

Patroon Greenway Project

A Community and Transportation Linkage Planning Project

Task 2 :

Regional Impact Report



Prepared for:

Capital District Transportation Committee

Albany, New York



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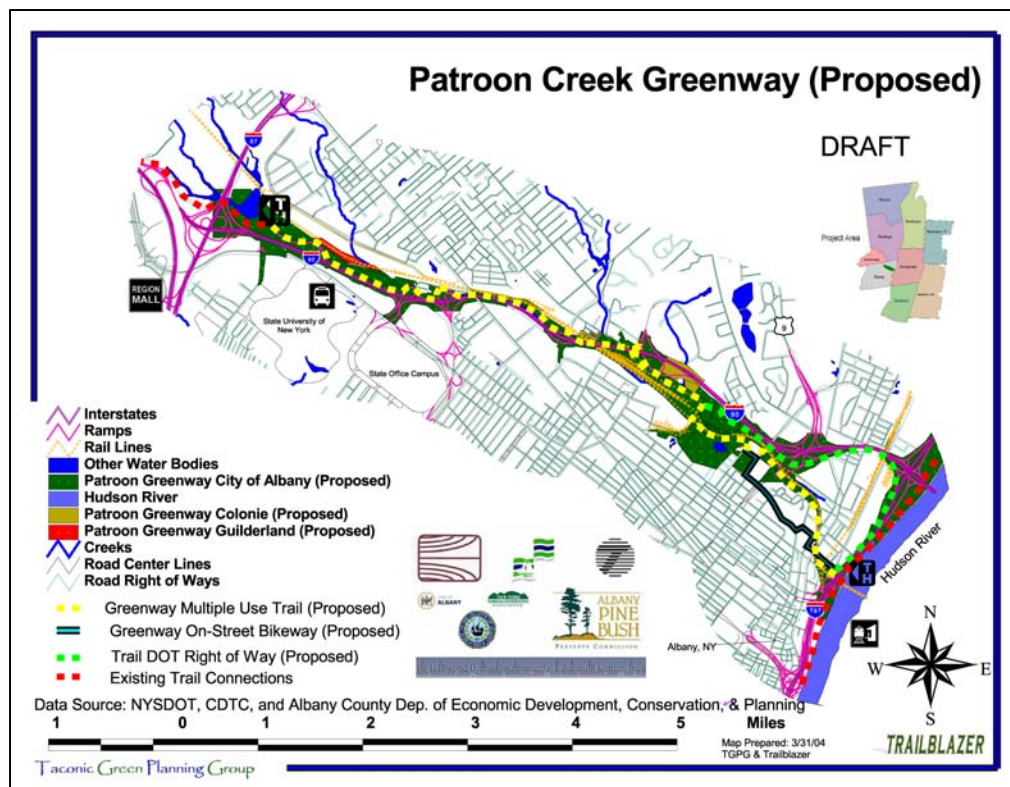
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This project is funded through the Capital District Transportation Committee's (CDTC) Community and Transportation Linkage Planning Program.

1. Introduction

The Patroon Greenway Project is being developed to connect The Pine Bush, Tivoli and Corning Preserves in Albany, New York. The first phase of the project involved establishing a proposed alignment for a trail along the Patroon Creek from Rensselaer Lake at Fuller Road to the Hudson River. This 6.5 mile corridor includes a diverse range of land uses including residential, commercial, institutional and recreational assets. The defining feature is currently I-90 between I-87 and I-787; but the creek and the adjacent preserves create a rare opportunity to create a new definition of this corridor as a linear resource connecting local communities and regional assets.

This document examines four areas of concentration for the potential for the Patroon Greenway Trail: 1) Value to the Regional Transportation System, 2) Environmental Justice, 3) Economic Development, and 4) Potential High-Tech Connections. Each of these topics highlights the potential of the new urban greenway to serve as a catalyst for reconnecting people and the environment, and for creating a positive future for the corridor. One of the advantages of creating greenways and trails is their unique ability to solve multiple problems in a cost effective and community-oriented way. The map below provides an overview of the proposed greenway corridor.

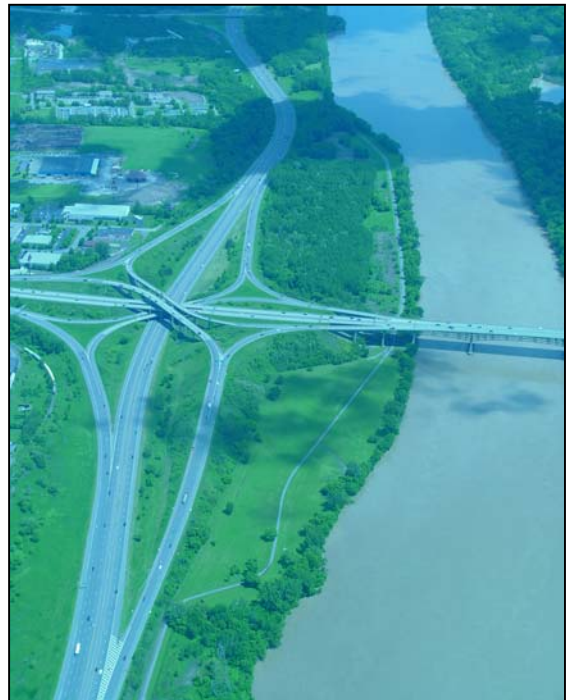


2. Value to the Regional Transportation System

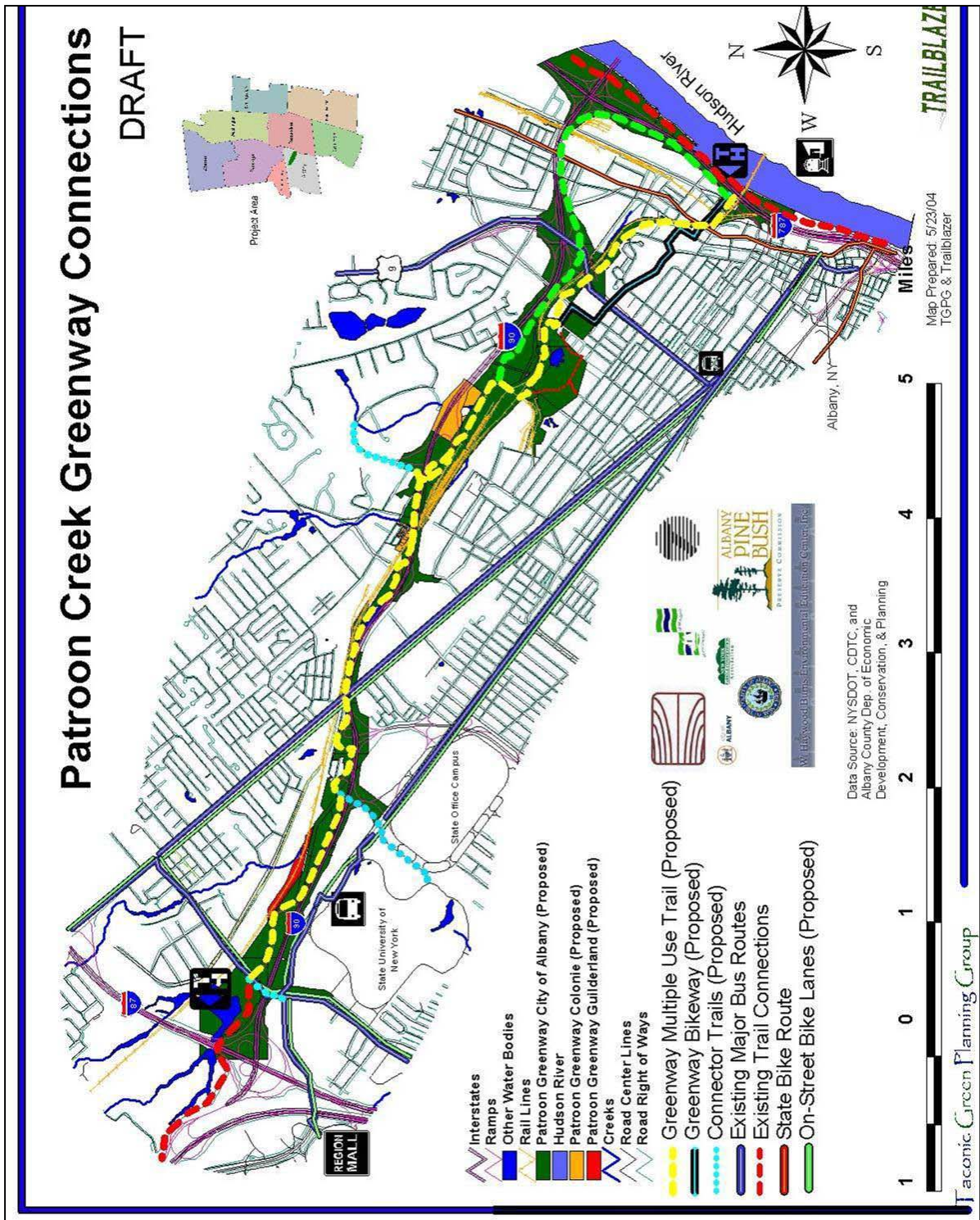
Albany County and the Capital Region of New York State are experiencing a decline in the amount of people bicycling and walking to work. From 1990 through 2000, U.S. Census data show a more than 30% decline in pedestrian and bicyclist commuting. During the same period, public transportation and carpooling experienced similar declines, and single occupant motor vehicles increased by a relatively modest 4.4%. While the Census data only represents travel to work and does not count recreation or other travel purposes, these numbers could be seen as critical indicators for the region's future.

It has often been said that bicyclists are the 'canary in the coal mine' for quality of life – and that less people walking and bicycling are a sign that quality of life is declining. The one potential bright spot in the past decade's Census data is a more than 23% increase in people working at home. As technology makes it possible for more people to work at home, key issues include whether or not those people will live in walkable communities where less motorized transport is necessary, or whether the ability to live and work anywhere will result in more sprawl and more trips by single occupant motor vehicles.

The Patroon Greenway Trail will create a logical connection to the existing regional system for walking and bicycling. While initially conceived as a connection between the Tivoli Preserve in Arbor Hill and the Pine Bush Preserve west of Fuller Road, the potential exists for this facility to connect at a larger scale from the Hudson River to the Erie Canalway Trail in Schenectady. At this scale, the trail becomes a connector for a new regional loop trail system along with the existing 42 mile Mohawk Hudson Bike-Hike Trail. It is worth noting that the Mohawk-Hudson trail was built in the 1970s as one of the nation's first demonstration projects using offshore oil revenues. The facility was constructed for an original budget of approximately \$600,000, and it currently carries an estimated 400,000 trips a year – a very favorable long-term return on the initial investment. The maps on the following pages show potential connections to provide access between the Patroon Creek trail, the region, and adjacent destinations.



*Photo: Aerial View of the Mohawk-Hudson Bikeway, Hudson River, and the Intersection of I-787/I-90
Source: John Thomas*



Map: Patroon Greenway Connections to the corridor's major destinations and to the region's transportation system.



Map: Patroon Greenway as a Part of the Capital Region's trail system
Base Map Source: Parks and Trails New York, www.ptny.org

As the maps indicate, there are significant potential benefits to the regional transportation system. These benefits can be summarized as follows:

Major Destinations:

The New York State Harriman Office Campus, State University of New York at Albany, the Albany Nanotech / Sematech Research site, Corporate Woods Office Park and Freihoffers' Bakery are examples of major employment sites along the corridor. The former First Prize meat packing site and the NL industries Superfund site are potential brownfield redevelopment locations. The Patroon Creek commercial development zone between Washington Avenue and I-90 includes a number of new office and commercial properties, many of which are healthcare businesses, which could be connected to the Greenway.

Intermodal Access and Connectivity:

As shown on the map, there are a number of existing Capital District Transportation Authority (CTDA) bus stops along the corridor. CDTA is promoting its 'Catch a Bikeable Bus' program and it is logical to connect the proposed trail with bike rack equipped public transit buses. The proposed Bus Rapid Transit system between Albany and Schenectady will be near the trail route. The corridor also includes the main Amtrak route between Buffalo and New York City, and provides a connection to the new Albany/Rensselaer train station via the Mohawk Hudson Bike Hike Trail

On-Street Connections to Sidewalks and Bicycle Facilities:

There are several key north-south connections to the local street system that will extend the trail into adjacent neighborhoods and destinations. Fuller Road is an important sidewalk connection between the Albany Nanotech site and the entrance to Rensselaer Lake Park. The linkage between the trail and the sidewalks at Central Avenue will provide access to local business. Extending the trail into the University and Harriman Campus will enable access for both transportation and recreation.

Neighborhoods and Local Corridors:

The Trail will provide an important asset to adjacent neighborhoods including Arbor Hill and West Albany. Local mixed-use corridors include Central Avenue, the new North Pearl Street Asian Market and other businesses in North Albany. The Arbor Hill School and Livingston Magnet Academy will benefit from access to the trail corridor, providing a potential 'Safe Routes to School' project. For local trips within these neighborhoods, the enhanced provision of bicycle and pedestrian facilities, especially in combination with improved transit access, is a cost-effective public works investment.

Case Studies

In a report presented at the 2004 Transportation Research Board annual meeting, entitled “*Commute Rates On Urban Trails: Indicators From The 2000 Census*” Hugh Morris concludes that, “...2000 Census journey-to-work data suggests that trails in urban areas may induce bike commuting by people who live in close proximity to the trail.” Among the factors Morris cited as elements for encouraging alternative transportation on trails are the following:

“Number of people living/working within proximate distance of the facility and mix of land uses around the facility...if the trail also connects to employment centers, schools, libraries, and shopping areas, then trip makers can use the trail for accessing those land-use types as well.

Number of access points to the facility. ...Trails such as the Custis Trail in suburban Washington, D.C. have access points into the surrounding neighborhood roughly every 100 yards.

Trail system/network vs. single facility: ...A network of interconnecting trails is substantially more useful for trip making because it has the ability to connect people to more places.

Trail surface, signs, sight lines, and maintenance: ...Design characteristics of the trail itself are important. Bike commuters like to go fast and that is best achieved on an asphalt trail with minimal grade and gentle curves.

Facilities at destinations to secure bikes and change attire: ...A chain is only as strong as its weakest link and the use of a trail for trip making is no exception. If there is no place to safely park one’s bike at the end of the trip then the trip won’t be made. “

Source: Morris, Hugh, “*Commute Rates On Urban Trails: Indicators From The 2000 Census*,” Transportation Research Board 83rd Annual Meeting, Compendium of Papers, Paper # 000650, Washington, D.C. 2004.

These factors are consistent with anecdotal evidence and personal experience of trails in the Albany, New York region. In order to provide a more detailed review of corridors similar to the I-90 / Patroon Greenway, the following sections present case studies of the I-66 / Custis Trail in Arlington, Virginia, and the I-90 / Mountains to Sound Greenway in Seattle, Washington.

I-66 Corridor / Custis Trail - Arlington, Virginia

Arlington, Virginia is a county that is quickly becoming a great place for walking and bicycling. In the 2000 Census, Arlington had a 6.3% mode share for walking and bicycling, which was just a 2% decline from 1990. With the recent addition of significant new urbanist redevelopment projects, 50 miles of new bike lanes, and the substantial completion of a perimeter loop trail around the county, mode share is expected to increase in the next decade. The League of American Bicyclists recently honored Arlington as a Bronze Bicycle Friendly Community.

The I-66 / Custis Trail is a 6 mile shared-use path built as an integrated element of the highway, and is a model for innovative design within an interstate right-of-way. The facility is completely separated from the freeway through extensive construction of retaining walls, bridges and landscaping. There are entrances to the trail at every street crossing and neighborhood. Connections are provided to Metro rail transit and the regional bus system, both of which have excellent bicycle accommodations.



Map of the I-66 / Custis Trail.

Source: <http://bikewashington.org/trails/wad/custis.htm>



Photo showing the Custis Trail, I-66 and a neighborhood connector.

Source: <http://spoke.compose.cs.cmu.edu/fwe/trips/constr.htm#RetainingWall>

I-90 Corridor / Mountains-to-Sound Greenway – Seattle, Washington

In the past 20 years, Seattle has become one of the best cities in North America for bicycling, in spite of hilly terrain and a rainy, northern climate. King County has a 4.5% mode bike/ped mode share, which is a 17% increase over the 1990 Census data. One of the region's signature projects is the Mountains to Sound Greenway, a National Scenic Byway that is *“the scenic, historic and recreation corridor along Interstate 90. This landscape stretches 100 miles from the Seattle waterfront through forests and rugged mountains to the edge of desert grasslands in Central Washington.”*

Source: <http://www.mtsgreenway.org/>

One of the unique features of the Greenway is the I-90 Trail in Seattle, which includes both the 3 mile long Lake Washington bridge path and a dedicated bicycle tunnel which is part of the ‘Portal to the Pacific’ gateway into the city on I-90. This is the same I-90 that runs across the country and through Albany, New York. The bridge, tunnel and trail sections were integrated elements of a series of highway reconstruction projects, and have been enhanced through stand-alone projects funded by a variety of state, local and federal funding sources.



Photos (L to R) show the entrance to the I-90 Trail, the ‘Portal to the Pacific’ bike tunnel and the Lake Washington Bridge shared-use path

Source: <http://homepage.mac.com/benbabusis/commute/commute-Pages/Image21.html>



Map of the I-90 Trail in Seattle. Source: <http://www.metrokc.gov/kcdot/tp/bike/bike9.pdf>

3. Environmental Justice

The need to consider environmental justice is already embodied in many laws, regulations, and policies such as: Title VI of the Civil Rights Act of 1964, National Environmental Policy Act of 1969 (NEPA), Section 109(h) of Title 23, and the Transportation Equity Act for the 21st Century (TEA-21). The US Department of Transportation, New York State Department of Transportation (NSYDOT), CDTC, and local communities are all part of the Environmental Justice process. The USDOT document *“An Overview of Transportation and Environmental Justice,”* provides the following background information:

“Safety and mobility are two of the U.S. Department of Transportation's (DOT's) top priorities. Achieving environmental justice is another undeniable mission of the agency...A 1994 Presidential Executive Order directed every Federal agency to make environmental justice part of its mission by identifying and addressing the effects of all programs, policies, and activities on "minority populations and low-income populations." The DOT's environmental justice initiatives accomplish this goal by involving the potentially affected public in developing transportation projects that fit harmoniously within their communities without sacrificing safety or mobility. “

“There are three fundamental environmental justice principles:

- To avoid, minimize, or mitigate disproportionately high and adverse human health and environmental effects, including social and economic effects, on minority populations and low-income populations.
- To ensure the full and fair participation by all potentially affected communities in the transportation decision-making process.
- To prevent the denial of, reduction in, or significant delay in the receipt of benefits by minority and low-income populations.”

Source: <http://www.fhwa.dot.gov/environment/ej2000.htm>

The Patroon Greenway Project is an interesting case from an Environmental Justice (EJ) perspective because it addresses past, present and future issues. These can be described as follows:

Past Environmental Justice Issues:

The construction of the interstate system created significant barriers to communities living along the highway rights-of-way. I-90 provides access to the region's east-west commuters and long distance travelers, but at the local level it is often a north-south barrier between neighborhoods and nearby resources. The highway separates residents of Arbor Hill, students at SUNYA and employees at Corporate Woods, giving little opportunity to cross in a north-south direction unless traveling by car. The West Albany recreation fields are isolated from the rest of the City in a similar way.

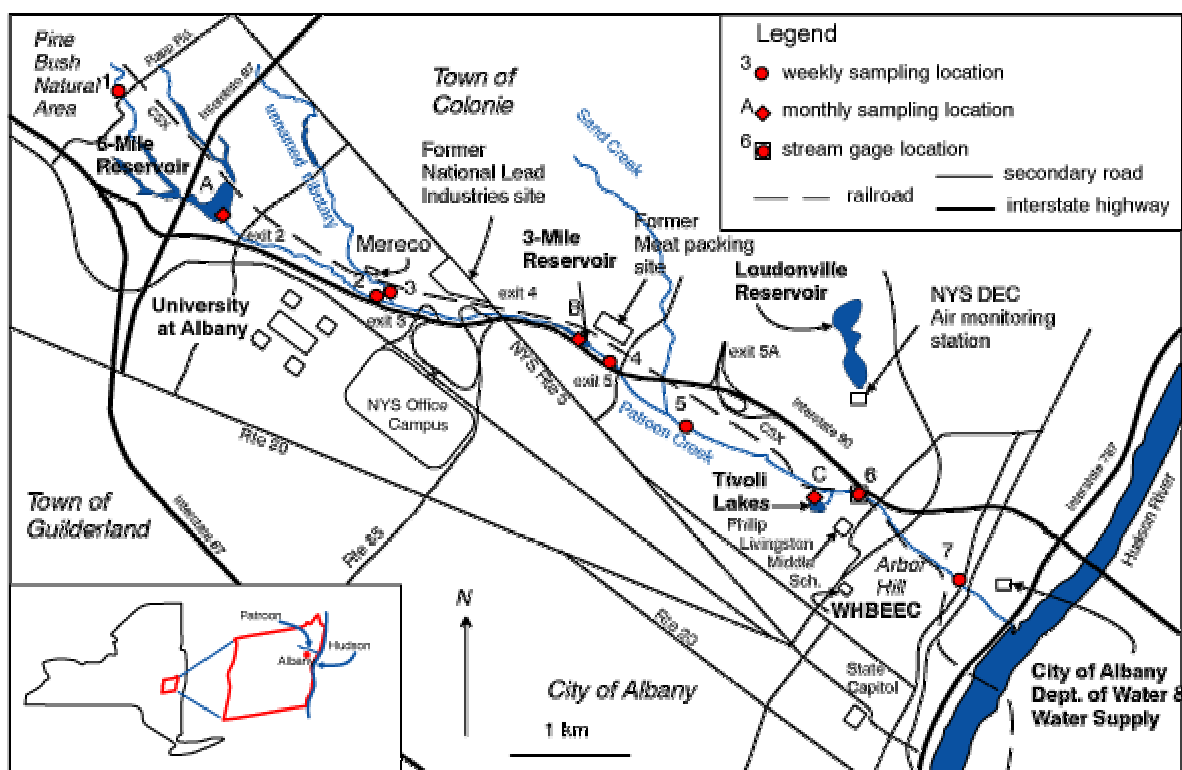
The Patroon Creek watershed was once a free-flowing series of lakes, wetlands and streams. Railroad and highway construction has turned this natural resource into a discontinuous series of culverts and retaining structures that were designed to enhance the man-made environment by reducing flooding and facilitating construction of the transportation system. This process has compromised the natural habitats for flora and fauna, as well as the water quality of the creek, over the past century. The W. Haywood Burns Environmental Education Center describes these conditions as follows:

“Once a water supply for the City of Albany, the Patroon Creek is today one of the ten most severely impacted in New York State, as a result of years of sewage discharge, urban runoff, and industrial pollution. Portions of the watershed have also been designated Areas of Concern by the New York State Department of Environmental Conservation. Two Superfund sites are located within the watershed: the National Lead Industries (NLI) site and the Mercury Refining Inc (Mereco) site, both severely contaminated by heavy metals. In an effort to monitor, manage, and eventually restore the creek, the University at Albany is collaborating with the W. Haywood Burns Environmental Education Center and the City of Albany to monitor water quality in the creek as part of a 2-year program funded by the US Environmental Protection Agency (EPA).”

Source: <http://www.w-haywoodburns.org/Main.html>

Present Environmental Justice Issues:

Air quality and noise pollution from the I-90 corridor and the railroads have an adverse effect on residents and businesses in the adjacent neighborhoods. Studies have shown correlations between these conditions and increased levels of asthma and respiratory illness in adjacent low-income communities. The current national epidemic of obesity and related cardiovascular disease is increasingly being linked to a lack of access to physical activity, especially walking and bicycling. In addition, high-speed traffic accessing the interstate system often passes through local neighborhoods, creating traffic safety concerns for pedestrians – especially children, seniors and people who do not have access to private automobiles. All of these conditions are present within the existing I-90 Patroon Creek Greenway corridor.



Map of the Patroon Creek Watershed and water quality monitoring system developed as part of the EPA / UAlbany / W.H. Burns collaborative project.

Source: <http://pyrite.atmos.albany.edu/Patroon>

Future Environmental Justice Issues:

The future Environmental Justice issues along the Patroon Creek can optimistically be viewed as a potential model for integrated solutions. Providing facilities for walking and bicycling can enhance public health, provide access to jobs, support environmental restoration and address the full range of Environmental Justice solutions. However, this can only occur with continuous community involvement throughout all infrastructure programs in the project area. Opportunities will include ongoing I-90 reconstruction projects, railroad system upgrades, local street improvements, CDTA bus system plans and other services. In some cases, local neighborhoods can take control of their own actions, such as providing bicycle racks designed by local artists, 'adopting' local trails for routine maintenance and planting community gardens. All of this requires being organized as a community and working in partnership with public agencies to achieve a common vision. Two excellent examples of this kind of partnership are described in the ongoing work of the W. Haywood Burns Environmental Education Center:

***"The Tivoli Preserve**, which is close to the Arbor Hill Elementary School, is an 80-acre park of wetlands, a lake, fields, forest and upland habitat that has been badly damaged by pollution. The Arbor Hill Environmental Justice Corporation, working closely with the W. Haywood Burns Environmental Education Center aims to clean up the Tivoli Preserve and replant areas devastated by decades of pollution and neglect. Often referred to as a "living classroom", the Environmental Education Center encourages young students to visit and study the preserve, to chronicle its strength and its problems throughout and to become involved in its better future....Walking trails through the preserve are being constructed in addition to trash bins and informational kiosks. Work is ongoing to identify and eliminate pollution sources into the Patroon Creek watershed and Tivoli Lake. Tivoli Preserve is a "gem" in the urban landscape that can offer respite from the hardscape of the city environs and a peaceful place to observe a myriad of wildlife.*

***Inner City Outings (ICO)** gives low-income, urban youth the opportunity to explore the forests, wetlands, mountains, beaches, and preserves surrounding their urban homes. For many youth, city streets are the only environments they know. Through Albany ICO, we seek to help broaden their horizons. The program is designed to foster leadership and appreciation of the environment through hands-on interaction with nature. It teaches youth how to become active in protecting their urban environment from pollution and neglect. The ICO also includes a mentoring program for older teens to introduce career choices in natural resources and hard sciences. The program involves outdoor education and on-site visits to professionals at their work sites.*

The Inner City Outings program is a joint effort of the W. Haywood Burns Environmental Center and the Sierra Club, which provides funding grants for transportation, supplies and equipment. The concept of engaging youth in nature teaches them to be good stewards of our natural resources and connects them to the earth. The focus for the W. Haywood Burns Environmental Education Center is the urban environment and how to recognize signs of contamination and take action to address them.”

Source: <http://www.w-haywoodburns.org/>

These efforts and other works in progress represent significant potential for the development of the Patroon Greenway Trail. It should be noted that there can be perceived negative effects of trail development. In this corridor there will be a need to address concerns of adjacent landowners in segments with limited right-of-way, especially adjacent to the I-85 ramps. In these cases, the trail can be shown to be an amenity for these neighborhoods, with the ability to create new public space in underserved communities. With cooperative community involvement and the support of transportation, environmental and resource agencies, the potential exists to establish a 6.5 mile interconnected corridor along the Patroon Creek that addresses the full range of Environmental Justice issues. Public health, physical fitness, transportation, recreation, access to nature, clean air and water, and neighborhood quality of life can all be part of the future for the I-90 / Patroon Greenway Trail.



Two photos illustrate the potential for achieving Environmental Justice in the I-90 Patroon Creek Corridor: (L) Winter trails would bring the experience of skiing to neighborhoods along the trail and (R) in downtown Buffalo, local artists recycle bicycles and bicycle parts into bicycle racks and public art – a concept that could be developed in Albany as part of the Patroon Greenway.

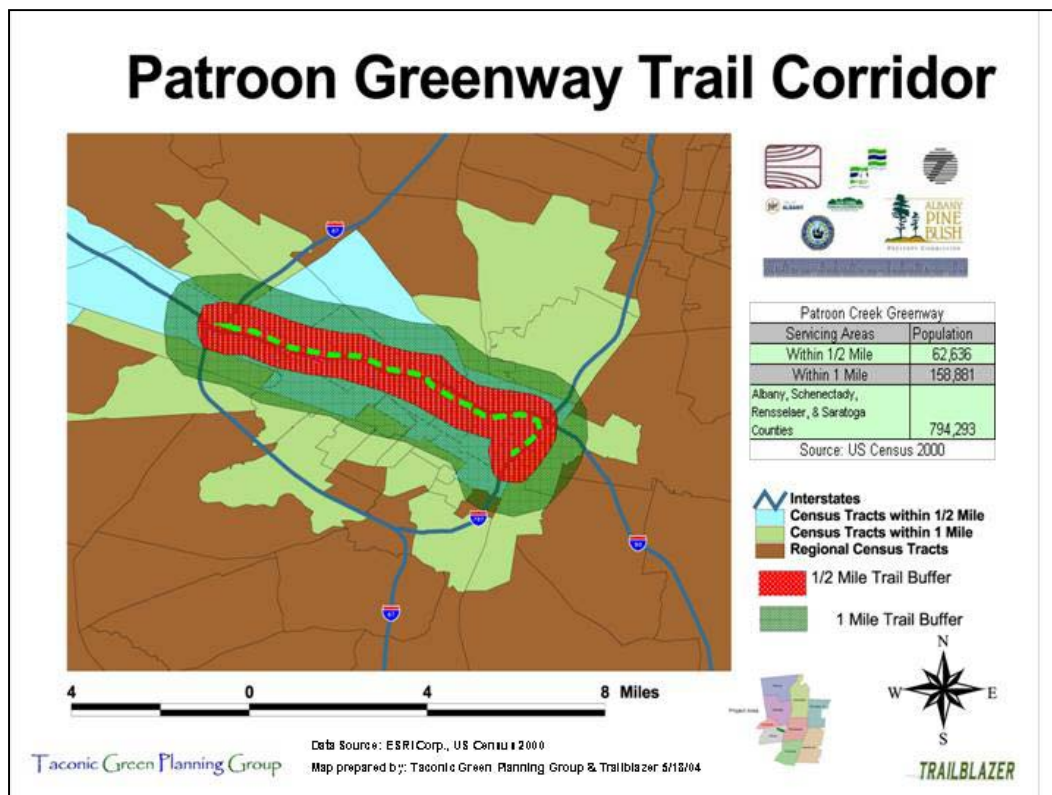
Photo Sources: (L): <http://www.w-haywoodburns.org/Main.html> (R): J. Olson, Trailblazer

4. Economic Development

The Patroon Greenway Project can provide significant economic development opportunities at the local and regional levels. The map below shows the potential population located within walking and bicycling distance of the proposed trail. There have been numerous studies and reports on the economic benefits of greenways and trails. In 1999, the Trust for Public Land (TPL) issued a national report summarizing many of these prior studies, entitled: *The Economic Benefits of Parks and Open Space: How Land Conservation Helps Communities Grow Smart and Protect the Bottom Line*. The TPL report includes the following statement, which frames this issue in the context of the Patroon Greenway:

“...As the nation moves toward a mixed economy based on services, light industry, consumer goods, and new technologies, businesses and their employees are no longer tied to traditional industrial centers. Today, businesses are free to shop for an appealing location, and they clearly prefer communities with a high quality of life, including an abundance of open space, nearby recreation, and pedestrian-friendly neighborhoods.”

Source: http://www.tpl.org/tier3_cdl.cfm?content_item_id=1145&folder_id=727



There are more than 150,000 residents within 1 mile of the proposed Patroon Greenway trail.

The following section is based on the TPL report and highlights references that are relevant to the potential benefits of the Patroon Greenway Trail.

The Trust for Public Land Economic Benefits of Open Space Index

Rank of open space/parks/recreation among factors used by small businesses in choosing a new business location: *One*¹

Percentage of Denver residents who in 1980 said they would pay more to live near to a greenbelt or park: 16 percent

Percentage who said so in 1990: *48 percent*³

Estimated gross increase in residential property value resulting from proximity to San Francisco's Golden Gate Park: *\$500 million to \$1 billion*

Increased property taxes resulting from this value: *\$5-\$10 million*⁴

Estimated value of outdoor recreation to the U.S. economy in 1996: *\$40 billion*⁶

Income from the 10,000 jobs supported by these visitors: *\$162.9 million*⁸

Amount spent to maintain Maryland's Northern Central Rail Trail in 1993: *\$191,893*

State and local taxes generated by Maryland's Northern Central Rail Trail in 1993: *\$304,000*¹¹

Front Royal, VA: A developer who donated a 50-foot-wide, seven-mile-long easement along a popular trail *sold all 50 parcels bordering the trail in only four months.*²⁴

Seattle, WA: Homes bordering the 12-mile Burke Gilman trail sold for *6 percent more than other houses of comparable size.*²⁵

Notes to the TPL Index:

¹John L. Crompton, Lisa L. Love, and Thomas A. More, "An Empirical Study of the Role of Recreation, Parks and Open Space in Companies (Re) Location Decisions," *Journal of Park and Recreation Administration*, 15:1 (Champaign, IL: American Academy for Park and Recreation Administration, 1997), 37-58.

³National Park Service, Rivers, Trails and Conservation Assistance Program, "Economic Impacts of Protecting Rivers, Trails, and Greenway Corridors," 4th ed. (Washington, DC: National Park Service, 1995), 1–8.

⁴, "The Value of Parks," Testimony before the California Assembly Committee on Water, Parks, and Wildlife, May 18, 1993.

⁶Outdoor Recreation Coalition of America, "Economic Benefits of Outdoor Recreation," State of the Industry Report (1997)

⁸Andrew Laughland and James Caudill, "Banking on Nature: The Economic Benefits to Local Communities of National Wildlife Refuge Visitation," (Washington, DC: U.S. Fish and Wildlife Service, Department of Economics, July 1997), v.

¹¹Maryland Greenways Commission, "Analysis of Economic Impacts of the Northern Central Rail Trail," (Annapolis, MD: Maryland Greenways Commission, Maryland DNR, June 1994).

²⁴ National Park Service, Rivers, Trails and Conservation Assistance Program, "Economic Impacts of Protecting Rivers, Trails, and Greenway Corridors," 4th ed. (Washington, DC: National Park Service, 1995)

²⁵ Elizabeth Brabec, "On the Value of Open Spaces," Scenic America, Technical Information Series, Vol. 1, No. 2 (Washington, DC: Scenic America, 1992),

To further state the economic case in support for greenways and trails, the following information from the San Francisco region indicates that not only can trails generate tax base, business and increased property values, but they also enjoy significant support for public sector investments:

"A large majority of voters in the East Bay Regional Park District (88%) agree that the system of regional parks and trails is a "valuable public resource." Most voters also recognize the need to properly maintain this public resource (86%). When asked directly whether they would support or oppose a special benefit assessment of \$5 per year on parcel owners in the district "in order to provide funds to operate and maintain a safe and aesthetically attractive system of trails and related facilities, which would include funds for park ranger services, safety patrols, fire suppression, and weed abatement,

- 77% indicated support for a \$5 assessment,
- 5% indicated that they were unused, and
- 18% indicated opposition to a \$5 assessment."

Source: <http://www.americantrails.org/resources/economics/EBayTrailsEcon.html>

In terms of trail-user based economic expenditures, the following table indicates levels of spending by trail users on a range of facilities from throughout the U.S.

Table 1: Trail Usage And Expenditures

TRAIL NAME & LOCATION	LENGTH (Miles)	ANNUAL VISITORS	TOTAL EXPEND. BY USERS	EXPEND. PER VISITOR	PAVEMENT TYPE
Heritage Trail Dubuque, Iowa	26	135,000	\$1,571,400	\$11.64	Compacted Limestone
St. Mark's Trail Tallahassee, Florida	16	170,000	\$2,368,100	\$13.93	Paved
Lafayette/Moraga Trail Berkeley Hills, CA.	7.6	400,000	\$2,008,000	\$5.02	Paved
Little Miami Warren County, OH	27	162,000	\$2,268,000	\$14.00	Paved
Northern Central Rail Trail Baltimore Co., MD.	20	450,000	\$4,027,930	\$8.95	Crushed Stone
Elroy-Sparta Trail Western Wisconsin	32	60,000	\$2,183,432	\$36.39	Crushed Stone
Katy Trail East-West across Missouri	225	250,000	\$3,575,087	\$14.30	Crushed Stone

NOTE: All Expenditures in Constant 2000 Dollars

Source: 2001 Schenectady Bicycle Master Plan, Edwards & Kelcey/Trailblazer

While the Capital Region is not currently experiencing the levels of economic growth found in other parts of the country, local data show that existing trails in the region show similar economic benefits. The Schenectady County Planning Department prepared a report in 1998 entitled *"Mohawk-Hudson Bike Hike Trail, Analysis of Trail Use, Regional Benefits, and Economic Impact."* The study concluded there are approximately 458,000 trail visits a year by an estimated 29,000 distinct users. Based on the survey results by user type, the report estimated that direct spending by trail users totaled over \$533,000.

Based on the above information from national and regional sources, the Patroon Greenway can potentially have significant economic benefits in the following categories:

Property Values: Trails have generally shown to have a neutral or positive benefit on property values, depending upon the proximity of adjacent properties, access to the trail, quality of design, and other factors. The Patroon Greenway can help offset some of the negative values associated with adjacent brownfield and transportation infrastructure facilities.

Business Location: Trails are a potential asset to employers as a way to provide recreation and fitness for employees, and as a quality of life enhancement to the region as a whole in attracting new businesses.

Tourism Expenditures: If the trail serves local, regional and long-distance destinations, tourism related businesses can include hotels, bed and breakfasts, cultural and historic sites and other services. The corridor's railroad, highway and transportation history are potential tourism attractions.

Small Business. Trails can serve as generators for local businesses including equipment sales and repair, retail and restaurants catering to trail users, especially if the trail supports significant amounts of use. The local 'mobile bicycle repair van' operating on the Mohawk-Hudson Bike Hike Trail is an example of this kind of entrepreneurial opportunity.

Transportation history can become a part of heritage tourism along the Patroon Greenway. This sign marks the location where Engine 999 was built – 'the first creation of man to travel more than 100 miles per hour.

Photo: J.Thomas

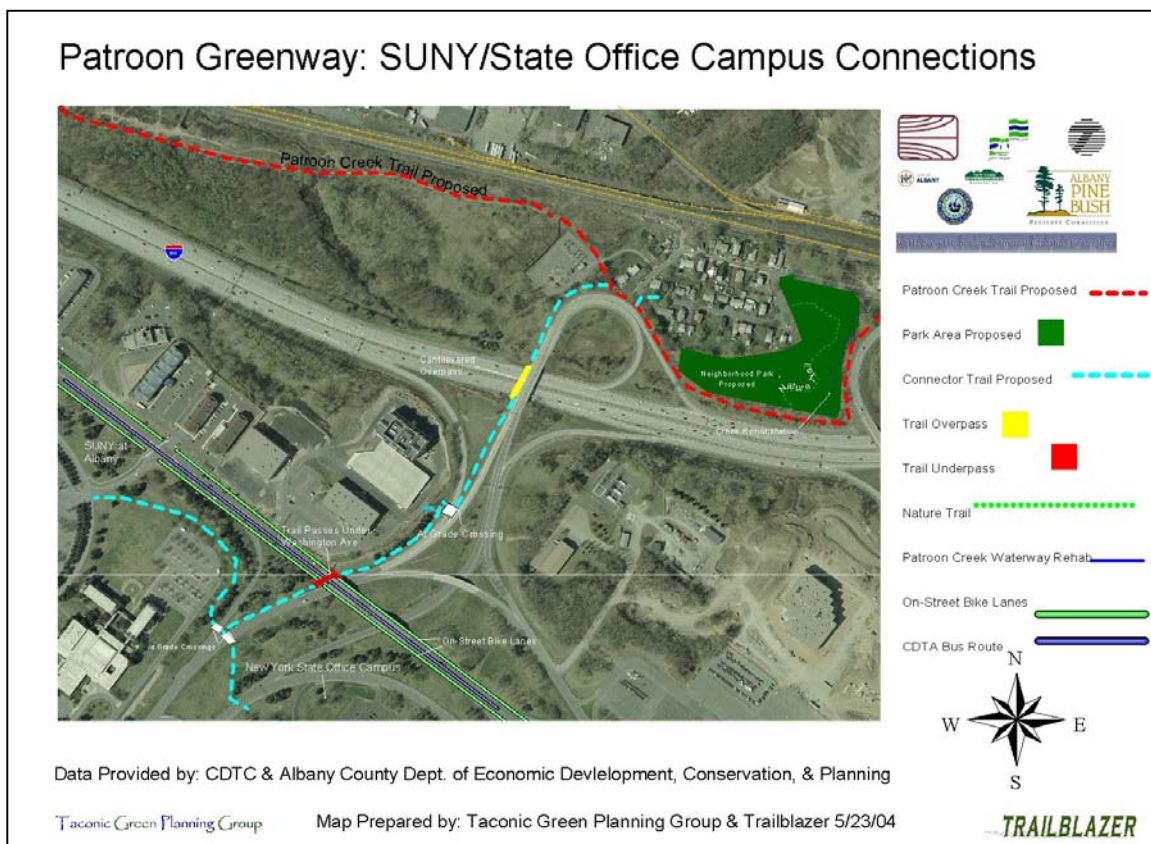


5. Potential High-Tech Connections

Attracting and maintaining high-tech jobs has become a major issue in the Capital Region. As the region redefines itself as part of New York State's 'Tech Valley,' Albany has entered the national and international market to bring in more high technology jobs. With the cooperation of the region's universities, the State Capital and private sector business interests, several high-profile projects are emerging, including:

The Nanotechnology Center / Sematech North at the State University at Albany
The Redevelopment of the Harriman State Office Campus
Malta Technology Park / Luther Forest

Both of the first two sites are located in the I-90 / Patroon Greenway corridor. The third is located in Saratoga County, near the new Zim Smith / Saratoga County Heritage Trail, which is currently under construction. In Saratoga County, the local economic development agency has featured the trail in its promotional materials for the project.



A detailed example of one of the potential High Tech Connections with the Harriman NYS Office Campus and the State University of New York.

There are many trail advocates and transportation professionals who support this connection between trails and high-tech facilities. However, it is important to listen to the professionals in the real estate site location industry for their perspective on the relationship between high tech and trails. The following excerpts are from *Development On-Line*, the journal of the National Association of Industrial and Office Properties, <http://www.naiop.org/developmentmag>.

The Developer's New Roles in Nurturing High Tech Companies

by Jim Long

"In today's competitive real estate and business environment, developers of master planned business parks must provide services and programs that reach beyond the role of traditional developments. They must not only create and protect the value of a tenant company's physical assets; they must also strive to provide an employee-friendly working environment that encourages productivity, creative thought and a sense of job satisfaction for employees. It must also provide support for company programs designed to enhance the recruitment and retention of employees. This is especially true for developments catering to the needs of companies involved in the application of advanced technologies.

In this new environment, successful developments center around five key elements, in addition to the traditional requirements. They are: the physical setting, community involvement and leadership, social interaction, educational support and recreational opportunities.

Interlocken, in Broomfield, Colorado, is a self-contained working environment whose amenities, facilities and services are easily accessible and centrally located within the park or immediately adjacent to the park. Transportation infrastructure - streets and parkways, bike and pedestrian trails, running paths, Park-n-Ride facilities - are all designed to accommodate mass transit or future light rail service at Interlocken. They extend through the development to connect each parcel and building within the park to the rest of the park and the surrounding areas. As a result, employees can enjoy the park's amenities without having to get into a car or cross a major street or highway."

Source: <http://www.naiop.org/developmentmag/pastissues/winter99/story9.htm>

Attracting the New Generation of Tenants:

How a City/Developer Partnership Works

by Scott McAfee

"Businesses today are trying to fit into the lifestyle of employees, to allow their associates to live near where they work and have access to top recreational, educational and health care services, regardless of business size or activity... More employees want to work in an area that has an area to exercise, where they can grab a sandwich and live in a comfortable nearby setting.

...To adapt to this new generation of clientele, Daimler has had to act promptly to meet their needs, aided by an in-place infrastructure at Westar, Ohio. Moreover, Westar's bike paths, ball fields, nearby parks and new community center offer employees a variety of recreational opportunities and affordable housing is nearby for a short commute. The company recognizes that all tenants now require fiber-optic telecommunications, favorable environmental conditions in building interiors, green space, recreation and supportive businesses in the area.

...Nationwide, developers cannot simply rely on what has worked in the past. With many factors other than real estate costs playing a role in determining where to expand or relocate, developers and communities must work even more closely in the future to provide the best overall quality of life for prospective employers."

Source: <http://www.naiop.org/developmentmag/pastissues/winter01/article1.htm>

Live-Work-Play" Facilities

Seen As Path to Economic Revival in NJ Town

by John Maddocks

"In order to revitalize the community, the team suggested enhancing the already-existing infrastructure and attracting a younger residential population, along with pedestrian and residential development with accompanying parking, walkways and bike lanes."

Source: <http://www.naiop.org/developmentmag/pastissues/fall00/article7.htm>

"In a 2002 survey of recent home buyers sponsored by the National Association of Realtors and the National Association of Home Builders, trails ranked as the second most important community amenity out of a list of 18 choices."

Consumer's Survey on Smart Choices for Home Buyers, National Association of Realtors and National Association of Home Builders, April 2002.

"Realizing the selling power of greenways, developers of the Shepherd's Vineyard housing development in Apex, North Carolina added \$5,000 to the price of 40 homes adjacent to the regional greenway. Those homes were still the first to sell."

Don Hopey, "Prime Location on the Trail," *Rails-to-Trails*, Fall/Winter 1999, p.18.

While these statements and statistics make a strong case for the Patroon Greenway Trail as a key element of High Tech Connections along the I-90 corridor, this has not been the case for many recent developments. The State University and Harriman Campus are both sprawling sites with auto-oriented perimeter ring roads and large parking lots. Most of the new development along Washington Avenue in the Patroon Creek Office Park is typical suburban development with generic office buildings set behind spacious parking. In spite of the fact that many of these new buildings house tenants that are healthcare and medical facilities, there are few connections for pedestrians, bicyclists and transit access. The new Nanotechnology / Sematech North complex west of Fuller Road is a similar isolated set of buildings which are not integrated into the University Campus or adjacent neighborhoods.

These projects are the result of 20th Century zoning ordinances, site development techniques and transportation planning. They are automobile dependent and do not build on the kinds of 21st Century concepts discussed in the preceding pages. While the Patroon Greenway Project cannot single-handedly change the entire corridor or retrofit all of these locations, it will provide a major step towards connecting the residential, commercial, institutional and natural environments. As a long-term investment, it is possible to envision the I-90 corridor of the future as a place where jobs, residences, parks, schools and neighborhoods coexist along a restored waterway connected by the trail system. Making this connection will require a considerable change in perspective. This change is not only possible; it is essential for the region's future.



Photo: An example of New Housing built along the Erie Canalway trail in Rochester, New York. The trail and waterway have become a focus for redevelopment and economic development efforts in the region. This is a potential model for the Patroon Greenway trail corridor. (Source: J. Olson)

6. Conclusion

The Patroon Greenway Trail has significant potential to be an important new asset to the Capital Region of New York State. These benefits can be summarized as follows:

Transportation: The trail will provide an important east-west connector for non-motorized transportation in a corridor that is currently a barrier to walking and bicycling. With well-planned north-south connector routes to local roads, sidewalks, on-street bikeways, transit access enhancements and pathway linkages, the Patroon Greenway Trail will create a new means of travel between neighborhoods, the State University, high tech development, schools and commercial centers along the I-90 corridor.

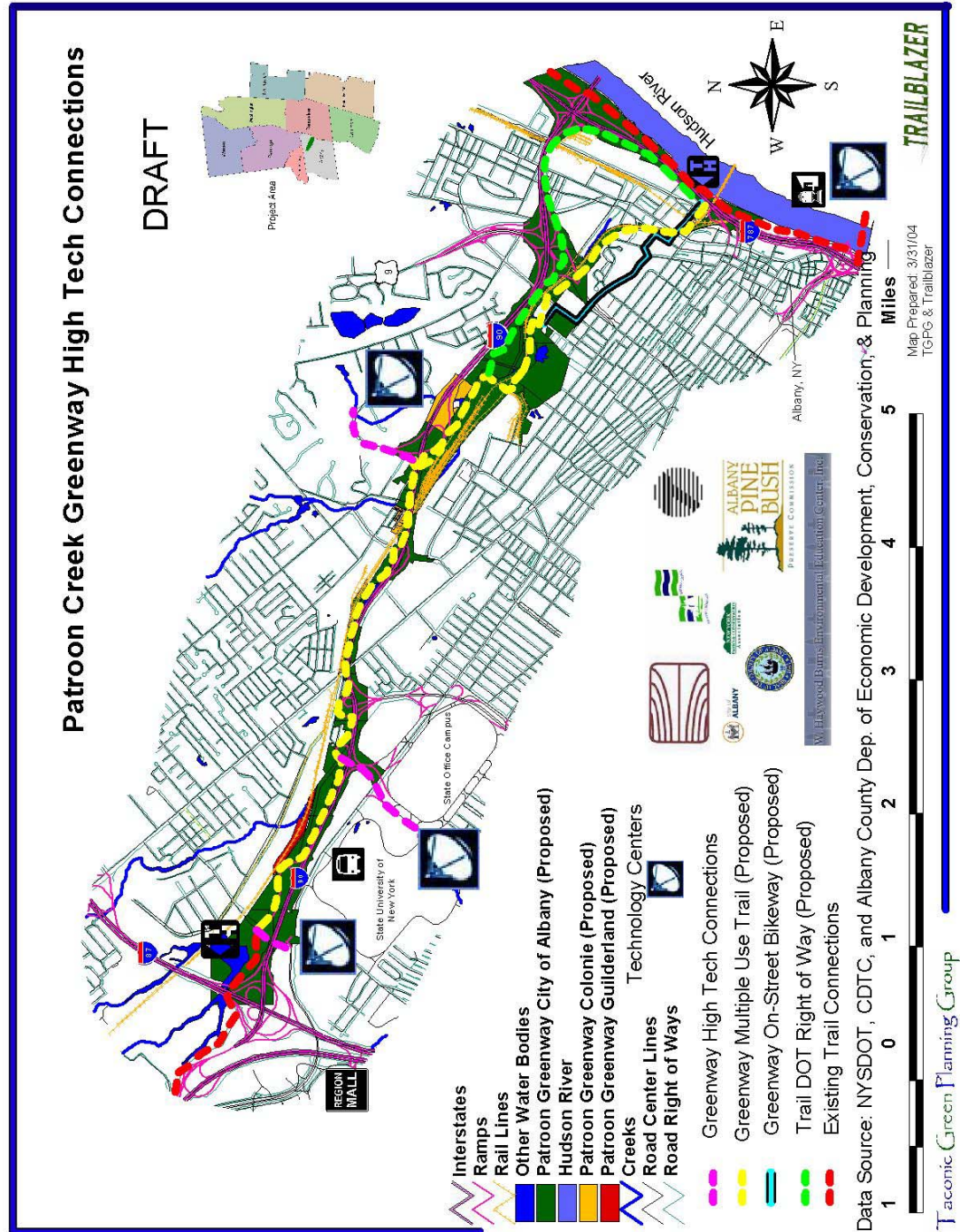
Environmental Justice: The Patroon Greenway offers the unique opportunity to connect three of the region's most significant public open spaces: the Albany Pine Bush, Tivoli and Corning Preserves. Access to these urban natural areas will help provide environmental justice to inner city and low-income neighborhoods that have been cut off from these places by I-90, have suffered the adverse affects of two Superfund sites, and have had to live with air and noise pollution associated with the highway corridor.

Economic Development: While the Greenway has the potential to generate economic development in the form of retail and tourism related services, its primary economic potential is as a quality-of-life benefit for the region. If the trail is ultimately connected to the Erie Canalway Trail between Rensselaer Lake and Schenectady, this potential will increase.

High Tech Connections: With the growth of 'Tech Valley' and the new nanotechnology center under development at the SUNYA / State Office Campus complex, the Patroon Greenway Trail can be seen as an integral part of this new high tech development. With knowledge-based employers and employees looking to locate to places that offer the ability to live, work, walk and bike, the trail has a direct connection to the region's high-tech development goals.

The Patroon Greenway will achieve these benefits through partnership and cooperation between community, business, agency and non-profit leadership. The trail is a way of organizing the combined energy of a diverse range of interests to achieve a common project that meets multiple goals and helps redefine the I-90 corridor into a regional gateway, a new experience connecting the city and nature, and a positive legacy for future generations.

Appendix 7.1: Map – Patroon Greenway High Tech Connections



Appendix 7.2: Albany County Transportation Census Data



CENSUS TRANSPORTATION PLANNING PACKAGE (CTPP 2000)

Table 1. Profile of Selected 1990 and 2000 Characteristics

Geographic Area: Albany County, New York

Subject	1990 Census		Census 2000		Change 1990 to 2000	
	Number	Percent	Number	Percent	Number	Percent
POPULATION						
Total population	292,594	100.0	294,565	100.0	1,971	0.7
In households	278,472	95.2	278,990	94.7	518	0.2
In group quarters	14,122	4.8	15,575	5.3	1,453	10.3
HOUSEHOLD SIZE						
Total households	115,901	100.0	120,645	100.0	4,744	4.1
1-person household	34,886	30.1	39,794	33.0	4,908	14.1
2-person household	36,920	31.9	38,682	32.1	1,762	4.8
3-person household	19,308	16.7	18,632	15.4	-676	-3.5
4-person household	15,411	13.3	14,807	12.3	-604	-3.9
5-or-more-person household	9,376	8.1	8,730	7.2	-646	-6.9
Mean number of persons per household	2.40	(X)	2.31	(X)	-0.09	(X)
VEHICLES AVAILABLE¹						
Total households	115,901	100.0	120,645	100.0	4,744	4.1
No vehicle available	17,019	14.7	17,142	14.2	123	0.7
1 vehicle available	43,710	37.7	46,816	38.8	3,106	7.1
2 vehicles available	41,150	35.5	43,167	35.8	2,017	4.9
3 vehicles available	10,558	9.1	10,503	8.7	-55	-0.5
4 vehicles available	2,564	2.2	2,342	1.9	-222	-8.7
5 or more vehicles available	900	0.8	675	0.6	-225	-25.0
Mean vehicles per household	1.49	(X)	1.47	(X)	-0.02	(X)
WORKERS BY SEX¹						
Workers 16 years and over	147,258	100.0	141,840	100.0	-5,418	-3.7
Male	75,665	51.4	72,910	51.4	-2,755	-3.6
Female	71,593	48.6	68,930	48.6	-2,663	-3.7
MEANS OF TRANSPORTATION TO WORK						
Workers 16 years and over	147,258	100.0	141,842	100.0	-5,416	-3.7
Drove alone	104,394	70.9	108,966	76.8	4,572	4.4
Carpooled	18,103	12.3	13,902	9.8	-4,201	-23.2
Public transportation (including taxicab)	11,022	7.5	7,956	5.6	-3,066	-27.8
Bicycle or walked	9,928	6.7	6,929	4.9	-2,999	-30.2
Motorcycle or other means	837	0.6	411	0.3	-426	-50.9
Worked at home	2,974	2.0	3,678	2.6	704	23.7
TRAVEL TIME TO WORK						
Workers who did not work at home	144,284	100.0	138,164	100.0	-6,120	-4.2
Less than 5 minutes	4,764	3.3	4,481	3.2	-283	-5.9
5 to 9 minutes	16,502	11.4	15,171	11.0	-1,331	-8.1
10 to 14 minutes	28,106	19.5	25,797	18.7	-2,309	-8.2
15 to 19 minutes	32,228	22.3	30,084	21.8	-2,144	-6.7
20 to 29 minutes	35,164	24.4	34,544	25.0	-620	-1.8
30 to 44 minutes	20,039	13.9	19,489	14.1	-550	-2.7
45 or more minutes	7,481	5.2	8,598	6.2	1,117	14.9
Mean travel time to work (minutes)	18.6	(X)	20.3	(X)	1.7	(X)
TIME LEAVING HOME TO GO TO WORK						
Workers who did not work at home	144,284	100.0	138,164	100.0	-6,120	-4.2
5:00 a.m. to 6:59 a.m.	22,864	15.8	24,737	17.9	1,873	8.2
7:00 a.m. to 7:59 a.m.	48,648	33.7	44,838	32.5	-3,810	-7.8
8:00 a.m. to 8:59 a.m.	37,709	26.1	33,868	24.5	-3,841	-10.2
9:00 a.m. to 9:59 a.m.	7,971	5.5	8,669	6.3	698	8.8
10:00 a.m. to 11:59 a.m.	4,844	3.4	4,739	3.4	-105	-2.2
12:00 p.m. to 11:59 p.m.	20,274	14.1	18,807	13.6	-1,467	-7.2
12:00 a.m. to 4:59 a.m.	1,974	1.4	2,506	1.8	532	27.0

1 See the entry for this item in the Technical Notes in the root directory or state subdirectories (filename: tech_notes.txt).
(X) Not applicable.
Source: U.S. Census Bureau. Census of Population and Housing, 1990 and 2000 long-form (sample) data.

Data from the 2000 U.S. Census that shows population and transportation data for Albany County. Note that approximately 53% of households have only one vehicle or less.

Appendix 7.3: Project Area Data & Background

Annual Average Daily Traffic Data: Albany, New York

Interstate 90-Albany County: 2002 AADT: 120,700

Source: NYS DOT Traffic Volume Report

Central Avenue AADT: 25,000 to 30,000

Functional Classification: Principal Urban Arterial

Source: CDTC Traffic Volume Report, 1999-2002

<http://www.cdtcmpo.org/tvr/data/ny5.htm>

Percentage of Albany County Households that have no vehicle available: 14.2%

Source: 2000 Census

Resident Populations in the City of Albany:

Grade School Students	8,559
High School Students	4,292
College Students	16,882
Veterans	7,347
Seniors (65+)	11,581
Disabled	18,802

Source: CDRPC Profile of Selected Characteristics, 2000

http://cdrpc.org/Census2000/DP2_CDR.pdf

Health and Physical Activity Data:

Percent of New York State Adults who are Overweight or Obese: 56%

Percent of New York State Residents who don't get enough physical activity:
73%

Source: NYSDOH, BRFSS 2000 data

Percent of Albany County Deaths Due to Cardiovascular Disease: 33% (924)

Percent of Albany County Deaths Due to Homicides: .003% (8)

Source: New York State Department of Health

County Health Indicator Profiles (1997 - 2001)

<http://www.health.state.ny.us/nysdoh/cfch/palban.htm>

Project Area Jobs Data:

Albany County NY Employed Citizens over the age of 16:	144,480	(2000)
Albany County, NY Median Family Income	\$56,724	
State University at Albany Employees	3,585	
NYS Office Campus Employees	9,000 (approx.)	

Unemployment Rates	(April, 2004)
Capital District	4.1%
New York State	6.0%
United States:	5.4%

Source: Capital District Regional Planning Commission, US Census 2000, NYS Office of the Governor, State University of New York at Albany

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Background from the CDTC New Visions Regional Planning Process:

Pursuing Quality in the Capital Region

A Discussion Paper for Use in the Capital District Transportation Committee and Capital District Regional Planning Commission's Quality Region Initiative

CDTC Quality Region Task Force, September 2002

"...Building upon the current strong set of facilities and services is a great opportunity for the region to distinguish itself from other areas, but will be particularly challenging in an era of strong growth. It will be necessary to accelerate investment in information infrastructure, address funding shortfalls for both highway and transit modes (especially regarding transit service outside traditional commuting times), address the inadequate supply of safe bicycling facilities and accommodation along major transportation corridors, improve the integration of various transportation modes and improve integration of land use decisions with transportation considerations. In short, it will be necessary to more fully implement the key strategies of the current New Visions plan."

Source: <http://www.cdtcmpr.org/qualreg.htm>