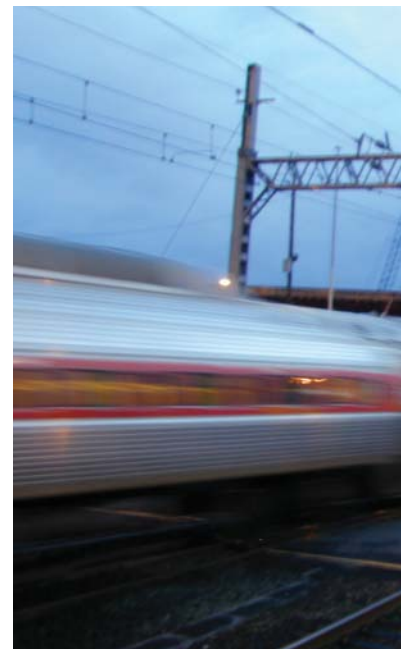


# *Commuter Service:* **Rail's past and future**

*As soon as the iron horse first graced its steel rail track,* charging its way towards a new era of industry and society, railroading found one of its fundamental reasons for existence: the efficient movement of people. As the early railroads began to consolidate commerce and production in then just-blossoming industrial America, they also brought along with them a basic need caused by that progress – a demand for workforce to operate the machinery of the industrial revolution. The potential for prosperity that first drew the job-thirsty masses to urban areas ultimately laid the seeds that would drive many of these city dwellers beyond the bustling urban cores to make their residences.

Lured by cheap land and pleasant environments on the outskirts of the cities, the first suburban areas began to spring up. However, as enthralled as these people were to be away from the hustle and bustle of the city, they still needed to maintain their jobs back downtown. Thus, these new outlying communities were naturally settled around active railroad lines heading out of town. Quickly adapting to these new trends in working and living locations, railroads began expanding their passenger services beyond what had been their typical service. And thus was born commuter rail.



The Trinity Railway Express connects Dallas and Fort Worth and is one of the new wave of commuter rail successes.

By the turn of the century, commuter trains had become the established means for the mobilization of a metropolitan region. From major cities like New York, Boston, Philadelphia and Chicago, railroads shot out branch lines in all directions like spider webs, to wherever there might be a community of workers and residents – then, or in the future. Cities in the industrial heartland, such as Pittsburgh, Cleveland and Milwaukee all boasted significant commuter railroad operations, as well. Not only did commuter operations make the railroads' existing routes more productive by earning more revenue per track-mile, but they also delivered the workers that fueled the commercial and industrial operations which, in turn, supported their existence.

Commuter operations in the cities in the Northeast and Midwest not only became sprawling networks, but staked their claim as a crucial cog in the daily business of the nation. The

concept of the 5:15 evening train became a symbol for the consistency and industrious virtues of America. Even though private railroads operated their trains from different stations, over their own track and using their distinct rolling stocks, they developed a cohesive system of commuter routes, with some railroads even going so far as to offer transfers to their competitors' lines. By the 1920s, commuter trains, along with the seamless connections to local subway and streetcar systems, were nothing short of the lifeblood of the nation's great cities.

### Transformation Nation

Although the Great Depression, and World War II impacted commuter rail across the country, two long-term transformations in American society bore the greatest influence on the vitality of these systems in many cities. First, people began to have choices.

New thoroughfares and eventually highways were built to provide quick and convenient trips into and around cities. Secondly, a steady decline in the nation's industrial activity caused a drop in jobs in many cities, particularly those producing or processing steel, coal and grain. With a shrinking workforce, cities like Pittsburgh or Cleveland no longer supported the demand for a rail system for commuters.

However, as some commuter rail operations foundered, others in the largest cities were still found indispensable for the commercial centers that did not disappear in these areas. Although New York found cars pouring onto its streets, hundreds of thousands of New York workers still found the trains of the New York Central, New Haven and Pennsylvania Railroads essential to getting to the city. Commuters in the Chicagoland area still turned out in throngs to be whisked into the Windy City on the tracks of a half-dozen different rail-



The Northeast is home to commuter rail's "old guard" in such cities as New York, Boston and Philadelphia.



Seattle's Sounder commuter rail system is already building strong ridership.

MARC commuter rail serves Baltimore and Washington, D.C., with three separate lines.

roads. Their counterparts in Boston, Philadelphia, and the Baltimore-Washington region all continued to find their way to commuter trains in their communities to get to jobs and back home. What had once made sense in so many ways, continued to.

Unlike intercity passenger rail, which was uniformly transferred from the control of private railroads to Amtrak in 1971, no such across-the-board transition occurred for commuter trains. More closely resembling the transition of city transit networks from private companies to local public systems, those commuter rail systems that withstood the 1950s undertook a more gradual shift to public ownership. After the failed merger between the New York Central and Pennsylvania Railroads into Penn Central ended in 1970, their operations in New York, Pennsylvania and New Jersey were undertaken by public entities in their respective jurisdictions. Having previously consolidated its private subway lines into one system, the Metropolitan Transit Administration in New York formed the Metro-North Railroad to continue commuter service north of the city along the Hudson, and Westchester and other suburban counties. The state of Connecticut also joined the system, continuing service previously offered by the New Haven Railroad. A

similar network – the MBTA – was constructed in Boston, from the remnants of the New Haven and Boston and Maine Railroads, throughout

New Jersey (NJ Transit), combining the old Pennsylvania network with those of the Erie Lackawanna and Delaware and Hudson, and in and around Philadelphia, merging the Pennsylvania's routes with those of its chief competitor in Philadelphia, the Reading Railroad.

Meanwhile, the state of Maryland intervened to support the commuter operations of the crumbling Baltimore and Ohio Railroad, which served areas between Baltimore, Washington, and beyond. Further north in Montreal, the remaining commuter routes of the Canadian National and Canadian Pacific Railroads were preserved and upgraded. Chicago's myriad commuter network of privately operated lines remained intact the longest of any city, until 1987 when a new regional entity named Metra was created to maintain all existing commuter rail service. Perhaps that durability stood as a testament to the city that's often referred to as the nation's railroading capital. Finally, the longest running commuter route west of Chicago,



Photo courtesy Saul Wilson

between San Francisco and San Jose, was turned over by the Santa Fe Railroad in 1986 to a public regional collaborative entity that kept the trains operating.

The ability of commuter rail in these six cities to withstand the decline of the passenger rail network through the 1960s and '70s speaks volumes to the important roles they played in their respective cities – and to the fact that they ran effective, efficient service. Where good economic conditions in healthy cities prevailed, the need to move large numbers of people in and out of downtowns was not only undiminished, it was expanding. Commuter rail networks offered these areas frequent, reliable service that was ingrained in their travel, social and residential habits. Soon, a number of cities would launch new commuter rail operations for these same reasons.

### Paths to Reality

Having witnessed the transformation of commuter rail systems in large cities from private to public control, a number of cities in the United States



Chicago's vast commuter rail network remained private until 1987, the latest of any in the U.S.



Photo courtesy Phillip Burnside

and Canada sought to launch commuter rail operations of their own. Starting in 1967 with the GO Train system spreading throughout the Toronto area, a wave of cities and regions launched new commuter rail operations.

Drawing upon the experience of cities with long established services, cities of varying sizes implemented commuter rail services of equally differing scope. From large-scale networks consisting of multiple routes, such as Los Angeles' Metrolink and GO Train in Toronto, to new services found everywhere from northern Virginia to Dallas-Ft. Worth to Seattle, commuter rail operations achieved a newfound momentum during the 1990s not seen since the early days of the century.

These systems were launched due primarily to demand. Congestion was reaching unbearable levels in many

cities, making the train a far more convenient and pleasurable experience than being stuck in rush-hour gridlock. The lower expense, too, had a significant impact on the commuter rail revitalization. Typically, these new systems were established along existing rail right-of-way and some even served communities that had existing former stations ready for a renaissance. All of these conditions made many a city turn to commuter rail.

#### **Advantage: Passengers**

Lying to the west and south of the nation's capital in Washington, D.C., the small towns of Northern Virginia saw a tremendous influx of residents and workers throughout the late 1970s and 1980s, drawn by a revitalized economy in the capital region. The population boom also inundated

The Virginia Railway Express operates two lines in Northern Virginia and moves nearly 15,000 commuters a day.

the local transportation network with traffic congestion that threatened the productivity of the area. Local and regional officials in Northern Virginia had experienced first-hand the revitalization of the commuter rail network on the Maryland side of the Potomac, and eyed a similar rail system as an option to improve the mobility of the area.

After studying numerous service options, two regional transportation entities, the Northern Virginia Transportation Commission and the Potomac and Rappahannock Transportation Commission, worked together to create the Virginia Railway Express in 1989. The new railroad drew together investment from state, regional and federal sources to plot out two lines from Northern Virginia into Washington, D.C. On June 22, 1992, the first Virginia Railway Express (or VRE, as it's known locally) train headed into Washington from Manassas, followed quickly by a line from Fredericksburg.

By bypassing the clogged traffic arteries in the region, the trains

quickly found a loyal ridership base across the system's 10 stations on the Manassas Line and 12 stops on the Fredericksburg Line. Not only did the service's schedules and well-located stations, including Washington's Union Station and close connections to the Pentagon, draw passengers, but a rider-friendly approach offered a more hospitable commuting experience than the roadways ever could. New riders are provided with a special welcome kit, containing information on the service and commuting trips, while long-time passengers take advantage of vendors at train stations, well-coordinated local transit connections, reimbursements for daycare if outbound trains arrive late, and cross-ticketing with the MARC commuter trains into Maryland.

This combination of effective and reliable service with strong passenger programs has drawn over 14,000 daily riders to the VRE's two lines, and the system has consistently had to add more seating over its 16-year history to meet rising demand.

"Our focus now is always improving our operations to make the VRE as reliable and efficient as possible," says Mark Roeber of the Virginia Railway Express.

### Trains to Two Cities

As trains in Northern Virginia helped maintain the momentum of growth in and around the nation's capital, more than 2,000 miles south and west, commuter trains restored the rail tradition between two of the largest cities in Texas. While just a little over 30 miles separate the center cities of Dallas and Fort Worth, traversing the metroplex that has developed between them can often take hours. The highways that connect the two cities through miles of suburban development grew jammed with congestion over the last decades of the 20th Century, and stifled the ability of the region to fully attain the benefits of its metropolitan character.

That all began to change with the purchase of a nearly-abandoned freight route between the cities in 1983. Threatened with abandonment after the bankruptcy of the Rock Island Railroad, which owned the line, the two cities acquired the route for \$34 million with the intent of returning passenger rail service over the corridor. After refurbishment of the trackage and acquiring second-hand Budd diesel-propelled railcars, the first leg of the Trinity Railway Express (TRE) opened over 10 miles between Dallas and South Irving in 1996. Subsequent expansions in 2000 and 2001 brought TRE trains first to Richland Hills outside of Fort Worth, and then to two stations in that city's downtown. Now anchored by Dallas' restored Union Station in the east and the historic Texas & Pacific Passenger

The Trinity Railway Express was launched in 1996 and now offers 15 trips in both directions daily between Dallas and Fort Worth.





Fort Worth's historic rail station is now enjoying passengers again.

Terminal in Fort Worth, 7,500 daily riders hop on TRE trains to reach one or both of the cities along the route.

The more than two million annual passengers that traverse the densely-populated corridor find a service that offers 15 trips in both directions each weekday, and 10 trains on Saturdays. There is no Sunday service yet, although the railroad is investigating expanding service. Along with reaching the downtown hearts of both cities and suburban communities along the way, trains also provide a convenient connection to the busy Dallas-Fort Worth International Airport by transferring to a free shuttle bus service. By establishing a bustling commuter rail service through a corridor with a natural demand, the Trinity Railway Express has cemented its role as an essential travel option in the Dallas-Fort Worth metroplex and unites two cities previously limited by clogged roads and lack of connectivity.

"We are now the way to get between Dallas and Fort Worth, and get there on-time 98 percent of our trips," says Kathy Waters, CEO of Trinity Railway Express. "We provide the community a lot of choices and flexibility, but our reliability has allowed us to build a loyal passenger base."

byways like Interstate 5 and Route 167. In an effort to confront the escalating travel problems through the area, voters in the region approved a 10-year plan in 1996 to address congestion and economic development with improved public transportation services. The regional body that was created to implement the plans, the Central Puget Sound Regional Transit Authority, known by the service-brand of Sound Transit, began devising plans for a commuter rail line to connect the downtowns of the two cities, along with communities along the way.

On September 18, 2000, Sound Transit initiated the Sounder commuter trains, rolling along a 40-mile line between Seattle's King Street Station and Tacoma. While only initially stopping at stations at Auburn and Sumner with a single daily trip, the

## Hearing the Sounder

Much like the Dallas-Fort Worth region in Texas, the city pair of Seattle and Tacoma in Washington State experienced a similar distancing of their region by the congested

service set out to quickly expand its operations. Additional stations were added in 2001 at Kent, Puyallup and Tukwila, and two additional trips were added. Sounder trains make the 40-mile run in exactly one hour, offering a speedy connection downtown-to-downtown. Meanwhile, in 2003, a new daily trip was offered north of Seattle from Everett, which stretched the service to 82 miles from Everett to Tacoma.

Now carrying over 4,000 riders everyday through the Puget Sound region, the young service has no designs on standing still. Continuing expansion of service will focus on increasing the number of runs between Seattle and Tacoma, ultimately reaching up to 18 trains a day in each direction by 2011, with another

Nearly a million riders use Sounder commuter rail between Seattle and Tacoma.



12 plying the route between Everett and Seattle. Another expansion south from Tacoma is also likely, heading to Lakewood by the end of the decade.

The spirit of implementing service piece-by-piece has become a hallmark for Sounder, in an attempt to provide

improved travel options as soon as possible. Long-suffering commuters have found each new trip to be another way to avoid traffic congestion and more fully realize the benefits of their communities. To Sound Transit, those concepts have already become a legacy of a service that is approaching only its fifth anniversary.

“We’ve come a long way in five years to build a system that’s responsive and relevant to the commuting

needs in the region,” says Marty Minkoff, Director of Transportation Services for Sound Transit, adding that “we are continuing to enhance our service, both in terms of improving operations and expanding the network.”

### **TRACKS AHEAD: New Experiences in Commuter Rail**

Based on experiences of both

## **ONE SYSTEM SPEAKS....**

**RAIL:** In RAIL Magazine, we chronicle the modern passenger rail renaissance here in the U.S. How has this revival impacted MARC?

**MARC:** Rail commuter ridership in the Washington area is at record levels. In our Fiscal Year 1997, MARC averaged only a little over 18,000 trips a day. We presently carry 26,500 riders on average, an increase of nearly 50 percent. In addition to increased ridership, we see a trend toward increases in long distance trips of 50-75 miles as growth in the Washington metropolitan area pushes development out further. We are also seeing a trend of people moving to Baltimore while working in Washington to realize better quality housing at a lower price.

**RAIL:** Nationally, ridership on the nation's commuter rail lines is among the fastest growing in all public transportation. Please tell us about the ridership trends on your systems and how you plan on continuing to meet growing demand.

**MARC:** We purchased 12 used gallery cars from Chicago primarily to maintain capacity while 34 single-level cars receive their 10-year overhaul. They will give us a marginal increase in capacity on some trains but they are not seen as a long-term solution to our capacity problems. Our goal is to purchase more bi-level cars similar to those built by Kawasaki in 2000. Competing for limited capital funds available for an overtaxed regional transportation system, is the biggest challenge.

**RAIL:** For many commuter rail systems, the issue of operating over lines owned by freight railroads is a

serious challenge. What has been your experience with this challenge?

**MARC:** Operation over CSX and Amtrak is always a challenge. In 2004, both railroads realized an 87 percent on-time performance, the lowest in recent years. Freight traffic on CSX is growing, and the more trains that are present on the railroad the more opportunity there is for delay. There are both conscious dispatching decisions that give priority to freight trains, as well as the normal uncertainties associated with operating on a freight railroad: trains in emergency, pulled knuckles or locomotive problems. During summer months CSX has imposed heat-related speed restrictions, which, while certainly a safeguard, adversely impact afternoon on-time performance. As part of our latest Operating Contract we are contributing capital funds for two projects to increase capacity on the Camden Line. This is only the first step to a much larger magnitude increase in capacity required on CSX.

On Amtrak MARC is operating in a territory with limited capacity for the number of trains operated by Amtrak and MARC. The Baltimore-Washington Corridor never had the volume of commuter traffic that points further north in the NEC did, which justified separate tracks for commuter trains. While we try to work closely with Amtrak to establish schedules that are realistic, one late train coming from the north or a mechanical problem on either Amtrak or MARC can have a domino effect on multiple trains.

**RAIL:** The tragic collision earlier this year between a commuter rail train and an SUV in Los Angeles, along with a

modern and traditional commuter rail systems, a number of new commuter lines are at various stages of development in cities and metropolitan areas across the nation. And, not surprisingly, many of these new operations are plotted for areas previously unacquainted with commuter rail.

First to arrive on the scene will be the first local or regional passenger rail service in the state of New Mexico. After several years of

study and investigation by state and local officials on instituting a new commuter rail line in and around Albuquerque, Governor Bill Richardson announced in Fall 2004 that the service would become a reality a little more than a year later, connecting Bernalillo through Albuquerque to Belen by the fall of 2005. Having signed agreements with Burlington Northern Santa Fe railroad to operate over their tracks, seven stations have

been plotted, passenger coaches were ordered from Bombardier and engines purchased from Motive Power, and the service already boasts a creative name: the *New Mexico Rail Runner*.

By ushering in the first commuter rail service to the Southwest between Fort Worth and the Los Angeles region, New Mexico officials are confident the success witnessed by commuter rail systems across the country can be replicable in their state.

**recent rash of pedestrian accidents, has raised questions about the safety of commuter rail systems. What steps are you taking to ensure the safety of your riders?**

**MARC:** Commuter rail as a whole has a far better safety record than the automobile alternative. Push-pull operation has been used safely for over 50 years. Studies have indicated a high level of safety of cab cars. We will abide by recommendations from the National Transportation Safety Board and Federal Railroad Administration on any changes in policy for push pull equipment.

**RAIL: Security is another key issue for commuter rail as trains in other countries have been targeted by terrorists. How has the security issue changed the way you operate your system and does providing commuter rail services in and out of the nation's capital make for any unique security challenges?**

**MARC:** Operating in and out of Washington's Union Station increases our sensitivity over security. Security in the station is provided by Amtrak police who coordinate closely with police forces who protect the area. They have a detailed program of escalating security as the threat level arises. Amtrak's and our emphasis has been on making passengers aware of unusual packages and individuals. Notices, announcements and posters are all used to elevate awareness of our passengers.

**RAIL: As commuter rail operations have flourished, so, too, has commuter rail station design. Tell us about some of the historic and new stations along your lines and how station design impacts your service.**

**MARC:** Since MARC is not a new system it has a wide range of historic structures along its lines. We have rehabilitated many of these stations at locations such as Odenton, Edgewood, Kensington and Laurel, Maryland. The only new station on the system is located at Dorsey, in Howard County, which features an airy cathedral ceiling and a modern version of a traditional clock tower.

**RAIL: Innovative equipment, whether it be cars and locomotives or software and safety, is vital to the success of any commuter rail operation. Where have you seen the biggest improvements in rail equipment in the last decade?**

**MARC:** In the past decade some of the biggest changes have involved using microprocessors in both cars and locomotives for both improved performance and temperature controls. During this period MARC has implemented a GPS-based system to monitor ride quality. The decade has seen a significant focus on design of cars, emergency exits and signs, and other appurtenances to improve passenger safety.

**RAIL: Where would you like to see it in coming years?**

**MARC:** In the next decade we see the implementation of positive train separation. Diesel locomotives will realize significant improvement in exhaust emissions. Locomotives will make widespread use of AC traction motors and electronics to improve reliability to higher levels. On-board passenger information systems will continue to be expanded and made more widely standard.





New Mexico's *Rail Runner Express* will be launched this fall.

Chris Blewett of the Mid-Regional Council of Governments, who will administer the service says that “the Rail Runner represents a great opportunity for New Mexico to get out ahead of coming congestion, and spur economic development and community revitalization.”

He also notes the ease in implementation for the commuter rail mode by saying, “commuter rail allows us to quickly get the service going by using existing railroad infrastructure and proven rolling stock.”

In June, Bombardier Transportation unveiled the first 10 bilevel commuter cars to be used in the Rail Runner Express, which were delivered in an extremely short time-frame.

“We’re proud to be part of the state of New Mexico’s vision to provide enhanced and reliable service for its citizens,” said Bombardier’s President William Spurr.

The same appealing characteristics that will bring commuter trains to the Southwest this fall have also set the stage for new services in the southeast, as well. Work is well underway in Nashville to bring a commuter operation to the Tennessee State Capital by the end of 2005. Already dubbed

the *Music City Star*, trains will operate over a 32-mile route between Lebanon to the east and downtown Nashville. Instead of buying new cars and locomotives, the operation has acquired a fleet of veteran double-decker Gallery Cars from Chicago’s Metra, as well as a handful of diesel locomotives.

Once the service begins operations to the five stations on the route, expansions on four additional lines are already planned – eventually striking out to Murfreesboro, Franklin, Kingston Springs and Gallatin. According to Bill Farquhar, Director of the Music City Star at the Regional Transportation Authority, who will operate the service, commuter rail offers immediate benefits to help improve mobility in Nashville.

“The quick timetable for getting the trains up and running will allow us to build a good foundation for commuter rail in the area,” says Farquhar, who adds: “The route from downtown to Lebanon is just the beginning for a region-wide commuter rail network in Nashville.”

Not far away in Atlanta, Georgia, another commuter rail operation lies on the horizon. Employing

an existing Norfolk Southern route, four daily roundtrips will be running by September 2006 between downtown Atlanta and Lovejoy to the southeast. A total of \$106 million has been allocated through Federal and state sources to improve the track infrastructure, build station facilities, and acquire Gallery Cars and refurbished locomotives just as Nashville is doing.

Some 3,000 daily riders are anticipated along the route, which will ultimately be extended further south, first to Griffin and then to Macon. The operation’s downtown station will feature convenient connections to the region’s existing MARTA rapid-transit network, as will the East Point station, where riders can transfer to a quick two-stop ride to Hartsfield International Airport.

Due to the strong benefits envisioned from this system, local officials have lined up to support the project, including committing local investment to help cover the operating and maintenance costs in the future.

“We are looking to do something no other transportation program in Georgia has done,” says Georgia Rail Passenger Authority Chair Carl Rhodenizer. “Because the communities along the line understand just how important this service will be to their citizens and to their prospects for quality growth, they have agreed to pay for its operation – a first in Georgia.”

“We hope that this first 26-mile line will be just the beginning and that ultimately the majority of Georgians will have access to commuter

rail and other passenger rail options," says Rhodenizer.

### Commuting to Communities

Building upon the strong legacies created by the nation's first commuter railroads, passenger rail systems connecting metropolitan regions can now be found from coast to coast, and everywhere in between. From Virginia to Washington, and from Texas to dawning systems in Georgia, Tennessee and New Mexico, these networks serve our largest cities while also reaching out into vital small urban areas and rural communities. Their trains connect people to jobs, essential community services, cultural and entertainment venues, and back again to their neighborhoods.

And yet, regardless of how many lines a commuter rail system operates, the types of trains running over its rails, or the varying downtowns, suburbs, villages or hamlets it serves along the way, the hallmarks of commuter rail are universal: reliable and efficient service which provides crucial mobility options to its passengers, and allows them to fully access and enhance their community. Perhaps that's why the phrase *commuting* still finds its relevance even today, more than a century after the first commuters took to the rails, for the word commute itself stems from the roots of both community and transformation. Indeed, there can be no more apt definition of modern commuter rail.

Commuter rail is in many ways passenger rail's past and future. The foundation of passenger train service in the United States was short haul trips similar to that seen in commuter rail today. Tomorrow, one can bet that more Americans will find their way to work on back on commuter rail. ■

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