

Innovation

Builds Operating Capacity

Building on its heritage of innovation, Norfolk Southern focused on customer satisfaction in 2005 by integrating new systems that helped operations remain consistent even with record volumes and major weather-related disruptions.

Norfolk Southern has prepared itself to take on additional business and to handle it effectively:

- ◆ A joint venture with Kansas City Southern pending before the Surface Transportation Board will increase

capacity and improve service on the **Meridian Speedway** between Meridian, Miss., and Shreveport, La., a critical connection between the Southeast and Southwest.

- ◆ Routing agreements with several



Superintendents of transportation Howard Gillespie, standing, Phil Turner, far left, and Wayne Baker keep their eyes on train movements and horsepower utilization at the operations control center in Atlanta.

By developing inventive business solutions benefiting the company as well as customers and communities, and using performance-enhancing technology, NS looks to the future even as it hails its success as a 175-year company.

The continued efficiency of rail in the multimodal global marketplace depends on alliances and other cooperative efforts to increase profitability and improve service on the transportation infrastructure.

OTC Optimized Train Control



The Optimized Train Control system enhances train and operating efficiency by linking together a variety of data points with the Norfolk Southern communications network.

major carriers streamline the exchange of traffic at major gateways.

Norfolk Southern focused on public-private partnerships to serve the public's interests and improve service and capacity on the network:

- ◆ Proposed clearance improvements along the **Heartland Corridor** from Norfolk to Ohio will create a seamless, high-capacity and higher-speed double-stack intermodal route across Virginia and West Virginia to Midwest markets. The western anchor of the project, the Rickenbacker Intermodal Facility at Columbus, Ohio, is the result of an agreement between the Columbus Rickenbacker Airport Authority and NS.

Expected to be operational in 2007, it will be one of the largest intermodal facilities on the NS network, with capacity to support a full-scale logistics park.

- ◆ Proposed work on corridor improvements such as **CREATE** (Chicago Regional Environmental and Transportation Efficiency) will unscramble rail lines in Chicago, leading to increased efficiency for shippers and better traffic flow for motorists.

Developments in technology continue to enhance NS' rail operations:

- ◆ The company is preparing to test a system called **Optimized Train Control** between Charleston and Columbia, S.C., to enhance safety. The

system combines data communications, positioning systems and onboard computers tied to a train's control systems. It automatically verifies operating limits to help prevent collisions and other train accidents. OTC provides improved visibility of network conditions and promotes more efficient operations.

- ◆ NS is implementing its **Unified Train Control System**. Jointly developed by NS and General Electric, UTCS provides a seamless and disaster-hardened transportation management system. It replaces existing equipment with networked, computer-aided dispatching work stations that function with tactical NS information systems.



Brig Burgess, Norfolk Southern Dearborn Division superintendent, addresses NS employees in Atlanta about management career opportunities available within the company.

UTCS includes a promising new feature called the movement planner. Using a virtual model of the NS rail network, the movement planner formulates an optimal, system-focused train management plan with the objective of maximizing on-time performance.

- ◆ The company has refined its **Thoroughbred Operating Plan**, increasing capacity for freight and making railroad operations more flexible. For the first time, the plan incorporates intermodal and unit trains dedicated to single commodities.

- ◆ NS evaluates the benefits of **infrastructure investment** alternatives through a refined capacity planning process using industry-standard simulation software. The process has led to capacity projects on rail corridors between Memphis and Chattanooga, Tenn.; between Chattanooga, Atlanta and Jacksonville, Fla.; and between Charleston and Columbia, S.C.

Norfolk Southern is working in additional ways to improve safety and customer service:

- ◆ The purchase of 222 new **high-efficiency locomotives** from late 2005 through the first half of 2006 will increase productivity and help handle growth in traffic volumes. Also, in the company's largest-ever locomotive rehabilitation program, NS overhauled 491 locomotives and rebuilt 29 in 2005. In 2006, NS expects to overhaul 420 locomotives and rebuild 52.

- ◆ Responding to increased demand for rail freight transportation, NS **hired** more than 2,400 train and engine service and mechanical employees in 2005.

- ◆ The company enhanced **training** for train and engine service employees and reached more field employees through coaching and mentoring. All operations supervisors completed training on leadership skills, including communications and coaching.

- ◆ Planning for future work-force changes, NS conducted **career fairs** to inform agreement employees about the benefits of joining management ranks.

- ◆ The company developed **operations supervisor training** for agreement employees who may choose to move into nonagreement supervisory positions. Similar to NS' management trainee program, it teaches leadership skills, builds confidence and teamwork, increases knowledge of company operations, and makes management processes more consistent. The first group of employees began training in early 2006. 🔄



Transportation management trainee Sarah Ponder operates a locomotive simulator at Norfolk Southern's Training Center at McDonough, Ga., near Atlanta.