

Overview of the Federal Railroad Administration



Joseph H. Boardman

Administrator

Federal Railroad Administration

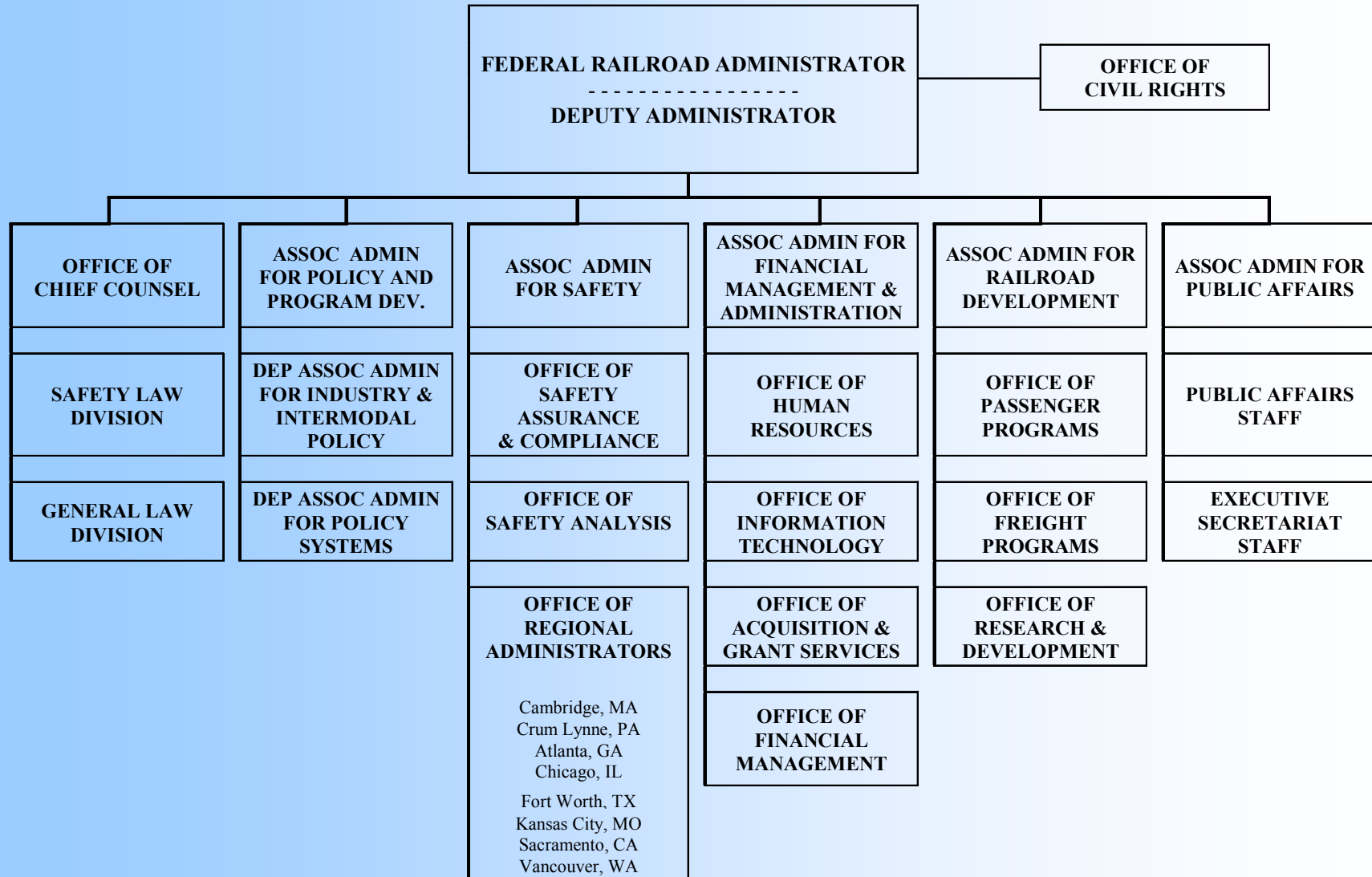
Surface Transportation Policy and Revenue Commission

June 26, 2006

FEDERAL RAILROAD ADMINISTRATION



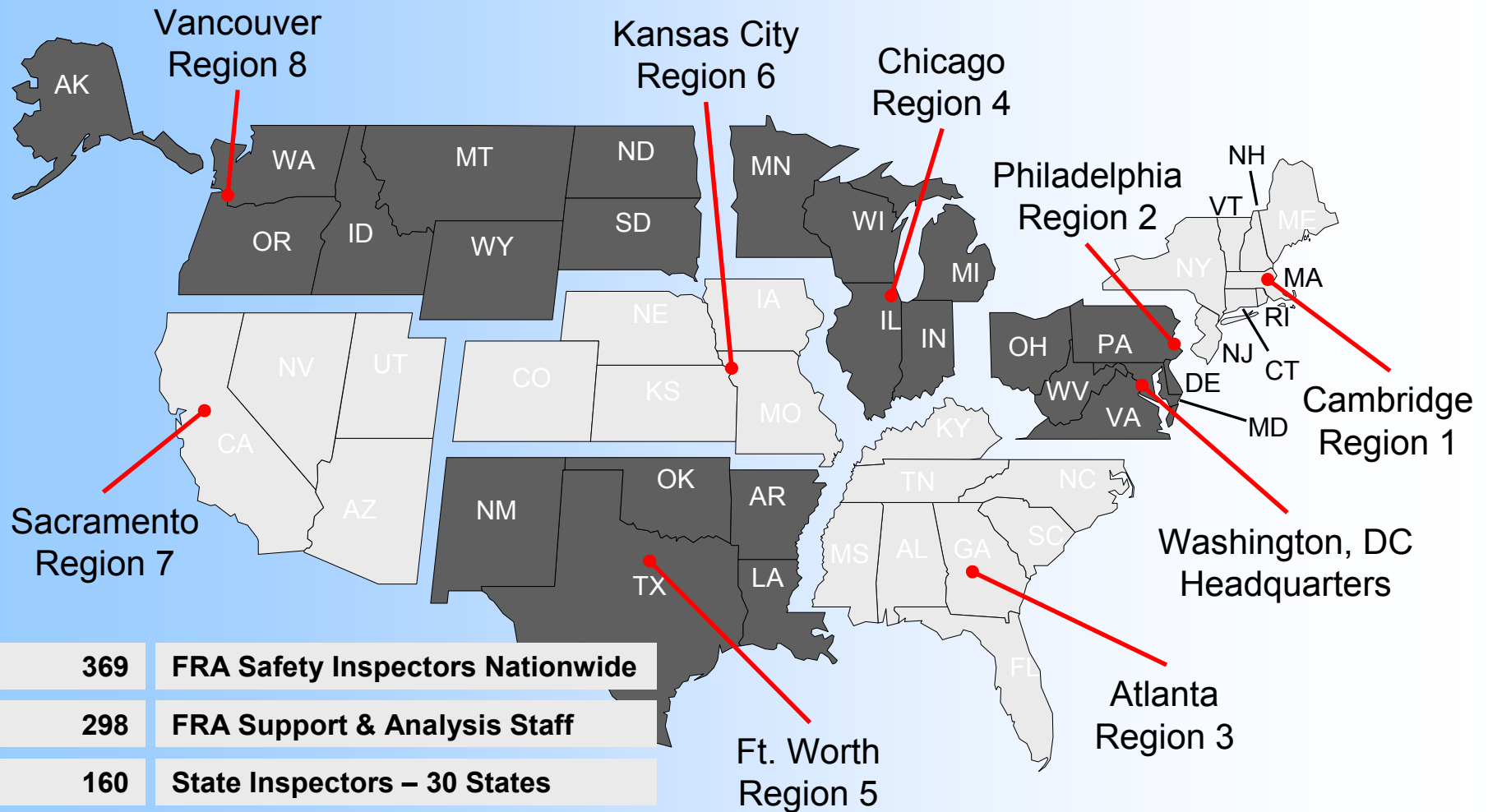
FEDERAL RAILROAD ADMINISTRATION ORGANIZATIONAL STRUCTURE



FEDERAL RAILROAD ADMINISTRATION

Federal Railroad Administration

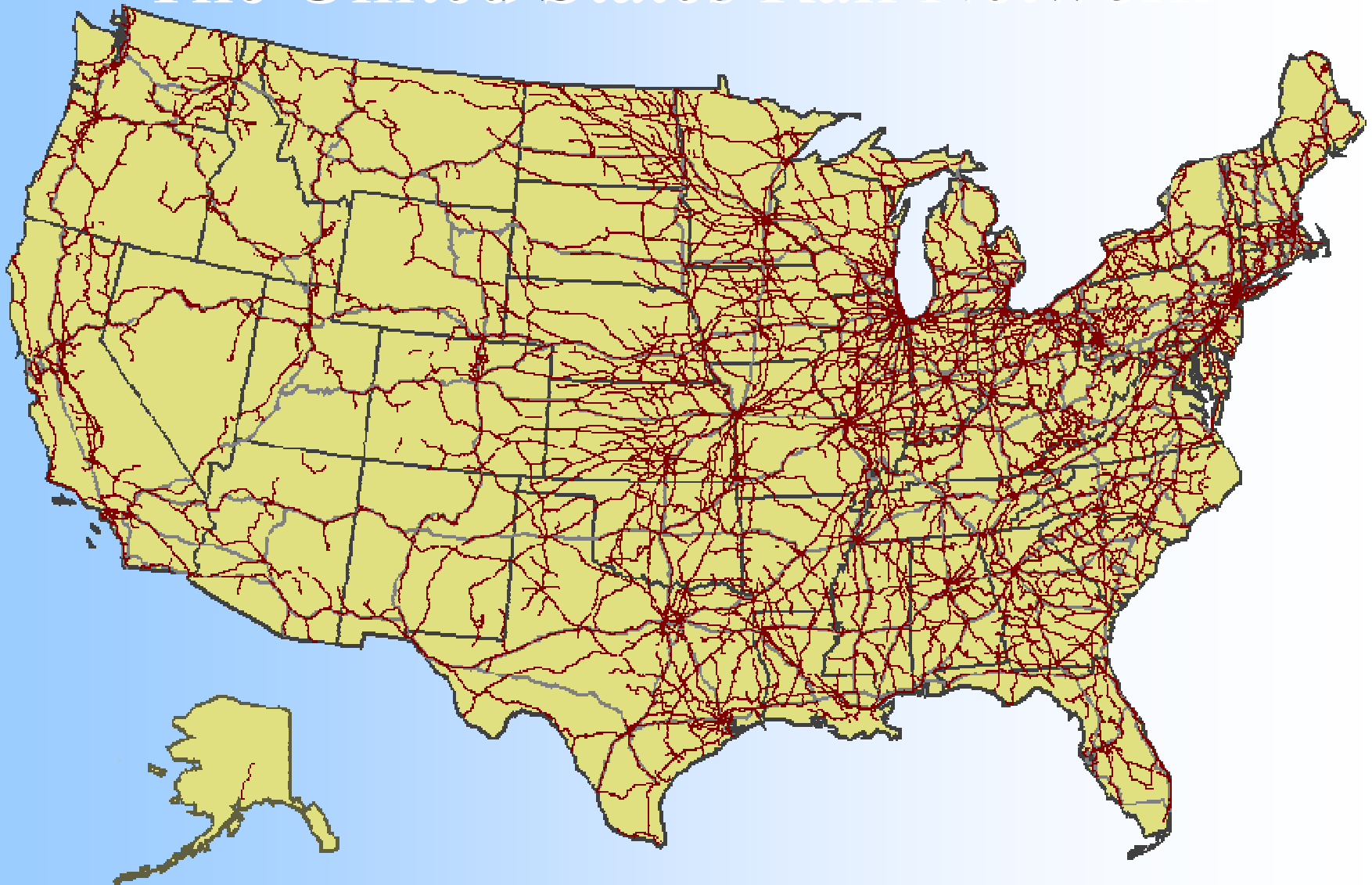
Eight Regions



FEDERAL RAILROAD ADMINISTRATION



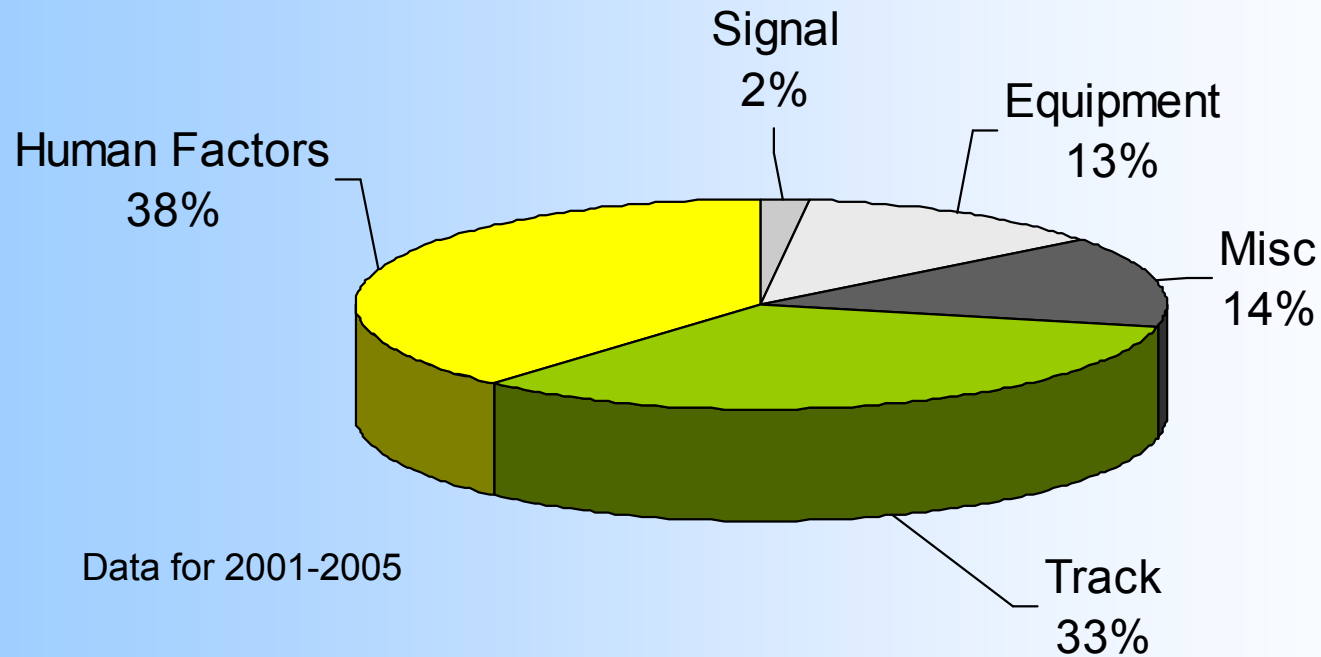
The United States Rail Network





Industry Overview

Train-Accident Cause Categories



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Industry Overview Freight and Passenger Railroads



Type	Railroad	Miles Owned	Miles Operated *	Employees
I	Amtrak	745	22,256	20,938
I	BNSF Railway	23,984	32,150	37,507
I	CSX Transportation	18,513	22,150	30,683
I	Canadian National – No. America	6,363	6,822	6,530
I	Kansas City Southern	2,905	3,072	2,670
I	Norfolk Southern	16,766	21,336	28,163
I	Canadian Pacific Rwy. Co.	1,680	3,251	2,635
I	Union Pacific	27,123	32,616	49,511
II	Regional (31 carriers)	15,641	15,641	7,422
III	Short Line (518 carriers)	27,109	27,109	11,878
	Commuter Railroads (19 agencies)	2,527	3,979	24,813
	Total	143,356	190,382	222,750

[I] Class I railroad (annual operating revenues of \$272 million or more) per Surface Transportation Board

[II] Railroads with more than 350 miles of road and/or more than \$40 million annual operating revenues

[III] Railroads with less than 350 miles of road and/or less than \$40 million annual operating revenues

* Miles owned plus operating rights on other railroads

FEDERAL RAILROAD ADMINISTRATION

Industry Overview Freight and Passenger Railroads



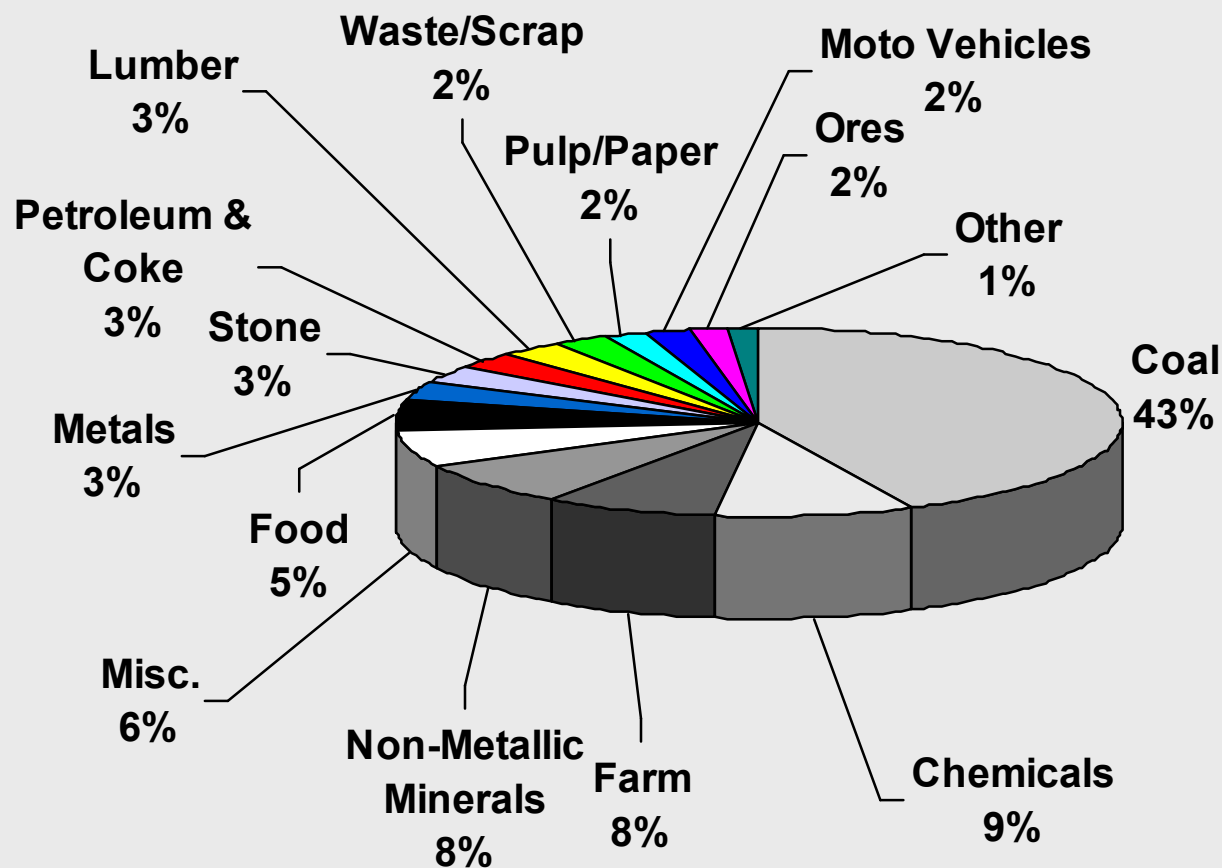
Class I Railroads [7 freight/1 passenger]	8
Intercity Passenger [Amtrak, Alaska Railroad]	2
Locomotives (Amtrak)	276
Passenger coaches (Amtrak)	1,211
High-speed train sets (Amtrak)	19
Daily passengers (Amtrak)	65,000
Commuter Railroads/Agencies	19
Passenger Locomotive/Coaches	5,967
Regional Railroads	31
Short-Line Railroads	518
Partially Regulated NonGeneral System Railroads (tourist)	139
At-Grade Crossings (total)	242,548
Public Grade Crossings	146,658
Private Grade Crossings	93,870
Pedestrian Grade Crossings	2,020
Freight Cars	1,312,245
Freight Locomotives (Class I railroads)	22,214
Major Classification Yards	88
Total Track Miles	233,779



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Industry Overview

Share of Commodities



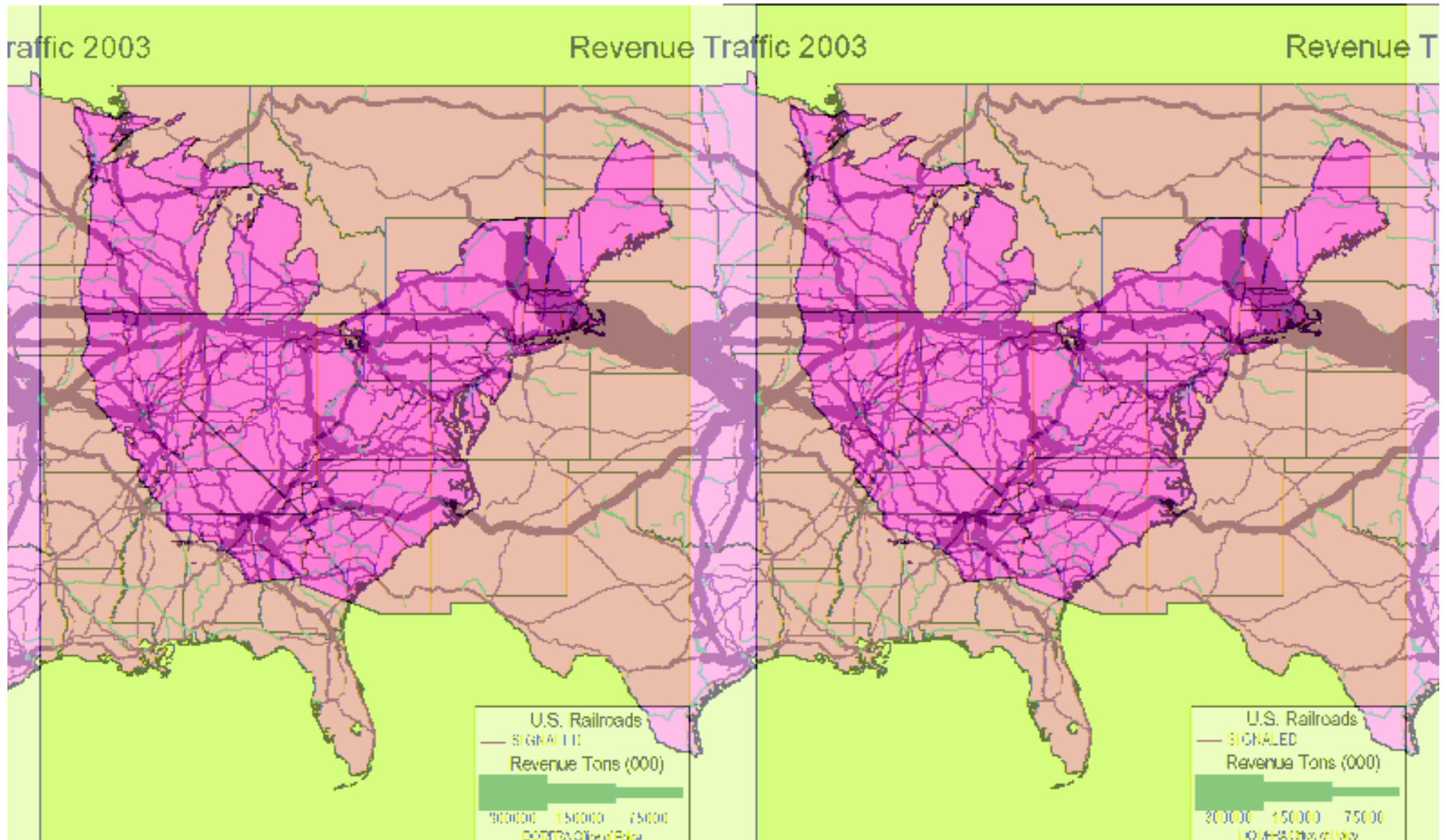
Class I railroads originate 84 percent of traffic and generate 91 percent of revenue; regional and short lines originate 16 percent of traffic and generate nine percent of revenue.

Class I Railroads Total Tons Originated 2004 – 1,844,202

Source - Association of American Railroads



Traffic Density (All Commodities):



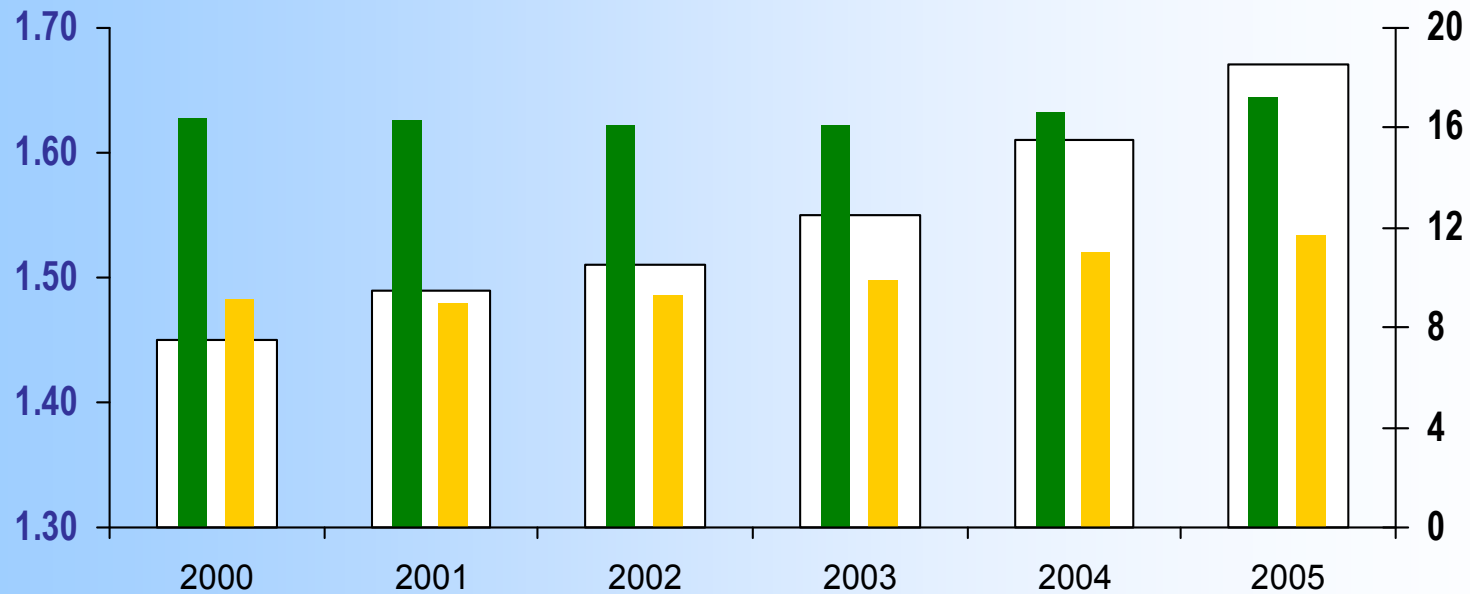
FEDERAL RAILROAD ADMINISTRATION

Industry Overview Revenue Ton-Miles/Carloads



R-T-M (trillions)

Car Loads (millions)



- Revenue Ton-Miles (trillions)
- Car Loads Originated - Excluding intermodal (millions)
- Intermodal Traffic - Containers/Trailers (millions)



Railroad Investment for Intercity Passenger Rail

- Traditionally, Operating and Capital Grants to Amtrak.
- Currently ~\$1.3 billion vs. ~\$1.6-1.8 billion Amtrak requests.
- Dependence on annual General Fund appropriation limits ability to develop meaningful long-term capital program, or partnerships with non-Federal entities.
- The significant portion of "discretionary" general funds available for transportation used to fund Amtrak/intercity passenger rail makes budget formulation susceptible to the needs of other programs.



Intercity Passenger Rail (the future)

- Need to improve Amtrak economic performance.
- Need to establish the Federal Government as a reliable/dependable capital investment participant/partner
- Need to address accumulated deferred maintenance and operational enhancement opportunities for the NEC
- Need to develop investment partnerships with the States based upon models developed for other surface transportation programs.
 - Equipment for State-supported services
 - Infrastructure improvements to address bottlenecks causing OTP/trip-time problems.



Research and Development

- Traditional focus of the ~\$35 - 45 million program has been on safety.
 - Development of new inspection technologies (e.g. automated track inspection vehicles, joint bar inspection)
 - Development/demonstration/validation of new designs (e.g. crash energy management, dark territory switch position indicators)
 - investigation of technological issues of concern (e.g. Acela brake disc cracks)
 - assist in accident investigations where technology might have contributed.
 - assist in rulemakings related to technology.
- Expanded focus on efficiency and capacity/congestion issues.
 - Positive Train Control
 - alternative fuels/ hybrid locomotives
- Strong partnerships with the "industry"
 - coordinated reviews of research needs with TRB, AAR
 - cost sharing very common



Research & Development (continued)

- Challenges that face FRA's R&D program
 - competition for adequate funds (e.g. FRA R&D frequently offered as an offset for other initiatives at various levels of budget development.)
 - appreciation of the time required to bring technology to "deployment-ready" state.
 - acceptance of risk inherent in R&D and willingness to accept some amount of "failure".
 - earmarking of funds for projects or institutions regardless of merit.



Freight Demand Forecast Predict Increasingly Limited Capacity

- The Department's Bureau of Transportation Statistics' Transportation Services Index shows that freight transportation demand is at record levels. Since the economy began its recovery in 2001, the Freight Service Index has grown by over 14 percent, and the overall trend is expected to continue.
- Global Insight, Inc. projects growth in tons for rail for this year at 2.5 percent, while trucking is expected to grow by 3.3 percent.
- Federal Highway Administration's Office of Freight Operations forecasts that overall demand for freight transportation will grow 43 percent by the year 2020.
- Rail freight system's traffic growth is forecast at 35 percent to maintain its present share of the freight market, and substantially more if highway congestion or public policy drives more freight from roads to rail.

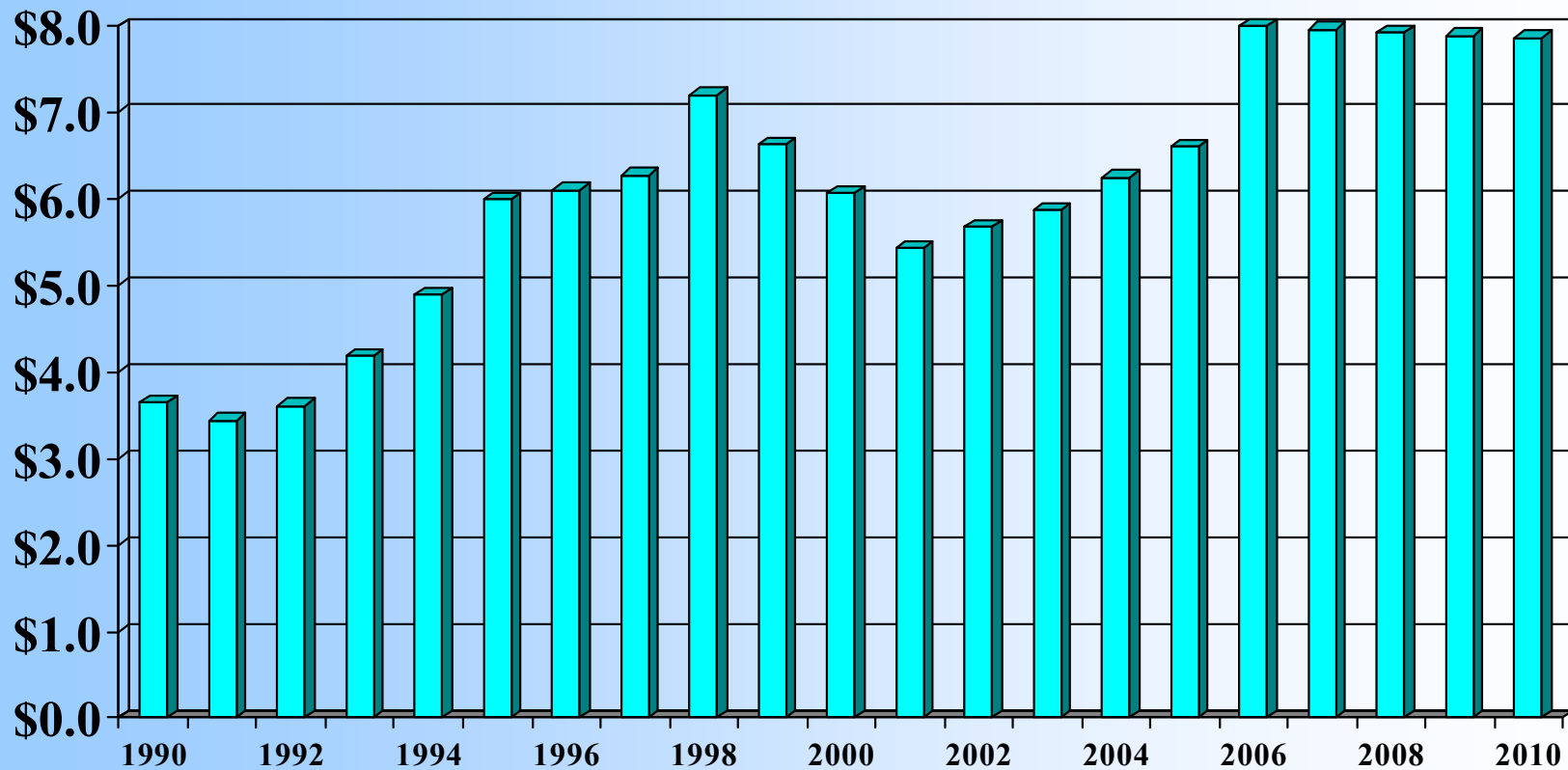


Railroad Investment

- Freight railroading is among the most capital-intensive of industries
- The industry's capital expenditures from 1990 through 2005 totaled nearly \$90 billion
- During this same period, another \$175 billion was expensed for maintenance-of-way and maintenance-of-equipment.
- The industry reports that as a general rule, 15 to 20 percent of that investment for any given year goes to capacity expansion.

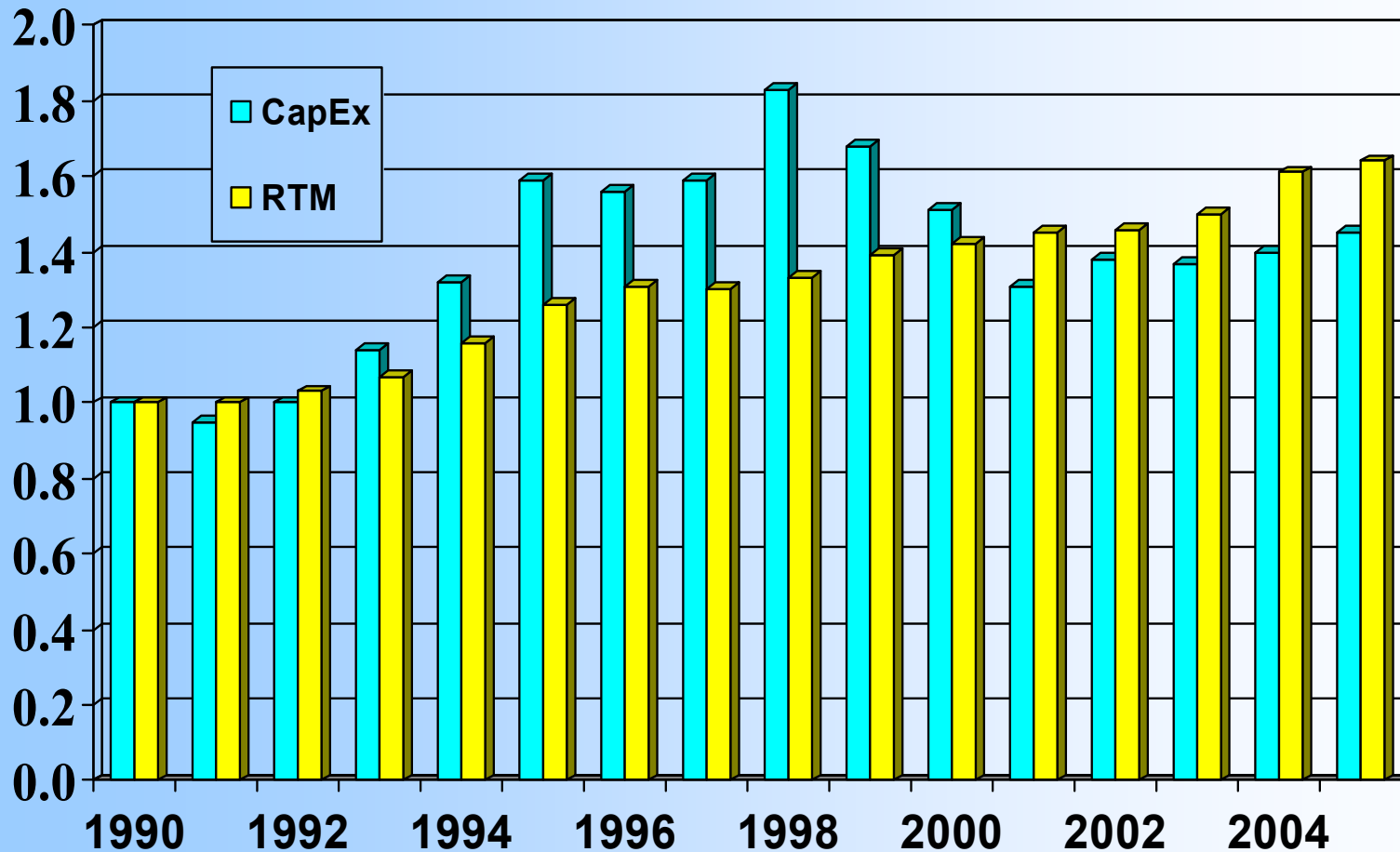


Class I Railroads Capital Expenditures (Dollars in Billions)



Source: Assn. Of American Railroads, "Railroad Facts," various for historic results
FRA Staff projected for 2009- 2010

Chart 2
Index of Capital Expenditures* and Index of Revenue Ton-Miles
Each Indexed to 1990

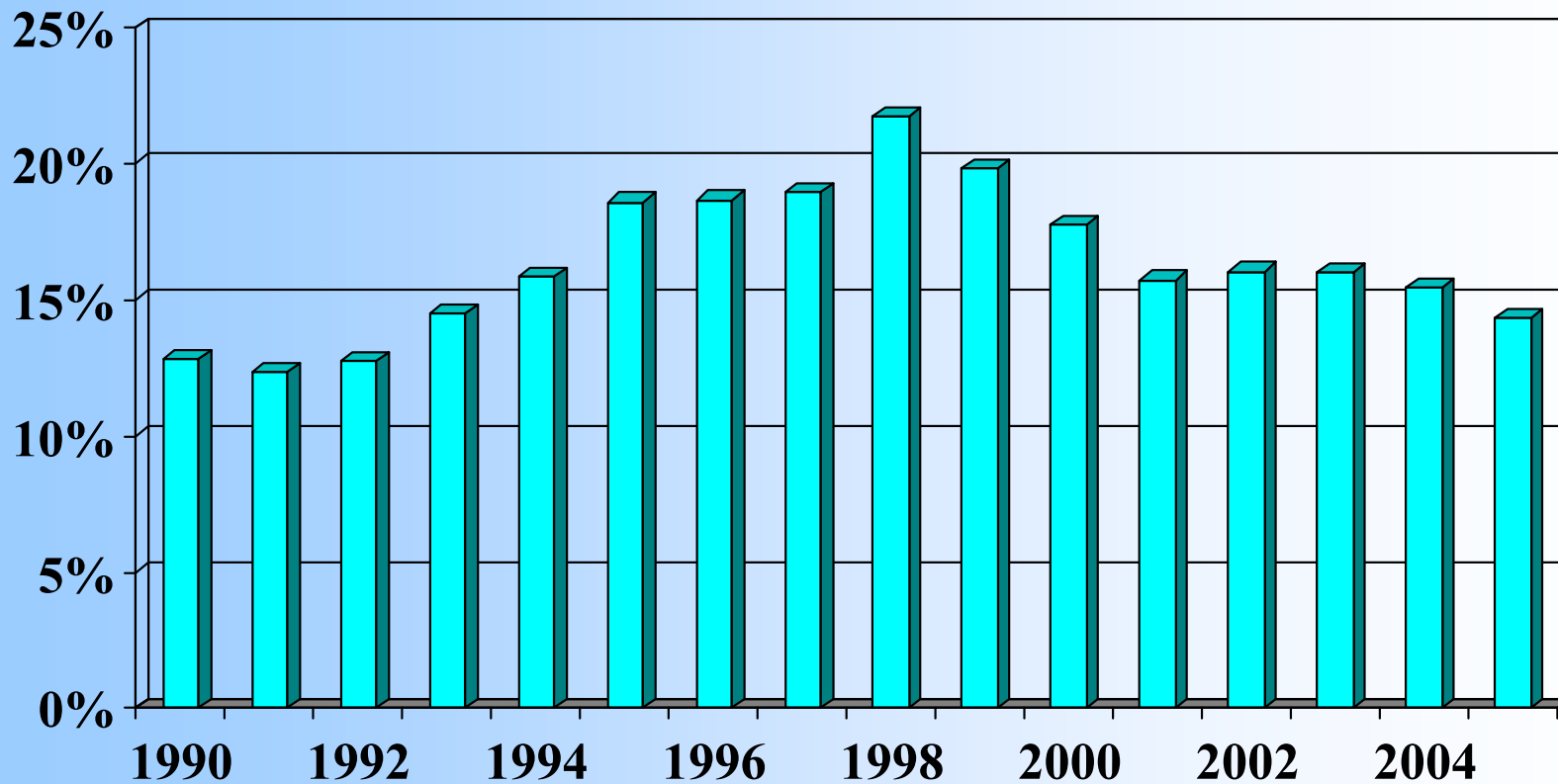


Source: Assn. Of American Railroads, "Railroad Facts."

* Capital Expenditures are in constant 1990 dollars



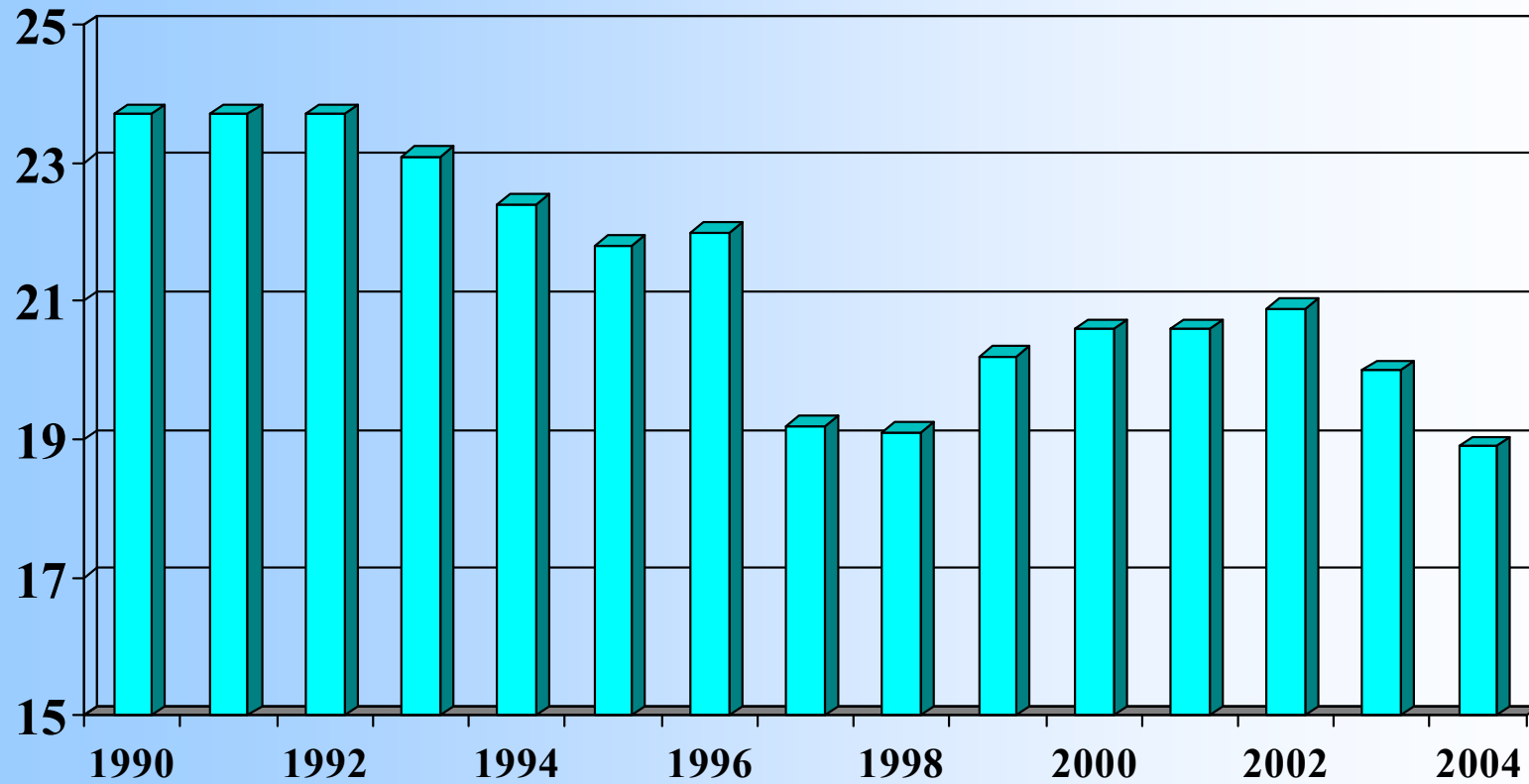
Chart 3
Class I Railroads
Ratio of Capital Expenditures to Operating Revenues



Source: Assn. Of American Railroads, "Railroad Facts."



Chart 4
Class I Railroads
Freight Train Speed



Source: Assn. Of American Railroads, "Analysis of Class I Railroads."
Measure of Freight Train-Miles per Freight Train-Hour



New Technology Will Improve Capacity

- Investment in new technology holds significant promise. Positive Train Control (PTC) and Electronically Controlled Pneumatic (ECP) brakes.
- Under PTC, enhanced communications and real-time information reduce headways and improve train speeds and safety.
- ECP brakes offer major benefits to the rail industry for improved train handling, car maintenance, and fuel savings, ECP brakes also offer increases in network capacity.



Expanding Capacity Will Require Investment From Several Partners

- Public/private partnerships, such as the Alameda Corridor project, Delaware's rehabilitation of Norfolk Southern's Shellpot Bridge, and the Brownsville rail relocation provide one approach to increasing capacity.
- State and local public-private partnerships provide a logical, market-based approach to address the returns demanded by private capital and the public benefits needed by communities and governments.
- Other successful examples include, the Alameda Corridor-East and the Kansas City Flyovers.



Other Rail Investment Needs

- Capacity/Congestion reduction
 - Record levels of traffic on much smaller system.
 - Substantial portions of system still single track without signals.
 - Specific bottlenecks such as entry into urban areas where freight and commuter rail compete for available capacity and major freight origins/destinations (ports, PRB)
- Preservation of light density service
 - Short-line startups usually saddled with poor track condition.
 - Changing rail transportation norms (286,000# cars)
 - Acquisition debt
- Other public interest
 - Relocations from downtowns
 - Grade crossing/trespasser safety



Other Rail Investment Needs (continued)

- Federal rail capital investment programs are few and generally not funded.
- Marginal involvement with the Highway Trust Fund
- RRIF most used today
 - loans for capital improvements with terms of up to 25 years at Federal Government's cost of money.
 - Credit programs not favored as a Federal investment tool.
- Rail-line relocation program, authorized at \$350 million/year 90% Federal grant-- General Fund appropriation. Not funded thus far.



Other Rail Investment (continued)

- "High-Speed" corridor planning/development. Authorized at \$100 million/year 50% Federal grant -- General Fund appropriation.
 - Only small earmarked projects funded thus far.
- Crossing improvements at high-speed passenger corridors. \$5.25 million in annual Highway Trust Fund contract authority available nation-wide -- 100% earmarked.