

High Speed Rail in New York State:  
The Benefits of Shorter Time-Distances



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Abstract

This report examines the potential impact of High Speed Rail on social and demographic trends in New York State. This report is based on an analysis of four proposed High Speed Rail lines: a Hudson River Line from New York to Albany, an Adirondack line from Albany to Montreal, a Finger Lakes Line from Albany to Ithaca, and an Erie Canal Line from Albany to Buffalo. Other lines are discussed but not analyzed for future impacts. By utilizing time distances from New York City as experienced today and under several potential scenarios, the impact of new rail systems on the economies of upstate cities is analyzed. Findings suggest that High Speed Rail could have a significant impact on cities in eastern New York and protect the sensitive Catskill Mountain region that is increasingly beset by development pressures.

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## **Introduction**

Since the 1980s there has been discussion of the potential for High Speed Rail to contribute to America's primarily automobile focused transportation system. Such discussions seemingly come in waves, however, as discussions have frequently become derailed by regional differences and corporate interests. Part of the reason for this is that the United States does not present a uniform picture for the utility of rail: whereas the Northeast represents nearly ideal conditions for rail transportation, other regions do not. This report examines the potential for High Speed Rail on a regional level, focusing on New York State, as a way of sidestepping the national controversies that have derailed such projects in the past.

The fairly dense population found in the Northeast and Great Lakes region, couples with well-developed urban centers with mass transit systems, provides an ideal environment in which to provide High Speed Rail. These conditions are similar to those found in Europe and Japan where High Speed Rail flourishes. New York is part of both regions, serving as the bridge between them, and features these same conditions both upstate and downstate. As will be discussed, both upstate and downstate could benefit from High Speed Rail, particularly if such technologies are developed within the state. High Speed Rail has the potential to better integrate the upstate economy with that of the New York Metropolitan Area, thereby expanding the labor and real estate markets of both regions.

## **Divergent Growth Patterns**

Trends in population growth in New York State tend to vary from one region to another, but broadly diverge along an “east-west,” rather than “upstate-downstate,” pattern. This is most noticeable in growth differentials between the New York metropolitan area and Great lakes metropolitan areas, but a gradient between the two regions exists, with low yet positive growth rates in the Capital District as well as growth in every eastern New York city in the last census. The overall pattern of population growth in New York State presents challenges and opportunities for a High Speed Rail network.

Growth in the greater New York Metropolitan Area, formerly known as Consolidated Metropolitan Statistical Areas but since 2003 as Combined Statistical Areas, has been strong since 1990. In contrast, population growth in upstate New York has been more mixed (Thomas & Smith 2011). Since 1990, the Albany CSA has grown 6.5 percent, the growth rate accelerated from two percent during the 1990s to 4.5 percent during the last decade. This was accompanied by strong growth in the central cities of eastern New York: every city east of New York 12, with the exception of Binghamton, gained population between 2000 and 2010. In each case, central city population growth was due to increases in immigration from other nations (Smith et al. 2013). This led to a reversal of the 1990s trend in some metropolitan areas: metropolitan Utica lost nearly 17 thousand residents during the 1990s, but lost only 499 in the 2010 census. Even within the metropolitan area, an east-west dynamic was evident: all of the decline was attributable to population loss in the city of Rome, whereas Utica and its inner suburbs gained population. The Syracuse CSA lost 10,060 residents during the 1990s and gained back the same

**Table 1: Population Change in New York MSA/CSA, 1990-2010**

MSA/CSA	1990	2000	2010	Change 1990-2010 (%)
Albany-Schenectady-Amsterdam	1,097,036	1,118,095	1,168,485	71,349 (6.5)
Binghamton	264,497	252,320	251,725	-12,772 (-4.8)
Buffalo-Niagara Falls	1,273,522	1,254,066	1,215,826	-57,696 (-4.5)
Elmira	95,195	91,070	88,830	-6,365 (-6.7)
Ithaca-Cortland	143,060	145,100	150,900	7,840 (5.5)
New York	19,710,239	21,361,797	22,085,649	2,375,410 (12.1)
Rochester-Batavia-Seneca Falls	1,096,153	1,131,543	1,149,653	53,500 (4.9)
Syracuse-Auburn	742,177	732,117	742,603	426 (0.1)
Utica-Rome	316,633	299,896	299,397	-17,236 (-5.4)

Source: Thomas & Smith, 2011; Smith et al. 2013

number in 2010. In contrast, Rochester grew 3.2 percent during the 1990s and only 1.6 percent the following decade due largely to layoffs by Kodak and other major corporations.

Growth in New York State overall has been strongest in areas closest to New York City. This is understandable as New York continues to stand as the most important city in the global economy. The city is home to more transnational corporations than any city in the world, with London as a distant second (Sassen 2001). The city also functions as the financial center of the world economy despite increasing competition from other cities, and its population places it among the largest metropolitan areas on the planet. Indeed, the only true global center of comparable population is Tokyo, which is larger in terms of population but ultimately has less financial and corporate capital at its disposal. As such, in the short term New York continues to serve as a global city *par excellence*, and population growth continues in both the city and the suburbs.

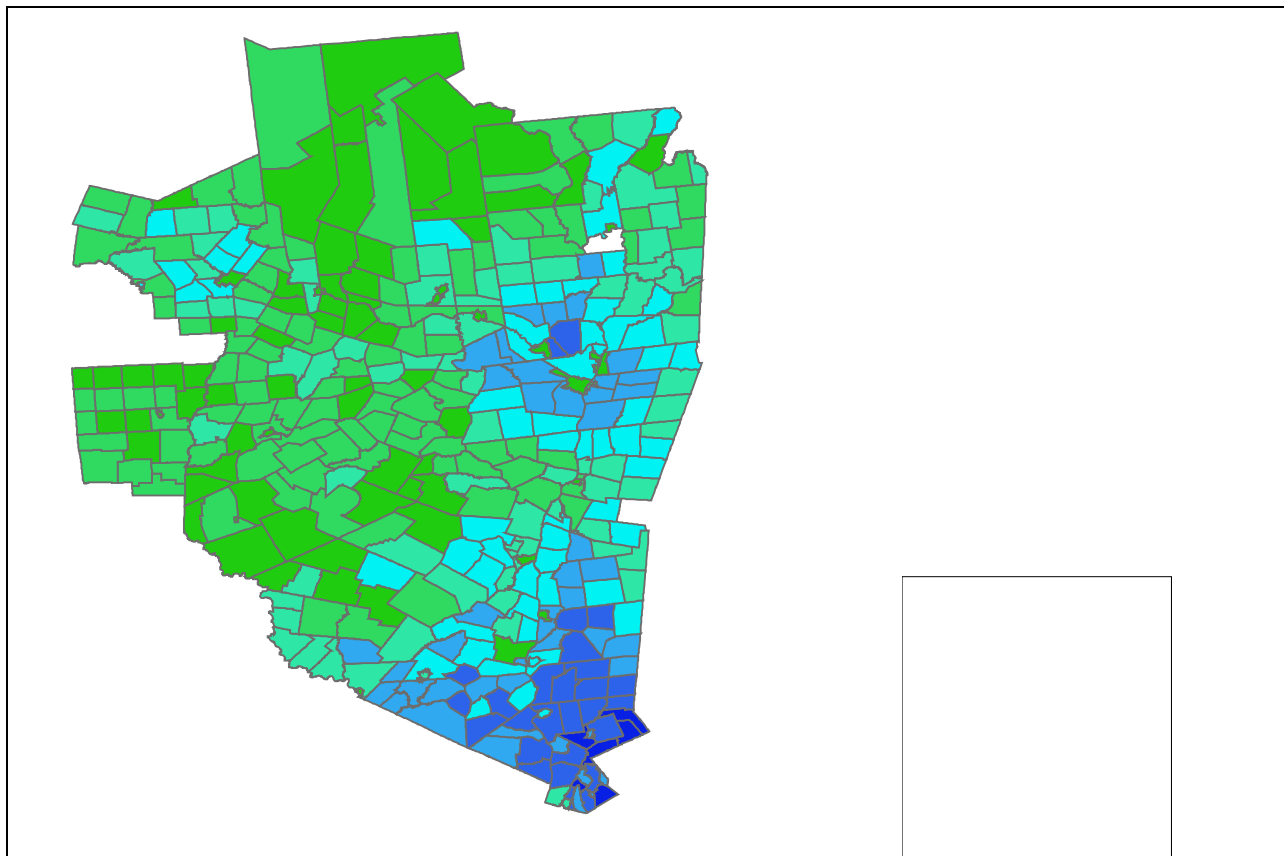
**Table 2: Population Change in New York City and Combined Statistical Area, 1990-2010**

Area	1990	2000	2010	Change 1990-2010 (%)
New York City	7,322,564	8,008,278	8,175,133	852,569 (11.6)
CSA	19,710,239	21,361,797	22,085,649	2,375,410 (12.1)

As shown in table 2, the city has added almost a million residents since 1990. This was a change from the trend over the previous three decades of population decline in the city, particularly in the Bronx and Brooklyn, as residents moved to the suburbs. It is worth noting, however, that even as the city population declined during the mid-twentieth century the metropolitan area as a whole continued to grow and expand into the surrounding countryside. Since 1990, however, the city again added new residents based primarily on immigration from other countries. During the period between 1990 and 2010, the city grew over 11.6 percent. Much of the growth was in depopulated areas of the Bronx and Queens, which grew by 15 and 14 percent respectively. The slowest growth was in Manhattan itself, which only grew by 6.6 percent, largely because population densities were already quite high. Although much has been made of people leaving the city after the infamous attacks of September 11, 2001, the city gained 150 thousand residents since that time—a slowing of the growth rate but not a reversal.

The New York Combined Statistical Area grew 12 percent over the same period, adding more people than live in the Las Vegas metropolitan area. Growth was strongest in Middlesex, Monmouth, Ocean and Somerset Counties New Jersey, which collectively grew over 23 percent between 1990 and 2010, and the Poughkeepsie-Newburgh-Middletown MSA in New York, which grew 18 percent during the same period. The northern extent of the CSA, Ulster County in metropolitan Kingston, grew by over 10 percent during this period. Hence, in New York State, the New York City suburbs and exurbs are spreading far inland along the Hudson Valley and into the Catskill Mountains from Middletown to Poughkeepsie to Kingston. Even in adjacent counties not officially part of the New York CSA, local economies are becoming more tied to New York City. In the Southern Catskills, traffic along the Southern Tier Expressway (NY 17 and I 86) begins to build around Liberty in central Sullivan County. In Columbia County in the Albany CSA, the small city of Hudson has attracted artists who enjoy inexpensive rents and easy access to New York via Amtrak. As shown in figure 1, those communities in the Hudson Valley and Southern Catskills that are integrated with the metropolitan economy typically having higher median incomes than those at greater distances.

The current trends are accompanied by risks to the Catskill Mountains (Smith & Thomas 2012). Unlike the settlement pattern found in New York's inner suburbs, such as those on Long Island and in Rockland County, the newer suburbs and exurbs have far lower population densi-



**Figure 1:** As early as 2000, communities integrated with New York enjoyed higher incomes. The lighter blues near the Albany and Utica metropolitan areas are indicative of higher incomes in cities relative to rural areas, but proximity to New York is a stronger predictor of income.

ities. In Orange and Ulster Counties in particular, newer subdivisions typically have multiple-acreage building lots. In Woodstock, for example, the minimum lot size for building a new house is three acres, a figure that helps spread septic systems away from well-water systems, but also spread the urban population across a far larger area. In more traditional urban settings with homes built on quarter-acre lots, each acre of urbanization in a tract of single family homes was supported by the tax revenue of four households; in a newer suburb, four households must support the services associated with twelve acres of urbanization. Often such sparsely settled areas do not have public water and sewer services, but such services as highway maintenance and plowing, fire and police protection, and schools are often still needed in such communities. The character of such communities is typically neither urban nor rural, but some blending of the two.

The relatively sparse settlement pattern has environmental consequences as well. Although many residents may think of themselves as “rural,” their lifestyle is quite suburban. As such, residents most often drive to a variety of settings, including shopping, employment, and school and other children’s functions. This amount of driving releases pollutants into the atmosphere. In addition, in many exurban locations the presence of housing has come to be associated as an expected part of the environment on the part of local wildlife, and not surprisingly such species as deer and even bear are increasingly found wandering through residential neighborhoods.

However, the population trends do point to some opportunities for revitalizing portions of eastern New York and alleviating population pressure in the city itself. Property values in New York have grown prohibitively high, pressuring families without high wages to make ends meet and companies to pay high wages in order to attract talent that may otherwise seek cities with lower costs of living. Such trends are also pushing families further into the hinterland: the Combined Statistical Area extends more than 100 miles away from the city. Although these pressures have been manifest as a real estate boom since 1990, the long-term trend of high property values for comparatively small accommodations could make the metropolitan area less attractive than other cities in the future. This would hinder New York City’s ability to compete against such global rivals as Tokyo and Hong Kong in the future, both of whom have turned to High Speed Rail projects as a way of spreading metropolitan influence into the hinterlands while alleviating pressures within the city. Simply stated, it is in New York City’s long term interest to look upstate as a means of expanding its local markets and spreading its population across a greater area in order to compete against global rivals. The remainder of this report examines the potential for High Speed Rail to revitalize large areas of upstate New York and bolster New York City’s position as leader of the global economy.

## **Definitions and Feasibility of High Speed Rail**

Definitions of High Speed Rail vary throughout the world, and not surprisingly there is thus variation from one country to another. Generally, the threshold speed is lower in the United States than it is in other parts of the world. In the European Union, a High Speed train is one that travels at least 124 miles per hour for older lines and 150 on new lines (America 2050 2011). In contrast, speed thresholds in the United States are lower, with trains running anywhere between

90 and 250 miles per hour considered “high speed.” The only passenger train that is currently defined as High Speed is Amtrak’s Acela line that operates along the Northeast Corridor.

There are several factors that affect the viability of a High Speed rail system. The first is the population of the markets involved. High Speed Rail requires a substantial ridership not only to be economically viable, but to function as an effective alternative to the congestion found in airports and on the highway system. It works best with 100-600-mile networks connecting large metropolitan areas or with one very large metropolitan area connected to a series of medium-size metropolitan areas. Generally, trips of less than 100 miles are more conveniently traveled with an automobile, whereas trips of longer than 600 miles are more ideally suited to air (Lane 2012).

High Speed Rail works best in regions that exhibit a medium-to-high population density, particularly in regard to centers of employment. Such density exists in the downtown areas of very large cities, such as New York and Chicago, where offices and other facilities are nearer one another. It is particularly well suited for business travelers and commuters, particularly those capable of paying the costs of such travel (America 2050 2011).

High Speed Rail is also most effective when it connects places with robust mass transportation systems, in particular bus and light rail systems. Travelers tend to shy away from rail when it is cumbersome to access or, conversely, difficulty in getting around awaits the traveler at the destination. Under such circumstances, automobile travel may be deemed more convenient and affordable. This is also true for walking: dense settlement with “walkable” neighborhoods enable patrons to walk to points of departure and to their final destinations (America 2050 2011; Button 2012).

Using such criteria, the regions best suited to High Speed Rail are the northeastern United States, the Great Lakes, and the Pacific Northwest. In contrast, the regions least suited include the South and the Mountain West (America 2050 2011). New York State is both in the Northeast and the Great Lakes, and as such is in a superb position to benefit from High Speed Rail. To date, the Department of Transportation has followed a “piecemeal” approach to High Speed Rail development (New York State Department of Transportation 2009).

One reason for the slowness of adoption is the high cost associated with High Speed Rail. The General Accounting Office estimates that the cost-per-mile of construction for High Speed Rail is \$50 million, in contrast to only \$8-10 million per mile of new interstate highway. Nevertheless, proponents of High Speed Rail point to reductions in traffic congestion, air pollution, and petroleum consumption as benefits of such a system. Also, such a system could be utilized to reshape metropolitan areas in directions that reduce sprawl and promote healthier neighborhoods (Tierney 2012).

### **Current High Speed Rail Projects and Proposals**

A case for High Speed rail can be made on the basis of the success of the nation’s only system: Amtrak’s Acela. In fiscal year 2008, Acela made \$220.2 million, a profit of \$64.8 per passenger, making it the most profitable line in the nation. In addition, the slower Northeast

Regional made \$146.5 million, a profit of \$19.6 per passenger. Without a High Speed connection, Amtrak's Empire Service operates daily between New York City and Albany and is one of the busiest routes in the country. Recording 737,259 passengers in 2010, the Albany-Rensselaer Station is the tenth busiest Amtrak station in the country. In 2011, the state received \$354 million to improve service that should result in faster service and more on-time arrivals (Anderson 2011). Ridership is also relatively high between Albany and Syracuse, despite extensive delays, sometimes up to two hours, at the Rensselaer station; fixing such delays would make Amtrak a more attractive alternative to upstate riders even without higher speeds.

Passenger rail has received poor press in the United States because of the subsidization of a number of lines that are not profitable. Outside the Northeast, the only Amtrak line to earn a profit in 2008 was the Chicago-Saint Louis line, which made \$3.8 million, or \$7.98 per passenger. In contrast, the rustic Empire Builder lost \$40.5 million and the Sunset Limited lost \$31.4 million during the same period. Even the relatively busy Pacific Surfliner in California lost \$14.7 million, or \$5.07 per passenger (Pew Charitable Trust, Subsidy Scope 2012).

The financial success of Acela is not alone within a global context. In Europe, the French TGV Sud Est line connecting Paris to Lyon has provided the state-owned SNCF railroad a 15 percent financial return. TGV Normandie, a line connecting Paris to Normandy, is providing an even greater return of 22 percent. TGV's Rhine-Rone line, however, only generates a modest 3 percent return, below the state railroad's 8 percent goal (Vickerman 1997). Similarly, the Japanese *Shinkansen* have also proven financially profitable, particularly in high population corridors such as the two lines used as commuter trains into Tokyo. The switch to a high-speed network is estimated to have an economic impact of ¥500 Billion per year; in addition, it has revitalized communities that would otherwise be too distant from major cities for commuting to be practical (Okada 2009). The Japanese case offers a cautionary tale as well: as politics interfered, some less profitable lines were constructed that jeopardized the system's financial well-being during the 1970s.

There are proposals in the United States, none of which have been fully implemented. The Florida High Speed Rail system was terminated by Governor Rick Scott who considered it a waste of taxpayer money. The system would have connected Tampa to Orlando and Miami, with the first length to have been opened in 2015. Built on dedicated tracks along Interstate 4, the train would have been capable of speeds nearing 180 miles per hour but, due to the number of stations (five in only 85 miles), travel times would not be significantly reduced compared to automobile. In addition, neither Tampa nor Orlando have extensive mass transit systems, and as such many riders would drive to the stations—quite possibly eliminating the time savings of the system. Indeed, some High Speed Rail supporters have suggested that the system would have failed due to such concerns, thereby condemning more worthy projects elsewhere (America 2050 2011).

In California, a comprehensive plan would first build a dedicated High Speed Rail line between the state's two largest metropolitan areas—Los Angeles and San Francisco—at a projected cost of \$65 billion. Phase 2 would expand the system at both ends: a line from the Bay Area to Sacramento and one from Los Angeles to San Diego. The cost for Phase 2 has not been projected as this component of the system is more than 20 years away. In its entirety the comp-



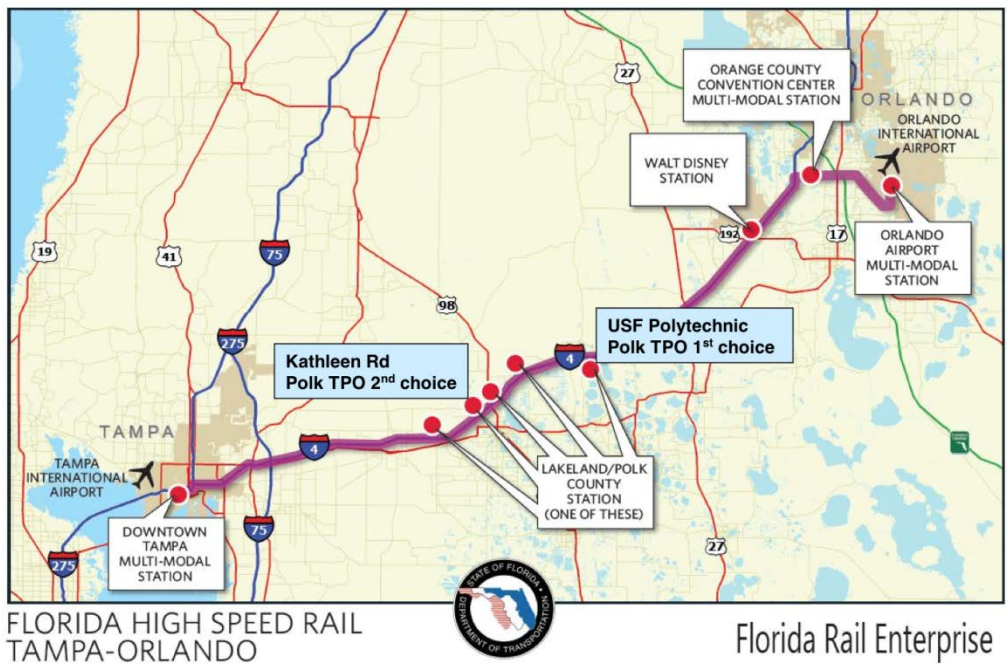


Figure 2: Proposed High Speed Rail networks in Florida and California.

leted system will be 800 miles long and fully integrated with local and regional rail and bus transit (California High Speed Rail Authority 2012). A project separate from the California high-speed line but one whose success may rest upon it is the proposed high-speed DesertXpress. The DesertXpress is a planned HSR line that, if fully operationalized, will connect Las Vegas with downtown Los Angeles. Initially envisioned as a line operating from Victorville, CA to Las Vegas, DesertXpress officials are working with the Los Angeles Metropolitan Transit Authority (MTA) to expand the HSR line to Palmdale, CA which is a stop on the prospective California HSR line that will eventually connect San Francisco to Los Angeles. The MTA is interested in working with DesertXpress in that Palmdale is increasingly becoming a commuter hotbed to Los Angeles, and therefore the agency sees this seamless HSR system as practical.

### **Rethinking High Speed Rail in New York State**

As noted earlier, the approach to High Speed Rail in New York State has been piecemeal. There are examples of such an approach working, such as the line between Chicago and Saint Louis in Illinois. The state fought for \$1.5 billion in funding to improve train operations between Chicago and Saint Louis. The federal government provided \$1.1 billion in funds, while Illinois committed the remaining \$400 million. The project, expected to be completed in 2014, will allow Amtrak passenger trains to run at top speeds of 110 mph, shortening the current train travel time of 5.5 hours by about ninety minutes along the 284-mile corridor. The largest part of the project entails constructing 190 miles of new track along the existing Union Pacific track. The new track will reduce or nearly eliminate bottlenecks suffered along the route which currently only consists of a single track for much of its duration. Other than constructing new track, numerous grade crossings and signals will be improved to allow for higher speed trains (Hilkevich 2010). The current route carried 610,000 passengers in fiscal year 2011, and ridership has consistently grown in the past several years. Officials involved in the project expect a marked increase in customers when the higher speed service begins in 2014.

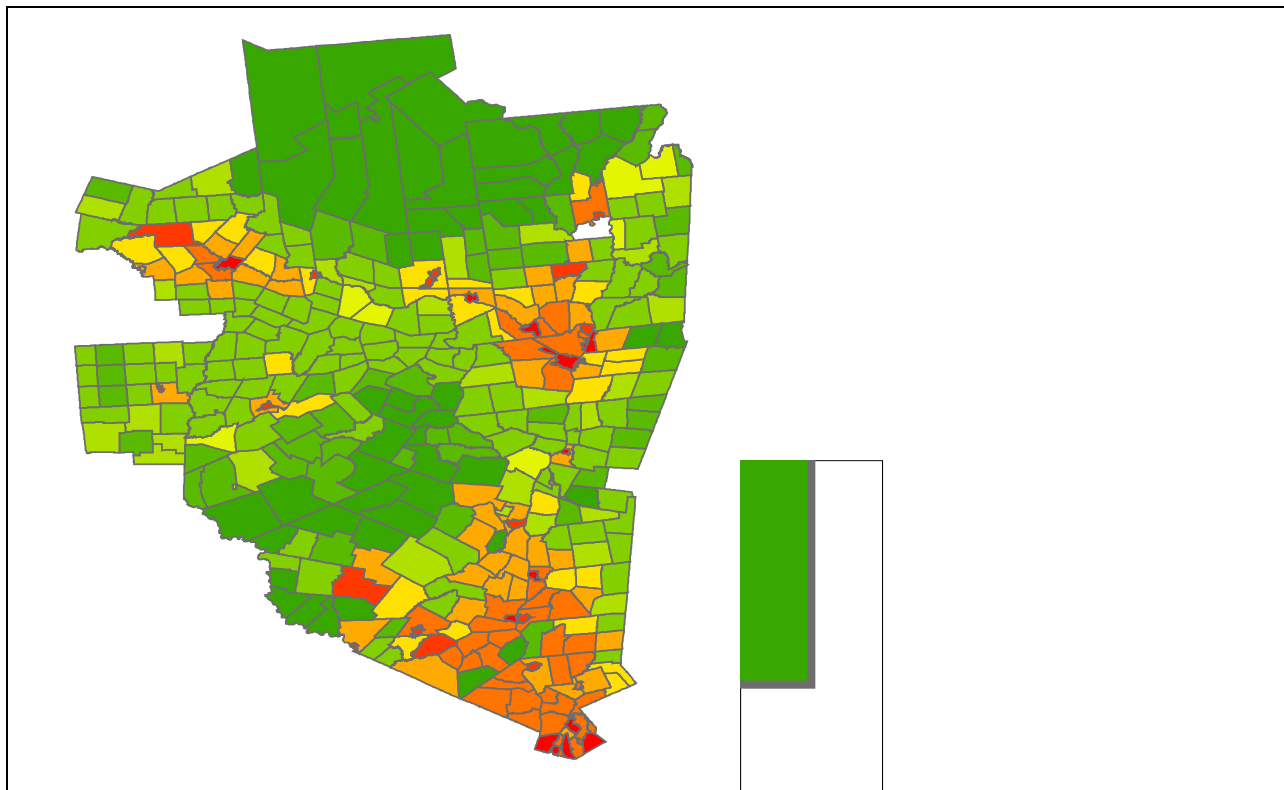
The major approach in New York involves upgrades to existing track between Albany and Buffalo that will increase speeds from 80 to 110 miles per hour, an improvement but nevertheless lower than the 125-180 mph parameters that typically define High Speed Rail in both Western Europe and in East Asia (Lane 2012). Nonetheless, an increase of 30 mph would reduce the travel time between Buffalo and Albany by about two hours. We propose a system that builds on such efforts but focuses on the potential for High Speed Rail to transform the transportation system and the state economy in a manner similar to the building of the Erie Canal in 1825. In our view, a High Speed Rail system should focus on the following:

1. Encourage New York metropolitan growth by spreading influence over a greater area. By providing rapid access to a large area of the state, especially in eastern New York, both businesses and residents of the New York metropolitan area will have access to a greater diversity of locales in which to locate. The ability to commute rapidly between upstate cities and Manhattan can offer firms and residents the opportunity to access lower priced areas upstate as well as higher wages scale in New York City. Over time, there should be a convergence as real estate moderates in the city and wages rise upstate.

2. Strengthen urban centers by focusing on existing urban locales. New York State was one of the earliest states to industrialize, and as a result the region is home to a sizable number of urban centers at roughly 50 mile intervals. This is particularly true in the eastern half of the state, the region most capable of tighter integration with New York City. The regular intervals of the state's cities as well as the concentration of mass transit in those cities offer an opportunity to help revitalize those urban centers.

3. Revitalize upstate communities by creating pathways into New York and the global economy beyond. Upstate cities have always been tied to the global economy, and the Port of New York has been the primary mechanism for this integration. When much of what upstate communities produced was durable goods such as textiles and computers, the relatively slow transportation system between upstate cities and the downstate metropolitan area was adequate. Increasingly, however, New York City needs the space and educated workforce offered by upstate communities, and upstate cities and towns require the capital of downstate. (Upstate New York has a more educated workforce than the nation as a whole: Pendall et al. 2004). High Speed Rail can help bridge this gap.

4. Reduce sprawl in environmentally sensitive areas. Although large areas of upstate New York have been urbanized for generations, large areas remain more or less natural. In eastern New York, particularly in the Catskill Mountain Region and in the Hudson Valley, a low-



**Figure 3:** Urbanization in southeastern New York. Oranges and reds represent townships that are more heavily urbanized, whereas the deep greens are sparsely settled towns. Note the large swath of urbanization in the Hudson Valley and Orange County suburbs, and other urbanized areas surrounding Albany and Utica. The deepest greens are found in the Catskill and Adirondack Mountains, and one goal of a system is to preserve the rural character of these regions.

density urbanization pattern that is neither economical nor sustainable has taken hold. This pattern has the potential to spread rapidly and, in the process, can threaten both the landscape and potentially the costs associated with the New York City water systems in the region. High Speed Rail can help “leapfrog” development over such regions while also enabling development in regions already urbanized and in need of assistance.

We envision a High Speed Rail system designed for both inter-city and commuter travel that consists of four lines within New York State and three major hubs for connection to other potential systems. As commuters to and from New York would provide a substantial share of the ridership, we see New York City as one of the hubs. Compared to Grand Central Station, Pennsylvania Station would perhaps be the better choice due to the connection to Acela and other Amtrak trains. The second hub is the Albany-Rensselaer station which is prominent in the current proposal, but could also serve as a hub for a line arriving from Boston to the east. The third hub is Buffalo, the western terminus of one proposed line and the natural point of departure for future lines heading to Cleveland and Toronto.

We anticipate that the busiest proposed line would be the Hudson Valley line. This corridor already features substantial ridership on both Amtrak and Metro-North lines, the “commuter zone” and “artist zone” stretching far north of the Metro-North station at Poughkeepsie (see below). The line would parallel the current lines running from Grand Central Station to Albany/Rensselaer with a station in Poughkeepsie. An additional station could be at Albany Airport, although the proposal calls for other lines to connect Albany/Rensselaer to Albany Airport and as such it may not be necessary or feasible for the Hudson Valley line. In addition, a station at Tarrytown may enhance the commuter abilities of the line, although this would slow the travel time between New York and Albany by a few minutes.

A second line would begin at Albany/Rensselaer and proceed to Albany Airport, Utica, Syracuse, Rochester, and end in Buffalo. The “Erie Canal line” would thus connect the five largest metropolitan areas in the state after New York, enhancing not only the potential to commute between these cities and one another but to the New York metropolitan area as well. The cities with the best potential for increased integration with New York City are Albany and Utica as both cities would be within the “artist zone” and, depending on train speed, the “commuter zone” as well. The station at Albany Airport would enable the airport to serve a wide catchment area served by the system.

The Adirondack line, running from Albany/Rensselaer to Albany Airport, Saratoga Springs, Plattsburgh, and finally to Montreal, could serve commuters in the Capital District as well as tourists to the Lake George Region. It would also provide High Speed Rail to Canada’s second largest city and rail connections available there.

A fourth line, the Finger Lakes line, could serve commuters to the Capital District and metropolitan New York as well as tourists to the Finger Lakes region. This line would start at Albany/Rensselaer and continue to Albany Airport, Oneonta, Binghamton, and Ithaca. The line could be further extended to Geneva and Rochester as well. The line would provide those in the northern Catskills and Susquehanna Region enhanced access to Albany Airport and place One-



Figure 4: Proposed High Speed Rail lines in New York State.

onta in the commuter zone for both the Albany and New York metropolitan areas (depending on the train speed).

### Potential Social and Economic Impacts

Past research (Smith & Thomas 2012) and recent interviews suggest that the pattern that currently exists in the Hudson Valley would be extended into other areas of eastern New York. Currently, New York City intersects with the rural areas of upstate New York in a series of “zones.” The region from New York City through the Greenbelt formed by the reservoirs and a series of state parks about thirty miles north of New York can be referred to as the “inner suburbs.” This region is characterized by dense settlement patterns in nearly contiguous urbanization, the comparatively sparsely settled suburbs of northern Westchester County more a function of wealth and topography than of pressure to develop into such a pattern. The greenbelt



**Table 3:** Zones of Proposed Stations and Time to Pennsylvania Station at Various Average Train Speeds

	110 MPH (time)	150 MPH (time)	250 MPH (time)
Commuter Zone	Albany (1:25)	Albany (1:00) Saratoga Springs (1:20)	Albany (:40) Saratoga Springs (:45) Oneonta (:50) Utica (:55)
Artist Zone	Saratoga Springs (1:40) Oneonta (2:00) Utica (2:10)	Oneonta (1:35) Utica (1:40)	Syracuse (1:10) Plattsburgh (1:20) Rochester (1:30)

itself is composed of the lands around the Croton System of reservoirs in Westchester and Putnam Counties east of the Hudson and the series of parks extending southwest from the Hudson at Bear Mountain to the New Jersey state line. North of this region to approximately the Interstate 84 corridor may be termed the “outer suburbs,” and it is here that substantial portions of open land becomes highly visible. Nevertheless, the outer suburbs are marked by high levels of commuting both with New York and the inner suburbs. North of the Interstate 84 corridor is a series of exurbs, including the towns north of Poughkeepsie, much of Ulster County and even though it is not officially part of the New York CSA, much of southern and central Sullivan County. This region features a considerable pattern of commuting to the suburbs and, perhaps surprisingly, to New York as well. Interview data from Kingston, Rhinebeck, and even as far away as Kinderhook (in Columbia County) indicate an increasing willingness to commute into Manhattan even on a daily basis. These three zones may be termed the “commuter zone” due to the ability of residents to commute daily or near-daily into the city. Beyond the commuter zone we see an “artists zone” where professionals, often but not exclusively artists, can purchase or rent space at comparatively low cost yet maintain a metropolitan clientele through occasional trips into Manhattan. Areas around Hudson and the southern Catskills as far north as Andes—about two to 2 ½ hours north of the city—have extensive economies based on this pattern. The building of a High Speed Rail system would extend this pattern more deeply into upstate New York and represents an opportunity to revitalize historic city centers while also minimizing the spread of urban sprawl in between.

Although the current plans call for trains capable of 110 miles per hour, like the Acela the new trains will only rarely hit such speeds. As a result, our projections for 110 mph trains actually overstate the benefits in terms of commuter and intercity transit. Nevertheless, if High Speed Rail systems capable of averaging 110 mph were developed, only Albany would marginally be within the commuter zone to Pennsylvania Station. Given the current proposal, however, we do believe that the “artist zone” that currently exists between roughly Kingston and Hudson would move north to include Albany and Saratoga Springs. As Saratoga Springs has a tradition of tourism that dates to the nineteenth century it is likely that city would benefit the most as it already has a certain market and “panache.” As Hudson is currently about two hours from New York, as are a number of small artist colonies in the Catskills, we also believe that Oneonta and Utica could see an increase in artists and similar creative professionals in need of occasional but not daily access to the metropolitan area. Oneonta currently has a local arts scene with connections to New York, and Utica has a large number of older industrial structures within a short walk of Union Station (see case studies below).

Trains traveling at 150 mph would spread New York City’s influence over a greater share of eastern New York, extending the commuter zone well into the Albany metropolitan area (including Albany and Saratoga Springs) with commutes approximately comparable to what many mid-Hudson valley residents experience today. Although both Oneonta and Utica also have commutes within the 90-120 minutes currently experienced by many Hudson Valley residents, we believe that access to the housing market in metropolitan Albany would make longer commutes unnecessary and, as such, few would commute from these more distant cities. However, both Oneonta and Utica would have considerable advantages for occasional commuters, including real estate values and other cost-of-living measures and existing infrastructure. It is likely that these cities would develop economies similar to those of the artist zone today.

At 250 mph, the influence of the New York metropolitan area would extend across nearly the entire state, pulling the eastern New York cities well into the commuter zone and extending the artist zone to Rochester in the west and nearly to Canada in the north. It is possible that this option would diffuse the influence over too great an area, however.

### **Case Studies in Three Communities**

#### *Albany: High Speed Rail meets Light Rail*

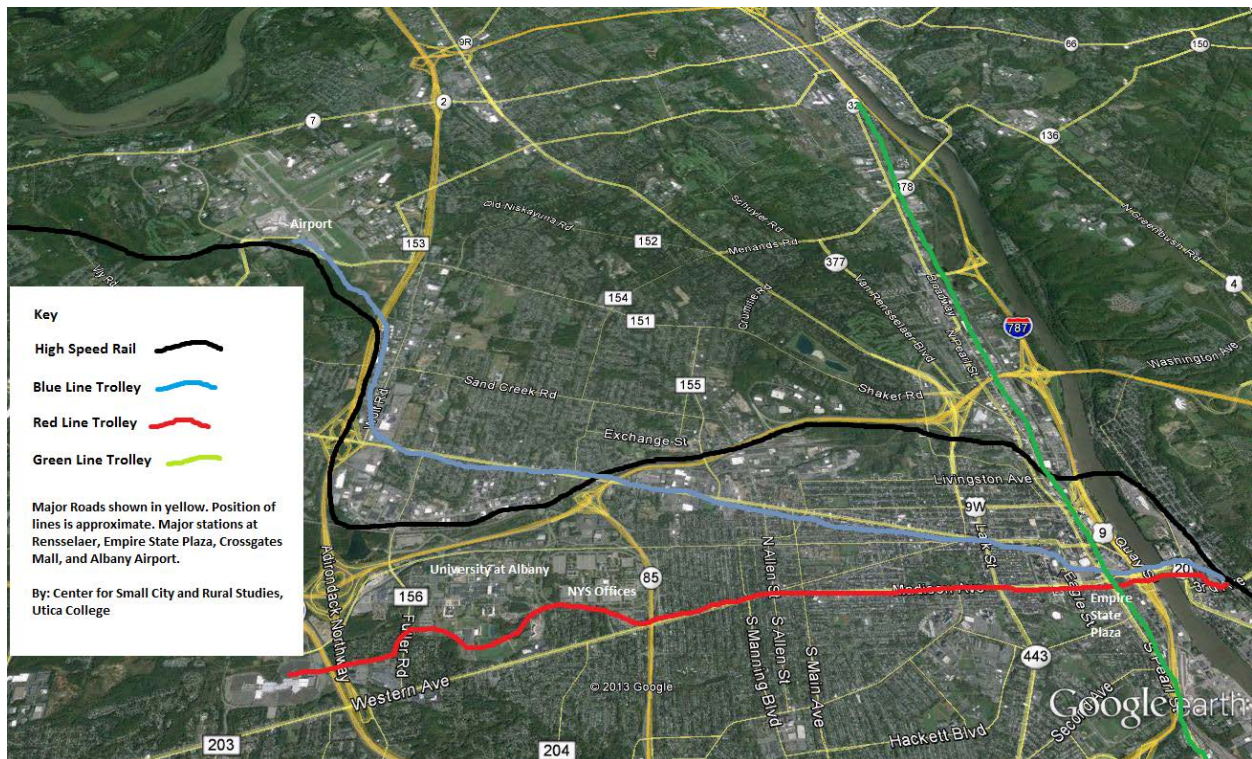


**Figure 5:** Rensselaer Station (bottom left) with downtown Albany across the river. High Speed Rail, particularly at speeds of 150 miles per hour or more, could transform both cities. A proposed light rail or modern trolley system would further revitalize the area.



The feasibility of a high-speed rail line passing through the Capital Region of New York could be enhanced by a limited but strategically placed light-rail or a modern trolley system in Albany County. A modern trolley or light-rail system would be one component of a multi-modal system that would help connect the Albany-Rensselaer Amtrak station in Rensselaer with downtown Albany. The line would subsequently split in two directions to serve the regional airport and suburban sites. A third line could potentially be built along the west side of the Hudson as well. As it currently stands the Albany-Rensselaer Amtrak station is literally cut off from downtown Albany by the Hudson River. Passengers going to and from the station must either drive to the station and pay for parking or take expensive cab rides as part of process of patronizing Amtrak trains. In addition, the station at Albany International Airport would attract travelers from throughout the region who could park at their local High Speed Rail station and fly out of the airport; this would likely increase demand at the airport.

A light-rail system connecting the station with downtown Albany and the Albany International Airport would encourage train travel as well as buoy business and tourist development in the community. Downtown Albany, while showing signs of revival, houses numerous underused lots and vacant buildings. Commercial enterprises, including firms in law, banking, and insurance are increasingly leaving downtown Albany for new Class A office space in the surrounding suburbs. While architecturally distinctive, firms are increasingly finding the downtown office buildings, many of which date to the 1920s, as functionally obsolete. Fortunately, mid-sized investors have rehabilitated many significant downtown properties into market-rate apartments and condominiums. Nonetheless, the reemergence of downtown Albany as a residential district is in its infancy and significant potential remains. A third line running



**Figure 6:** Two proposed rail lines in Albany: High Speed Rail with stations at Albany International Airport and Albany-Rensselaer Station, and a modern trolley or Light Rail system.



from Delmar, through downtown Albany, and to Cohoes roughly following New York 32 could further enhance this potential.

After passing through downtown Albany we envision that the light-rail system would branch off in two directions: 1) Downtown Albany to Albany International Airport via Central Avenue and 2) Downtown Albany to Crossgates Mall in suburban Guilderland via Western Avenue. Both corridors contain substantial vehicular traffic and popular city bus routes. Central Avenue, once the heart of Albany's retail community, remains a relatively vibrant commercial hub, but akin to downtown Albany, the corridor houses numerous lots and buildings that are underused or underdeveloped. For its first two miles west of downtown Albany, Central Avenue acts as an unofficial boundary between the largely white working-class neighborhood of Beverwyck and the largely African-American working-class neighborhood of West Hill. It also retains a very urban feel as most of the buildings are built out to the sidewalk and stand multiple stories high. Although the corridor is long past its heyday as the commercial heart of the Albany region, its buildings are largely occupied and house an array of businesses, including popular restaurants and delis, local apparel, hardware, and shoe stores, and small food markets. Nonetheless, many of the structures contain vacancies. As light-rail and modern trolley systems have spurred investment in places as varying as Cincinnati, Portland, OR, and Washington D.C., we would expect private sector investment to follow the public investment in light-rail.

Upon crossing Watervliet Avenue in Albany, the Central Avenue corridor shifts from a traditional urban layout to a more suburban form, and it retains this composition west into Colonie. Set back from the street with large surface parking lots are several regional supermarket chains, new car dealerships, strip malls, restaurants, and a Home Depot store. Although this part of Central Avenue in Albany has experienced significant new investment in the last ten years (old buildings were demolished and replaced with new structures), the new structures have retained the auto-centric layout of area despite the district being patronized by many lower-income residents who lack cars. Although the city has worked to a limited degree to make the district more pedestrian friendly, a light-rail system that would most likely run down the center of Central Avenue, would add dozens of medians throughout the corridor in which pedestrians could safely wait while attempting to cross the street.

Central Avenue maintains its suburban layout into the town of Colonie. Even though Colonie houses the second largest shopping mall in the entire region as well as dozens of national chain stores, most of the commercial activity is centered at the junction of Central Avenue and Wolf Road. Between the Albany city line and Wolf Road, however, lie numerous aging structures and weed-filled vacant lots. Just as in Albany, the town of Colonie could witness significant new private sector investment along this under-used corridor following the public light-rail investment. The approximately one-and-a-half mile corridor would be ripe for new mixed-use development that ideally would combine residential and commercial activities in the same buildings. With the Central Avenue light-rail line terminating at the Albany International Airport, the town of Colonie could also witness substantial hotel development adjacent to the line, an added boon to its tax base.

We would also propose a second light-rail line connecting downtown Albany to Crossgates Mall in suburban Guilderland via Western Avenue. Similar to Central Avenue, Western Avenue

is a heavily travelled corridor that is at many times choked with bus and automobile traffic. Unlike Central Avenue, however, Western Avenue would be less of a candidate for redevelopment. Western Avenue begins at the western edge of downtown Albany. Venturing west one would quickly encounter the downtown campus of the State University of New York at Albany. Following this is the residential neighborhood of Pine Hills and the expanding campus of the College of Saint Rose. The eastern section of Pine Hills is heavily populated by students, and although it retains many attractive features including its walkability and proximity to restaurants and the bucolic Washington Park, the city has had a problematic relationship with numerous property owners, many of whom are absentee landlords who invest little in their student-filled dwellings. A new light-rail line through this section would likely attract a more serious type of investor than what has been all too common up to this point—deadbeat landlords. A line here could also attract owner-occupied homebuyers and new retail establishments.

West of the College of Saint Rose the neighborhoods abutting Western Avenue become visibly more upscale. The Buckingham neighborhood along this section of the corridor between Manning Boulevard and Highway 85 is the wealthiest in the city of Albany. The median household income in the census tracts west of Manning Boulevard and south of Western Avenue are upwards of \$120,000. Therefore, few changes would be seen along this stretch of the corridor, but the owners of the properties here would likely see price appreciation following the construction of the light rail line. Continuing west after Highway 85 lie tidy middle class residential neighborhoods to the south of Western and the Harriman State Office Complex and the uptown campus of the State University of New York at Albany on corridor's north side. City buses along this stretch are at many times filled to the brim with college students and government workers. As this stretch of Western Avenue is quite suburban in character, the line could veer off of the street and take advantage of the open space in these campuses to save on costs in building the line.

West of the university is the town of Guilderland and the corridor here is comprised of a mix of retail stores and hotels on the south side and residential homes on the north side. Retail further expands west of Fuller Road with Stuyvesant Plaza and subsequently the massive Crossgates Mall, the largest shopping center in the region. Significant bus and vehicular traffic choke the corridor during many times of the day. A modern light-rail system would both alleviate road congestion and strengthen property values for both the city of Albany and the town of Guilderland.

Although investment in a new, modern light-rail system is likely far off, Kathy Sheehan, one of the leading mayoral candidates in Albany, supports the concept of a light-rail system that would connect the Albany-Rensselaer Amtrak station with downtown Albany and then further on to Albany International Airport via Central Avenue (Author conversation with Kathy Sheehan, August 22, 2012). Sheehan did not mention a Western Avenue line. Yet, both lines would strengthen a statewide high-speed rail system by funneling passengers into public transportation nodes.



**Figure 7:** Utica's Union Station (center bottom), with a considerable amount of developable urban property nearby.

### *Utica: Revitalizing Downtown from the Station Out*

Utica's Union Station is an architecturally rich structure in the historic heart of downtown. In addition to Amtrak, the station currently also serves intercity bus passengers and the Adirondack Scenic Railroad. The Children's Museum is next door. The surrounding area, however, had been dominated by industrial and warehousing activities for much of its history, and as such today the area is a blend of large buildings pockmarked by parking lots and vacant land. The arrival of High Speed Rail, particularly at speeds that significantly lower the time distance to New York, would transform the historic heart of the city of planned well.

The area surrounding Union Station currently is home to many buildings that would make excellent loft apartments and an arts and antiques district. The many underutilized lots in the neighborhood would, under such circumstances, become significant investment opportunities. To the south and southwest of the area and extending into the current heart of the central business district is the proposed Great Utica Rescue Walking Trail, a guided tour of downtown based on the abolitionist history in the city. The trail could be used as a focus for redevelopment efforts: as a city formerly home to over 100 thousand residents Utica has a geographically large downtown that has, over the past six decades, fallen into considerable disrepair. The train station and historic trail could provide guidance as to how to prioritize projects. To the north of the station is an industrial area that abuts the historic harbor off of the Erie Canal. The area is currently developed with an eye toward automobile accessibility, a strategy that has been met with limited success. A bridge stretching north for the station for passengers could be expanded into a new parking structure to serve Utica area travelers and serve as an enclosed gateway "mall" to a



revitalized harbor district. In order for this approach to work the harbor area must be developed, at least in the area nearest downtown, with pedestrians in mind, most likely along "new urbanism" lines. Research has shown that such development earns cities 25 to 59 times more revenue per acre than its suburban counterparts (Minicozzi 2012; see also Empire State Future 2012).

The potential of this approach is multifaceted. The obvious benefit, particularly at lower time distances, is the ability of local residents to commute to other cities, particularly Albany and New York. The new parking garage and public transport would service this population seeking to get to the station. Local companies, particularly those located near the train station, could likely attract talent from other cities as well. The train would thus serve as an impetus for redevelopment of Downtown Utica for both residential and commercial real estate. The area nearest the train station would likely develop an arts and antiques community seeking out an urban arts scene with access to that of New York City. This has been the case in Hudson where the local Amtrak station is at the same time distance as that proposed here.

The local arts scene and redeveloped harbor, potentially with an indoor mall immediately north of Union Station, could also attract significant tourists taking advantage of High Speed Rail to get to Utica. Combined with an emphasis on Utica's social, industrial and revolutionary war history (a Fort Schuyler Park might help), a substantial tourism economy could develop.

There are obstacles to such a vision. Since its first demolition of several blocks of downtown in the area of Liberty and Oriskany Streets to make way for parking, Utica has formulated revita-



**Figure 8:** Utica's Central Business District is home to a veritable sea of largely underutilized parking lots.



lization strategies based on accommodating the automobile. In addition to an excessive number of parking lots, an aerial intersection immediately west carries Genesee and John Streets over historic Bagg Square, which is covered by a permanent umbrella of steel and concrete. These efforts have met with roughly the same results as similar strategies attempted by other major cities. According to Google Earth imagery accessed in 2011, there are well over sixty parking lots of various sizes in downtown Utica (bounded by State Street, Park Avenue, and the railroad tracks), but only a handful of lots even approached 50 percent occupancy on the day of the photography. This was true even in the heart of downtown, close to Genesee Street, where the lots are joined by three sizable parking garages. It is a common misperception in many cities that adding more parking will result in urban revitalization. This has clearly not been the case in Utica, and there is evidence from other cities and towns that contradicts the conventional wisdom as well. As late as a decade ago an empty lot was turned into a suburban-style office building and adjacent parking that does little to aid the urban fabric of the central business district. What Utica needs to revitalize is the reestablishment of an urban core with pedestrian traffic. High Speed Rail is one of several steps in establishing this core.

*Oneonta: Leapfrogging the Mountains*

Oneonta is on the other side of the environmentally fragile Catskills Mountains. At current rates of suburban and exurban growth in the New York Metropolitan Area, the region will be in danger of losing its rural character within in a generation or two. Even today, Ulster County was reclassified by the federal government as part of the New York Combined Statistical Area in 2003, and growth on southern Sullivan county means that the mountains dubbed the “Borscht



**Figure 9:** Proposed site of Oneonta’s High Speed Rail station (bottom center).

Belt” will soon follow suit. Development patterns in this region encourage considerable sprawl as many townships require three or more acres for a building permit. Such a low density exurban pattern is already evident in places like Woodstock and around the Ashokan Reservoir. Not only do they ensure continued reliance on the automobile for almost everything, the cost of such basic municipal services as road maintenance is spread over fewer tax payers and, over time, will require higher taxes on those who remain (Thomas & Smith 2012). We believe High Speed Rail offers a better alternative. The proposed line paralleling Interstate 88 would have stops on Oneonta, Binghamton, and Ithaca. This line could be extended to serve Geneva and Rochester as well. By providing a High Speed route to the area north of the mountains, High Speed Rail could be a major component in protecting the region from further sprawl.

In Oneonta itself High Speed Rail should be located downtown to take advantage of public transportation. Immediately adjoining the historic train station (now an Italian restaurant) and the Foothills Performing Arts Center is an ideal dirt lot that also sits across the street from a parking garage. Additional parking could be designed into the upper floors of the station if necessary. Local residents would be capable of commuting to Albany and, by transfer to another line, Utica and New York as well. The location of the station downtown would also serve as a locus for revitalization: the Market Street Area was demolished and substantially rebuilt as a bypass around downtown during the 1970s. Consequently, the urban renewal lot is a hodge-podge of differing architectural styles, economic functions, and aesthetic choices. The former train station is an upscale Italian restaurant with parking in front. The former L. P. Butts hardware store, itself a product of urban renewal, was demolished several years ago, scarring the streetscape with a dirt lot. It is this site that is proposed for a new passenger rail station. Across the street, the largest area of the urban renewal area contains a suburban-style credit union, a drive through ATM for a commercial bank, a hotel, and numerous underutilized parking lots. High speed Rail would reinvigorate the area, providing a locus for commuters to other cities and tourists to Oneonta, and spurring investment that should result in new urbanism style development.

### **Organizations Advocating for High Speed Rail in New York State**

Two key organizations in New York State that are working on behalf of greater investments in rail are the Empire State Passenger Rail Association (ESPA) and the Center State CEO. Both groups have argued that investments in rail would improve the upstate economy, facilitate commerce, and help meet the nation’s environmental goals.

ESPA, a membership-supported organization based in Buffalo and headed by Bruce Becker, has been particularly involved in the case for rail. Because of the necessity for federal funding for any significant rail project, members of ESPA hold yearly briefings with the Congressional Railroad Subcommittee and the High-Speed and Inter-City Rail Caucus in Washington. These briefings are designed to share ideas, network, and build relationships with federal Amtrak officials. ESPA also sponsors an annual Congressional reception and last year met with twenty-six of the new members of Congress in Washington. The receptions provide a crucial educational venue for ESPA to make its case for rail investments to new members of Congress, many of whom have limited knowledge of rail.

Because ESPA is based in New York State, it works closely with lawmakers in Albany. ESPA holds an annual conference in the state and organizes speakers from local, state, and federal agencies and organizations. Its most recent conference in Schenectady included speakers from Amtrak, the National Association of Rail Passengers, AARP, Bombardier, the New York State Governor's Office, the New York State Department of Transportation (DOT), and others. ESPA has also used some of its financial resources to hire a lobbyist from Patricia Lynch Associates in Albany to make the case for rail to members of the State Senate and State Assembly (Interview with Bruce Becker, February 5, 2013).

Center State CEO has been another group active in the promotion of rail investment in the state. Based in Syracuse, the group organized the High Speed Rail New York Coalition which unified the Chambers of Commerce and the mayors of the major cities along the rail corridors from Albany to Buffalo and Albany to Plattsburgh. The Coalition's purpose was to cultivate a unified message in support of rail investments to lobby the governor and federal representatives. Deb Warner, Vice President for Public Policy and Government Relations at the Center State CEO, noted that in recent years service along the corridor has become increasingly degraded as track and signals continue to age. Although the organization understands that authentic high speed rail would entail travel speeds exceeding 150 mph, Warner states, "We would be happy to get speeds back to where they were in the 1950s, at 90 mph instead of an average speed of 40 {mph} today because of bottlenecks and the continue neglect of the infrastructure" (Interview with Deb Warner, January 22, 2013).

Center State CEO has met with congressional committees in Washington and state officials in Albany. They have organized meetings and conference calls with the mayors of every major city along the Empire Corridor and have worked with those cities to develop an assessment on how investments in rail would affect tourism, the footprint of the available workforce, the environment, urban development, multi-modal transportation, and other factors. These separate assessments were then compiled into a larger regional impact study that was subsequently presented to the State DOT.

The State DOT estimates that it would cost \$40 billion to construct track that would enable train speeds of 160 mph between Buffalo and New York City. In comparison, the cost of track that would allow for speeds up to 125 mph is estimated at \$16.9 billion. Federal sources of funding, therefore, are absolutely essential to any major rail project, and this speaks to why both ESPA and Center State CEO have spent considerable resources on lobbying and education efforts in Washington.

## **Conclusion**

The investment in High Speed Rail has the potential to reinvigorate New York cities, upstate and downstate. We have proposed four lines that would better integrate the economies of the entire state, but we also see this as the core of what could be an important infrastructure connecting the Northeast and the Great Lakes.

This report has stressed the potential of High Speed Rail to expand the sphere of influence exercised by New York City's robust economy while creating new markets and investment opportunities upstate. Such cities as Albany and Utica could be commuter hotspots using technology commonplace in Europe and Japan, and such new technologies as Magnetic Levitation trains, capable of speeds well in excess of 250 miles per hour, could do even more. High Speed Rail could also improve existing commuter service as well. A line to Riverhead, Long Island, with stations in Jamaica and Hicksville, could alleviate congestion throughout Long Island. A High Speed line across the Hudson River, either with a new Tappan Zee Bridge or at Bear Mountain Bridge, connecting the Hudson River line to Monticello could improve the commutes for tens of thousands in southeastern New York and northern New Jersey. Obvious stations are at Tarrytown, Harriman, Middletown, and Monticello; a regular tail line could connect Harriman to Newburgh and Kingston.

Other lines could be built into neighboring states and provinces. A line from Albany to Boston, connecting Pittsfield, Springfield, and Worcester along the way, would likely also be profitable. Similarly, a line from Buffalo to Toronto would take advantage of the high populations along Lake Ontario's "Golden Horseshoe," one of the most populated regions in North America. Similarly, a line from Buffalo leading to Cleveland and beyond would extend the High Speed nature of the proposed Erie Canal line well into the Great Lakes. A line from Utica to Ottawa, via Watertown, would also connect travelers to Canada's rail system at Kingston, Ontario. Simply stated, New York has within its power to not only transform itself but the region as a whole. And High Speed Rail is perhaps the most important mechanism for doing so.

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