Railroad Infrastructure

Section 12

Freight railroads carry over 40 percent of the nation's freight tonnage on privately owned rail lines that were largely built more than 100 years ago. Rail infrastructure includes over 140,490 miles of standard gauge track; 76,000 railroad bridges; and over 800 tunnels.[1]

Rail intercity passenger service is limited to AMTRAK. Unlike mass transit, immigrants probably do not use intercity rail more frequently than natives. As a means of crossing the border legally, rail is in a distant last place. In 2003, for example, 193.7 million passengers entered the U.S. from Mexico by car; 48.7 million walked across; 4.2 million came by truck; while only 12,101 came by train.[2]

Border crossings by rail are likely to increase dramatially when the NAFTA "highway" is completed, however.

Railroads by the Numbers

140,490 route-miles of standard gauge rail operated in the U.S. (2006)
1.6 million freight cars in service in the U.S. (2008)
$54.0 billion total freight revenue (2006)
$0.299 cents freight revenue per ton mile (2006)
3,274 average tons of freight per train (2007)
7 class I railroads (revenues above $350 million)
186 miles of high-speed rail service in the U.S. (2007)
1,243 miles of high-speed rail service in Japan (2007)

Railroad Infrastructure Spending (a)
$9.3 billion (2006) ($31.44 per capita)

2050 Spending Projections (b):
$13.5 billion: at current population trends
$10.5 billion: at 50-percent reduction in immigration
$9.3 billion: at zero population growth

Notes: a. Private and public spending on railroad infrastructure.
b. Assumes per-capita spending remains at 2005 levels.

Sources: Association of American Railroads, American Society for Civil Engineers, Bureau of Transportation Statistics, Pew Research,Wikipedia.

Freight Railroad Infrastructure

America's diminished ability to transport cargo by rail is explained by a few simple facts. Rail traffic is increasing, while the miles of track are decreasing. Rail cargo is also becoming heavier, as evidenced by a 106-percent rise in ton-miles per route mile beteen 1990 and 2006. The weight of freight hauled per mile of track increased from 8.63 million tons in 1990 to 17.70 million tons in 2006. These trends have focused more and heavier traffic over fewer core lines, thereby increasing both the strain and the importance of railroad bridges and tunnels.[3]

Aging infrastructure raises the potential for catastrophic failure. According to a Federal Railroad Administration (FRA) survey completed in 1993, more than half of the nation's railroad bridges were built before 1920. The survey, which FRA's chief engineer says is still applicable today, found that 36 percent of railroad bridges were made of timber, 32 percent of steel, and 20 percent of masonry; the remaining 12 percent were not identified by bridge type.

The survey, released prior to the August 2007 Minneapolis bridge disaster, reports that the most recent fatality from a bridge structural failure occurred in 1957. Thirteen were killed in Minneapolis.

Similarly, very few railroad tunnels have been built in the past 50 years, although some have been been upgraded. Tunnels do not deteriorate with use as rapidly as bridges do, but they are vulnerable to

water and drainage problems.

Most bridges and tunnels were designed to have long useful lives—for the rolling stock of the time. Until recent years, this provided an extra cushion, because the old steam locomotives were even heavier than today's diesel and electric locomotives. The problem now is freight cars. Average railcar weights have increased from 263,000 pounds to 286,000 pounds, and some can weigh as much as 315,000 pounds. In addition, freight car height has increased as intermodal freight traffic requires double-stacking of cargo containers. Some bridges and tunnels do not have the clearance needed to accommodate these trains.

Grading the Railroads

In its 2005 Report Card for America's Infrastructure, the American Society of Civil Engineers (ASCE) gave heavy rail infrastructure—including freight rail traffic, Amtrak, and intercity rail service—a grade of C– because "limited rail capacity" had created "significant chokepoints and delays" for the first time since World War II. The I-35W bridge collapse also raised questions about the safety of railroad bridges and led the FRA in September 2007 to recommend that rail operators "adopt and implement safe maintenance practices to prevent bridge failures," according to an FRA fact sheet on railroad bridge safety.[4]

A study underwritten by the American Association of Railroads and released in September 2007 concludes that freight railroads need $148 billion in infrastructure expansion over the next 28 years. Without such an increase, one-fourth of the nation's track will be operating at or near full capacity by 2035, "causing severe congestion that will affect every region of the country and potentially shift freight to an already heavily congested highway system."

We might dismiss this as another industry crying wolf, except that in May 2008 the Congressional Budget Office (CBO) reached much the same conclusion. The CBO claimed that freight railroads must increase their annual infrastructure spending by $4 billion per year to maintain performance.[5]

By contrast, current infrastructure spending for passenger rail is estimated to be *above* the optimal amount. This finding could reflect different definitions of capital spending and maintenance needs between passenger and freight rail lines. More likely, it illustrates an important general point: Not all investment is effective in maintaining, or even is intended to maintain, the performance of existing infrastructure.

A Southern Pacific locomotive pulls passenger, mail, and observation cars along the Tillamook Branch in the Pacific Northwest.

Waste happens.

Railroad Finance

Freight railroads are privately owned and are subject to fairly little federal economic regulation. That is the good news. The bad news: Railroads receive little federal and no state financial support—in sharp contrast to highway and mass transit systems, which are dependent on public infrastructure funding.

The Government Accountability Office (GAO) reports that the federal government provided only $263 million for freight rail infrastructure in 2006—a fraction of the estimated $9 billion spent by the railroads themselves. Equally important was the GAO's observation that the federal funds "are not invested

under any comprehensive national freight strategy, nor are the public benefits they generate aligned with any such strategy."[6]

Part of the problem is a lack of information on the condition of railroad infrastructure. Freight railroads are privately owned. Most of them consider information about the condition of their bridges and tunnels proprietary, citing concerns about security and liability. They collect such information sporadically—only 16 of the 43 smaller freight railroads surveyed by the Federal Railroad Administration inspect their bridges at least once a year—and share it with Washington selectively.

The federal government has no regulations or standards for the safety of railroad bridges and tunnels. The value of Washington conducting independent inspections of railroad infrastructure is therefore limited.

Compared to other modes of transportation, the railroads spend heavily on infrastructure. Truckers and maritime barge operators, for example, use infrastructure that is owned and maintained by the government, providing them with a competitive advantage over the railroads. The economic, environmental, and safety benefits of railroads vis-a-vis the other modes may warrant federal funding for rail infrastructure.

The NAFTA Railroad

NAFTA was supposed to combine cheap Mexican labor with U.S. capital and technology to enable both countries to compete with cheap Asian imports. C. Fred Bergsten and Jeffrey Schott of the Institute for International Economics testified to Congress in 1997:"We wanted to shift imports from other countries to Mexico since our imports from Mexico include more U.S. content and because Mexico spends much more of its export earnings on imports from the United States than do, say, the East Asian rivals."[7]

While official Washington endorses those goals, NAFTA's transportation plans make a mockery of them.

We refer to a secretive, under-the-radar, plan for a north-south super-highway spanning three countries—from Mexico through the United States and into Canada. The word "secret" is appropriate. The plan is regionalized, mostly in Texas—where the governor recently unveiled plans for a $184 billion superhighway project. While a lot of Texans know about it, few know the whole story because the project is being built in increments so as to keep it off the national radar screen of most, if not all, the mainstream media.[8]

The NAFTA "highway" is, in reality, a 1,200-foot-wide transportation corridor that will ultimately include six passenger vehicle lanes, four truck lanes, and six rail lines, with utility, maintenance, and safety zones. The highway is to start at the port of Lazaro Cardenas in southwest Mexico. This port is being expanded to accommodate as many as 2 million containers per year by the end of the decade. Punta Colonel, about 150 miles south of Tijuana, is also being eyed for expansion to offload more cargo containers filled with Asian goods. It too will connect to the highway.

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Chinese goods unloaded at Mexican ports are to be loaded onto the NAFTA railroad, which carries them north through the center of Mexico to the United States border at Laredo. In the U.S., the railway continues north through Texas and Arkansas to Kansas City, Missouri, with extensive connections to the south, Midwest, and ultimately, Canada.

Thanks to NAFTA, the historical east-west orientation of U.S. rail lines will give way to a north-south orientation. There is a irony here: Chinese

immigrants helped to build the first transcontinental railroad in the U.S. Now Chinese imports threaten to put it out of business.

The maritime route from Shanghai to Lazaro Cardenas is about 2,000 miles longer than the route from Shanghai to Los Angeles. In spite of this 30-percent increase in overall mileage, the NAFTA railway offers customers a 15-percent cost reduction compared to shipping cargo containers to Los Angeles or Long Beach. These savings are achieved through the callous displacement of U.S. longshoremen and transportation workers by cheap, easily exploited Mexican labor. Taxpayer subsidies and privatization schemes further obscure the true cost of the NAFTA transportation corridor.

The wage effects will extend far beyond transportation, however, as the railroad will accelerate the offshoring of U.S. manufacturing jobs. While many new transportation jobs will be created here, most of the workers will be recruited from the South and will be paid minimal wages. The value of native labor will fall to unprecedented lows.

The railroad is but a cog in a much larger wheel—a planned North American Union that will allow labor and capital to move freely across the increasingly meaningless national borders of the U.S., Mexico, and Canada.

Rail Security

In the days and weeks following 9/11, Amtrak was inundated with passengers who could not, or would not, fly to their destinations. The intercity rail system operates in 46 states over a 22,000 mile network. Economic fallout from the disaster would have been far greater had the Amtrak alternative not been available.

Since then—and especially since the Madrid train bombings of March 2004—concerns have been raised over the security of passenger rail service in the U.S. Unfortunately, the nature of such systems makes them inherently vulnerable to attacks and difficult to secure. A Government Accounting Office study enumerates the problems:

> …..By design, passenger rail systems are open, have multiple access points, are hubs serving multiple carriers, and, in some cases, have no barriers so that they can move large numbers of people quickly. In contrast, the U.S. commercial aviation system is housed in closed and controlled locations with few entry points. The openness of passenger rail systems can leave them vulnerable because operator personnel cannot completely monitor or control who enters or leaves the systems.
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> In addition, other characteristics of some passenger rail systems—high ridership, expensive infrastructure, economic importance, and location (large metropolitan areas or tourist destinations)—also make them attractive targets for terrorists because of the potential for mass casualties and economic damage and disruption…[9]

Efforts to strengthen passenger rail security have been minimal, at best. In particular, GAO notes that the Transportation Security Agency has not done a comprehensive assessment of the risks facing passenger rail—and therefore has no way to evaluate which security measures offer the best "bang for the buck." New screening technology has been tested, but no decisions have been made on installation. ■

Endnotes

1. Government Accountability Office, August 2007.
2. Bureau of Transportation Statistics, "Border Crossing US-Mexico Border Crossing Data," http://www.bts.gov/programs/international/border_crossing_entry_data/us_mexico/index.html.
3. Government Accountability Office, "Federal Role in Providing Safety Oversight and Freight Infrastructure Could be Better Targeted," August 2007.
4. American Society of Civil Engineers, 2008.

5. Congressional Budget Office, "Issues and Options in Infrastructure Investment," May 2008.
6. American Society of Civil Engineers, January 2008.
7. www.citizensforaconstitutionalrepublic.com/hawkins9-24-06.html.
8. www.aim.org/aim_report_print/5102_0_4_0/.
9. Government Accountability Office, "Passenger Rail Security: Federal Strategy and Enhanced Coordination Needed to Prioritize and Guide Security Efforts," March 2007.

Federal Spending on Infrastructure and Social Programs, 1960-2006 (as percent of non-defense spending)

	Education and Social Programs (%)	Infrastructure (%)
1960	20.7	11.2
1970	26.5	7.1
1980	31.0	6.4
1990	25.5	3.6
2000	30.9	3.6
2006	33.9	3.5

Note:
Social programs include Medicaid and means-tested income programs. (Social Security and Medicare are not included.)

Sources:
Office of Management and Budget, *Historical Statistics*, FY 2009 Budget, Table 3.1. (social programs); Congressional Budget Office, *Trends in Public Infrastructure Spending*, August 2007, Table A-2. (infrastructure).