

# RAIL NETWORK *Keeps* OPERATING *Smoothly*

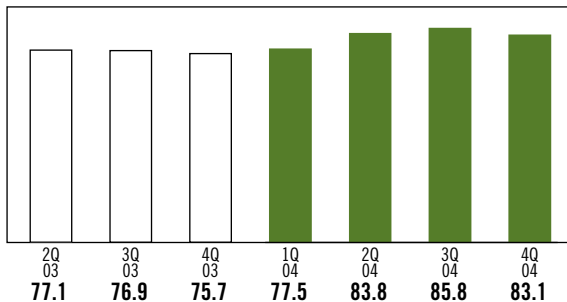
SOLID PLANNING AND INVESTMENTS IN PEOPLE, EQUIPMENT AND INFRASTRUCTURE enabled Norfolk Southern to improve its operating performance and to continue consistent, reliable service to customers in 2004, even as volume growth put significantly more traffic on the network.

- ▶ The Thoroughbred Operating Plan, or TOP, continued to provide a foundation for growth. Further refinements of TOP and new technologies brought solid results to NS' operating metrics.
- ▶ The Coal Transportation Management System, which also includes grain train traffic information, and the Strategic Intermodal Management System helped improve coal unit train and intermodal network operations, respectively.
- ▶ Local Operating Plan Adherence, or LOPA, a service measurement tool, was refined. LOPA operates through the Thoroughbred Yard Enterprise System to plan and measure local switching operations at origin and destination terminals.
- ▶ Another measurement tool, Operating Plan Adherence, was enhanced to better measure

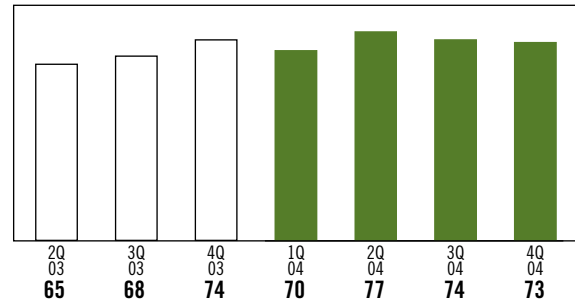
shipment connection performance. The system uses a trip plan for each rail car on the system and monitors connection performance to measure if each car makes its connections correctly and on time. Volume increases affected on-time train performance for the year; however, a focus on making connections helped ensure individual shipment performance. When planned connections are met, service consistency and overall velocity improve, even with increased carloads.

- ▶ The company advanced its order for locomotives, purchasing 207 in 2004.
- ▶ NS continued to use remote control locomotive technology in local switching operations to improve safety and efficiency.

CONNECTION PERFORMANCE (PERCENT)



SWITCHING PERFORMANCE (PERCENT)



- ▶ NS hired more than 2,000 train and engine crew members in 2004 to prepare for increased traffic volume and work force attrition. Several hundred mechanical and other employees also were hired to handle the additional locomotive and car programs planned for 2005. Training at McDonough, Ga., was expanded, with classes running 24 hours a day, seven days a week.
- ▶ NS began testing its Unified Train Control System, or UTCS. Jointly developed by NS and General Electric, UTCS will replace existing systems with networked, computer-aided dispatching workstations that, together with feeds from current tactical NS information systems, will provide a seamless transportation management system. Phased installation of UTCS began in December 2004.
- ▶ A pilot program using LEADER, or Locomotive Engineer Assist Display and Event Recorder® technology, began in 2004 on the Winston Salem, N.C., line. The pilot is a partnership among NS, New York Air Brake Corp., General Electric Transportation Systems and the Federal Railroad Administration. LEADER works by continuously logging the operating state of a train in its memory, creating a statistical profile of the operation over a number of trips. That information is used to develop the most efficient trip – called the “golden run” – and to help engineers repeat it on subsequent trips in real time by adjusting the throttle and brakes.



Engineer Jeff Blasco of Crewe, Va., operates the controls of a Dash-9 locomotive. Norfolk Southern is installing advanced technology aboard locomotives to maximize operating efficiency.



A trainload of trilevels for hauling vehicles moves across the countryside at Johnstown, Pa. Norfolk Southern is North America's largest rail carrier of automotive parts and finished vehicles.