous clusters of defective ties. The line is more fully described in Table 1.

Rail Use

There are nine rail users (shippers and consignees) located on the line, with at least one located at each station. Commodities moving over the line consist of agricultural products such as potatoes and corn, mostly fresh and dehydrated potatoes, and agriculturally related commodities such as fertilizers and fertilizer materials. Annual traffic approximates 1,000 carloads.


EASTERN IDAHO RAILROAD
REHABILITATION PROJECT
UCON to MENAN
MENAN
Pop. 601
LEWISVILLE
Pop. 471
RIGBY
Pop. 2,681
UCON
Pop. 895
Lewisville
Knolls
Little
Buttes
Annis
Lorenzo
Coltman
Rigby Airport
Kellers
Island
OXBOW
SLOUGH
Payne
U.P.R.R. (West Belt Branch)
(West Belt Br.)
T. 5 N.

Table 1
LINE FACILITIES AND CONDITION
West Belt Industrial Lead
Eastern Idaho Railroad

Mileposts	0.0 to 10.7		
Stations	Ucon	MP	0
	Coltman	MP	2.6
	Grant	MP	4.6
	Lewisville	MP	8.7
	Midway	MP	9.6
	Menan	MP	10.4

Rail — Rail weight and location:

MP	0	- MP	0.45	90#
MP	0.45	- MP	2.73	70#
MP	2.73	- MP	2.90	131#
MP	2.90	- MP	10.70	70#

The vast majority of the rail on the line, 10.08 miles, is lightweight 70-Ib. jointed rail which has become surface bent from poor tie conditions.

Ties	Mixed hard and soft woods in fair to poor condition. Tie conditions vary over the line.
Tie Plates and Anchors	Many tie plates are missing contributing to the poor tie condition. Rail anchors are inadequate and those that do exist are ineffective.
Ballast	Native materials with standard ballast in places, typically as a light covering over native materials.
Surface/Line	Poor overall, F.R.A. excepted conditions.
Bridges	Total of 12 bridges, mostly timber pile, open deck trestles.
Roadbed/Drainage	Poor drainage and mud conditions throughout.
Grade Crossings	Total of 25, most with wood plank surfaces.
Vegetation	Fair overall weed and brush control except MP 8 - MP 10.7, poor.
Side Tracks	Side tracks exist at all stations listed.
Timetable Speed	10 MPH, F.R.A. excepted track.
Weight Limit	240,000 lbs.

Benefit - Cost Analysis

Project Alternative

The project alternative is rehabilitation and continued operation.

Null Alternative

The condition of the track, and especially the lightweight rail, dictates a major rehabilitation effort if the line is to remain in long-term service. As evident from the profit/(loss) statement presented later, the line would be operated at a loss if normalized maintenance of way and structures were considered. With rehabilitation, there is a projected operating profit, but it is not large enough to fund the needed work. Therefore, the physical needs of the track cannot be met from operating revenues and the null alternative is abandonment.

Project Description and Costs

The project will replace the existing 70-lb. jointed rail with 90-lb jointed rail , insert 11,770 new cross ties, rework the road crossings, and surface and line the track. It is anticipated that the project will be implemented over a period of time, approximately three years in three equal stages. The track will be in stable Class 2 condition with a maximum permissible speed of 25 mph throughout at the completion of the project.

The estimated cost of the project is the sum of the rehabilitation effort and the net liquidation value of the line. The rehabilitation of the track is estimated to cost $2.36 million with a credit for the materials released as detailed in Table 2. The net liquidation value of the track and right-of-way is estimated to be $220,463. Thus the total cost of the project is $2,581,061.

Project Benefits

The benefits of the project consist of transportation efficiency benefits that would result from avoiding abandonment of the line. These consist of avoidance of increased alternative transportation costs for existing and future traffic movements, and the improvement of the line's profit/(loss) statement resulting from increased revenues and decreased operating costs.

Increased traffic would result with rehabilitation as one shipper is waiting to see if the project will go forward before committing to a facility expansion, and two others would increase business if the cars could be picked up later in the day permitting them to prepare more product for shipping. As the shipments are fresh products, this is a real consideration. The

Table 2
REHABILITATION COST ESTIMATE
Eastern Idaho Railroad
(Class II Operation)

Cost Items	Miles	Unit Quantity	Unit	Unit Cost	Total Cost
Materials					
Rail, 90 lb., Relay	10.08	158.4	N-Ton	$330	$526,902
Rail, 90 lb., Relay	0.13	158.4	N-Ton	330.00	6,795
Joints, 90 lb., S.H.	10.08	320.0	Each	10.50	33,869
Joints, 90 lb., S.H.		105.0	Each	10.50	1,103
Tie Plates, S.S., S.H.	10.08	6,500.0	Each	1.50	98,280
Tie Plates, S.S., S.H.		540.0	Each	1.50	810
Rail Anchors, New	10.08	4,320.0	Each	0.85	37,014
Rail Anchors, New		6,552.0	Each	0.85	5,569
Bolts and Nutlocks, New	10.08	1,280.0	Each	1.85	23,869
Bolts and Nutlocks, New		308.0	Each	1.85	570
Turnouts, Relay		7.0	Each	5,000.00	35,000
Crossties, New	10.70	1,100.0	Each	30.00	353,100
Switch Ties, New		24.2	MBM	725.00	17,509
Spikes, New, 9/16" x 5 1/2"		398.0	Keg	90.00	35,820
Ballast	10.70	1,045.0	Ton	6.00	67,089
Crossing Boards & Screws		540.0	T.F.	60.00	32,400
Tie Plugs	10.08	18.0	BDS	25.00	4,536
Compromise Joints, S.H., 131/90 #		12.0	Each	185.00	2,220
SUBTOTAL MATERIAL COST					$1,282,455
Labor Costs					
Unload Ties and Remove Old Ties	10.70	1,100.0	Each	1.50	17,655
Unload Ballast	10.70	1,045.0	Tons	1.50	16,772
Unload Rail	10.08		Mile	1,000.00	10,080
Install Crossties	10.70	1,100.0	Each	15.00	176,550
Install Switchties		24.2	MBM	700.00	16,905
Install Rail	10.08		Mile	79,200.00	798,336
Install Turnouts		7.0	Each	7,000.00	49,000
Surface and Line	10.70		Mile	7,920.00	84,744
Rework Grade Crossings Including Paving		540.0	T.F.	120.00	64,800
SUBTOTAL LABOR COST					$1,234,842
REHABILITATION COST (Material and Labor)					$2,517,297
Less Salvage Value of Material Released					156,699
TOTAL REHABILITATION COST					$2,360,598

NOTE: Unit Values current as of --> December 1994
SOURCE: Wilbur Smith Associates

condition of the line forces the railroad to run over it earlier in the day in order to make connections than it would have to if the permissible speed were higher. Also, the carrier has to pay penalties when it misses connections which is occurring more frequently than it would if the line were rehabilitated. Increased traffic is conservatively estimated at an average of 500 cars per year once at least two thirds of the rehabilitation work is completed.

Shipper transportation efficiency benefits are estimated at $1.84 million per year prior to the threshold point of the project, and $2.54 million per year after that. The railroad's operations are expected to show a loss of $53,919 prior to rehabilitation and a profit of $70,139 after rehabilitation as shown on Tables 3 and 4. The final benefit is the salvage value of the line including the rehabilitation effort at the end of the project life.

Benefit-Cost Ratio

Table 5 contains the present value analysis depicting the computation of the benefit-cost ratio. The analysis is conducted with a project life of ten years and a discount rate of 3.6 percent as mandated by the Federal Railroad Administration. The present value of project costs is $2,413,111 and project benefits $19,980,181 as shown in the table leading to a positive B-C ratio of 8.28.

Table 3

WEST BELT OPERATING

PROFIT/(LOSS)

Before Rehabilitation

Revenue		$200,000
Costs		217,102
MW&S	128,400	
Transportation	60,384	
G&A	28,318	
ROV		36,817
NET		($53,919)

Table 4

WEST BELT OPERATING

PROFIT/(LOSS)

After Rehabilitation

Revenue		$300,000
		193,044
Costs		
MW&S	128,400	
Transportation	39,464	
G&A	25,180	
ROV		36,817
NET		$70,139

Table 5
BENEFIT -- COST ANALYSIS
Easternn Idaho Railroad
(1994 $)

	COSTS			BENEFITS							
Year	REHAB	NLV	Total Costs	Oper.	ansportation	RR P/(L)	Hwy	Salvage	Total Benefits	Net Benefits	Present Value Net Benefit
1994											
1995	786,866	220,463	1,007,329						1,782,944	(1007329)	(972325)
1996	786,866		786,866	0	1,836,863	53,919	0		1,782,944	996,078	928,055
1997	786,866		786,866	0	1,836,863	53,919	0		2,614,502	996,078	895,806
1998			0	0	2,544,363	70,139	0		2,614,502	2,614,502	2,269,603
1999			0	0	2,544,363	70,139	0		2,614,502	2,614,502	2,190,737
2000			0	0	2,544,363	70,139	0		2,614,502	2,614,502	2,114,611
2001			0	0	2,544,363	70,139	0		2,614,502	2,614,502	2,041,130
2002			0	0	2,544,363	70,139	0		2,614,502	2,614,502	1,970,203
2003			0	0	2,544,363	70,139	0		2,614,502	2,614,502	1,901,740
2004			0	0	2,544,363	70,139	0		2,614,502	2,614,502	1,835,657
2005			0	0	2,544,363	70,139	0		2,614,502	2,614,502	1,771,869
2006			0					947,759	947,759	947,759	619,985
PV's	2,200,309	212,802	2,413,111	0	19,027,131	330,066	0	619,985	19,980,181	17,567,071	17,567,071

Discount Rate	0	NPV	17,567,071	
		B/C Ratio	8.28	12/15/94

Table 6
REHABILITATION COST ESTIMATE
Eastern Idaho Railroad
PHASE I
(Class II Operation)

Cost Items	Miles	Unit Quantity	Unit	Unit Cost	Total Cost
Materials					
Rail, 90 lb., Relay	0.75	158.4	N-Ton	$330	$39,204
Joints, 90 lb., S.H.	0.75	320.0	Each	10.50	2,520
Tie Plates, S.S., S.H.	0.75	6,500.0	Each	1.50	7,513
Rail Anchors, New	0.75	4,320.0	Each	0.85	2,754
Bolts and Nutlocks, New	0.75	1,280.0	Each	1.85	1,776
Bolts and Nutlocks, New	5.25	128.0	Each	1.85	1,243
Crossties, New	6.00	1,100.0	Each	30.00	198,000
Switch Ties, New		20.0	MBM	725.00	14,500
Spikes, New, 9/16" x 5 1/2"		98.0	Keg	90.00	8,820
Ballast	6.00	1,000.0	Ton	6.00	36,000
Crossing Boards & Screws		128.0	T.F.	60.00	7,680
Tie Plugs	0.75	18.0	BDS	25.00	338
SUBTOTAL MATERIAL COST					$320,348
Labor Costs					
Unload Ties and Remove Old Ties	6.00	1,100.0	Each	1.50	9,900
Unload Ballast	6.00	1,000.0	Tons	1.50	9,000
Unload Rail	0.75		Mile	1,000.00	750
Install Crossties	6.00	1,100.0	Each	15.00	99,000
Install Switchties		20.0	MBM	700.00	14,000
Install Rail	0.75		Mile	79,200.00	59,400
Service Joints	5.25				13,125
Surface and Line	6.00		Mile	7,920.00	47,520
Rework Grade Crossings Including Paving		128.0	T.F.	120.00	15,360
SUBTOTAL LABOR COST					$268,055
REHABILITATION COST (Material and Labor)					$588,203
Less Salvage Value of Material Released					11,752
TOTAL REHABILITATION COST					$576,451

NOTE: Unit Values current as of --> December 1994
SOURCE: Wilbur Smith Associates

IDAHO, NORTHERN AND PACIFIC
REHABILITATION PROJECT

The Idaho, Northern and Pacific was formed from a cluster of branch lines spun off by the Union Pacific in 1983. The lines include one branch located in Oregon, but the remainder are located in several counties north and west of Boise as shown on Figure 2. The line segment lying in Payette and Gem Counties and connecting Payette, on the Union Pacific main track, with Emmet is the subject of this analysis. The line is 25 miles long and serves the intermediate stations of Eiffie, Fruitland, Buckingham, Tom Thumb and New Plymouth in addition to the terminal points.

Service Area

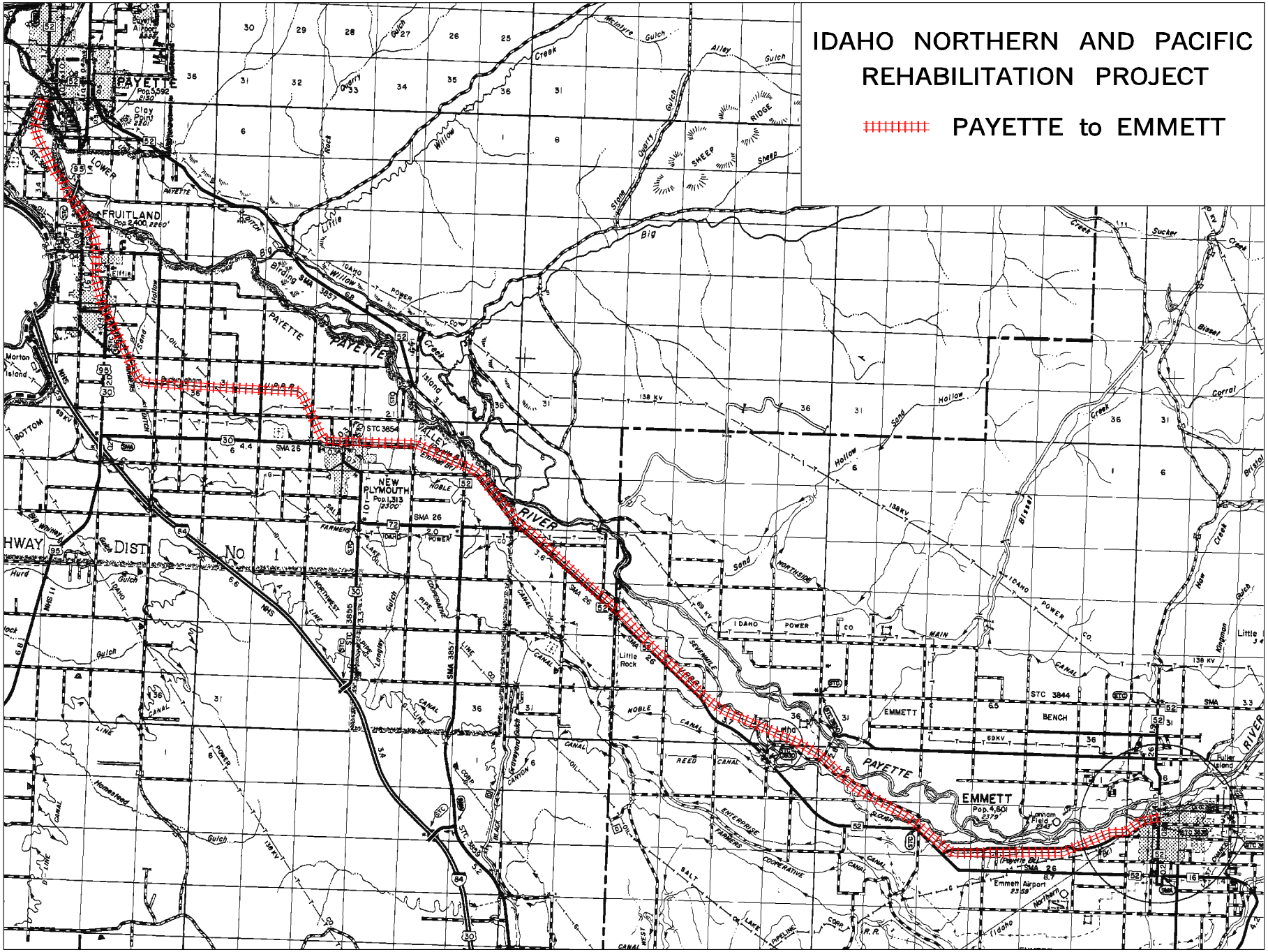
The area served by the affected lines is one of agricultural production immediately surrounding the subject segment, and timber production and processing further up the connecting segments. All of the traffic moves over the subject segment en route to its main track connection.

Line Condition

Although the timetable maximum speed was formerly 25 and 40 mph over most of the line, it has been lowered to 10 mph for the first 10 miles or so and 20 for the remainder due to deteriorated track conditions. Approximately 10 miles (the first 10) of the line are laid with 100-lb. jointed and 18 miles with 131-lb. jointed rail in fair to good condition, although the rail ends are battered in the 100-lb. material. The tie condition is poor with defective joint ties and defective clusters elsewhere. There are 95 rail-roadway at-grade crossings on the line segment and practically all of them have poor surfaces. A more detailed description is the subject of Table 1.

Rail Use

Almost 5,000 cars per year move over the line segment now and another 2,100 will in the future as the segment connection will become the singular interchange point with the Union Pacific (at present there are two).


IDAHO NORTHERN AND PACIFIC
REHABILITATION PROJECT
PAYETTE to EMMETT
PAYETTE
FRUITLAND
NEW PLYMOUTH
EMMETT
RIVER

Benefit-Cost Analysis

Project Alternative

The project alternative is rehabilitation and continued operation.

Null Alternative

The null alternative is continued operation over poor track.

Project Description and Costs

The project proposed consists principally of replacing 12,500 ties and associated improvements to create Class 2 FRA track safety standard conditions. The ballast section will also be significantly improved, rail anchors added, and most of the grade crossings reworked. The track will be surfaced and lined and the maximum speed increased to 25 mph. The estimated cost of the project is $1.33 million as detailed in Table 2.

Project Benefits

Placing the track in stable Class 2 condition will generate transportation benefits for the railroad relating to reduced costs in train operations and maintenance of way. Raising the permissible maximum speed to 25 mph for the 25 miles of the line segment that is not within yard limits will save one hour in running time per one-way trip over the segment. Based on a 6-day per week round trip over the segment, crew, locomotive, and freight car hire savings of $75,894 annually will result. The crew savings are significantly impacted by the avoidance of having to recrew about once a week due to violation of the hours of service law.

Maintenance of way savings also will be accrued from: avoidance of spot surfacing and correction of cross level constantly being performed due to the current lack of ballast to hold the surface; spot crossing surface repairs that do not contribute to needed long-term repair; and constant replacement of joint bars being cracked due to the lack of support. The maintenance savings benefits are estimated to total $143,827 per year. Thus, total annual benefits resulting from the project equate to $219, 721.

Benefit-Cost Ratio

Table 3 displays the present value of all costs and benefits. The present value of the project costs is $1,284,153, and the present value of the benefits is $1,847,999, providing a positive benefit-cost ratio of 1.44.

Table 1
LINE INVENTORY AND CONDITION
Idaho Northern and Pacific Railroad
Payette to Emmett

Mileposts	0.39 to 29.07			
Stations	Payette	0.4	Tom Thumb	8.8
	Eiffie	4.0	New Plymouth	11.1
	Fnuitland	5.1	Emmett	29.1
	Buckingham	6.8		
Rail	Approximately 18 miles of 131-lb. and 10.6 miles of 100-lb. jointed rail in fair to good condition. Rail ends are battered in 100-lb. material.			
Ties	Condition varies with defective ties comprising up to 80 percent of some track sections, however, poor joint ties and clusters of defective ties are typical.			
Tie Plates and Anchors	Fully plated. Track is anchored, but ineffective in many locations.			
Ballast	Light rock covering over native materials.			
Surface/Line	Line is fair to good, surface fair to poor.			
Bridges	Sixteen structures, mostly timber pile open deck trestles.			
Roadbed/Drainage	Roadbed lacks shoulders in places, two slide-outs on fills near Payette ditches need cleaning and problems exist with spoil from irrigation ditches blocking right-of-way drainage and fouling ballast.			
Grade Crossings	95 at grade rail-highway crossings, practically all with poor surfaces.			
Timetable Speed	10 mph, Payette MP/0.4, to New Plymouth, MP 11.1. 20 mph, New Plymouth to Emmett, MP 29.1.			
Weight Limit	263,000 lbs.			

Table 2
REHABILITATION COST ESTIMATE
Idaho Northern & Pacific Railway
(Class II Operation)

Cost Items	Miles	Unit Quantity	Unit	Unit Cost	Total Cost
Materials					
Bolts and Nutlocks New	25.00	108.0	Each	$3.00	$8,100
Anchors, New	25.00	1620.0	Each	0.85	34,425
Crossties, No. 1 Relay	25.00	500.0	Each	18.00	225,000
Spikes, New		208.0	Keg	73.00	15,184
Crossing Boards & Screws		2280.0	T.F.	60.00	136,800
Ballast	25.00	400.0	Ton	12.00	120,000
SUBTOTAL MATERIAL COST					**539,509**
Labor Costs					
Unload Ties and Remove Old Ties	25.00	500.0	Each	1.50	18,750
Unload Ballast	25.00	400.0	Tons	1.50	15,000
Install Crossties	25.00	500.0	Each	15.00	187,500
Install New & Adjust Old Anchors	25.00	4320.0	Each	0.35	37,800
Joint Servicing	25.00		Mile	2,500.00	62,500
Grade Crossings Including Paving		2280.0	T.F.	120.00	273,600
Surface and Line	25.00		Mile	7,920.00	198,000
SUBTOTAL LABOR COST					**$793,150**
REHABILITATION COST (Material and Labor)					**$1,332,659**
Less Salvage Value of Material Released					2,277
TOTAL REHABILITATION COST					**$1,330,382**

NOTE: Unit values current as of --> December 1994
SOURCE: Wilbur Smith Associates

Table 3
BENEFIT - COST ANALYSIS
Payette to Emmett
(1994 $)

Year	COSTS			BENEFITS							Present
	Rehab	NLV	Total Costs	Oper.	Track	RR P/(L)	Hwy	Salvage	Total Benefits	Net Benefits	Value Net Benefit
1994											
1995	1330382	0	1,330,382							(1,330,382)	(1,284,153)
1996			0	75,894	143,827	0	0		219,721	219,721	204,716
1997			0	75,894	143,827	0	0		219,721	219,721	197,602
1998			0	75,894	143,827	0	0		219,721	219,721	190,736
1999			0	75,894	143,827	0	0		219,721	219,721	184,108
2000			0	75,894	143,827	0	0		219,721	219,721	177,710
2001			0	75,894	143,827	0	0		219,721	219,721	171,535
2002			0	75,894	143,827	0	0		219,721	219,721	165,575
2003			0	75,894	143,827	0	0		219,721	219,721	159,821
2004			0	75,894	143,827	0	0		219,721	219,721	154,267
2005			0	75,894	143,827	0	0		219,721	219,721	148,907
2006			0					142,200	142,200	142,200	93,021
								93,021	1,847,999		
PV's	1,284,153	0	1,284,153	606,188	1,148,790	0	0	93,021	1,847,999	563,847	563,847

Discount Rate	3.60%	NPV	563,847	BALA\TBL-10.WK1
		B/C Ratio	1.44	12/15/94

Table 4
REHABILITATION COST ESTIMATE
Idaho Northern & Pacific Railway
PHASE I
(Class II Operation)

Cost Items	Miles	Unit Quantity	Unit	Unit Cost	Total Cost
Materials					
Bolts and Nutlocks New	10.60	108.0	Each	$3.00	$3,434
Anchors, New	10.60	1,620.0	Each	0.85	14,596
Crossties, No. 1 Relay	10.60	500.0	Each	18.00	95,400
Spikes, New		85.0	Keg	73.00	6,205
Crossing Boards & Screws		830.0	T.F.	60.00	49,800
Ballast	10.60	400.0	Ton	12.00	50,880
SUBTOTAL MATERIAL COST					**220,315**
Labor Costs					
Unload Ties and Remove Old Ties	10.60	500.0	Each	$1.5	$7950
Unload Ballast	10.60	400.0	Tons	1.50	6,360
Install Crossties	10.60	500.0	Each	15.00	79,500
Install New & Adjust Old Anchors	10.60	4,320.0	Each	0.35	16,027
Joint Servicing	10.60		Mile	2,500.00	26,500
Grade Crossings Including Paving		830.0	T.F.	120.00	99,600
Surface and Line	10.60		Mile	7,920.00	83,952
SUBTOTAL LABOR COST					**$319,889**
REHABILITATION COST (Material and Labor)					**$540,204**
Less Salvage Value of Material Released					965
TOTAL REHABILITATION COST					**$539,239**

NOTE: Unit values current as of --> December 1994
SOURCE: Wilbur Smith Associates

Project Ranking Procedure

Two basic criteria provide the means of ranking projects. The first is the immediacy of abandonment. A line in danger of being abandoned, assuming it passes the benefit-cost ratio test (in excess of 1.0), will receive assistance before one that is not so threatened. If more than one line is threatened by abandonment, the one in the most immediate danger will receive the preference. Beyond this criteria, projects are ranked by benefit-cost ratio -- the larger the ratio, the higher the assistance rank.

Project recommendations based on these criteria are presented to the Idaho Railroad Advisory Council by the ITD. The Advisory Council's recommendations are then forwarded to and reviewed by the Transportation Board for final approval.

Chapter 5

RAIL ISSUES, NEEDS AND RECOMMENDATIONS

Idaho Rail Issues

The composition of the Idaho rail system has changed since the state first became involved in rail planning in the late 1970s and so have the issues surrounding it. Following is a discussion of current Idaho rail issues that are of concern.

1. Future of the *Pioneer* - First is the possible loss of passenger service now provided by Amtrak's *Pioneer*. This issue was discussed in detail earlier in the document.

2. Flood Damage - The recent devastating floods caused tremendous damage to some rail lines in the state which may not be repaired and reopened without some form of public assistance.

3. Short Line Railroads - Branch lines of Class 1 carriers are being spun off to short line operators which has changed the composition of the state's rail system. These carriers are capable of providing better local service than the former Class 1 owners and also of increasing local business, but they need assistance in bringing some lines up to physical standards to provide adequate service.

4. Railroad Mergers - Both of the major railroads serving Idaho have or are in the process of merging with other major railroads. It is unclear what this will mean to Idaho rail shippers in terms of long-range competition and freight rates and service.

5. Car Shortages - From time to time, railroad customers experience car shortages. Sometimes they are related to specific car types and sometimes they are related to circumstances such as bumper crop years. Others appear to be chronic involving particular rail lines or traffic movements. In addition, the large railroads are encouraging as many shippers as possible to provide their own equipment (and making rate adjustments) and taking other steps to reduce the need for use of capital funds for equipment.

Past studies conducted by ITD have revealed several chronic shortage situations in Idaho. One is in the Palouse where covered hoppers to move grain are typically in short supply. The Washington State Department of Transportation (WSDOT) found that large carriers assign cars to long-haul markets where they earn higher rates rather than to short-haul movements such as export grain from the Palouse. The WSDOT also estimated that the equivalent of over 1,000 carloads of grain annually were forced to alternate modes because of the shortage of covered hoppers.

In 1993, the Washington State Transportation Commission approved the purchase of 29 grain cars ($730,000) for use on the Blue Mountain Railroad in the Palouse and Walla Walla County, Washington. As grain storage has increased over time, shipments have tended to become more spread out and not occur just at harvest. Thus, several of the larger grower associations were willing to agree to use the cars throughout the year and balance the car's usage. The cars earn revenue from car-hire paid by the railroads and demurrage paid by the shippers. The revenues are earmarked for maintenance, repairs, taxes and other costs of ownership.

The same problem with grain cars has been experienced in Eastern Idaho and also problems obtaining refrigerated cars of the shipment of potatoes. The same type of program as implemented in Washington State could prove to be a benefit to Idaho shippers also.

6. Grade Crossings - Rail-highway at-grade crossings are a major safety issue and the FRA has a goal to close 25 percent of the existing crossings nationwide. In addition, Idaho's grade crossing accident history is above the national average based on accidents per million of motor vehicles registered. But Idaho's accident history per crossing is slightly lower than the national average.

7. Rail Transportation of Spent Nuclear Fuel - The movement of nuclear waste by rail is a major concern particularly for those residing close to the destination and along the routes of transport. Since 1956, spent nuclear fuel (SNF) has been removed from U.S. Navy nuclear-powered ships and prototypes and transported to the Idaho National Engineering Laboratory (INEL) near Idaho Falls. This SNF is primarily shipped by rail. There are twelve locations where shipments originate, three in the western U.S. and the rest in the eastern U.S.

Between 1956 and 1994, there were 596 shipments of SNF shipped to the INEL[1]. A shipment is defined as the transporting of a single shipping container of SNF. The shipping containers for SNF are in three configurations and weigh approximately 214,500 pounds to approximately 375,000 pounds in the loaded condition. Multiple shipments can move on one train.

In 1995, Idaho's Governor Philip E. Batt and Attorney General Alan Lance entered into a Settlement Agreement with the Department of Energy and the U.S. Navy that, among other things, determines the number of SNF shipments to the INEL through the year 2035. Under the agreement, the Navy could ship no more than 24 shipments to the INEL from the date of the agreement through the end of 1995; no more than 36 shipments in 1996; and no more than 20 shipments per year in 1997 through 2000. From 2001 through 2035, the Navy may ship a running average of no more than 20 shipments per year. The total shipments of Naval SNF to the INEL shall not exceed 575 and shall not exceed 55 metric tons of spent fuel.

In 1995, there were 35 shipments of SNF to the INEL, 9 from the western U.S. and 26 from the eastern U.S. To date in 1996, there have been 20 shipments, 11 from the western U.S. and 9 from the eastern U.S.

There has been a continuing concern in Idaho (for many years) about the shipments of SNF and other nuclear waste. The Snake River Alliance, an Idaho based environmental group, has filed a suit to prohibit further shipments into the state.

The State of Idaho INEL Oversight Program monitors the shipments and storage of nuclear waste on behalf of the State of Idaho. The Oversight Program is currently conducting a study to determine the specific rail routes the SNF shipments are carried over and the population possibly affected within a certain number of miles from the routes, in case of an accident.

---

[1] Department of Energy Programmatic Spent Nuclear Fuel Management and Idaho National Engineering Laboratory Environmental Restoration and Waste Management Programs Final Environmental Impact Statement, U. S. Department of Energy, Office of Environmental Management, Idaho Operations Office, April 1995.

8. Rail Project Funding - One of the most critical issues is funding. With the loss of LRFA and threatened cut-backs in all federal programs, the state will have to consider funding the monies to address many of the issues and the needs described in the next section. The Idaho rail program has been dependent on federal funding derived from the Local Rail Service Assistance Program (LRSA) and its successors.

   LRSA -The LRSA program was born of the Regional Rail Reorganization Act (3-R Act) of 1973. It was designed originally to provide temporary financial support (two years) for rail service continuation on those lines which were not included in the Conrail system. The intent was to provide rail users time to adjust to the loss of rail service and/or to find alternate transportation The program was broadened in enactment of the Railroad Reorganization and Rehabilitation Act (4-R Act) of 1976 and made applicable to the whole country.

   The program was revised and expanded again in 1978 by making all lines transporting less than 3 million gross ton-miles per mile per year eligible for assistance. The purpose of adding the so-called "pre-abandonment" lines to the program was to prevent abandonments by assisting lines through acquisition or rehabilitation funding to become viable operations. The Omnibus Budget Reconciliation Act of 1981 contracted the program by prohibiting the use of funding for operating subsidies.

   LRFA - In 1990, Section 5(g) of the Department of Transportation Act was amended by the Local Rail Service Reauthorization Act and the name of the program was changed to Local Rail Freight Assistance (LRFA). The criteria for lines eligible to receive assistance was also revised. The new criteria are stated elsewhere in this document.

   The rail freight program first became operational in 1976 with an appropriation of almost $54 million. Annual appropriations rose to a high of $80 million for 1980 and 1981 and then started the decline which reached the $10 million per year order of magnitude evident in recent years before the current federal budget problems and apparent lack of reauthorization.

   ISTEA - Rail planners and others concerned with rail service continuation were hopeful that the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) would provide a source of funding for freight projects in general and rail projects in particular. This was

not the case although some projects were funded through Metropolitan Planning Organizations (MPOs), but more typically, freight projects proved to be a hard sale. There is hope for ISTEA II and a number of proposals are being formulated for consideration.

CMAQ - Funding for a few rail projects nationwide has taken place through The Congestion Mitigation Air Quality (CMAQ) program in ISTEA. These projects were made possible because of the relative fuel efficiency, and thus pollutant generation, of rail transportation as opposed to other land transportation modes. Use of the funds is limited, however, based on the air quality in the project area and most of Idaho is not eligible for these funds.

State Programs - By 1988, 27 of the 49 states with railroads had their own state-funded programs for the provision of rail assistance. Funding sources vary by state. Some states are prohibited from providing assistance to private enterprise which is one characteristic of the rail system that is not usually encountered when dealing with the other modes. While trucks, planes and waterway vessels are owned and operated by private entities, they are not operated over private rights-of-way as are the railroads. Although Idaho participates in infrastructure improvement for the other modes, it does not have funding available for railroads unless it is directly associated with a project for one of the other modes. As stated elsewhere in this document, unless Idaho develops a means of funding rail projects, it will not be able to respond when public action is required to maintain service over an essential component of the state's rail system.

Rail Needs

A significant amount of Idaho rail mileage has been spun off to short line operators in the last two years. This mileage has consisted of branch lines with low levels of traffic that were not the best financial performers, and in the past might well have become abandonment candidates. One of the reasons that abandonment mileage has significantly decreased over that experienced in the late 70s and early 80s has been the practice of the larger railroads to find alternate owners and/or operators for their lighter density lines.

The theory behind the change in operators is based on the new operator being able to perform the necessary tasks at a lesser cost, and with a more focused local interest, develop more business and thus revenue than the large railroad. With reduced costs and additional revenue,

the potential for profitability will increase, hopefully to the point that the operation becomes viable in the long term.

One of the real problems with the theory lies in the condition of the trackage at the time of the transfer of operations. Line maintenance is typically performed in accordance with the anticipated return on the investment, and in the case of light density lines, only the minimum was performed. Thus, alternate operators often take over track with deferred maintenance which in turn prevents institution of operating efficiencies and/or limits the ability to attract new traffic. In addition, it represents a major front-end investment, more often than not, beyond the capability of the new operator.

Providing financial assistance in addressing this type of problem has been the essence of the federal rail program and that of programs developed by individual states. While Idaho does not have a state-funded rail program, all of the federal rail assistance funds the state has received have been devoted to short line track rehabilitation. Two additional rail rehabilitation assistance projects developed in 1994 are discussed in this document. Others exist and were included in the Statewide Transportation Improvement Program (STIP).

District Rail Needs

District 1

Most of the needs in District 1 were addressed by the $6 million rehabilitation of the St. Maries River Railroad. The railroad did, however, suffer some flood damage this year ranging from $30,000 to $50,000. State and shipper attempts to prevent the abandonment of the Wallace Branch from Plummer to Mullan were unsuccessful. There could eventually be some needs on the remainder of the Wallace Branch from Plummer back towards Spokane if it is ever purchased by a short line carrier. The line is in good shape at this time, however.

District 2

Practically all of the rail lines in this District, as discussed previously, are branch or light density lines although for the most part they are still owned and operated by the Class 1 carriers. Many of these lines have been a concern of the Department for some time and a number of studies have been performed as mentioned earlier. One of the lines is the BN branch from Palouse, Washington to Bovill. The line connects with the BN's P&L Subdivision which runs between Spokane, Washington, where it connects with BN's main track, and Moscow.

The branch, also known as the WI&M for the predecessor company, Washington, Idaho and Montana, serves a number of local on-line industries and provides a BN connection for the STMA at Bovill. The other end of the STMA at Plummer connects with the UP. The WI&M is not in the best of shape and is laid with worn light-weight rail which should be replaced, although BN recently relaid some of the curves. The project is an expensive one and along with cross tie replacement, has been estimated to cost $5 million, hard to justify for a line with low traffic levels. It too was damaged in the recent floods and repairs are estimated to cost $160,000. The line is open between Palouse, Washington and Princeton and the BNSF has indicated it may not reopen the rest of the line.

Another project candidate in the District is the BN line between Moscow and Arrow. It connects with the CSP at Arrow and was a critical link in the BN's service to Lewiston in the past. With the reconstruction of the CSP along the Snake River when lower Granite Dam was built, BN traffic off the CSP began moving in another direction to access the main track and the line segment became redundant. The segment has a three percent grade on it which presented some operating problems and the river grade along the Snake was more attractive.

The States of Idaho and Washington were able to obtain an agreement with the BN not to remove the track after the line had been approved for abandonment until the *Palouse Empire Regional Rail Study*, referenced earlier, had been completed. In the process of performing the study, a potential volume wood products movement was discovered that would require the segment. That potential still exists although it has not been developed to date. In addition to resumed use by several on-line shippers, another potential traffic movement of grain to the barge terminals at Lewiston was discovered but interest has waned somewhat with the concern over the drawdown. This movement was of particular interest as the short-haul rail move would take a number of trucks off of local roads with substandard pavements and which suffer from freeze-thaw conditions and the 6 - 7% grade down to Lewiston. The Port of Lewiston has also seen potential in the line to further develop its intermodal business. The funds estimated for the project are for its costs to reopen the line and rehabilitation. However, this line segment was the most severely damaged in the flood virtually washing out large segments north of Arrow and between Kendrick and Troy. The estimated $2.5 million in reconstruction costs eliminate this line from practical consideration.

District 3

Most of the UP branch lines in the District are now operated by the INPR. An analysis of the rehabilitation needs of one of its lines, Payette to Emmett, is contained in this document. Its line from Weiser to Rubicon was abandoned in 1995. The remainder of the railroad (Emmett to Cascade) also has needs and an estimated $3 million is needed for infrastructure improvement for the entire railroad.

District 4

The EIRR operates three interconnected light density lines totaling 153 miles in length that lie south of the UP main track and serve Rupert, Burley and Twin Falls among others. The Oakley Branch, 11.5 miles long needs work similar to its Menan Branch which is discussed elsewhere. The estimated cost is $1.4 million.

District 5

All the branch lines in District 5 are currently operated by the Union Pacific. It has been the experience of ITD that the Union Pacific is not interested in public assistance, preferring to fix lines on their own if the investment will pay off. An alternate solution could be to spin off or abandon the line. Should any of these lines be sold to another carrier, an assessment of needs could then be undertaken.

District 6

The EIRR also operates several interconnected light density lines that lie northeast of Idaho Falls totaling 115 miles in length. The line segment between Ucon and Menan is the subject of an analysis contained elsewhere in this document for which federal funds have been approved to assist in rehabilitation. The funding approved, however, only address 20% of the needs and 80% are still remaining. In addition, another $1.5 million are needed on the lines between Idaho Falls and Newdale, and between St. Anthony and Ashton.

Recommendations for Future Rail Planning and Project Development

Rail planning is an important component of the state's overall transportation planning process. Based on the economic importance of the state's 1,940 mile rail system, it is desirable to involve industry and the railroads in developing plans and partnerships that will strengthen Idaho's transportation system.

Based on ITD's experience with the rail program for 18 years, it has reached conclusions regarding public involvement in what is principally a private-sector business. Idaho's Rail Program to date has been supported mainly by funds derived from federal programs. As mentioned previously, the principal federal program -- Local Rail Freight Assistance Program (LRFA), formerly Local Rail Service Assistance -- has long been a target of federal cost cutting and now only receives token funding (no 1996 funds were available at the time this document was printed). Unless some action is taken in Idaho, there will be very limited or no means of providing financial assistance to maintain essential rail service where such service is endangered. Forty eight percent of the state's 1,940-mile rail system are classified as light density lines based on the FRA's 5 MGTM/M criterion. Approximately two-thirds of these light density lines are on shortlines.

Line abandonments can affect public and private sector interests through economic development and local employment impacts, higher shipping fees, and increased highway costs where roadways are inadequate to handle increased numbers of trucks or truck weights. Likely candidates for abandonment can be detected early and, with public and private cooperation, retention of rail service on some of these lines is possible. Where service retention is not possible, the state and local communities may also wish to preserve abandoned rail rights-of-way for future rail or other transportation use. The following recommendations provide an outline for state and local efforts to address the impacts of line abandonments and to initiate rail service and corridor preservation efforts, where appropriate:

1. That the Idaho Transportation Department, as part of a continuous rail planning process, monitor Idaho's rail system and its use for the purpose of meeting the goals and objectives set forth in this document; initiate implementation of the rail plan by identifying strategies, policies, and actions to carry out the goals and objectives; and determine statewide track conditions and evaluate freight car supply, rail and roadway access to intermodal facilities and rail trackage at the facility and other rail capital needs.

2. That the Department, along with the Idaho Railroad Advisory Council and other interested parties, further explore and define the state's role in rail transportation and the means of fulfilling that role, including funding.

3. That the Department act as the facilitator to bring all parties - the state, local government, the railroads, and the rail users - together to accomplish common goals, and that the Idaho Railroad Advisory Council initiate action to expand membership on the council to include representatives from railroads and railroad shippers.

4. That the Department involve sub-state District and local governments in identifying and participating in rail issues of local and regional concern.

5. That consideration be given to creative financing at the state and local levels to best serve the state's future rail needs.

6. That the Department work with Amtrak and communities in marketing and promoting ridership at the local level, and with Idaho's congressional delegation at the national level to retain rail passenger service in Idaho.

7. That the Department continue to monitor the status of the state's light density line system through its rail program, and seek alternatives to abandonment prior to Surface Transportation Board (formerly the Interstate Commerce Commission) proceedings, and assist the Idaho Public Utilities Commission when abandonments are being considered.

APPENDICES

U.S. Department
of transportation
**Federal Railroad
Administration**

Office of the Administrator

400 Seventh St.. S.W.
Washington. D.C. 20590

MEMO TO: All States Participating in the Local Rail Freight Assistance (LRFA) Program

SUBJECT: Standard Benefit-Cost Methodology

The-Local Rail Service Reauthorizing Act of 1989 requires the Federal Railroad Administration (FRA) to establish amethodology for calculating the ratio of benefits to costs of projects proposed for LRFA funding no later than July 1, 1990. Attached is the methodology.

In developing this methodology, we have taken into consideration the twenty state methodologies previously approved by FRA as well as the comments we received from eighteen states in response to the draft methodology distributed on May 15, 1990. Each state that submitted comments will receive a letter addressing the comments provided.

The statutory directive that a standard methodology be established is based on two other statutory requirements. First,the Local Rail Service Reauthorizing Act of 1989 limits eligibility to only those projects where the ratio of benefits to costs is greater than one. Second, FRA is required to consider the ratio of benefits to costs of projects proposed for discretionary funding. Equitable implementation of these provisions requires the use of a standard methodology.

Should you have any questions regarding the methodology, please contact the office of Passenger and Freight Services at 202/366-1677.

Gilbert E. Carmichael
Federal Railroad Administrator

BENEFIT-COST METHODOLOGY

FOR

THE LOCAL RAIL FREIGHT ASSISTANCE PROGRAM

Required by the
Local Rail Service
Reauthorizing Act
(PL 101-213: 12/11/89)

Published by the
Federal Railroad Administration
July, 1990

TABLE OF CONTENTS

BENEFIT-COST METHODOLOGY
FOR PROJECTS UNDER THE LOCAL RAIL
FREIGHT ASSISTANCE PROGRAM

BACKGROUND AND INTRODUCTION

The local Rail Service Reauthorizing Act of 1989 amended Section 5 (n) of the Department of Transportation Act (Act), to require that:

> "The Secretary, no later than July 1, 1990, shall establish a methodology for calculating the ratio of benefits to costs of projects proposed under subsection (b), taking into consideration the need for equitable treatment of different regions of the United States and different commodities transported by rail. The establishment of such methodology shall be a matter committed to the Secretary's discretion."

Section (c) (2) of the Act was also amended as follows:

> "No projects shall be provided rail freight assistance under this section unless the ratio of benefits to costs for such project, calculated in accordance with the methodology established by the Secretary under subsection (n), is greater than 1.0."

This methodology has been established and published in response to the Act's directive. It is to be used for calculating the benefit-cost ratios of all projects for which assistance is requested under Section (b) of the Act. These projects include acquisition of a line of railroad or other

rail property, rehabilitation or improvement of rail properties and construction of rail or rail related facilities.

The foundation for much of this methodology was provided by two earlier FRA documents: Benefit-Cost Guidelines Rail Branch line Continuation Program (February 1980) and FRA Simplified Benefit-Cost Methodology (May 1982). Also, the twenty State methodoloies that have been approved by the FRA were each reviewd, both to identify common elements and to identify individual State approaches to issues that might have been overlooked in the earlier FRA documents.

An example of the result of this review process is the inclusion in this methodology of the avoidance of increased highway maintenance costs as a legitimate secondary benefit of a rehabilitation project that prevents a rail line abandonment. Neither of the earlier FRA documents addressed this issues although 35 percent of the States submitting methodologies did. Most of the potential projects in these States were on branch lines in rural/farm areas where it could be expected that significant diversiion of traffic onto farm to market secondary raods would indeed create the need for increased maintenance on those roads.

Inclusion in the methodology of this feature also complies directly with the Act's requirement that the Secretary take into consideration "…the need for equitable treatment of different regions of the United States and different commodities transported by rail."

THE BENEFIT-COST METHODOLOGY

General. The following sections present, in a step by step fashion, the benefit-cost methodology to be used for analyzing local rail freight assistance projects. The methodology and the steps included herein have been developed as the minimum with which the analyst must comply if the benefit-cost analysis is to meet the statutory requirements discussed earlier.

The analyst or other reader who is interested in learning more about the economic theory behind benefit-cost analyses in the local rail service area and/or the various techniques available for gathering and analyzing information is referred to the FRA's February 1980 Benefit-Cost Guidelines rail Branch Line Continuation Program, and to the FRA's July 1978 Rail Planning Manual, Volume II: Chapter 2, "Light Density Lines".

It is important that the data underlying the benefit-cost analysis be reasonably current and data over three years old should not be considered valid, except where:

1. It is part of a historical time series of data that has an end date within three years prior to summission of the data, or:
2. An explanation accompanies submission of the data as to why it can reasonably be expected to reflect current conditions.

A benefit-cost analysis of a candidate rail freight assistance project must complete the following steps:

1. Establishing the project alternative;
2. Determining the project costs;
3. Determining the null alternative;
4. Using the standard planning horizon;
5. Using the FRA published discount rate;
6. Calculating transportation efficiency benefits;
7. Calculating secondary benefits;
8. Calculating salvage value;
9. Calculating the benefit-cost ratio.

Each of these steps is dicussed in detail in the sections which follow.

Establishing the project alternative. The analyst must begin by identifying the problem, determining the possible solutions to the problem, comparing those solutions to each other and choosing which one (or more) to define as a "project" for purposes of performing the benefit-cost analysis or analyses. The project must meet one of the statutory eligibility criteria which are (1) acquisition of a line of railroad or other rail property, (2) rehabilitation or improvement of rail properties, or (2) construction of rail or rail-related facilities.

Table 1 presents in a summary fashion, for each of the eligible project alternatives, the type of indications that would lead the analyst, to

choose that alternative for evaluation. It also presents categories of benefits and costs to be used in comparing various project alternatives with various null alternatives.

Determining the project costs. In most cases, the project cost will be equal to the cash and in-kind outlays used to build and implement the project, exclusive of financing costs. Since the analysis is from a public perspective, the source of funds or the financing arrangements have no bearing on the project cost. It is important to include the costs covered by shares paid in cash or in kind by the Federal Government, the State, the railroad, local governments, shippers (for the purpose of this methodology shippers also includes receivers), or anyone else contributing to the project. If costs will occur in future years, such costs should be discounted to a present value.

In some cases, there will be more to the project than just the direct cash and in-kind investments. For example, when the project alternative is rehabilitation and the null alternative is abandonment, the project cost should include the net liquidation value of the existing line. This is because the materials and land tied up by the line could be released for other purposes if the project were not undertaken. Similarly, any project which uses existing resources that under the null alternative would be sold must include the value of those resources as part of the project cost. Conversely, when the project alternative is rehabilitation and the null alternative is continued operation on poor track, then the value of any material taken up during the rehabilitation and used

elsewhere (e.g., light rail which is used on other lines in the railroad's system) should be subtracted from the cost of the rehabilitation project.

Determining the null alternative. Although seeming to be self evident, this step is as important as any in the process. The null alternative represents the analyst's best estimate as to what will happen if the project is not undertaken, and is the alternative against which any candidate project must be compared in the benefit-cost analysis. Possible null alternatives to various types of projects are shown in Table 1.

Chapter 2 of the Rail Planning Manual provides considerable information on data collection techniques and methods to assist the analyst in determining the null alternative.

Using the standard planning horizon. This is the number of years over which the benefits and costs of the project will be considered. The FRA has determined that for local rail freight assistance projects the appropriate planning horizon is ten years, and that horizon is to be used in all benefit-cost analyses in support of project applications.

Using the FRA published discount rate. The discount rate to be used each year in benefit-cost analyses will be published annually by the FRA after funds for the Local Rail Freight Assistance Program have been appropriated. Normally, that will be at the same time as the FRA sends to

the States the solicitation for applications for projects to be funded with that year's appropriation.

The published discount rate will be based upon the Federal Government's cost of borrowing (determined by the interest rate on 10 year obligations) less that element of the cost of borrowing that is estimated to represent expectations as to inflation.

Because the discount rate to be used will not include an inflation component, all forecasts of cost and benefits included in the analysis are to be in constant dollars.

Calculating transportation efficiency benefits. Transportation efficiency benefits are those which are a direct effect of the project alternative being considered. Much of the information used to calculate transportation efficiency benefits must, of necessity, be provided by railroads and/or shippers. To the extent permissible under law, any information considered commercially sensitive will be protected. Any information submitted with or as part of a benefit-cost analysis which the State wants to be treated confidentially should be clearly and specifically so identified.

Refer back to Table 1 for examples of the types of transportation efficiency benefits to be achieved under various combinations of project and null alternatives. Because the alternatives and the circumstances attendant to the alternatives will vary in each case, so will the

procedures used to calculate the transportation efficiency benefits. Various procedures and formulas are presented in the Benefit-Cost Guidelines for Local Rail Service Assistance. The procedures described here for the two most common sets of alternatives will allow for estimation of these benefits using readily available data. The two sets of alternatives discussed here are:

(1) The null alternative is abandonment and the project alternative is rehabilitation.

(2) The null alternative is continued operation and the project alternative is rehabilitation.

In the majority of other eligible project alternatives, the procedures discussed here will still be relevant if the words "acquisition" or "construction" are substituted for "rehabilitation" in the following discussion.

In describing the calculation of benefits, the terms "base traffic" and "incremental traffic" will be used often. Base traffic is the amount of traffic that would be shipped under both alternatives, by whatever mode. Incremental traffic is the amount of traffic that would be shipped under the project alternative, but not under the null alternative. For example, incremental traffic includes new traffic that the shipper chooses to produce and ship under the project alternative, but which would neither be produced nor shipped under the null alternative. Incremental traffic

may also simply consist of traffic saved from extinction by preventing an abandonment that would put a shipper out of business. In many cases, incremental traffic will be zero.

The calculation for determining the transportation efficiency benefits of the first set of alternatives (rehabilitation vs. abandonment) is as follows:

Transportation efficiency benefits resulting from implementing the project alternative =	Reduced transportation cost to the shipper on base traffic
	plus
	Profits earned by the shipper in producing, shipping and selling incremental traffic
	plus (minus)
	Branchline operating profits (losses)

Table 2 presents a worksheet format for calculating transportation efficiency benefits for this set of alternatives. As an example of the calculation in a simple case, assume that under the project alternative (a rehabilitated branch line), the only business on the line will manufacture and ship 3,000 tons by rail at a rate of $5.00 per ton; that under the

null alternative (abandonment), the shipper will only manufacture and ship by truck 1,000 tons at a rate of $10.00 per ton; that in manufacturing, shipping and selling the additional 2,000 tons under the project alternative, the shipper, earns an additional profit of $5,000; and that under the project alternative railroad on- and off-branch operating costs exceed attributable revenues by $4,000. Then,

Reduced transportation costs to shipper on base traffic =	(1,000 tons) x ($10.00 - $5.00) = $5,000
Profits earned by the shipper on incremental traffic =	$5,000
Branchline operating losses =	$4,000
Net transportation efficiency benefits =	$5,000 + $5,000 - $4,000 = $6,000

The example presented above is purposefully a simple one, and real world variations will undoubtedly present the analyst with complications. A more complex example is presented in the Appendix. Additionally, some of the differing circumstances that may arise are discussed below.

(1) The line may have more than one business and/or commodity using its services. If so, the reduced transportation costs to the shipper on base traffic and the profits earned by the shipper on incremental traffic would have to be computed separately for each commodity and business and then summed.

(2) Forecasted continued operation of the line at a deficit may result in surcharges. Such surcharges should be included in the rate paid under the project alternative.

(3) The approach presented here requires the analyst to establish the on- and off-branch operating costs and attributable revenue for the branch line. The Interstate Commerce Commission abandonment procedures, 49 CFR 1152, Subpart D (Standards for Determining Costs, Revenues and Return on Value), provide a methodology for calculating on- and off-branch operating costs as well as attributable revenue. If appropriate data are not readily available from the railroad(s), the analyst will need to study the line operation and develop data using appropriate unit costs.

(4) This approach assumes that the rate charged by an alternate mode is equal to its cost to provide service (including a return on investment). That assumption is necessitated by the fact that little or no information is normally available to allow the analyst to calculate alternate mode costs with any reasonable accuracy. If information is available to show that the alternate mode's rate is different than its cost to provide services, appropriate adjustments should be made (as were made by considering the operating income or loss attributable to the branchline).

(5) In the above example, a simple assumption is made about the profits earned by the shipper on incremental traffic. In reality, that information may not be easily obtained and will require cooperative dialogue with the shipper(s) or potential shipper(s) involved, as well as

some independent confirming evaluation by the analyst. However, since it is in the shipper's self interest to have lower transportation rates, and thus higher profits, he should be motivated to cooperate.

In the second set of most commonly seen alternatives (rehabilitation versus continued operation), calculating the benefits involves estimating decreases in rail line operating costs for current traffic and estimating benefits of any newly generated traffic. If tariffs will remain the same under both alternatives, the benefits will normally be simply increased operating income for the branch line as a result of decreased operating costs. Table 3 provides a worksheet format for calculating and recording transportation efficiency benefits under this scenario. Occasionally, improved service as a result of rehabilitation may attract incremental traffic to a line even if there is no tariff decrease. In those cases, the increased profit to the shipper(s) of producing, shipping and selling that incremental traffic should be included. However, the analyst should verify that the shipper(s) commitment to provide the incremental traffic is real and will not vanish after the rehabilitation is finished.

If the operating cost savings resulting from the rehabilitation translate into lower tariffs as well as (or perhaps instead of) increased branch line operating income, or if the rehabilitation keeps tariffs from rising, then there will be shipper related benefits and the situation will be similar to the rehabilitation versus abandonment set of alternatives and should be handled according to the worksheet format

shown in Table 4. It is important that the analyst track closely the savings in this case, from operating cost savings to either increased branch line profits or rate reductions, and thus benefits to the shipper(s), so as to avoid double counting of benefits.

Calculating Secondary Benefits. Secondary benefits are those which are an indirect consequence of the project alternative being evaluated and normally reflect temporary dislocations that will be avoided by implementing the project alternative rather than allowing the null alternative to occur. The analyst should identify secondary benefits and quantify them for each year in the planning horizon, including all offsets, taking care to avoid double counting and the inclusion of transfer payments. If in the course of searching for and identifying secondary benefits, the analyst determines that they do not warrant consideration, then they need not be quantified and included in the analysis. However, a statement to that effect should be included.

In calculating secondary benefits, the analyst should take a Statewide and not a local perspective. Thus, for example, if a plant is expected to close as a result of a rail line abandonment, it is important to know what alternatives the plant's owner might pursue, if any. If the owner intends to relocate that plant's production to another part of the State, then the local employment and other impacts should not be included in the analysis, since they will be offset at the new location. If the owner intends to relocate out of State, then these impacts should be included.

This pertains also to any tax revenues lost to the State or local community as a result of the plants relocating out-of-state. In either case, the business relocation costs should be included in the analysis.

Typical secondary benefits to be addressed include:

(l) Relocation Expenses. If rehabilitation of a line prevents abandonment of that line and a shipper thus avoids moving his business elsewhere, the relocation costs saved are secondary benefits of the rehabilitation alternative. Information and data to quantify these benefits must be obtained through cooperative dialogue (or surveys) with the shipper(s) involved, and independent confirming evaluation by the analyst. Typical relocation expenses might include (but are not limited to) the cost of moving equipment and inventory, the cost of moving key employees and the cost of breaking a lease at the old location. In addition to relocation, shippers might have other alternatives, including changing markets. If so the avoidance of the costs of turning to those alternatives should be quantified as benefits.

(2) Unemployment. If the abandonment alternative would result in people losing their jobs, then the value of the wages earned by those people under the rehabilitation alternative constitutes a secondary benefit, but only for the length of time that they would have been unemployed under the abandonment alternative. The analyst must establish that period, beginning with data available from the State unemployment

office as to unemployment rates and the length of time that people in the local area (usually on a county basis) pursue unemployment claims. Care must be taken to keep the unemployment analysis reasonable. Inclusion of jobs lost beyond the shipper, railroad and secondary jobs that can be specifically identified as resulting from the abandonment should be avoided.

Because the benefit-cost analysis is to be conducted from a State wide perspective, unemployment compensation should not be deducted from the lost wages, since within the boundaries of the State, unemployment compensation is a transfer payment. Additionally, the analyst should take into account as an offset the value of any jobs created by the abandonment alternative (e.g. trucking industry jobs if there is a significant movement to that mode). On the other _ hand, the value of new jobs created by the project alternative is an additional benefit if those jobs are filled by people who would otherwise remain unemployed.

(3) Highway Impacts. At some point, diversion of traffic l from rail to truck may become significant enough to result in increased maintenance needs on the local road and highway system. Another highway related impact to be considered is increased air pollution. While increased highway maintenance costs and air quality impact may be difficult to quantify, they are legitimate secondary benefits.

It should not be forgotten that traffic diversion significant enough to increase road and highway maintenance costs also implies offsets to the benefits achieved by avoiding that maintenance. Offsets to be taken into account at the appropriate steps in the analysis include any increased trucking industry employment (discussed earlier) and increased road and use tax revenues, such as fuel taxes and vehicle registration fees.

Calculating salvage value. The salvage value for the last year in the planning horizon should be calculated. In cases where the value of the entire line was used in the project cost, the salvage value of all materials in the line, i.e. the line's net liquidation value, would be used here. If the project cost represents only those capital improvements put in place by the project, it is the C salvage value of only those capital improvements that would be used here.

Calculating the benefit-cost ratio. Using the FRA published discount rate, calculate the present value of the benefits (see Table 5 for an example format). The sum of the present values of the benefits should then be divided by the project cost to determine the benefit-cost ratio. In the case of a phased project, the present value of future project costs should be added to current year costs.

Table 2

Calculation Sheet for Transportation Efficiency Benefits
Null Alternative = Abandonment
Project Alternative = Rehabilitation

Item	Amount Per Year
1. Reduced transportation cost to the shipper on base traffic as a result of the rehabilitation.	
2. Shipper's profit on incremental traffic (traffic that would not move without the rehabilitation)	
3. Branch line projected operating profit (loss) after the rehabilitation	
4. NET TRANSPORTATION EFFICIENCY BENEFITS (add lines 1, 2, and 3)	

NOTES:
1. Reduced transportation cost on base traffic = Quantity shipped in null D alternative x (rate per unit in null alternative minus rate per unit in project alternative).
2. Shipper's profit on incremental traffic should be determined by cooperative dialogue with the shipper and evaluated for reasonability by the analyst.
3. Branch line projected operating profit (loss) = Branch line projected attributable revenue minus projected off-branch costs minus projected on-branch costs (excluding return on value).

Table 3

Calculation Sheet for Transportation Efficiency Benefit.
Null Alternative = Continued Operation
Project Alternative = Rehabilitation
Note: No change in rates between project and null alternatives

Item	Amount Per Year
1. Branch line operating profit after rehabilitation	
2. Branch line operating profit before rehabilitation	
3. NET TRANSPORTATION EFFICIENCY BENEFITS (subtract line 2 from line 1)	

NOTES:

(1) Branch line operating profit = Branch line attributable revenues minus off-branch costs minus on-branch costs (including return on value).

(2) Where the effects of rehabilitation are directly traceable to changes in specific cost elements (e.g. crew costs), it is adequate to simply calculate the value of each of those changed costs and sum them to arrive at the total transportation efficiency benefits, without having to calculate total branch line operating profit before and after rehabilitation.

Table 4

Calculation Sheet for Transportation Efficiency Benefits
Null Alternative = Continued Operation
Project Alternative = Rehabilitation
Note: Rates are Reduced Under Project Alternative
(or are kept from rising

Item	Amount Per Year
1. Reduced transportation cost to the shipper on base traffic as a result of the rehabilitation	
2. Shipper's profit on incremental traffic (traffic that would not move without the rehabilitation)	
3. Increase in branch line projected operating profit as a result of the rehabilitation	
4. NET TRANSPORTATION EFFICIENCY BENEFITS (add lines 1, 2, and 3)	

Table 5

Calculation of the Present Value of Project Benefits

	Year (a)			
Benefit Category	1	2	3.....10	
1. Transportation Efficiency Benefits				
2. Lost Labor Output	(b)	(c)	(c)	(c)
3. Business Moving Costs	(b)	(c)	(c)	(c)
4. Increased Highway costs				
5. Salvage Value				
6. Totals				
7. Discount Factor (d)	$(1+i)$	$(1+i)^2$	$(1+i)^3$	$(1+i)^{10}$
8. Present Value of Totals (6 divided by 7)				

(a) Each year from 1 to 10 should have its own column.

(b) If abandonment occurs in a later year, this benefit would be moved to that year.

(c) No entry should be made beyond the temporary period in which people would be employed and/or the business is moved.

(d) The interest rate (discount rate) is represented by the letter i. Calculations to determine the discount factor can be eliminated by using discount Tables available in many economics and finance textbooks or by the use of a pocket calculator which includes a discounting function.

APPENDIX

AN EXAMPLE OF THE METHODOLOGY'S APPLICATION

The following example indicates how the benefit-cost methodology would be applied to a specific project.

Establishing the project alternative. In this particular case, the project contemplated is rehabilitation of a 45-mile rail branch line. The branch line is in poor condition, and an application for abandonment has been filed.

To determine whether the line can reasonably be expected to continue operating after rehabilitation, a forecast of revenues and expenses is generated (shown in Table A-1). Although the line's a operating profit will be positive, it is not sufficient to provide an adequate return for the railroad for the $610,000 it could receive by scrapping the line. Nevertheless, the railroad has consented to withdraw its abandonment application if the line is rehabilitated. Therefore, the project alternative is rehabilitation and continued operation.

Determining the project costs. The project will be phased, with the first half of the rehabilitation to occur in year zero (the current year) at a cost of $200,000 and the remaining work to occur in year one at a cost of $250,000. The year one cost has a present value of $235,850, which is $250,000 divided by 1.06 (achieved through application of the discount rate discussed subsequently). This brings the present value of the cost of all rehabilitation work to $435,850. These costs include the cost of ties, ballast, labor, and some rail replacement. Since the line will be abandoned without, the project, the project cost must include the net liquidation value of the line, which in this case, is $610,000 (see Table A-1). The total project costs, then, are $1,045,850.

Determining the null alternative. All indications lead to the conclusion that failure to rehabilitate the line will lead to | immediate abandonment, with shippers either finding other modes to ship their goods, reducing output, closing or moving.

Using the standard planning horizon. The FRA-prescribed ten-year planning horizon is used.

Using the FRA published discount rate. For the purposes of this C example analysis, it is assumed that the real discount rate published by the FRA is six percent. Consistent with the methodology, constant dollars will be used throughout the analysis.

Determining the transportation efficiency benefits. To determine the transportation efficiency benefits, it is necessary to forecast commodity shipments and their prices under both the project and null alternatives. Table A-2 contains such a forecast. As columns 2 and 3 of the table show, the shipments of commodity types 20 and 28 (food and chemicals) will remain the same under either alternative. The shipments of commodity types 24 and 26 (lumber and pulp) will decline substantially if the branch line is abandoned. Columns 4 and 5 of the table show the forecasted unit price per carload for each commodity. Columns 6 and 7 of the table show the total carrier charges that would be paid by the shippers A-3 under each alternative. Note that the total carrier charge for commodity 26 (pulp) declines not because of a lower price but because of the large decrease in the amount shipped. Column 8I shows annual price differences on base traffic. This is found for each commodity by multiplying the number of carloads of base traffic by the difference in transportation price per carload under each alternative. The base traffic is the smaller of the figures in columns 2 and 3. For example, the base traffic price difference for commodity 24 is 2,000 carloads X ($260 per carload-$160 per carload), or $200,000. Column 9 is the shipper's profit on making, shipping and selling incremental traffic. This data would be obtained from conversations with the shippers and independent evaluation of data provided by them. Incremental traffic is the column 2 figure minus the column 3 figure. The sum of column 8, the sum of column 9, and the operating profit on the line (shown on Table A-1) represent the total annual transportation efficiency benefits of rehabilitating and retaining the branch line. These figures are shown and totaled on Table A-3.

Calculating secondary efficiency benefits. Since no businesses would move under the abandonment option, no business relocation costs are involved. However, some temporary unemployment will result. Information provided by the railroad and the shippers, supplemented by field research in the local communities, leads to the estimate that the abandonment and reduction of shipper output will lead to the temporary loss of 30 jobs. State unemployment A-4 data shows that the average unemployed person will find a new job in about six weeks and that the average weekly pay is $200. Thus, the total value of lost labor output is $36,000.

Calculating salvage value for the last year in the planning horizon. In this case the cost of the project included the rehabilitation work and the net liquidation value of the entire |line. It is estimated that in ten years the salvage value will be approximately $700,000.

Calculating the benefit-cost ratio. The benefit-cost ratio calculation is shown on Table A-4. Benefits for each year are shown separately and summed, and each year's sum is discounted to present value. The total present value of the benefits is then divided by the project cost to yield a benefit-cost ratio of 2.8, showing the project to be worthwhile from an economic efficiency viewpoint.

TABLE A-3

Calculation of Annual Efficiency Benefits from

Implementing Rehabilitation Alternative

Type of Benefit	Amount Per Year
1. Reduced transportation cost to the shipper on base traffic	$234,800
2. Shipper profit on incremental traffic	56,975
3. Branch line projected operating profit (loss) after the rehabilitation	49,000
NET ANNUAL TRANSPORTATION EFFICIENCY BENEFITS	**$340,775**

BENEFIT-COST METHODOLOGY

FOR

THE LOCAL RAIL FREIGHT ASSISTANCE PROGRAM

Required by the
Local Rail Service
Reauthorizing Act
(PL 101-213: 12/11/89)

Published by the
Federal Railroad Administration
July, 1990

TABLE OF CONTENTS

BENEFIT-COST METHODOLOGY
FOR PROJECTS UNDER THE LOCAL RAIL
FREIGHT ASSISTANCE PROGRAM

BACKGROUND AND INTRODUCTION

The local Rail Service Reauthorizing Act of 1989 amended Section 5 (n) of the Department of Transportation Act (Act), to require that:

> "The Secretary, no later than July 1, 1990, shall establish a methodology for calculating the ratio of benefits to costs of projects proposed under subsection (b), taking into consideration the need for equitable treatment of different regions of the United States and different commodities transported by rail. The establishment of such methodology shall be a matter committed to the Secretary's discretion."

Section (c) (2) of the Act was also amended as follows:

> "No projects shall be provided rail freight assistance under this section unless the ratio of benefits to costs for such project, calculated in accordance with the methodology established by the Secretary under subsection (n), is greater than 1.0."

This methodology has been established and published in response to the Act's directive. It is to be used for calculating the benefit-cost ratios of all projects for which assistance is requested under Section (b) of the Act. These projects include acquisition of a line of railroad or other

rail property, rehabilitation or improvement of rail properties and construction of rail or rail related facilities.

The foundation for much of this methodology was provided by two earlier FRA documents: Benefit-Cost Guidelines Rail Branch line Continuation Program (February 1980) and FRA Simplified Benefit-Cost Methodology (May 1982). Also, the twenty State methodologies that have been approved by the FRA were each review, both to identify common elements and to identify individual State approaches to issues that might have been overlooked in the earlier FRA documents.

An example of the result of this review process is the inclusion in this methodology of the avoidance of increased highway maintenance costs as a legitimate secondary benefit of a rehabilitation project that prevents rail line abandonment. Neither of the earlier FRA documents addressed this issues although 35 percent of the States submitting methodologies did. Most of the potential projects in these States were on branch lines in rural/farm areas where it could be expected that significant diversion of traffic onto farm to market secondary roads would indeed create the need for increased maintenance on those roads.

Inclusion in the methodology of this feature also complies directly with the Act's requirement that the Secretary take into consideration "…the need for equitable treatment of different regions of the United States and different commodities transported by rail."

THE BENEFIT-COST METHODOLOGY

General. The following sections present, in a step by step fashion, the benefit-cost methodology to be used for analyzing local rail freight assistance projects. The methodology and the steps included herein have been developed as the minimum with which the analyst must comply if the benefit-cost analysis is to meet the statutory requirements discussed earlier.

The analyst or other reader who is interested in learning more about the economic theory behind benefit-cost analyses in the local rail service area and/or the various techniques available for gathering and analyzing information is referred to the FRA's February 1980 Benefit-Cost Guidelines rail Branch Line Continuation Program, and to the FRA's July 1978 Rail Planning Manual, Volume II: Chapter 2, "Light Density Lines".

It is important that the data underlying the benefit-cost analysis be reasonably current and data over three years old should not be considered valid, except where:

1. It is part of a historical time series of data that has an end date within three years prior to submissions of the data, or:
2. An explanation accompanies submission of the data as to why it can reasonably be expected to reflect current conditions.

A benefit-cost analysis of a candidate rail freight assistance project must complete the following steps:

1. Establishing the project alternative;
2. Determining the project costs;
3. Determining the null alternative;
4. Using the standard planning horizon;
5. Using the FRA published discount rate;
6. Calculating transportation efficiency benefits;
7. Calculating secondary benefits;
8. Calculating salvage value;
9. Calculating the benefit-cost ratio.

Each of these steps is discussed in detail in the sections which follow.

Establishing the project alternative. The analyst must begin by identifying the problem, determining the possible solutions to the problem, comparing those solutions to each other and choosing which one (or more) to define as a "project" for purposes of performing the benefit-cost analysis or analyses. The project must meet one of the statutory eligibility criteria which are (1) acquisition of a line of railroad or other rail property, (2) rehabilitation or improvement of rail properties, or (2) construction of rail or rail-related facilities.

Table 1 presents in a summary fashion, for each of the eligible project alternatives, the type of indications that would lead the analyst, to

choose that alternative for evaluation. It also presents categories of benefits and costs to be used in comparing various project alternatives with various null alternatives.

Determining the project costs. In most cases, the project cost will be equal to the cash and in-kind outlays used to build and implement the project, exclusive of financing costs. Since the analysis is from a public perspective, the source of funds or the financing arrangements have no bearing on the project cost. It is important to include the costs covered by shares paid in cash or in kind by the Federal Government, the State, the railroad, local governments, shippers (for the purpose of this methodology shippers also includes receivers), or anyone else contributing to the project. If costs will occur in future years, such costs should be discounted to a present value.

In some cases, there will be more to the project than just the direct cash and in-kind investments. For example, when the project alternative is rehabilitation and the null alternative is abandonment, the project cost should include the net liquidation value of the existing line. This is because the materials and land tied up by the line could be released for other purposes if the project were not undertaken. Similarly, any project which uses existing resources that under the null alternative would be sold must include the value of those resources as part of the project cost. Conversely, when the project alternative is rehabilitation and the null alternative is continued operation on poor track, then the value of any material taken up during the rehabilitation and used

elsewhere (e.g., light rail which is used on other lines in the railroad's system) should be subtracted from the cost of the rehabilitation project.

Determining the null alternative. Although seeming to be self evident, this step is as important as any in the process. The null alternative represents the analyst's best estimate as to what will happen if the project is not undertaken, and is the alternative against which any candidate project must be compared in the benefit-cost analysis. Possible null alternatives to various types of projects are shown in Table 1.

Chapter 2 of the Rail Planning Manual provides considerable information on data collection techniques and methods to assist the analyst in determining the null alternative.

Using the standard planning horizon. This is the number of years over which the benefits and costs of the project will be considered. The FRA has determined that for local rail freight assistance projects the appropriate planning horizon is ten years, and that horizon is to be used in all benefit-cost analyses in support of project applications.

Using the FRA published discount rate. The discount rate to be used each year in benefit-cost analyses will be published annually by the FRA after funds for the Local Rail Freight Assistance Program have been appropriated. Normally, that will be at the same time as the FRA sends to

the States the solicitation for applications for projects to be funded with that year's appropriation.

The published discount rate will be based upon the Federal Government's cost of borrowing (determined by the interest rate on 10 year obligations) less that element of the cost of borrowing that is estimated to represent expectations as to inflation.

Because the discount rate to be used will not include an inflation component, all forecasts of cost and benefits included in the analysis are to be in constant dollars.

Calculating transportation efficiency benefits. Transportation efficiency benefits are those which are a direct effect of the project alternative being considered. Much of the information used to calculate transportation efficiency benefits must, of necessity, be provided by railroads and/or shippers. To the extent permissible under law, any information considered commercially sensitive will be protected. Any information submitted with or as part of a benefit-cost analysis which the State wants to be treated confidentially should be clearly and specifically so identified.

Refer back to Table 1 for examples of the types of transportation efficiency benefits to be achieved under various combinations of project and null alternatives. Because the alternatives and the circumstances attendant to the alternatives will vary in each case, so will the

procedures used to calculate the transportation efficiency benefits. Various procedures and formulas are presented in the Benefit-Cost Guidelines for Local Rail Service Assistance. The procedures described here for the two most common sets of alternatives will allow for estimation of these benefits using readily available data. The two sets of alternatives discussed here are:

(1) The null alternative is abandonment and the project alternative is rehabilitation.

(2) The null alternative is continued operation and the project alternative is rehabilitation.

In the majority of other eligible project alternatives, the procedures discussed here will still be relevant if the words "acquisition" or "construction" are substituted for "rehabilitation" in the following discussion.

In describing the calculation of benefits, the terms "base traffic" and "incremental traffic" will be used often. Base traffic is the amount of traffic that would be shipped under both alternatives, by whatever mode. Incremental traffic is the amount of traffic that would be shipped under the project alternative, but not under the null alternative. For example, incremental traffic includes new traffic that the shipper chooses to produce and ship under the project alternative, but which would neither be produced nor shipped under the null alternative. Incremental traffic may

also simply consist of traffic saved from extinction by preventing an abandonment that would put a shipper out of business. In many cases, incremental traffic will be zero.

The calculation for determining the transportation efficiency benefits of the first set of alternatives (rehabilitation vs. abandonment) is as follows:

Transportation efficiency benefits resulting from implementing the project alternative =	Reduced transportation cost to the shipper on base traffic
	plus
	Profits earned by the shipper in producing, shipping and selling incremental traffic
	plus (minus)
	Branchline operating profits (losses)

Table 2 presents a worksheet format for calculating transportation efficiency benefits for this set of alternatives. As an example of the calculation in a simple case, assume that under the project alternative (a rehabilitated branch line), the only business on the line will manufacture and ship 3,000 tons by rail at a rate of $5.00 per ton; that under the

null alternative (abandonment), the shipper will only manufacture and ship by truck 1,000 tons at a rate of $10.00 per ton; that in manufacturing, shipping and selling the additional 2,000 tons under the project alternative, the shipper, earns an additional profit of $5,000; and that under the project alternative railroad on- and off-branch operating costs exceed attributable revenues by $4,000. Then,

Reduced transportation costs to shipper on base traffic =	(1,000 tons) x ($10.00 - $5.00) = $5,000
Profits earned by the shipper on incremental traffic =	$5,000
Branchline operating losses =	$4,000
Net transportation efficiency benefits =	$5,000 + $5,000 - $4,000 = $6,000

The example presented above is purposefully a simple one, and real world variations will undoubtedly present the analyst with complications. A more complex example is presented in the Appendix. Additionally, some of the differing circumstances that may arise are discussed below.

(1) The line may have more than one business and/or commodity using its services. If so, the reduced transportation costs to the shipper on base traffic and the profits earned by the shipper on incremental traffic would have to be computed separately for each commodity and business and then summed.

(2) Forecasted continued operation of the line at a deficit may result in surcharges. Such surcharges should be included in the rate paid under the project alternative.

(3) The approach presented here requires the analyst to establish the on- and off-branch operating costs and attributable revenue for the branch line. The Interstate Commerce Commission abandonment procedures, 49 CFR 1152, Subpart D (Standards for Determining Costs, Revenues and Return on Value), provide a methodology for calculating on- and off-branch operating costs as well as attributable revenue. If appropriate data are not readily available from the railroad(s), the analyst will need to study the line operation and develop data using appropriate unit costs.

(4) This approach assumes that the rate charged by an alternate mode is equal to its cost to provide service (including a return on investment). That assumption is necessitated by the fact that little or no information is normally available to allow the analyst to calculate alternate mode costs with any reasonable accuracy. If information is available to show that the alternate mode's rate is different than its cost to provide services, appropriate adjustments should be made (as were made by considering the operating income or loss attributable to the branchline).

(5) In the above example, a simple assumption is made about the profits earned by the shipper on incremental traffic. In reality, that information may not be easily obtained and will require cooperative dialogue with the shipper(s) or potential shipper(s) involved, as well as some independent confirming evaluation by the analyst. However, since it

is in the shipper's self interest to have lower transportation rates, and thus higher profits, he should be motivated to cooperate.

In the second set of most commonly seen alternatives (rehabilitation versus continued operation), calculating the benefits involves estimating decreases in rail line operating costs for current traffic and estimating benefits of any newly generated traffic. If tariffs will remain the same under both alternatives, the benefits will normally be simply increased operating income for the branch line as a result of decreased operating costs. Table 3 provides a worksheet format for calculating and recording transportation efficiency benefits under this scenario. Occasionally, improved service as a result of rehabilitation may attract incremental traffic to a line even if there is no tariff decrease. In those cases, the increased profit to the shipper(s) of producing, shipping and selling that incremental traffic should be included. However, the analyst should verify that the shipper(s) commitment to provide the incremental traffic is real and will not vanish after the rehabilitation is finished.

If the operating cost savings resulting from the rehabilitation translate into lower tariffs as well as (or perhaps instead of) increased branch line operating income, or if the rehabilitation keeps tariffs from rising, then there will be shipper related benefits and the situation will be similar to the rehabilitation versus abandonment set of alternatives and should be handled according to the worksheet format shown in Table 4. It is important that the analyst track closely the savings in this case, from

operating cost savings to either increased branch line profits or rate reductions, and thus benefits to the shipper(s), so as to avoid double counting of benefits.

Calculating Secondary Benefits. Secondary benefits are those which are an indirect consequence of the project alternative being evaluated and normally reflect temporary dislocations that will be avoided by implementing the project alternative rather than allowing the null alternative to occur. The analyst should identify secondary benefits and quantify them for each year in the planning horizon, including all offsets, taking care to avoid double counting and the inclusion of transfer payments. If in the course of searching for and identifying secondary benefits, the analyst determines that they do not warrant consideration, then they need not be quantified and included in the analysis. However, a statement to that effect should be included.

In calculating secondary benefits, the analyst should take a Statewide and not a local perspective. Thus, for example, if a plant is expected to close as a result of a rail line abandonment, it is important to know what alternatives the plant's owner might pursue, if any. If the owner intends to relocate that plant's production to another part of the State, then the local employment and other impacts should not be included in the analysis, since they will be offset at the new location. If the owner intends to relocate out of State, then these impacts should be included. This pertains also to any tax revenues lost to the State or local community as

a result of the plants relocating out-of-state. In either case, the business relocation costs should be included in the analysis.

Typical secondary benefits to be addressed include:

(l) Relocation Expenses. If rehabilitation of a line prevents abandonment of that line and a shipper thus avoids moving his business elsewhere, the relocation costs saved are secondary benefits of the rehabilitation alternative. Information and data to quantify these benefits must be obtained through cooperative dialogue (or surveys) with the shipper(s) involved, and independent confirming evaluation by the analyst. Typical relocation expenses might include (but are not limited to) the cost of moving equipment and inventory, the cost of moving key employees and the cost of breaking a lease at the old location. In addition to relocation, shippers might have other alternatives, including changing markets. If so the avoidance of the costs of turning to those alternatives should be quantified as benefits.

(2) Unemployment. If the abandonment alternative would result in people losing their jobs, then the value of the wages earned by those people under the rehabilitation alternative constitutes a secondary benefit, but only for the length of time that they would have been unemployed under the abandonment alternative. The analyst must establish that period, beginning with data available from the State unemployment office as to unemployment rates and the length of time that people in the

local area (usually on a county basis) pursue unemployment claims. Care must be taken to keep the unemployment analysis reasonable. Inclusion of jobs lost beyond the shipper, railroad and secondary jobs that can be specifically identified as resulting from the abandonment should be avoided.

Because the benefit-cost analysis is to be conducted from a State wide perspective, unemployment compensation should not be deducted from the lost wages, since within the boundaries of the State, unemployment compensation is a transfer payment. Additionally, the analyst should take into account as an offset the value of any jobs created by the abandonment alternative (e.g. trucking industry jobs if there is a significant movement to that mode). On the other hand, the value of new jobs created by the project alternative is an additional benefit if people who would otherwise remain unemployed fill those jobs.

(3) Highway Impacts. At some point, diversion of traffic from rail to truck may become significant enough to result in increased maintenance needs on the local road and highway system. Another highway related impact to be considered is increased air pollution. While increased highway maintenance costs and air quality impact may be difficult to quantify, they are legitimate secondary benefits.

It should not be forgotten that traffic diversion significant enough to increase road and highway maintenance costs also implies offsets to the

benefits achieved by avoiding that maintenance. Offsets to be taken into account at the appropriate steps in the analysis include any increased trucking industry employment (discussed earlier) and increased road and use tax revenues, such as fuel taxes and vehicle registration fees.

Calculating salvage value. The salvage value for the last year in the planning horizon should be calculated. In cases where the value of the entire line was used in the project cost, the salvage value of all materials in the line, i.e. the line's net liquidation value, would be used here. If the project cost represents only those capital improvements put in place by the project, it is the C salvage value of only those capital improvements that would be used here.

Calculating the benefit-cost ratio. Using the FRA published discount rate, calculate the present value of the benefits (see Table 5 for an example format). The sum of the present values of the benefits should then be divided by the project cost to determine the benefit-cost ratio. In the case of a phased project, the present value of future project costs should be added to current year costs.

Table 1

Alternatives for Benefit-Cost Analysis

Project Alternative	Null Alternative	Indications & Comments	Benefits Categories	Cost Categories
I. Rehabilition & continued operation	A. Abandonment	The line is in Category 1, 2 or 3 of a system diagram map; the railroad has stated publicly that with rehabilitation the line will be retained; financial analysis shows that the line is unprofitable but that rehabilitation will make it profitable.	(I) Difference between rates charged for service by alternate mode and rates charged for rail service on traffic that will move under both alternatives. (II) Shipper business profits, on traffic that would not move without rehabilitation. (III) Branch line projected operating profit. If a loss is projected, this amount is negative. (Iv) Labor output that would be lost without rehabilitation. (v) Cost of moving businesses, if move would opccur with abandonment. (vI) Increased cost of maintaining/repairing roads if modal-shift occurs with abanment. (vII) Salvage value of entire line at end of planning horizon.	(I) Cost of rehabilitation materials and labor including the present value of any future rehabilitation required to keep the line operating. (II) Net liquidation value of line prior to rehabilitation

Table 1 (continued)

Alternatives for Benefit-Cost Analysis

Project Alternative	Null Alternative	Indications & Comments	Benefits Categories	Cost Categories
	B. Continued operation on poor track	The line is in Category 5 of a system diagram map; the branch line accounts show the line to be marginally profitable.	(I) Increase in branch line profits after rehabilitation. (II) Any decrease in rates on traffic moving under both alternatives. (III) Shipper business profits on traffic that would not move without rehabilitation. (Iv) Salvage value of rehabilitation materials at end of planning horizon.	(I) Cost of rehabilitation materials & labor. (II) As a cost offset the value of any materials released which are sold or used elsewhere.
2. Rehabilitation and Resumption of Service	Non-resumption of Service	Line has been out of service. Changes in local economic conditions indicate a demand for resumed service.	Same as 1A (I,II,III,Iv, and vII)	Same As 1A

Table 1 (continued)

Alternatives for Benefit-Cost Analysis

Project Alternative	Null Alternative	Indications & Comments	Benefits Categories	Cost Categories
3. Acquisition with continued operation	A. Abandonment	This is the expected null alternative, since there is usually no reason to acquire if the railroad will serve the line anyway.	Same as 1A	(I) Cost of acquiring the line. Including the present value of any future rehabilitation required to keep the line operating.
	B. Continued operation	This may occur if the line is currently owned by one party and leased by another	(I) Present value of stream of lease payments.	(I) Cost of acquiring the line. Including the present value of any future rehabilitation required to keep the line operating.
4. New construction	A. Transportation service continues as is	Transportation services currently provided are profitable.	Same as 1B.	(I) Cost of materials and labor for the capital improvement. (II) Present value of any future rehabilitation required to keep line operating or reopen it.
	B. Transportation service is changed (e.g. line is abandoned)	Some transportation services currently provided are unprofitable	Same as 1A (I), (v)	(I) Cost of materials and labor for the capital improvement. (II) Present value of any future rehabilitation required.
				Same As 1A

Table 2

Calculation Sheet for Transportation Efficiency Benefits
Null Alternative = Abandonment
Project Alternative = Rehabilitation

Item	Amount Per Year
1. Reduced transportation cost to the shipper on base traffic as a result of the rehabilitation.	
2. Shipper's profit on incremental traffic (traffic that would not move without the rehabilitation)	
3. Branch line projected operating profit (loss) after the rehabilitation	
4. NET TRANSPORTATION EFFICIENCY BENEFITS (add lines 1, 2, and 3)	

NOTES:
1. Reduced transportation cost on base traffic = Quantity shipped in null D alternative x (rate per unit in null alternative minus rate per unit in project alternative).
2. Shipper's profit on incremental traffic should be determined by cooperative dialogue with the shipper and evaluated for reasonability by the analyst.
3. Branch line projected operating profit (loss) = Branch line projected attributable revenue minus projected off-branch costs minus projected on-branch costs (excluding return on value).

Table 3

Calculation Sheet for Transportation Efficiency Benefit.
Null Alternative = Continued Operation
Project Alternative = Rehabilitation
Note: No change in rates between project and null alternatives

Item	Amount Per Year
1. Branch line operating profit after rehabilitation	
2. Branch line operating profit before rehabilitation	
3. NET TRANSPORTATION EFFICIENCY BENEFITS (subtract line 2 from line 1)	

NOTES:

(1) Branch line operating profit = Branch line attributable revenues minus off-branch costs minus on-branch costs (including return on value).

(2) Where the effects of rehabilitation are directly traceable to changes in specific cost elements (e.g. crew costs), it is adequate to simply calculate the value of each of those changed costs and sum them to arrive at the total transportation efficiency benefits, without having to calculate total branch line operating profit before and after rehabilitation.

Table 4

Calculation Sheet for Transportation Efficiency Benefits
Null Alternative = Continued Operation
Project Alternative = Rehabilitation
Note: Rates are Reduced Under Project Alternative
(or are kept from rising

Item	Amount Per Year
1. Reduced transportation cost to the shipper on base traffic as a result of the rehabilitation	
2. Shipper's profit on incremental traffic (traffic that would not move without the rehabilitation)	
3. Increase in branch line projected operating profit as a result of the rehabilitation	
4. NET TRANSPORTATION EFFICIENCY BENEFITS (add lines 1, 2, and 3)	

Table 5

Calculation of the Present Value of Project Benefits

	Year (a)			
Benefit Category	1	2	3.....10	
1. Transportation Efficiency Benefits				
2. Lost Labor Output	(b)	(c)	(c)	(c)
3. Business Moving Costs	(b)	(c)	(c)	(c)
4. Increased Highway costs				
5. Salvage Value				
6. Totals				
7. Discount Factor (d)	$(1+i)$	$(1+i)^2$	$(1+i)^3$	$(1+i)^{10}$
8. Present Value of Totals (6 divided by 7)				

(a) Each year from 1 to 10 should have its own column.

(b) If abandonment occurs in a later year, this benefit would be moved to that year.

(c) No entry should be made beyond the temporary period in which people would be employed and/or the business is moved.

(d) The interest rate (discount rate) is represented by the letter i. Calculations to determine the discount factor can be eliminated by using discount Tables available in many economics and finance textbooks or by the use of a pocket calculator which includes a discounting function.

APPENDIX

AN EXAMPLE OF THE METHODOLOGY'S APPLICATION

The following example indicates how the benefit-cost methodology would be applied to a specific project.

Establishing the project alternative. In this particular case, the project contemplated is rehabilitation of a 45-mile rail branch line. The branch line is in poor condition, and an application for abandonment has been filed.

To determine whether the line can reasonably be expected to continue operating after rehabilitation, a forecast of revenues and expenses is generated (shown in Table A-1). Although the line's a operating profit will be positive, it is not sufficient to provide an adequate return for the railroad for the $610,000 it could receive by scrapping the line. Nevertheless, the railroad has consented to withdraw its abandonment application if the line is rehabilitated. Therefore, the project alternative is rehabilitation and continued operation.

Determining the project costs. The project will be phased, with the first half of the rehabilitation to occur in year zero (the current year) at a cost of $200,000 and the remaining work to occur in year one at a cost of $250,000. The year one cost has a present value of $235,850, which is $250,000 divided by 1.06 (achieved through application of the discount rate discussed subsequently). This brings the present value of the cost of all rehabilitation work to $435,850. These costs include the cost of ties, ballast, labor, and some rail replacement. Since the line will be abandoned without, the project, the project cost must include the net liquidation value of the line, which in this case, is $610,000 (see Table A-1). The total project costs, then, are $1,045,850.

Determining the null alternative. All indications lead to the conclusion that failure to rehabilitate the line will lead to | immediate abandonment, with shippers either finding other modes to ship their goods, reducing output, closing or moving.

Using the standard planning horizon. The FRA-prescribed ten-year planning horizon is used.

Using the FRA published discount rate. For the purposes of this C example analysis, it is assumed that the real discount rate published by the FRA is six percent. Consistent with the methodology, constant dollars will be used throughout the analysis.

Determining the transportation efficiency benefits. To determine the transportation efficiency benefits, it is necessary to forecast commodity shipments and their prices under both the project and null alternatives. Table A-2 contains such a forecast. As columns 2 and 3 of the table show, the shipments of commodity types 20 and 28 (food and chemicals) will remain the same under either alternative. The shipments of commodity types 24 and 26 (lumber and pulp) will decline substantially if the branch line is abandoned. Columns 4 and 5 of the table show the forecasted unit price per carload for each commodity. Columns 6 and 7 of the table show the total carrier charges that would be paid by the shippers A-3 under each alternative. Note that the total carrier charge for commodity 26 (pulp) declines not because of a lower price but because of the large decrease in the amount shipped. Column 8I shows annual price differences on base traffic. This is found for each commodity by multiplying the number of carloads of base traffic by the difference in transportation price per carload under each alternative. The base traffic is the smaller of the figures in columns 2 and 3. For example, the base traffic price difference for commodity 24 is 2,000 carloads X ($260 per carload-$160 per carload), or $200,000. Column 9 is the shipper's profit on making, shipping and selling incremental traffic. This data would be obtained from conversations with the shippers and independent evaluation of data provided by them. Incremental traffic is the column 2 figure minus the column 3 figure. The sum of column 8, the sum of column 9, and the operating profit on the line (shown on Table A-1) represent the total annual transportation efficiency benefits of rehabilitating and retaining the branch line. These figures are shown and totaled on Table A-3.

Calculating secondary efficiency benefits. Since no businesses would move under the abandonment option, no business relocation costs are involved. However, some temporary unemployment will result. Information provided by the railroad and the shippers, supplemented by field research in the local communities, leads to the estimate that the abandonment and reduction of shipper output will lead to the temporary loss of 30 jobs. State unemployment A-4 data shows that the average unemployed person will find a new job in about six weeks and that the average weekly pay is $200. Thus, the total value of lost labor output is $36,000.

Calculating salvage value for the last year in the planning horizon. In this case the cost of the project included the rehabilitation work and the net liquidation value of the entire |line. It is estimated that in ten years the salvage value will be approximately $700,000.

Calculating the benefit-cost ratio. The benefit-cost ratio calculation is shown on Table A-4. Benefits for each year are shown separately and summed, and each year's sum is discounted to present value. The total present value of the benefits is then divided by the project cost to yield a benefit-cost ratio of 2.8, showing the project to be worthwhile from an economic efficiency viewpoint.

Table A-2

Commodity Shipment and Tariff Forecasts
(Annual Data)

STCC Code	Ammount Shipped (Carloads)		Transportation Price Per Carload ($ per carload)		Annual Transportation Charges ($ per year)		Base Traffic Price Difference ($ per year)	Shippers Profit on Incremental Traffic ($ per year)
	Alt. 1	Alt. 2	Alt. 1	Alt. 2	Alt. 1	Alt. 2		
20	125	125	210	270	26,250	33,750	7,500	-0-
24	3000	2000	160	260	480,000	52,000	200,000	50,000
26	200	80	133.75	250	26,750	20,000	9,300	6,975
28	450	450	260	300	117,000	135,000	18,000	-0-
Totals							234,800	56,975

Note: Alt. 1 is rehabilitation
Alt. 2 is abandonment

TABLE A-3

Calculation of Annual Efficiency Benefits from

Implementing Rehabilitation Alternative

Type of Benefit	Amount Per Year
1. Reduced transportation cost to the shipper on base traffic	$234,800
2. Shipper profit on incremental traffic	56,975
3. Branch line projected operating profit (loss) after the rehabilitation	49,000
NET ANNUAL TRANSPORTATION EFFICIENCY BENEFITS	**$340,775**

Table A-4

Calculation of the Present Value of Rehabilitation Project Benefits

	YEAR									
Benefits Category	1	2	3	4	5	6	7	8	9	10
1. Transportation Efficiency Benefits	$340,775	$340,775	$340,775	$340,775	$340,775	$340,775	$340,775	$340,775	$340,775	$340,775
2. Lost Labor Output	36,000	--	--	--	--	--	--	--	--	--
3. Salvage Value-end of Period	--	--	--	--	--	--	--	--	--	$700,000
4. Total Benefits (constant $)	$376,775	$340,775	$340,775	$340,775	$340,775	$340,775	$340,775	$340,775	$340,775	$1,040,775
5. Discount Factor (at 6%)	1.06	1.124	1.191	1.262	1.338	1.418	1.503	1.593	1.689	1.79
6. Present Value (4 divided by 5)	$355,448	$303,181	$286,125	$270,028	$254,690	$240,321	$226,730	$213,920	$201,761	$581,438

7. SUM OF PRESENT VALUES OF BENEFITS = $2,933,642

8. PRESENT VALUE OF COSTS = $1,045,850 = $1,045,850

9. BENEFIT-COST RATIO (7 - 8) = 2.8 = 2.8

APPENDIX B

State Rail Program

State Rail Program

For more information contact:
Ron Kerr
Senior Transportation Planner
Division of Transportation Planning
Phone: (208) 334-8210
FAX: (208) 334-4432

Description of the Mode

The 1,917 miles of railroad lines in Idaho include main lines, secondary main lines, branch lines, and short lines. The state is served by two major railroads providing connections to points in the United States, Canada, and Mexico.

The Idaho Transportation Department does not own or operate any active rail lines. The role of the state rail program is to assist in the preservation of essential rail lines through state rail planning and administration of the federal Local Rail Freight Assistance (LRFA) Program or other eligible programs that may become available.

Determination of Needs

The primary focus of state involvement in rail planning and the federal LRFA program has been to assure that Idaho will be served by an efficient rail network integrated into a state transportation system, and to preserve those rail lines which are essential to Idaho=s economy and the overall transportation system.

The economics of the rail system and alternative methods for retaining essential rail services are evaluated in the rail planning process. Priority is given to branch lines that could be abandoned or have reduced service because of poor track conditions, resulting in impacts on rail shippers and shifts of rail traffic to trucks which can negatively impact state and local roads. The rail planning process benefits shippers, railroads, communities and local officials who have a stake in preserving essential local rail freight service and jobs in the community.

Funding

The U.S. Department of Transportation=s Federal Railroad Administration (FRA) provides federal funding for the LRFA Program. The railroad, shippers, or other private/local sources provide a minimum 30 percent local match. The funds are used primarily for capital improvements such as track rehabilitation and/or new connections. Identified projects which request financial assistance are reviewed and screened by the Idaho Transportation Department with regards to the needs identified in the rail planning process. Based on this evaluation, projects are selected annually for LRFA Program funding.

Due to limited funding and the discretionary nature of the LRFA Program, the FRA has historically funded only one project per state per year. Future projects beyond a one- or two-year horizon are difficult to anticipate because the state rail system has been changing as major carriers sell or lease lines to smaller regional carriers, and because of uncertainties about future federal funding. Congress has not appropriated funds for the LRFA Program since fiscal year 1995. Congress and the Administration are considering several proposals to fund rail-freight projects in the reauthorization of ISTEA.

Project Selection

The track rehabilitation program is designed to improve those rail lines in the state that have suffered from deferred maintenance, and the infusion of funds could prevent the rail line from being abandoned. Potential projects must have a benefit/cost ratio greater than 1.0 and the line must carry a minimum volume of traffic. Projects are selected by the Idaho Transportation Department in coordination with appropriate local officials, shippers, the Idaho Railroad Advisory Council, and the railroads involved, with final approval made by the Transportation Board. Completion of these projects can take many years. The rail rehabilitation projects listed in the STIP are contingent on funding being available for the LRFA Program or other eligible sources in future years and inclusion in the eligible Program of Projects in the Idaho *State Rail Plan and Updates/Amendments* thereof.

Application Process

The application process assumes that funding for the Local Rail Freight Assistance (LRFA) Program, or any other eligible program, is authorized and appropriated by the time each federal fiscal year begins. So far, Congress has not reauthorized or funded the LRFA Program for fiscal year 1998. Inquiries are made in September to railroads as to their interest in having the state apply to the Federal Railroad Administration (FRA) for LRFA funding. Only certain lines carrying a

minimum and maximum threshold of rail traffic is eligible. If a railroad is interested, field inspections are undertaken to determine rehabilitation needs. Detailed rehabilitation plans and benefit/cost analyses are developed. If a project or projects qualify, an application is prepared and forwarded to the FRA by January of each year. If the FRA approves the projects(s), grant agreements are issued by the FRA in May or June of that year. Following the Idaho Transportation Board=s approval, an agreement and technical specifications are negotiated with the railroad and implemented. The State Rail Planner conducts this process because rail rehabilitation needs are addressed and prioritized on a statewide basis through the state rail planning process. Federal funds are limited which normally allows for only one project per year for each state.

Public Involvement/District Information

The Idaho Transportation Department must provide the opportunity for a public hearing when a rail project is proposed. There is no federal requirement for rail projects to be included in the Statewide Transportation Improvement Program (STIP). Since the STIP reflects projects identified within the State Rail Plan and Updates/Amendments, and is intended to be a multi-modal document, any public involvement for the STIP would be in addition to the federal requirements for state rail projects. If a district receives comments or questions from rail shippers or locals concerned about the future rail service in their community or other rail issues, the comments or questions should be directed to the State Rail Planner. Furthermore, district involvement is primarily in the area of construction engineering to monitor and oversee project construction.

Reference Materials

- X *State Rail Plan* and Updates/Amendments
- X Federal regulations pertaining to the Local Rail Freight Assistance Program

Appendix C

FRA Comments

Comments on the last Idaho Rail Plan received from the Federal Railroad Administration (FRA) were directed toward the state's benefit-cost methodology and its application in the St. Maries River Railroad assistance project. The St. Maries rehabilitation effort was a long-term project and was performed in stages over several years. The benefit0cost analysis performed for each stage was the subject of an Amendment to the Rail Plan and the comments were addressed in the first amendment following their receipt.

At the time of the last Rail Plan, each state was responsible for the derivation of its own methodology which was subject to review and approval by the FRA. The FRA subsequently published a standard methodology for use by all states so that projects would be evaluated on the same basis and could be more equitably compared and ranked for the allocation of funds. This methodology, which was used to evaluate the assistance projects contained in this document, is the subject of Appendix A.

APPENDIX D
INDEX TO FEDERAL
RAIL PLANNING REGULATIONS
49 CFR Part 266, Section 266.17(C) and (d)
as proposed November 30, 1990

TITLE	REFERENCES (1)	RAIL PLAN UPDATE LOCATION
Objectives of Rail Service Assistance Program	c, 1	Chapter 1
Operating Carriers	c, 2, i	Chapter 2
Freight Traffic Density	c, 2, ii	Chapter 2
Service Description	c, 2, iii	Chapter 2
Lines Eligble for Assistance	c, 3, i	Chapter 3
Lines Potentially Subject to Abandonment	c, 3, ii	Chapter 3
Lines with Applications Pending	c, 3, iii	Chapter 3
Rail Projects for In-Kind Benefits	c, 3, iv	None
Screening Criteria	c, 4	Chapter 3
Benefit-Cost Analysis	c, 5	Chapter 4
Planning Process Participation	c, 6	Chapter 1
Transportation Planning Process	c, 7	Chapter 1
Update of Data	d, 1	Chapter 2, 3 and 4
Map/Description Update	d, 2	Chapter 2
Analysis of New Projects	d, 3	Chapter 4
Rail/Overall Transportation Planning Relationships	d, 4	Chapter 1
Public Involvement/Resource Allocatic	d, 5	Chapter 1
Agency Changes	d, 6	None
Policy Revisions	d, 7	Chapter 1

(1) Subsection, paragraph, and sub-paragraph of Part 266, Section 266.17.

APPENDIX E

SUMMARY OF COMMENTS RECEIVED ON THE
DRAFT IDAHO STATE RAIL PLAN

FHWA

- Excellent document

Montana DOT

- Nice job

Idaho Growers Shippers Association (potato shippers)

- Well done; encourage continued updating of plan and adoption

Idaho Farm Bureau Federation

- The State of Idaho and commodity producers should initiate and maintain an aggressive, cooperative effort to provide competitive local rail service whenever possible.

- Support the development and implementation of strategies outlined in the ARecommendations for Future Rail Planning@ as discussed in the State Rail Plan.

- Establish a Shippers Task Force to provide input to the Idaho Transportation Department and Transportation Board on rail and other transportation related issues.

Idaho Barley Commission

- We strongly support and encourage the development of specific strategies by the Idaho Transportation Board to fulfill the Recommendations for Future Rail Planning spelled out in the State Rail Plan.

- Conduct a statewide rail needs study as part of a continuous rail planning process.

- Identify and secure funding mechanisms to assist with critically needed acquisition (including equipment) and rehabilitation projects.

- Convene a Shippers Task Force to advise ITD and the Transportation Board on rail and other transportation issues.

Senator Lin Whitworth

- Idaho needs ITD to give a complete and thorough review of the rail transportation system in regards to service, safety and responsible actions.

Idaho State Tax Commission

- The draft is loaded with lots of helpful information and useful insights.

Transportation Communications Union

- We support your efforts to develop a State Rail Plan to assist in keeping rail service in Idaho.

Carolyn Garder, Citizen, Idaho Falls

- Railroads may very much be needed and not be getting the support they need to keep them going.

Mayor Kenneth Walker of Lewisville

- We are in favor of the proposal (the project on the West Belt Branch of the Eastern Idaho Railroad) which would provide increased and more expedient service and hopefully improved crossings in the Lewisville area.

Federal Railroad Administration (verbal)

- One of the better State Rail Plans

- More potential rail projects could have been analyzed in detail, but understandable due to lack of funding.

- The section on Lines Eligible for Assistance including System Diagram Map Lines should be expanded some (this has been done).

- Explain the rationale of why railroads abandon lines. (This has been done.)

Federal Railroad Administration (written)

- The FRA is pleased to approve the Idaho State Rail Plan update.

Local Highway Technical Assistance Council (verbal)

- Explain the tradeoff between rail and truck transport in terms of traffic shifts and impacts on state and local roads.

Port of Lewiston

- Supports the plan

- There should be more flexibility in the use of funds for funding rail freight projects such as the rail facilities in the Port of Lewiston. An investment of $100,000 in the rail facilities at the Port would go far further to increase the port=s competitiveness than an equivalent investment in highways.

Charles G. Clark, Union Pacific Railroad

- State and local governments are very unlikely to fund rail assistance projects now that the Federal Local Rail Service Assistance Program has been eliminated, particularly with the use of highway user revenue or local bonding mechanisms. State and local governments do not need to pick up the federal program because government is trying to second guess when the Class 1 railroads (and possibly short lines) make their decisions regarding capital investments and where these investments need to be directed. (Specific references in the rail plan=s recommendations for the use of state general or highway user funds and local bonding were eliminated and replaced with a reference to creative financing at the state and local levels to best serve the state=s future rail needs.)