Rail Line Abandonment and Public Acquisition Impacts on Economic Development

RICHARD S. TAYLOR, KENNETH L. CASAVANT, AND J. C. LENZI

Railroads are not the dominant transportation mode they once were, but they still play a large role in freight movement and are the only practical means of transport for a variety of commodities. Railroads also comprise a principal component of a community's economic development infrastructure as rail service still ranks as a prime site selection criterion for many industries. As U.S. railroads continue to restructure and reduce the size of their physical plant in an effort to reduce costs, light-density branch lines will continue to be targets for abandonment. Effects of rail line abandonment on both public and private costs in a region are evaluated. Drags on economic development in the region caused by this structural change are identified. Specifically, methodology and results of a statewide examination of the rail freight system in the state of Washington are discussed. This procedure, developed for use by the Washington Rail Development Commission, details the revenue and costs incurred for the existing Class I railroads on each branch line segment in the state. Then, for those segments where the railroads experience a revenue deficiency an analysis is presented on the public impacts of increased transportation costs to shippers and damage to roads of any decision to abandon a line segment. The need and rationale of public acquisition to retain local rail service for economic development purposes are discussed. Low traffic levels and poor track conditions typical of light-density rail lines are not going to attract for-profit railroad operators, and thus many locales may have no choice but to acquire the lines to retain them. Examples of public ownerships in Washington State are provided.

As U.S. railroads continue to restructure and reduce the size of their physical plants to reduce costs, light-density branch lines will continue to be targets for abandonment. Thus, many communities will continue to be faced with the loss of rail service. Public and private sector costs and infrastructure deterioration associated with rail line abandonments inhibit economic development. A methodology developed for use by the Washington State Rail Development Commission provides a means to measure the impacts and associated costs. Preservation of rail service can translate into benefits for local and regional economic development, the extent of which is difficult to quantify. Both current and potential impacts are considered in the following discussions.

The portion of the rail system discussed provides what has become labeled as local rail service. This label is appropriate as the concerns and impacts are indeed local. From a state perspective, transportation infrastructure requirements to retain or locate a business can be found in one part of the state or another, but the local community does not have the same selection expanse. Thus, at the local level, preserving and improving infrastructure becomes necessary.

R. S. Taylor, Wilbur Smith Associates, NCNB Tower, P.O. Box 92, Columbia, S.C. 29202. K. L. Casavant, Washington State University, Department of Agricultural Economics, Pullman, Wash. 99164–6210. J. C. Lenzi, Washington State Department of Transportation, Transportation Building, Olympia, Wash. 98504.

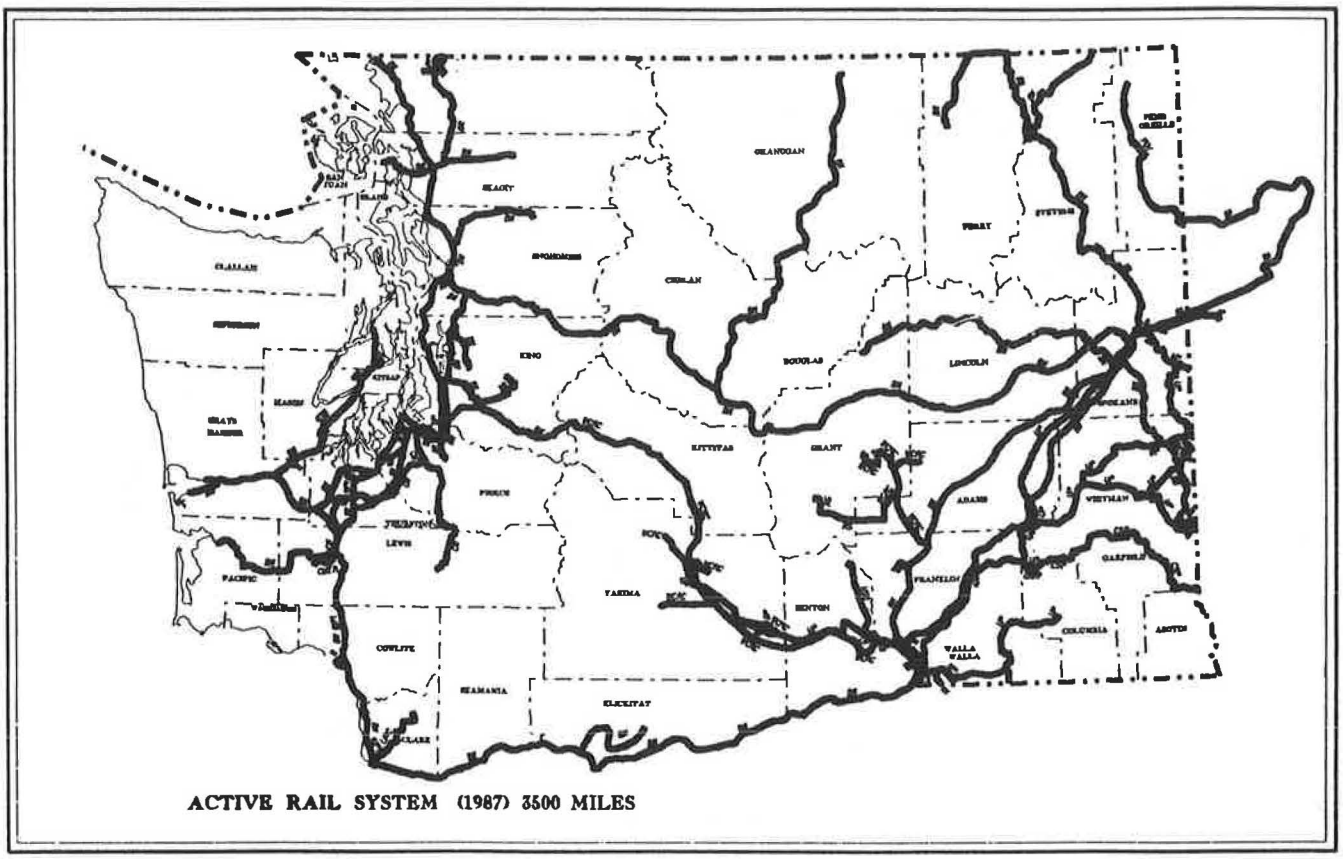
STATEWIDE LIGHT-DENSITY LINE EXAMINATION

In 1987, the Washington State legislature created the Rail Development Commission to conduct a comprehensive examination of rail freight and passenger service and to develop policy and recommendations for the state's future role and programs. The principal thrust of the rail freight effort was directed toward the state's branch or light-density line (LDL) system and consisted of a two-step approach: (a) a determination of which components of the system were likely abandonment candidates, and (b) an assessment of abandonment impacts. The Washington State rail system (see Figure 1) consists of some 3,500 route-mi, almost half of which are LDLs. The LDL mileage investigated comprised 37 lines totaling 1,462 mi owned by two Class I carriers.

The Local Rail Service Assistance Act of 1978 and its predecessors made federal funds available to states for enhancing the viability of LDLs or for mitigating the effects of abandonment of such lines. Section 803(a) of the act stated, however, that to be eligible for funds a state must have a rail plan that "includes . . . a methodology for determining the ratio of benefits to costs of projects . . ." The Washington State Department of Transportation (WSDOT) has developed appropriate state rail plans, and incorporated in each plan is a methodology that has been accepted by the Federal Railroad Administration as meeting the requirements of Section 803(a). The general WSDOT benefit-cost methodology provided the basis for the analyses. Methodologies developed for the LDL system determinations did not involve detailed examinations because of data, time, and budget constraints, and because the purpose of this particular effort was to develop policy and responsive programs, a generalized approach was deemed acceptable.

RAIL LINE REVENUES AND COSTS

First, rail lines likely to be abandoned were identified by assessing attributable revenues and costs. Lines were analyzed



SOURCE: Washington State Department of Transportation

FIGURE 1 Washington State railroads—1987.

using Interstate Commerce Commission (ICC) procedures for abandonment cases. Although the procedures contain both on- and off-branch elements, data, time, and budget constraints prohibited an assessment of off-branch costs. Thus, the procedures were modified as necessary and only on-branch elements were evaluated (*1*).

Revenues

Revenues attributable to each line were made available by one carrier and proportioned from the ICC waybill sample based on the number of cars provided by the other carrier. A similar disparity existed in carloadings. Three years of data were supplied by one, and 1 year by the other. An average volume for the 3 years was used in the former case. Estimates of on-branch revenues were made using a 25 percent division of each carrier's total revenue.

Costs

Line costs were computed according to ICC procedures as defined in Title 49, Code of Federal Regulations, Part 1152, for on-branch costs. On-branch cost elements cover train operations as well as maintenance and ownership considerations and the following were used in the analyses:

- Maintenance of way and structures (normalized),
- Maintenance of equipment,
- Transportation,
- Freight car costs,
- Return on investment from locomotives,
- Property taxes,
- Return on value, and
- Rehabilitation needs.

Cost elements, with the exception of maintenance of way and structures, property taxes, return on value, and rehabilitation, are largely a function of the level of service required to handle the traffic generated by the line. The other cost elements are a function of the line's length and physical characteristics.

Service frequency and hours of operation were estimated for each line on the basis of its traffic characteristics. Service-related costs were computed using system-average unit costs for each of the Class I carriers and the service units estimated for each line. Length and physical characteristics were determined from railroad track charts supplemented by limited field inspections. Right-of-way values and tax rates were obtained from local contacts and data from the Washington State Department of Revenues.

For analysis and need assessment purposes, costs were viewed as comprising three principal components—operating, opportunity, and rehabilitation.

Operating costs were classified as those costs associated with line operations and maintenance, more specifically crew, fuel, train supplies, locomotives (servicing, maintenance, and depreciation), freight car costs, maintenance of way and structures, and property taxes. These costs can be considered as out-of-pocket costs or the costs that have to be met to maintain day-to-day operations.

Return on value or opportunity costs reflect those costs that can be attributed to retaining ownership of an LDL as opposed to liquidating its assets and investing the proceeds elsewhere. As such, return on value represents the opportunity foregone by retaining the investment in the line. This cost considers the value (i.e., salvage or market value of the line's assets less the cost of removal and sale) of the assets of the line segment—right-of-way, track materials, and any other facilities. Estimates of the value of track materials and rights-of-way were made as previously discussed. A 14.5 percent rate of return, consistent with ICC determinations at the time, was applied to the value to derive an annual cost.

In the case of a Class I branch line operation where the cost of the investment has been retired for many years, opportunity costs can be viewed as paper costs as opposed to out-of-pocket costs. For example, if the LDL were being operated by a short line that recently acquired the line, these costs would most likely be real out-of-pocket costs in the form of debt service.

Rehabilitation needs of the state's LDL system were considered as a cost item for purposes of this analysis for the same reason opportunity costs were included—the line's operations should be earning enough to cover the associated costs. Rehabilitation costs are incurred when the physical condition of a line is substandard or not capable of handling traffic in the manner desired or required.

Rehabilitation brings the line up to the standard desired when it is retained at that level through normalized maintenance. Thus, rehabilitation costs are usually one-time expenditures. In order to place the expenditures on an annual basis for purposes of this analysis, however, they were addressed as the amount required yearly to retire a loan equal to the needs over a 10-year period at a 10 percent interest rate.

Needs estimates were prepared from railroad track charts, spot field inspection (where clarification was needed), and Washington State Utilities and Transportation Commission inspection file data. Data taken into consideration from secondary sources consisted of the weight and age of rail, and timbering and surfacing dates. All rail weights less than 100 lb were considered too light for modern day carloadings and were replaced with 100-lb material in preparing the estimates.

Analysis Results

When revenues and costs (including rehabilitation) were compared, 11 of the 37 lines evaluated (approximately one-fourth of the mileage) were estimated to cover all estimated costs, as presented in Table 1. Six other lines were estimated to generate revenues sufficient to cover all costs except rehabilitation. These lines would then become candidates for outside rehabilitation assistance. Similarly, the six lines, which failed to generate revenue adequate for return-on-value considerations, would become acquisition candidates.

Lines failing to cover even operating costs would require operating subsidies as well as other forms of assistance if rail service preservation were to be accomplished. However, these lines will most likely become abandonment candidates.

Sensitivity

Revenue-cost comparisons just discussed were also made using 20 percent increases and decreases in costs to test the sensitivity of the analysis. The 20 percent increase resulted in one additional line estimated to have a loss, whereas the 20 percent decrease in costs resulted in two more lines showing an overall profit. Thus, it was concluded the analysis was not sensitive to the levels of change tested. Given the purpose of the analysis, to determine the order-of-magnitude needs of the state's LDL system, the analysis was deemed to be adequate for the purpose for which it was performed.

IMPACTS OF RAIL LINE ABANDONMENT

Impacts of abandonment vary in magnitude as well as users affected. Generally, benefits or losses are defined in terms of the net difference in conditions before and after an abandonment. These benefits include economic costs avoided or gains achieved by shippers, carriers, or the general public. When a line is abandoned, former rail users and the surrounding community may experience higher costs to move their product or to receive goods. Additionally, shippers, the community, and the general public may also experience employment, tax, highway, personal income, environment, energy, and other impacts. On the other hand, the abandoning railroad enjoys a benefit by reducing losses associated with the line and better utilization of the assets tied up on the line. A schematic of the potential impact framework is shown in Figure 2. This framework identifies the affected parties, possible actions by these parties, and the impacts of these actions.

Case studies of actual abandonments and the resulting impacts have provided somewhat mixed results (*2,3*). In many cases, there appears to have been little adverse impact, but then again, in individual cases, the impacts have been severe enough to force business closures and relocations. The methodology adopted focused on the most probable and quantifiable impacts.

Increased Cost of Transportation

Impact on transportation costs is the most direct and often-discussed impact by all parties involved in abandonment analyses. In most cases, the alternative available to the rail user or community is the use of truck transport to another rail site, to barge transportation, or to or from the final destination or origin. Such movements entail, in two of the cases, transshipment or double-handling expenditures as well as trucking costs.

Associated impacts concern the loss of quality of service (flexibility) caused by rail line abandonment. Seasonal movements over roads constrained by weight limits or closures could result in lost market opportunities. Further, the loss of the competitive environment surrounding rail and truck modes

TABLE 1 REVENUE-COST COMPARISON

			REVENUE COVERS		
Line No.	Length (miles)	Operating Costs	Operating & Opportunity Costs	Operating, Opportunity & Rehabilitation Costs
1	38			
2	3	■	■	
3	31			
4	98	■	■	
5	26			
6	48			
7	38			
8	26			
9	28	■		
10	7	■	■	■
11	46			
12	82	■	■	■
13	76	■	■	■
14	109			
15	86			
16	9			
17	35	■		
18	42	■	■	
19	36	■	■	■
20	19	■	■	
21	38	■		
22	35	■	■	
23	45	■	■	■
24	17	■	■	■
25	23			
26	11	■	■	■
27	9	■	■	■
28	137	■	■	
29	35	■		
30	5	■	■	■
31	19	■	■	■
32	57	■	■	■
33	68			
34	2	■		
35	11			
36	56			
37	12	■		
TOTALS				
Lines 37		23	17	11
Miles	1,463	848	698	364

SOURCE: Wilbur Smith Associates

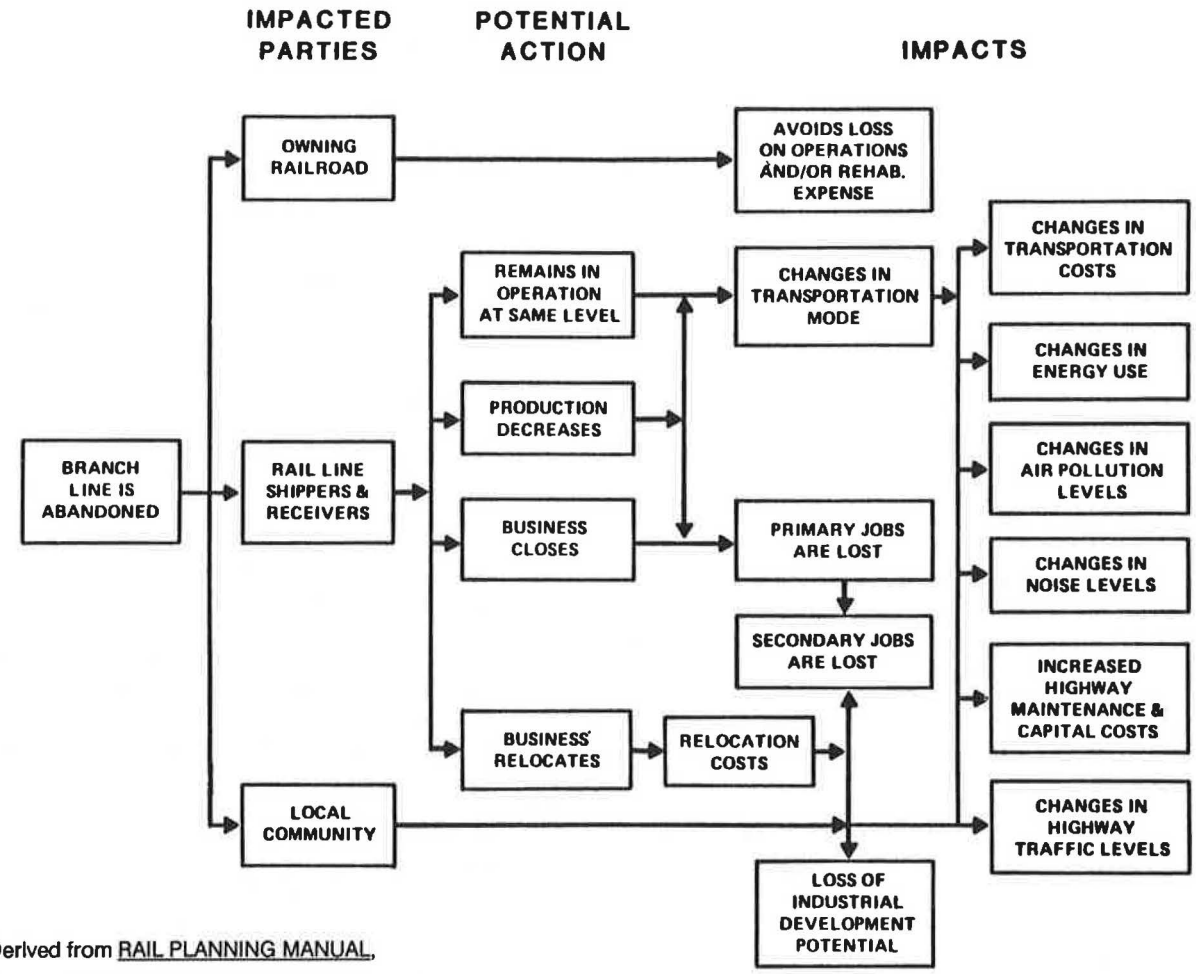
has resulted in rate changes and has upset the negotiating balance between shipper and remaining carrier. In most instances of rail line abandonment, the total demand for transportation is quite inelastic (especially in rural agricultural areas) and the net price to producers simply decreases.

Although grain is by far the principal rail traffic in eastern Washington, traffic in central and western Washington is more diverse. Wood products, principally finished lumber and chips, along with food products (much of which is dry milk, cheese, and other processed dairy products) are the dominant traffic that would be transshipped in the event of branch line abandonments in these areas of the state. Many of the rail segments in western Washington depend heavily on one principal shipper, usually a wood products or dairy manufacturing firm, for the traffic to recover expenses incurred on the line.

Grain Transportation Costs

In eastern Washington, the cooperative grain elevator is a multiplant firm; its closest alternative facility with rail service will usually be charged the same rail rate. Thus, the additional costs comprise the costs to truck to the alternative elevator plus those of the alternative elevator throughput.

A review of approximately 10 rail line analyses done earlier indicated a conservative average increase in transportation costs faced by grain elevator firms is around 10 cents per bushel (5 cents trucking and 5 cents handling). This cost is multiplied by the annual volume to be moved to identify total cost increases. This 10 cents average will be modified to reflect the competitive situation facing elevator firms in different parts of Washington. For example, elevators close to the river,



Derived from RAIL PLANNING MANUAL, Federal Railroad Administration

FIGURE 2 Potential impacts of branch line abandonment.

such as many of those in Whitman County, would receive a smaller increase or have no impact from rail line abandonment because of a readily accessible and low-cost transportation alternative (truck or barge). A major study by the U.S. General Accounting Office (GAO) (*3*) indicated an average increase in shipper cost of 19 percent, only slightly above the 10 cents average.

Other Commodity Costs

For other commodities (e.g., forest products and milk products), a similar comparison of the cost of trucking to alternative rail stations and transloading was used to determine cost increases to shippers. Discussions with firms in Washington shipping each product, supplemented by a review of recent studies, indicate the following cost impacts faced by shippers of these products is appropriate. Dairy products are moved in 80,000- to 85,000-lb movements (gross weight) throughout the year. These loads mean costs for trucking (at $1.20/mi) would be $0.06/ton-mi for a 20-ton payload with a transloading cost of $50 per truckload ($2.50/ton).

For wood chips, the average load is 70,000 to 75,000 lb because in many cases the physical volume capacity of the truck (cube) is reached before the weight limit. The average net payload then is about 17 tons, so the cost is $0.07/ton-mi with a $60/truckload (if a facility exists) to $120/truckload (if a facility has to be developed) transloading cost, or about $3.50/ton to $7.00/ton, respectively. Finished lumber often moves in loads of 95,000 to 100,000 lb, so trucking costs are $0.05/ton-mi with transloading costs of $4.00/ton (including crane investment, and driver and crane operator labor). These costs were then applied to each line segment on the basis of its commodities and trucking distances to the nearest alternate railhead.

State and County Highway Impacts

Another impact of rail line abandonment is damage to roads caused by the shift in traffic resulting in additional trucks on area roadways. Such traffic shifts cause increases in road maintenance and reconstruction costs and are costs borne by the public but resulting from private decisions. Several studies have provided estimates of impact of past rail line abandonment on county roads and state highways in Washington. Preliminary examination of impacts on state highways found rail line abandonment to be having only marginal effect in

general but was creating "pockets of potential problems"(*4*). A subsequent examination of impacts on county roads found rail line abandonments between 1970 and 1987 had caused $5 and $6 million of damage to roads in Lincoln and Spokane counties (see Figure 1), respectively, over the period, most of which occurred after 1980 (*5*). Total estimated funds needed to repair the roads was about $1.5 billion for the 10-county study area in eastern Washington (approximately $400 million related directly to rail line abandonment). Later work defined the circumstances and costs more precisely.

Pavement Life

Pavement deterioration and the rate at which it occurs are affected by the environment, principally the moisture and freeze-thaw cycle that creates internal stresses that limit a pavement's life. Although the environment causes pavement deterioration, the process is accelerated by heavy traffic.

Pavement life is directly affected by pavement design relative to traffic patterns and loads. It is not just the maximum size of a load that is critical; the number of loads applied to the pavement is also important. Loads are evaluated using the common measures of Kips (1 Kip = 1,000 lb) and equivalent single axle loads (ESALs) (usually 1 ESAL = 18 Kips), such that all loads, both single and tandem (dual) axles, are expressed in the number of ESALs impact.

Load weight impact depends on gross vehicle weight (GVW), per-axle weight, and the distance between axles (measured by the bridge formula). The general relationship between vehicle weight and damage is shown in Figure 3. Damage increases in a greater proportion than the increase in weight, thus overloaded trucks are especially tough on roads not designed for those loads.

Impact Magnitude

In reality, the loss of rail service usually adds only a relatively small number of trucks to the local road network on a daily basis. This incremental increase in truck traffic is normally small in comparison to the existing truck traffic. However, in rural areas such impacts increase in magnitude. Rural roads are often built to lower design standards, are older in age, and were not built for today's heavier (often overloaded) trucks.

The WSDOT Pavement Management System (PMS) has been used in numerous studies of road impacts over the past 5 years. These analyses indicate an average annual impact of $4,400/mi of state highway caused by abandonment of the different rail lines previously analyzed. Over the 20-year design life of the highway, the increased cost is $88,000/mi. This annualized cost of $4,400 serves, on average, as the basis for generation of impact estimates on state highways. Dividing these per-mile estimates by truck tonnage identified in each study allows a per ton-mile estimate to be developed. These estimates range from $0.01/ton-mi to $0.06/ton-mi with the average cost being $0.05/ton-mi. The range of impact occurs because of the differing environmental conditions (seasonal movement problems), pavement design, and traffic patterns (e.g., overloading of trucks) in each case study. For this analysis, ton-mile costs were adjusted for each segment of potential abandoned rail line to reflect known conditions.

County road impacts, based on a previous study and county engineer estimates, are more severe mainly because of poorer surfaces and lower design standards. A conservative estimate of $7,200/mi each year (including required bridge repair or reconstruction) is more representative of county road impacts. On a per ton-mile cost basis, the range of damage was $0.02/ton-mi to $0.09/ton-mi with an average of $0.075/ton-mi. This general estimate along with the state highway estimate was modified and applied to reflect known conditions.

However, these costs do not include a major reconstruction caused by traffic levels above the design standards of differing road segments. Present estimates for new construction of highways average $1 million/mi for a two-lane road.

Critique

The state's Rail Development Commission road damage methodology was based on preliminary results of an ongoing

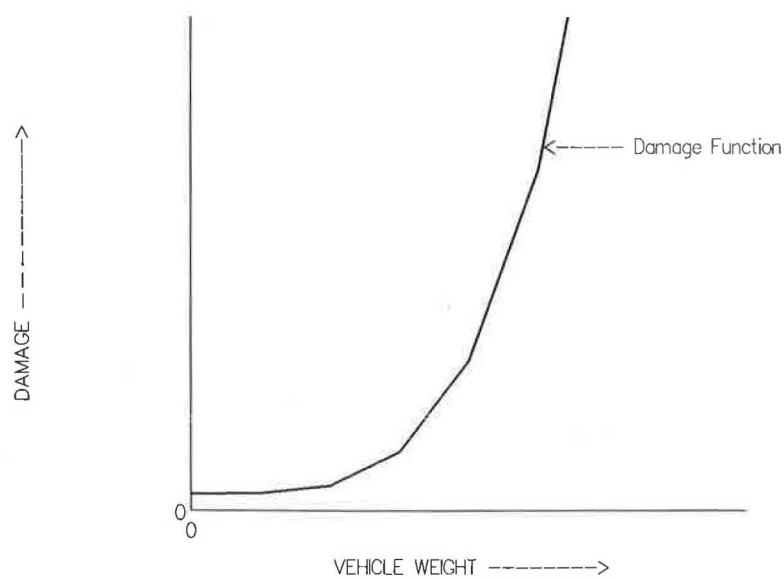


FIGURE 3 Roadway damage and vehicle weight.

(at the time) evaluation by the Washington State Transportation Center. More complete results now available (*6*) derived from four case studies reveal that no discernible increase in deterioration can be identified for highways adequately designed for truck traffic (most components of the state and federal system) unless significant truck volumes are involved. However, local and county roads, often gravel or thin 2-in. bituminous treatment over a 4- to 5-in. base, can be severely damaged. This finding is shown in Figure 4 as the relationship between pavement quality and pavement life. The difference between the expected life of a given pavement quality and its new (and shorter) life resulting from increased loadings becomes greater as pavement quality decreases.

The case studies also revealed that it was appropriate to include corroboration of the PMS findings by surveying WSDOT district and county engineering personnel. The hands-on knowledge available from these sources provided a more complete and specific picture of road impacts.

Economic Development

If increased transportation costs are the abandonment impact most frequently mentioned by rail users, then the loss of economic development potential is the most frequently mentioned by local communities. The GAO study found in examining impacts of railroad abandonment that "of most significance was the perception . . . that their communities' abilities to attract new industry in the absence of rail service would be reduced" (*3*,p.50).

However, GAO also points out that according to the ICC's Office of Public Assistance abandonment "protesters often inappropriately focus their rebuttals on the adverse community impact potentially posed by loss of rail service." They further advise that "testimony on potential impacts alone will not provide a sufficient basis to deny the abandonment" (*3*,p.40). This view results from the Commission's attitude toward speculative developments and the costs (losses) a carrier would incur while waiting for them to materialize (if ever).

Location Considerations

There is no doubt that rail service availability is a contributing factor in many industrial location decisions. In fact, in a survey of managers of newly located plants of Fortune 500 companies, rail service was the most frequently mentioned "must" factor considered in final site selection (see Table 2) (*7*). However, conclusive proof that the presence of rail service will attract new industry in a given community is not possible because there are numerous other factors in the locational decision.

Many industrial location requirements including developed infrastructure and community activities tilt the table toward developed areas and away from the rural portions of the country. Some major rail-traffic-generating industries such as pulpmills have an entirely different set of locational criteria. Thus, predicting specific needs is difficult when discussing the location of industry unless a particular prospect is being considered.

Impact Measures

Methodologies previously discussed provide a means of quantifying impacts on rail users and roadways. The same factors translate into economic growth impacts in terms of cancellation of business expansion plans or in extreme cases, business relocations or closures. Roadway impacts relate to infrastructure deterioration and diversion of public funds from development-oriented projects.

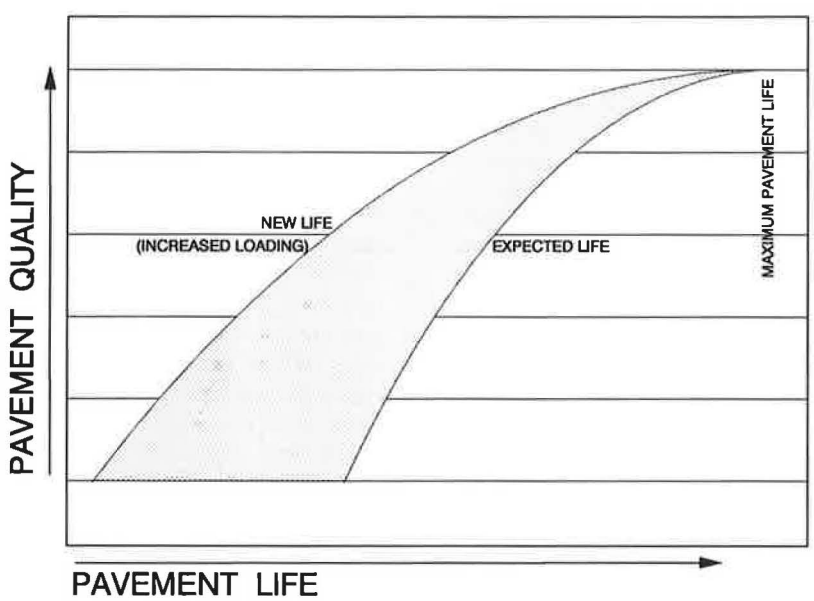


FIGURE 4 Weight and pavement life.

TABLE 2 CONSTRAINTS ON FINAL SITE SELECTION: FACTORS VIEWED AS A MUST BY ALL INDUSTRIES (7,p.150)

Factor	Percent of Plant Openings Citing at Least 1 Factor
Rail service	47
On expressway	42
Special provision of utilities (Water, sewage, gas)	34
Rural area	27
Environmental permits	23
Within metropolitan area	21
On water	16
Available land/building	8
Transportation (airport, truck service)	3
Community financing, support	1
Proximity to other division plant	1
Minimum acreage	1
Non-union site	1

Note: Number of plants citing at least one factor = 159

Although not considered in the Washington State methodology per se (survey of 10 LDLs—four that had been abandoned and six that were not—had mixed results) economic development impacts can be included in a statewide rail system examination. Although it is not possible to predict the relationship between the availability of rail service and impending economic developments, certain measures do exist that can provide valuable insights.

Suitable industrial sites, especially developed sites, are basic to the whole development process and one measure of both the increased potential for the location of industry and a community's commitment to encouraging economic development. Various organizations including state and local agencies and the railroads themselves maintain site files and can be a source of information on industrial site locations along each rail line.

If there are no sites cataloged or being promoted, it should be determined if there are properties along a particular line that are suitable for rail-oriented industrial location. Although there are means of providing rail service for off-line industry (intermodal or piggyback services), it is preferable for rail-dependent businesses, especially those with heavy traffic volumes, to locate on a rail line where a track can be constructed directly to the facility. Not only should the property be located adjacent to a line, but also because of gradient and curvature requirements that are more restrictive for railroad tracks than for roadways the property should be easily reached following the necessary engineering parameters.

In particular, unique sites (which meet the needs of industries with rare or difficult requirements, or types of sites in short supply) and their locations should be noted and steps taken to protect them for future development. The level of general economic activity or past and present industrial prospect records can provide other clues as to the potential for rail-related development. Availability of natural resources is another measure that should be noted. All provide clues for the types of industry that might locate in a given locale, the probability of occurrence, and whether rail service might be a requirement.

Rail Service Preservation-Impact Relationships

The typical approach to determining the worthiness of railroad branch line preservation efforts used in federal and state local rail service programs is to compare the costs of providing rail service with the impacts of losing it. The impacts become benefits, if avoided, and benefit-cost tools and methods are used.

Comparisons

Because the statewide branch line evaluation was not performed in detail, a rigid benefit-cost approach was not used.

It was deemed sufficient for the purposes of the effort to compare the levels of service preservation costs and impacts. Annual costs of operating, maintaining, and owning the total LDL system analyzed were estimated to be $53.3 million. This figure equates to $5.9 million in excess of the yearly abandonment impact estimate of $47.4 million ($31.9 million for transportation and $15.5 million in road damage). Eliminating the 11 lines that were estimated to earn sufficient revenues to cover all costs and thus not to be in danger of becoming abandonment candidates and comparing the remaining 26 resulted in $38.6 million in annual costs versus $22.9 million in impacts. This widened gap between costs and impacts is indicative of the heavier traffic volumes associated with the profitable lines and lighter traffic of the unprofitable lines (thus, the reduced impacts). Rail service costs remain more in proportion to the number of lines because of the large amount of fixed costs compared to variable costs typically associated with light-density operations.

Figure 5 shows the service-impact cost relationship for the remaining 26 lines (three rail lines not shown in the figure because they do not fit any of the cost scenarios used). Impacts from abandonment of one of the lines exceed all costs associated with it. For another, the abandonment impacts exceed operating plus return on value costs and the abandonment impacts exceed operating costs for three other lines. Based on federal Local Rail Service Assistance Act guidelines, the first case would most likely be eligible for any type of assistance, whereas the second would be rehabilitation candidates and also candidates for acquisition and rehabilitation.

Revenue Consideration

If each LDL's revenue earning potential were taken into consideration and a comparison made (see Figure 5) of impacts and revenue deficiencies (revenue minus costs), the number of lines that would be classified as potential assistance candidates increases roughly threefold. Three lines are estimated to have impacts exceeding the total revenue shortfall; whereas the impacts on 12 other lines exceed the revenue deficiency for all costs except rehabilitation. The impacts on three additional lines exceed operating costs.

PUBLIC OWNERSHIP

As presented in Table 1, the analysis performed in Washington State revealed that less than one-third of its LDLs (11 of 37) were estimated to earn sufficient revenues to cover all existing and anticipated expenses. Thus, two-thirds of the number of LDLs representing 1,099 mi (3/4 of the total mileage), would have little attraction for for-profit operators and could potentially become abandonment or public assistance candidates. Given the ICC's position on potential impacts, it is unlikely that future development potential will deter approval of line abandonments. Thus, public action (or action of some other nonprofit entity) would appear to be necessary to preserve service over the majority of the state's LDL system for economic development purposes.

The National Experience

Much has been written about the resurgence of local and regional railroads formed from lines that have been abandoned or spun off by larger carriers. Between 1970 and 1987 (November 1), almost 19,000 mi (*8*,p.7) of railroad had come under the domain of newly created short-line (or local) and regional railroads. Of the total, 4,420 mi are owned by public entities and 829 mi are owned by the shippers served by the line as opposed to lines acquired as for-profit operations by private companies. Public acquisitions over the period were made on behalf of states (2,287 mi) and various local organizations (2,133 mi) such as cities, counties, port authorities, local improvement districts, industrial development corporations, and transit authorities (*8*,p.12).

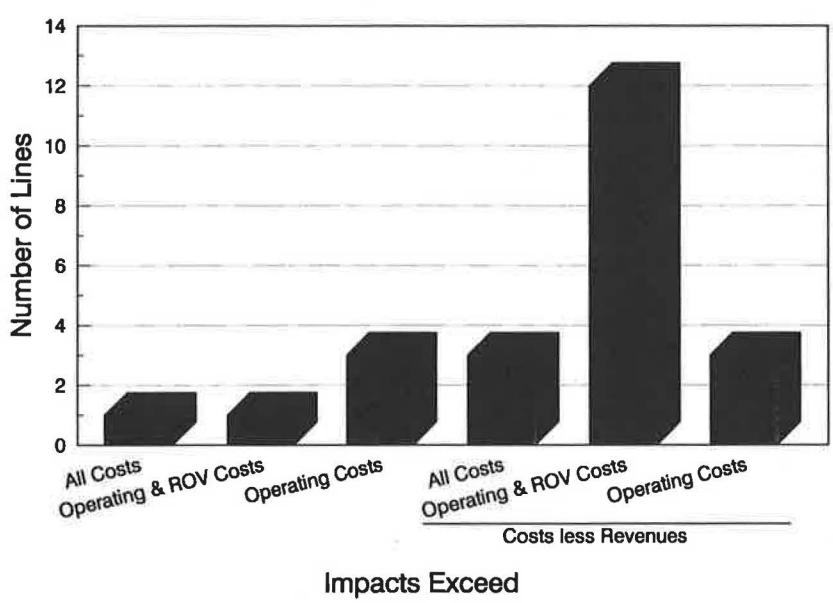


FIGURE 5 Impact cost summary.

Thus, public ownership accounts for almost one-quarter of the mileage taken over from larger railroads between 1970 and 1987. When viewed in relation to only local mileage (11,430 mi after eliminating regional railroads and all for-profit operations), public acquisitions increase to 39 percent of the total.

Washington State

Public ownership of rail lines in the state of Washington is permissible under state statutes for port districts and county rail districts. Three such rail operations now exist. One is both owned and operated by a port district and the other two are owned by a port district and a county rail district, respectively, but are run under contract or lease by short-line operators. The three lines total 177 mi in length.

Pend Oreille Valley Railroad

The Pend Oreille Valley Railroad extends 61 mi between Newport and Metaline Falls in Pend Oreille County and came into existence because of financial troubles of the Milwaukee Road that led to a 1978 abandonment filing on the line. An assessment of abandonment impacts indicated 170 jobs ($2,358,000 in annual wages) would be lost in addition to increased transportation costs of $723,000 per year. The Pend Oreille Port District was formed to acquire the line when it became apparent that was the only way to preserve service. The line was initially leased to an outside operator, but the port district took over all operations in 1984. A new industry, the Ponderay Newsprint Company, will begin operations this year and was attracted to the line through a joint state and local effort. Because rail service was a locational requirement, this business would have gone elsewhere had the line not been preserved.

Lewis and Clark Railway

The Lewis and Clark Railway operates over approximately 30 mi of the former Chelatchie Prairie Railroad acquired by Clark County in 1987. Clark County purchased the line just before it was dismantled for the purpose of promoting industry in the northern part of the county. The railway (a short-line operator) is interested in developing business by recapturing and expanding traffic from both existing industries on the line as well as attracting new industries. The Columbia River Economic Development Council recognizes that rail service is an important tool in drawing industry and market sites along the railroad. However, the Council does not show preference to sites along the railroad in order to preserve its public sector neutrality and because it is also interested in developing high-technology industries (which typically do not use rail) as well as maintaining its traditional resource-based industries. In the latter vein, a new aggregate pit is to be developed on the railroad.

Port of Royal Slope

In 1980, an embargo of service by the Milwaukee Road of all lines west of Montana was the reason for the Port of Royal Slope acquiring 25.6 mi of rail line in Grant and Adams counties. Annual transportation cost increases if the line were abandoned were expected to total $582,000 with an additional loss of sales by on-line users of $231,800. Rail service proved to be critical for one business that was handling local agricultural products. The port district line is operated by a short-line railroad that owns and operates other lines in the area.

Public Ownership Rationale

Although public acquisition of a rail line often results as an act of last recourse, there are valid reasons for public ownership.

Financial

Rail line acquisition and, more often than not, rehabilitation can require a sizeable amount of capital. Some new operations have failed because they were undercapitalized (*8*,p.22). Commercial loans have generally been available for acquisition of lines but not to fund rehabilitation. One reason for this is because the railroad's assets are already encumbered (debt represents between 75 and 90 percent of total capital for most newly formed small railroads) (*11*,p.65) and the lender would have to assume greater risks for additional loans. Also, in the case of truly light-density lines most purchase prices equate to the net liquidated value and a lender can usually recapture its funds in case of default. However, rehabilitation involves large quantities of labor and nonsalvage materials, which means the full cost of the effort cannot be recovered. Public acquisition (and rehabilitation) eliminates front-end capital requirements for the operator and thus assists in eliminating one potential cause of failure.

Stability

Another reason for public ownership, which is of primary importance for economic development purposes, relates to shipper perceptions. The location of new development on light-density lines has been viewed as a sizeable risk for some time given the past collapse of the northeastern and midwestern carriers and the current implementation of plant rationalization programs by healthy railroads. Short-line operators, especially during the early days of the period mentioned, were also viewed with skepticism as their tenure was questionable. However, ownership by a government entity alleviates many of these feats by promoting a perception of stability for an industrial prospect.

CONCLUSIONS

Economic development and rail service currently have a different relationship than the two experienced in the past. At one time, the existence of a railroad was essential to a community's economic well being. This relationship is certainly no longer the case, but even so, the presence or lack of rail service can still have an impact on local economic development. Although the impacts cannot always be fully quantified,

part of the transportation infrastructure is lost with a corresponding loss of economic development potential, and local resources that could have been devoted to economic growth and development efforts are required to overcome abandonment impacts.

Economic development has to be approached from the local level if local interests are to be protected. Given current trends in the railroad industry, continuation of local rail service provided by a branch or LDL could prove to be a problem. Thus, it appears that more and more communities will have to become directly involved in local rail service preservation efforts once it is decided that rail service is important enough to the community to warrant the necessary capital expenditures and continuing obligations.

The analytical procedure applied in staff work for the Washington Rail Development Commission for the purposes of determining rail needs and development of a responsive state rail program appears to work well in identifying potential problem lines and order-of-magnitude costs and benefits associated with rail line abandonment. The procedure allows the different entities to approach the problem with a better understanding and quantification of the overall economics and costs to be avoided or benefits achieved. Costs involved also represent a negative draw on resources that would be available for economic development.

The comparison of railroad deficits (revenue minus costs) and private and public impacts that could result from abandonment can be viewed as the amount shippers and county or state taxpayers might be willing to pay to avoid rail line abandonment and to preserve economic development opportunities that the availability of rail service might promote. The decision process should also recognize that attracting the proper industry could eliminate deficit rail operations. Thus, it is incumbent on each area potentially impacted to carefully weigh the value of rail service in light of transportation needs of existing industry and those likely or desired to locate locally.

The work performed for the Rail Development Commission led to a finding that "the state, counties, local communities, railroads, labor and shippers all benefit from continuation of rail service . . ." and that rail lines that provide benefits "should be assisted through the joint efforts of the state, local jurisdictions, and the private sector" (*12*,p.10). The Rail Development Commission also recommended funding of the Essential Rail Assistance Account, already in the statutes but not funded, totaling $4.7 million in the 1989 to 1991 biennium (*12*,p.15). In 1989, the Washington legislature subsequently approved appropriations of $2.3 million for distribution to county rail and port districts for the purposes of acquiring, maintaining, or improving branch lines.

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