



**CDTC New Visions**

**Quality Region Task Force**

**White Paper**

**September 2020**

Capital District Transportation Committee  
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### Introduction

The Capital District Transportation Committee (CDTC) is the designated Metropolitan Planning Organization (MPO) for the Albany-Schenectady-Troy and Saratoga Springs metropolitan areas. Like MPOs nationwide, CDTC produces and regularly updates our region's long-range transportation plan. CDTC's regional plan, called New Visions for a Quality Region, considers the future of our region's transportation system in the next 30 years. Our current plan is called New Visions 2040, and our new, updated plan will be called New Visions 2050.

CDTC assigned the tasks of updating our New Visions Plan to the following 6 permanently-established Advisory Committees and 4 temporarily-established Task Forces:

- Regional Operations and Safety Advisory Committee
- Freight Advisory Committee
- Regional Transportation Coordination Committee
- Bicycle and Pedestrian Advisory Committee
- Complete Streets Advisory Committee
- Equity Advisory Committee
- Transit Task Force
- Infrastructure Task Force
- Smart Communities Task Force
- Mobility Task Force

The CDTC Policy Board served as the advisory committee for the Quality Region white paper. Committee and Task Force members were selected from throughout the CDTC region, and consisted of representatives from both public and private sectors and CDTC staff. The Committee and Task Force members were asked to review the existing New Visions 2040 Plan, and to develop strategies and recommendations for our 2050 Plan. Over the last 6-month period, some Committees and Task Forces met monthly, while others met bi-monthly. Each Committee and Task Force was tasked with producing a draft "white paper" summarizing its findings.

For the New Visions 2050 plan the Quality Region Task Force was replaced by the CDTC Policy Board. This was done to more directly involve the Policy Board members early in the process, and to reduce redundancy and meeting attendance, since most members of past Quality Region Task Forces were also members of the Policy Board.

The Policy Board was asked to examine issues relating to the region's quality of life for the New Visions Plan update, and to make recommendations for policies and actions for the New Visions 2050 Plan. This Policy Board was also asked to review the work of the other committees and task forces to ensure consistency with each other's New Visions principles and recommendations. The Quality Region topics considered include:

- Fostering Community Quality of Life
- Forecasting Regional Growth and Transportation Needs
- Financial Plan
- Big Ideas/Big Ticket Initiatives
- Land Use

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- Economic Development
- Regional Equity
- Reviewing and focusing New Visions guiding principles

Many of these topics are already considered and supported in the New Visions 2040 Plan. The Policy Board considered ways in which the Plan could be updated and strengthened. The Policy Board members include:

### **Policy Board:**

- |  |   |
|--|---|
| • Dennis M. Baker, Mechanicville                       | • Patrick Madden, Troy  |
| • Patrick Barnes, NYSDOT                               | • Paula A. Mahan, Colonie   |
| • Carm Basile, CDTA                                    | • Charles V. Patricelli, Watervliet                                   |
| • William T. Keeler, Cohoes                            | • Gary McCarthy, Schenectady  |
| • Philip F. Calderone, Albany County Airport Authority | • Daniel P. McCoy, Albany County                                      |
| • Richard J. Marquis, FHWA                             | • Steven McLaughlin, Rensselaer County                                |
| • Louis Esposito, Princetown                           | • Michael E. Stammel, Rensselaer                                      |
| • Stephen Goodman, FTA                                 | • James D. Shaughnessy, Capital District Regional Planning Commission |
| • Anthony Jasenski Sr., Schenectady County             | • Kathy M. Sheehan, Albany  |
| • Patrick K. Jordan, Albany Port District Commission   | • Joseph Stahl, New York State Thruway Authority                      |
| • Andrew Joyce, Albany County                          | • Michael E. Stammel, Rensselaer County                               |
| • Meg Kelly, Saratoga Springs                          | • Preston Allen, Saratoga County                                      |
| • Edward Kinowski, Stillwater                          | • Thomas C. Werner, Saratoga County                                   |
| • Joe Landry, Schenectady County                       |   |

## **New Visions Approach and Program Connectivity**

### ***Approach***

Transportation planning at CDTC (and most MPOs) is broken down into programs. This is also the case with our New Visions 2050 Plan. The 14 programs addressed in this plan are (in alphabetical order):

- Bicycle and Pedestrian
- Complete Streets
- Environment and Technology
- Financial Plan
- Freight
- Human Services Coordinated Plan
- Infrastructure
- Mobility/Demand Management
- Operations and Congestion Management
- Performance Measures

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- Public Participation Plan
- Quality Region
- Safety and Security
- Transit

CDTC staff program managers were assigned the task of actually drafting each program's white paper (or technical paper) with regular and significant input from the relevant advisory committee or task force. Program managers were given standard outlines to follow and were requested to:

- Update the New Visions 2040 white papers.
- Re-examine the latest relevant data, and develop future trends.
- Examine the 4 different future scenarios (See more detailed discussion below.), and develop the impacts of each scenario on their program, if applicable.
- Based on these trends and scenarios, strengthen their New Visions 2050 white papers, especially the recommendations section.

Once the draft white papers were drafted, critical information from each white paper was used to develop a new expanded executive summary.

### ***Connectivity***

Each transportation program in this plan is connected and related in several ways to other programs in this plan. You cannot improve one transportation mode or program without improving the other, or in some cases, without harming another.

On a program level, the Complete Streets program is related to the Bike/Pedestrian and Transit programs; the Safety program, to the Bike/Pedestrian program; the Regional Operations program, to the Infrastructure program, the Environment and Technology program and the Equity program, to every program, etc., etc.

On a more specific level, if we improve safety (reduce crashes) we improve bike/pedestrian travel and highway operations (traffic congestion). If we improve highway operations, we improve freight and transit. If we improve transit (reduce the number of vehicles), we improve highway operations. If we improve highway and bridge infrastructure, we improve safety. If we improve bike/pedestrian travel, we improve the environment. If we improve human services transportation, we improve safety. And so on and so on...

Conversely if we worsen transit, we worsen highway operations. If we worsen highway and bridge infrastructure, we worsen safety and worsen freight. If we worsen the environment, we may worsen the infrastructure (flooding). Etc., etc., etc.

This connectivity and inter-relation can also result in opposing conditions. That is, improving highway operations and infrastructure (increased speeds) may have a negative impact on safety. Improving highway and bridge infrastructure can sometimes result in harm to the environment especially if precautions are not taken. Improving freight (over-night deliveries) can worsen highway operations. Improving safety and bike/pedestrian travel may have a negative impact on highway operations.

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Improving highway and bridge infrastructure or freight may have a negative impact on already disadvantaged populations.

This is the nature of transportation, and this connectivity can be both good and bad, and very challenging. CDTC deals with transportation's connectivity by analyzing impacts on all modes and programs fairly and objectively. Our goal has always been to find those improvements with the most positive impacts and the least negative impacts, i.e. the most cost effective or the highest benefit/cost ratio.



Transportation is so interrelated and connected that these connections exist both on a program level and on an individual level. Transportation consumers switch modes regularly. Bicyclists and pedestrians become transit riders; users of human services transportation need to become transit riders and pedestrians; and shoppers must decide to ride or walk to a brick-and-mortar store or to order online and use the freight system to deliver their order to their door. On a much larger scale we daily make modal decisions to drive our vehicle or a ride-hailing vehicle; ride a bike, bus, train; walk; fly; or any combination of several of these modes. Transportation is so interrelated and connected that we intentionally and physically connect transportation at intermodal facilities called train and transit centers, airports, and seaports. The overall transportation system is really many smaller systems linked together.

Acknowledging this connectivity, we have organized this plan by programs and their white papers for the convenience of the reader. The reader who is interested in bike/pedestrian issues can start with reading the Executive Summary, and if he or she wants more detail, read the Bike/Pedestrian white paper in the Appendices (from least detailed to the most detailed). However to obtain a true understanding of bike/pedestrian issues, the reader may want to read the infrastructure white paper, since bike/pedestrian improvements are and compete with infrastructure; the complete street white paper, since bike/pedestrian infrastructure will compete with vehicle, transit, freight, and even “green” infrastructure; the environment and technology white paper, since electric bikes, scooters, mopeds, etc. all compete with bicyclists and pedestrians. And the list goes on...because one transportation mode will always impact other modes.

In the end, the connections and the overlaps between transportation modes and programs can be frequent, but they cannot be eliminated. In this plan program managers whose white papers were closely related all made significant efforts to coordinate, cooperate, and to reduce or eliminate redundancy. Our goal is to make this plan as readable and understandable as possible.

## What is a Quality Region?

What is a “Quality Region?” To answer that question we would be better to start with a definition of a “Quality of Life”, since a Quality Region is to a region, as a Quality of Life is to an individual.

One definition for quality of life is the standard of health, comfort, and happiness experienced by an individual or group; in other words, those things that are needed for a good quality of life. Certainly that can be very subjective, but most of us could agree that a good job, a clean environment, good transportation, good health, good education, and a safe and secure environment are important features of a good quality of life.

Just as individual quality of life can be subjective, so can a quality region. We often hear that our region has a good quality of life, meaning we have a good economy, clean environment, good recreation opportunities, good education, good healthcare, etc. In addition to those features, we think everyone can agree that a quality region should have a quality transportation system or **best transportation system possible**.

A quality region includes all of the above features. It is also a region where all transportation modes are operating as safely and as efficiently as possible, with fair and equitable access for all users, with efficient and sufficient intermodal facilities, which rewards good transportation planning and land use, and maximizes the benefits and minimizes the costs to society.

When it comes to a Quality Region, New Visions reflects a regional consensus of residents, businesses, state and local government representatives and transportation providers to use transportation and public policy to do more. That is, to:

- Promote sustainable economic growth with good-paying jobs
- Revitalize urban areas
- Help build community structure in growing suburbs



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- Preserve open space, agricultural land, and our environment
- Make communities more walkable, bikeable, and livable
- Provide meaningful transit options
- Connect all residents with job opportunities
- Manage increasing traffic congestion and maintain reasonable mobility on the highway system
- Encourage land use and transportation planning
- Provide cleaner, safer, and more efficient transportation options

A quality region considers health, the economy, and the environment within an overall framework of land use planning and transportation policies. Creating and sustaining a quality region in the Capital District is central to the direction of New Visions toward urban investment, concentrated development patterns, and smart economic growth.

People agree that a quality region:

- Develops and sustains healthy urban, suburban, and rural communities that function interdependently and readily adapt to change
- Creates economic, educational, social, cultural and recreational opportunities
- Provides safe neighborhood environments and housing choices for all
- Protects sensitive environmental resources
- Fosters community identity and "a sense of place" in all parts of the region

New Visions principles follow four themes:

- Preserve and manage the existing investment in the region's transportation system.
- Develop the region's potential to grow into a uniquely attractive, vibrant, and diverse metropolitan area.
- Link transportation and land use planning to meet the Plan's goals for urban investment, concentrated development patterns, and smart economic growth.
- Plan and build for all modes of transportation, including pedestrian, bicycle, public transit, cars, and trucks.

**A QUALITY REGION IS ONE WHICH PROVIDES A GOOD QUALITY OF LIFE FOR THE MOST PEOPLE.**

We think that our New Visions Quality Region planning and investment principle applies:

***Investing in a Quality Region – Transportation programs and planning are multi-modal and multi-programmed. Fair and equitable investments in all these modes and programs are needed to make our region a Quality Region.***

A transportation system is multi-modal by its nature because no one mode can meet all the demands on the system. Marine and Rail transportation can move large, heavy commodities less expensively, but cannot meet the next-day, high-value demands met by Air. Not everyone can or wants to travel by car, and if they did all did, the congestion would be unbearable. Transit and bicycle/pedestrian can relieve that congestion. Specialized vehicles can meet the needs of the disabled community. Large, long-haul



trucks can provide the flexibility needed to meet the last-mile demands of freight. Each mode or program meets a specific demand.

Just as transportation is multi-modal so is transportation planning. The best transportation system possible and the best transportation planning possible will result in a Quality Region, and must also be multi-modal. Only by focusing on all modes and inter-modal connections will we have the most effective and efficient transportation system possible.

So in seeking a Quality Region for transportation we must take a balanced approach, not one mode or program at the exclusion of another; and we usually must compromise. Making small improvements to all modes and programs is not easy and is not inexpensive, but a Quality Region for transportation should benefit all users.

This plan will include recommended transportation planning and programming strategies for all the modes/programs that will preserve the quality and livability of the Capital District to the horizon of 2050, and result in a Quality Region.

## Quality Region Principles

The New Visions Plan addresses the region's quality of life in a number of important ways and provides a framework for improving the region's economy. The following 3 New Visions Planning and Investment Principles support the region's quality of life:

***Investing in a Quality Region – Transportation programming and planning is multi-modal and multi-programmed. Fair and equitable investments in all these modes and programs are needed to make our region a Quality Region.***

*As we stated before, good transportation programming and planning deals with all modes and all programs. These modes include vehicles, trucks, buses, bicycles, pedestrians, ships, trains, high-speed passenger trains, and planes; more recently scooters, and drones; someday self-driving vehicles; and possibly in the future vehicles which operate on our roads, in the air, and on the water. These programs include infrastructure, congestion and operations, bicycle/pedestrian, transit, human service transportation, safety, freight, complete streets, equity, mobility, and others. If we are truly concerned with making our region a Quality Region, we cannot "put all our eggs in one basket", that is, we must invest in all these modes and programs fairly and equitably.*

*For many years transportation programming and planning meant one thing – Infrastructure (roads and bridges). Today roads and bridges are still a very critical part of the overall transportation system, and they will be for the foreseeable future. However, they must compete with the many demands (and needs) for other modes of transportation, and even new modes which may develop.*

*Regionally vehicle miles traveled have declined and are growing more slowly; and other modes of transportation continue to grow. Because of this and our very slow regional population growth, we do*

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*not need to invest in new roads and bridges as we stated in our last New Visions revision, and we need to critically look at our current road and bridge system. Also because building new roads and bridges and maintaining all the current roads and bridges are very expensive, we should look for ways where we can actually decrease our number of roads and bridges and our reliance on them. Some examples include de-commissioning lightly used bridges and highway ramps, converting lightly used bridges from vehicle use to bicycle/pedestrian use only, and reducing or repurposing travel lanes as in “road diet” projects.*

*Regarding transportation investments, they should help preserve and enhance the Capital District's existing urban form, infrastructure, and quality of place. Neighborhood-based local planning efforts are important to the success of an overall regional plan that emphasizes livable communities and smart growth.*

*Transportation investments will:*

- Plan and build for all modes of transportation, including pedestrian, bicycle, public transit, cars, trucks, marine, aviation, and rail;*
- Support healthy urban, suburban, and rural communities;*
- Encourage concentrated development patterns and smart economic growth;*
- Link transportation planning and land use planning in order to reduce conflicts and improve both;*
- Protect sensitive environmental resources and our environment.*

### ***Economic Development – Transportation is critical to our region’s economy.***

*New Visions articulates the transportation investment needed for sustainable regional economic growth. All indications are that the region's quality assets are becoming apparent to decision makers outside the region. Transportation choices, strong urban areas, affordable and diverse housing locations, good schools, colleges and universities, ease of mobility, modern air and rail transportation facilities, cultural and recreational opportunities and a clean environment are significant criteria in location decisions of advanced technology firms. These factors support the region’s economic development and business climate. Whenever possible, CDTC will partner with New York State to encourage regional efforts to build a strong, sustainable economy.*

### ***Regional Equity – Transportation investments will address all needs fairly and equally.***

*Funding for appropriate repair, replacement and reconstruction will be based on the function and condition of the facility -- not ownership. Investments should meet the needs of all users of the transportation system, in a manner that increases access to transportation or does not disproportionately impact people with disabilities, and minority and low-income populations.*

## **Fostering Community Quality of Life**

The following are specific examples of New Visions issues and how they will impact your future.

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### Transportation Technology

New Visions recognizes the negative and positive impacts of new transportation technologies on the system and its users. With planning, we can minimize the negative impacts and maximize the positive impacts. How will people interact with self-driving cars, shuttles, trucks, and buses; electric vehicles and charging stations; smart streetlights, roads, and parking; ridesharing technologies for cars, scooters, and bicycles; drones; and technologies which have not yet been invented?

### Transportation Safety

New Visions offers a strategy which examines traffic safety data, develops high accident locations, analyzes potential mitigation measures and solutions, and develops a competitive funding process to make these improvements. Where the data may not be available, CDTC will work to educate all users to “coexist” and to develop strategies to improve safety. How can we continue to reduce crashes and minimize their impacts on people?

### Transit Service/Mobility

Working with our regional transit provider, CDTA, New Visions examines future population growth trends and forecasts transit ridership and future needs. This will improve and grow a variety of transit services for the Capital District, increasing mobility and supporting economic development and smart regional growth. How can we dedicate lanes for transit and integrate on-road facilities for bicycles?

### Highways and Bridges

New Visions makes a strong commitment to keeping the region’s highway and bridge system in good condition, providing billions of dollars for highway rehabilitation, reconstruction, and design and for bridge maintenance, repair, and replacement by 2050. Maintaining and replacing our existing infrastructure will be our highest priority, and will require most of our existing resources. How can we build a safer, more durable, more efficient road system?

### Traffic Congestion

New Visions explores ways to manage congestion and to ease daily commutes by using existing technology such as incident and traffic information systems, and new technology such as traffic routing systems, new traffic signal monitoring technology and someday automated vehicles. The Plan also encourages support for more Travel Demand Management (TDM) strategies such as transit, pedestrian and bicycle travel, carpooling, vanpooling, carsharing and bikesharing, which can all reduce single occupant vehicle travel and provide affordable high quality alternatives. How can we minimize the impacts of congestion?

### Complete Streets

New Visions endorses local Complete Streets that are designed and operated for all users of all ages and abilities, including pedestrians, bicyclists, motorists, transit users, freight deliveries, children, elderly and people with disabilities. A properly designed “Complete Street” will improve safety, encourage walking and bicycling, slow traffic, improve air quality, promote local business, and even encourage social interaction. How can we strike a balance, which makes our streets useable and safe for all?

### Bicycle and Pedestrian Transportation

New Visions encourages development that incorporates safe walking and bicycling accommodations into road and bridge construction and city, village, and town plans. Shifting trips to walking and bicycling where feasible can reduce congestion and greenhouse gas emissions from transportation. Active transportation has additional physical and mental health benefits and providing safe places to walk and

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bike creates access to recreational opportunities that benefit community health and economic development. How can we provide more walking and bicycling facilities to more people, and how can we make walking and bicycling safer?

### Environmental Quality

New Visions supports energy conservation and air quality in the region by advocating sustainable development patterns and site design, urban reinvestment, and community-based land use planning. New Visions also encourages transit, bicycle, & pedestrian, carpooling, carsharing, and bikesharing investments & strong participation in the U.S. Department of Energy Clean Cities program. How can we reduce transportation's negative environmental impacts on air, water, land, and people?

### Freight Movement

New Visions advocates congestion management and infrastructure investments that will support the movement of goods throughout the Capital District. Freight movement is about how goods get to your doorstep and to the stores' shelves, but it is also about freight's positive impact on the regional economy, growth, and employment. How does freight deal with consumers' need for on-time, overnight deliveries?

### Equity

New Visions ensures that both the positive and negative impacts of transportation planning conducted by CDTC and its members are fairly distributed, and that defined Environmental Justice populations do not bear disproportionately high and adverse effects. Eliminating, reducing and mitigating conflicts between land use, development and transportation are critical strategies to promoting environmental justice. How can we correct mistakes made in the past?

### Human Services Transportation

New Visions works with the many human services transportation providers in our area to identify the transportation needs of people who have disabilities, older people, and people with low income. CDTC then works to improve services for these transportation disadvantaged populations by identifying gaps and overlaps in services, and providing recommendations and funding for improvements. Everyone has the right to safe, reasonable transportation.

### Local Communities

New Visions acknowledges the importance of land use & development, and of reducing conflicts between land use, development and transportation. CDTC sponsors the Community and Transportation Linkage Planning Program, which provides funding for cities, towns, & villages to prepare & implement community-based transportation & land use plans consistent with New Visions principles. How can we strengthen our communities?

### Public Participation

New Visions seeks public participation and input in every stage of the planning process. It is one of the primary objectives of this plan because without public participation and input, the plan will not have public support; and without public support, the plan's goals and objectives will never be implemented. How can we expand participation in the metropolitan planning process?

### Big Idea/Big Ticket Initiatives

The New Visions 2040 Plan reaffirms support for consideration of potential "big ticket" initiatives, which would be supported by higher growth scenarios, and additional funding. The plan puts forward the

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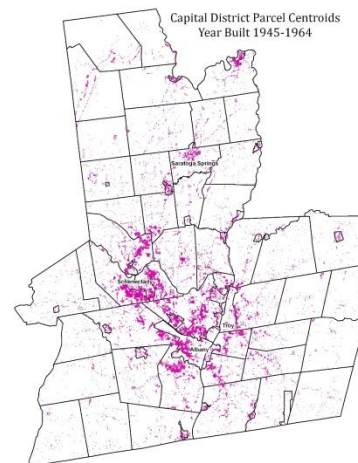
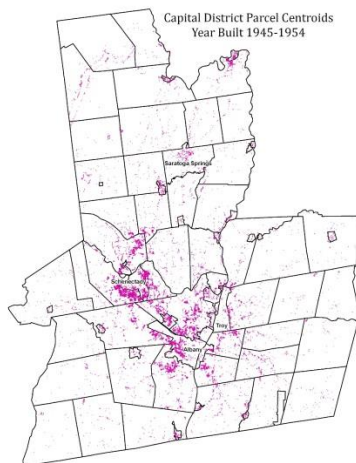
vision of bold, aspirational investments that could be feasible if the public supports the vision and funding can be found. How can we make affordable progress towards these initiatives, and how can we fund them?

### Travel Demand Management (TDM)

The New Visions 2050 Plan re-emphasizes the need for TDM strategies, such transit, pedestrian and bicycle travel, carpooling, vanpooling, carsharing and bikesharing. A successful TDM program will have a positive impact on many factors, including personal health, traffic congestion, a clean environment, equity, congestion and operations, etc. It will support regional sustainability, air quality and equity goals. How can we convince more people to try and use these TDM strategies?

## Forecasting Regional Growth and Transportation Needs

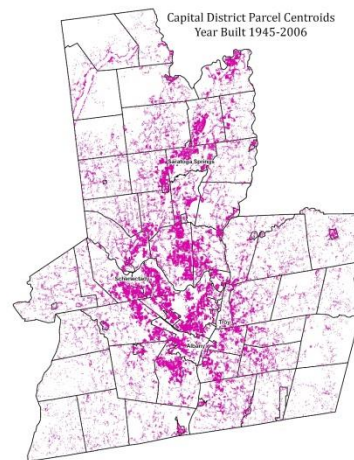
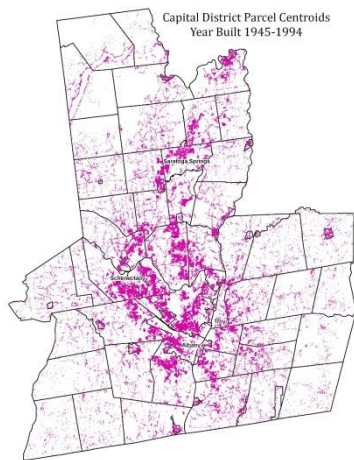
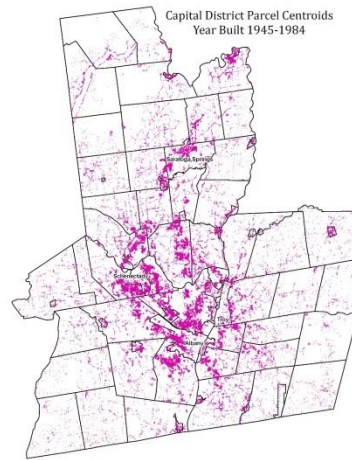
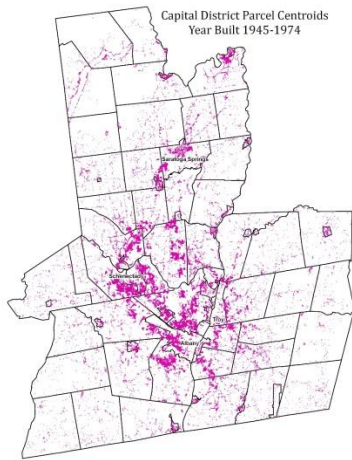
Forecasting growth is critical for New Visions 2050 and transportation planning in general because transportation has a huge impact on growth, and growth has a huge impact on transportation. Look at the following maps showing the number of developed parcels in the 4-County area. In 1945-1954 there were few developed parcels in the Towns between the City of Albany and the City of Saratoga. And then in the early 1960's came the Northway or I-87, and things began to change. In the 1945-1964 map, a few more parcels are developed in that area. In the 1945-1974 map a pattern has developed so that most of the developed parcels are adjacent to the Northway. The pattern becomes clearer in the 1945-1984 map, and in the 1945-1994 map the pattern extends north and south of the City of Saratoga Springs. By the 1945-2006 map the entire I-87 corridor is filled in with developed parcels. This is a strong trend which shows how growth follows transportation improvements, and this trend continues today





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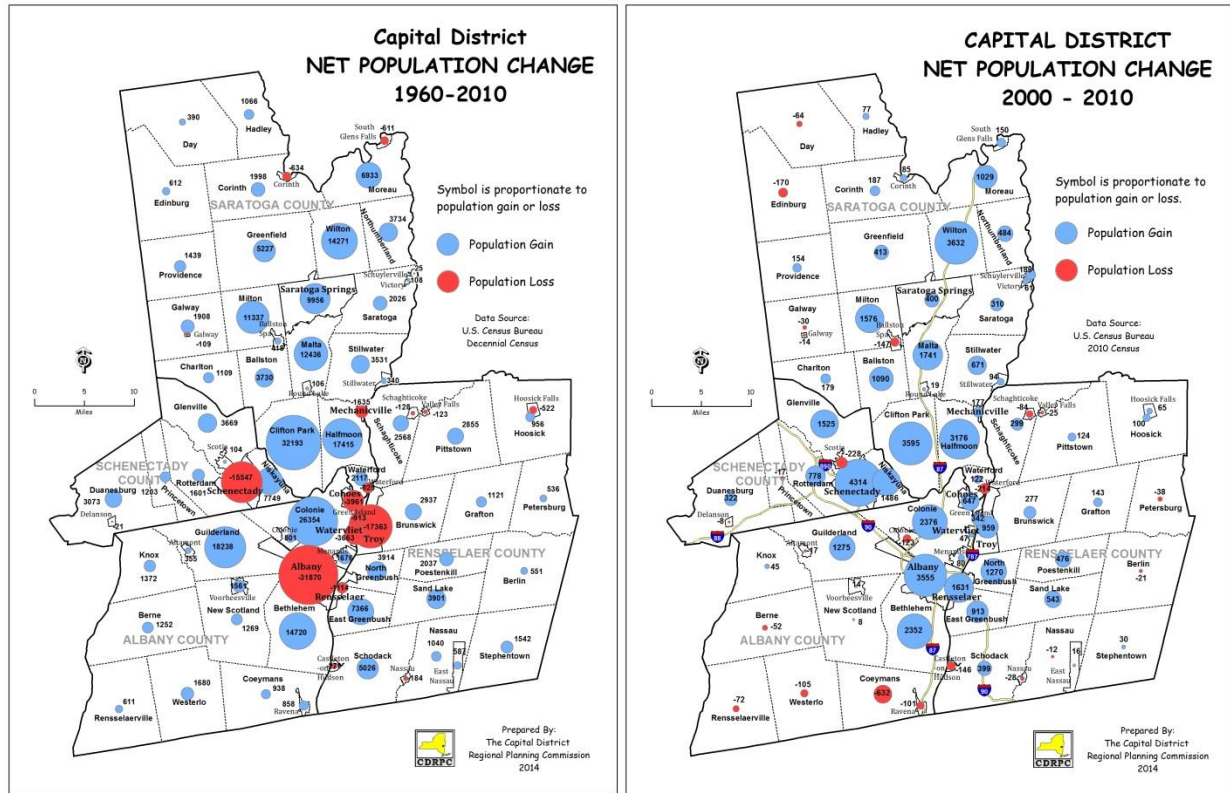
On the other hand, transportation will also follow growth. Many new roads needed be constructed in the Towns of Malta and Stillwater because of the growth at the Luther Forest Technology Campus and the growth of Global Foundries. Even now we are considering other transportation improvements because of future growth projections in the area. Another example is the growth in commuting patterns between the City of Schenectady and the City of Albany. Because of it, the NYS Thruway added 2 lanes between their Exits 23 and 24. The new “Rexford Bridge” (Balltown Road over the Mohawk River) between Rexford in Saratoga County and Niskayuna in Schenectady County was built with 4 travel lanes instead of 2 lanes, because transportation follows growth.

So how is our region’s population growing and what does our future growth mean for our future transportation and vice versa? Below we examine regional growth using 3 different approaches.

One way to look at future growth is to look at the change in population by city and town in the last few decades. Below are maps showing populations changes in 1960-2010 and 2000-2010 based on actual U.S. Census data. The first map (1960-2010) shows population growth in our suburban towns and

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population losses in the Cities of Albany, Schenectady, and Troy. It shows the “move to the suburbs” – a well understood and documented trend nationwide.



But look at the second map (2000-2010) and the growth in the last decade. For the first time in 50 years our cities experienced growth in 2000-2010. People are moving back into the cities. Developers understand this trend, and are building more and more rental and multi-unit housing in the downtown areas of these cities. Young professionals are moving into these units to be closer to their work places and closer to entertainment, and retired people are moving into these units to simplify their lives and to live near parks, trails, and entertainment, and in walkable communities.

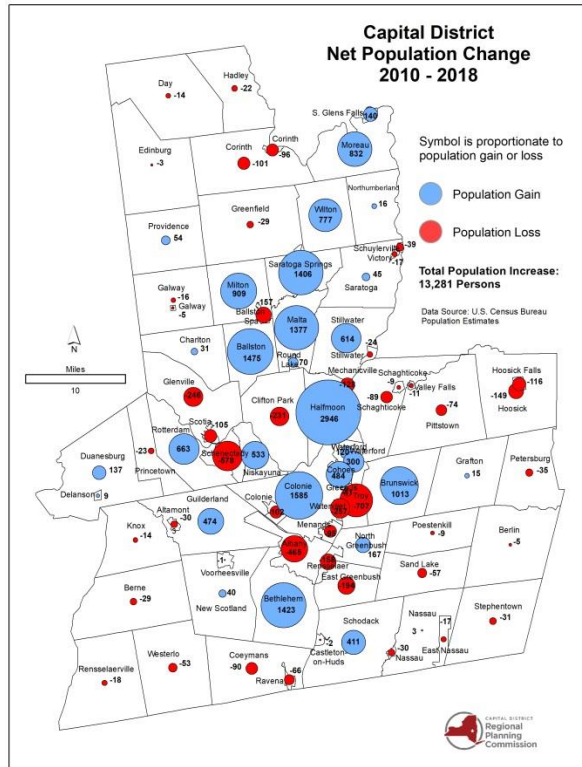
There is no question that this urban growth is happening. The question is, “Will this trend of growth in the cities continue like it has in many other metropolitan areas in the U.S.?” And if this trend continues, how will our transportation needs change?

The last map in this approach is below. Because the 2020 U.S. Census is just beginning and data from this census will not be available until late in 2020 or early 2021, this map shows a projected net population change by city and town. If this projection is accurate, instead of growth it shows small populations decreases for Albany, Schenectady and Troy. Once again this shows the importance of the 2020 U.S. Census for our region and for planners. We will need to see the actual 2020 census data before we draw any conclusions.



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There is another observation which we can make from the below map, and that is that even the projected growth in those areas that are growing, is relatively small. The projected growth for the entire area from 2010-2018 is only 13,281 people or about a 1.6% increase over 8 years.

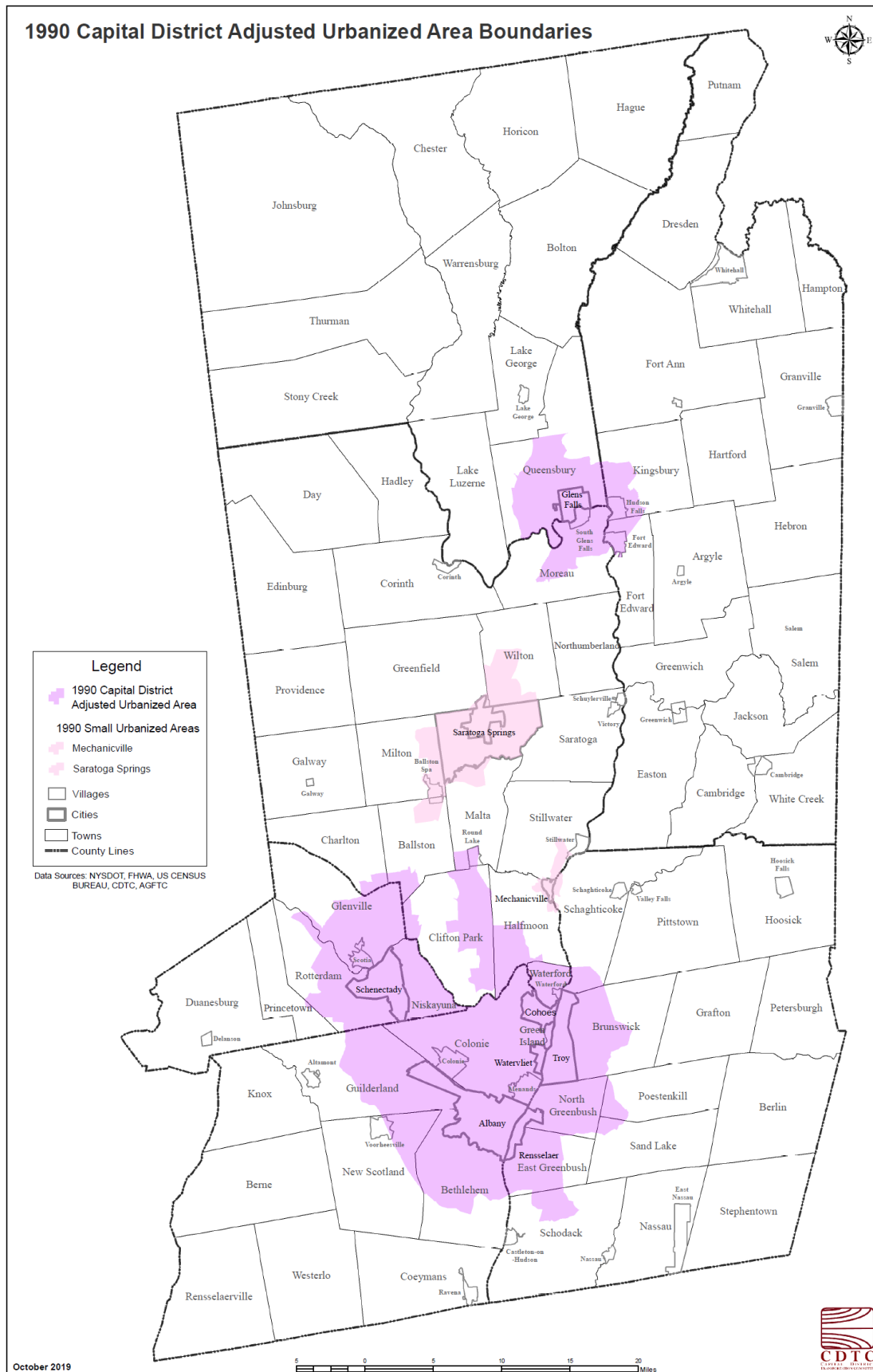


A second way to examine growth is by looking at the U.S. Census “urban area boundaries” from the last 3 censuses. Every 10 years after the national census, the U.S. Census Bureau designates the urban area boundaries for metropolitan areas with a population of more than 50,000 people. These metropolitan areas are broken down into census tracts and blocks, and each tract and block is examined. The U.S. Census applies several criteria, including population, population density, impervious land cover, etc. and each tract and block that meet the criteria are designated as part of the urban area.

In our area of upstate New York (6 Counties of Albany, Rensselaer, Saratoga, Schenectady, Warren, and Washington Counties instead of the 4 Counties in the CDTC planning area) there are currently 3 metropolitan areas - Albany-Schenectady-Troy, Saratoga Springs, and Glens Falls. In the maps below are the urban area boundaries for our area after the 1990 census (pink highlighted area), the 2000 census (green highlighted area), and the 2010 census (yellow highlighted area).

In 1990 there were only 2 Large Urbanized Areas (Albany-Schenectady-Troy and Glens Falls) in the 6 County Region and only one within CDTC’s Planning area. Saratoga Springs and Mechanicville were the only 2 small urbanized areas in the 4 County Region.

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In 2000 the Albany-Schenectady-Troy Urbanized area and the Glens Falls Urbanized area expanded, and Saratoga Springs became a Large Urbanized Area. Mechanicville remained a small urbanized area and Ravena was added as a small urbanized area.

**2000 Capital District Adjusted Urbanized Area Boundaries**

**Legend**

- 2000 Capital District Adjusted Urbanized Area
- 2000 Small Urbanized Areas
- Mechanicville
- Ravena
- Villages
- Cities
- Towns
- County Lines

Data Sources: NYSDOT, FHWA, US CENSUS BUREAU, CDTC, AGTC

Map showing the 2000 Capital District Adjusted Urbanized Area Boundaries. The map includes the following locations:

- Putnam
- Hague
- Horicon
- Chester
- Johnsburg
- Warrensburg
- Bolton
- Dresden
- Whitehall
- Hampton
- Granville
- Graville
- Hartford
- Kingsbury
- Fort Ann
- Lake George
- Stony Creek
- Thurman
- Day
- Hadley
- Lake Luzerne
- Queensbury
- Moreau
- South Glens Falls
- Fort Edward
- Argyle
- Hebron
- Salem
- Greenwich
- Northumberland
- Wilton
- Greenfield
- Providence
- Edinburg
- Corinth
- Saratoga Springs
- Saratoga
- Easton
- Cambridge
- White Creek
- Hoosick Falls
- Hoosick
- Pittstown
- Schaghticoke
- Valley Falls
- Stillwater
- Malta
- Ballston
- Charlton
- Galway
- Milton
- Ballston Spa
- Clifton Park
- Halfmoon
- Waterford
- Cohoes
- Green Island
- Troy
- Watervliet
- North Greenbush
- Poestenkill
- Berlin
- Sand Lake
- Rensselaer
- East Greenbush
- Bethlehem
- New Scotland
- Westerlo
- Coeymans
- Schodack
- Nassau
- Stephentown
- Grafton
- Petersburgh
- Brunswick
- Colonie
- Niskayuna
- Schenectady
- Rotterdam
- Glenville
- Duanesburg
- Princtown
- Delanson
- Knox
- Altamont
- Guiderland
- Voorheesville
- Rensselaerville
- Ravena
- Carlisle-on-Hudson
- Nassau
- East Nassau

Scale: 0 to 20 Miles

CDTC  
Capital District  
County of Dutchess

## CDTC Quality Region Task Force White Paper

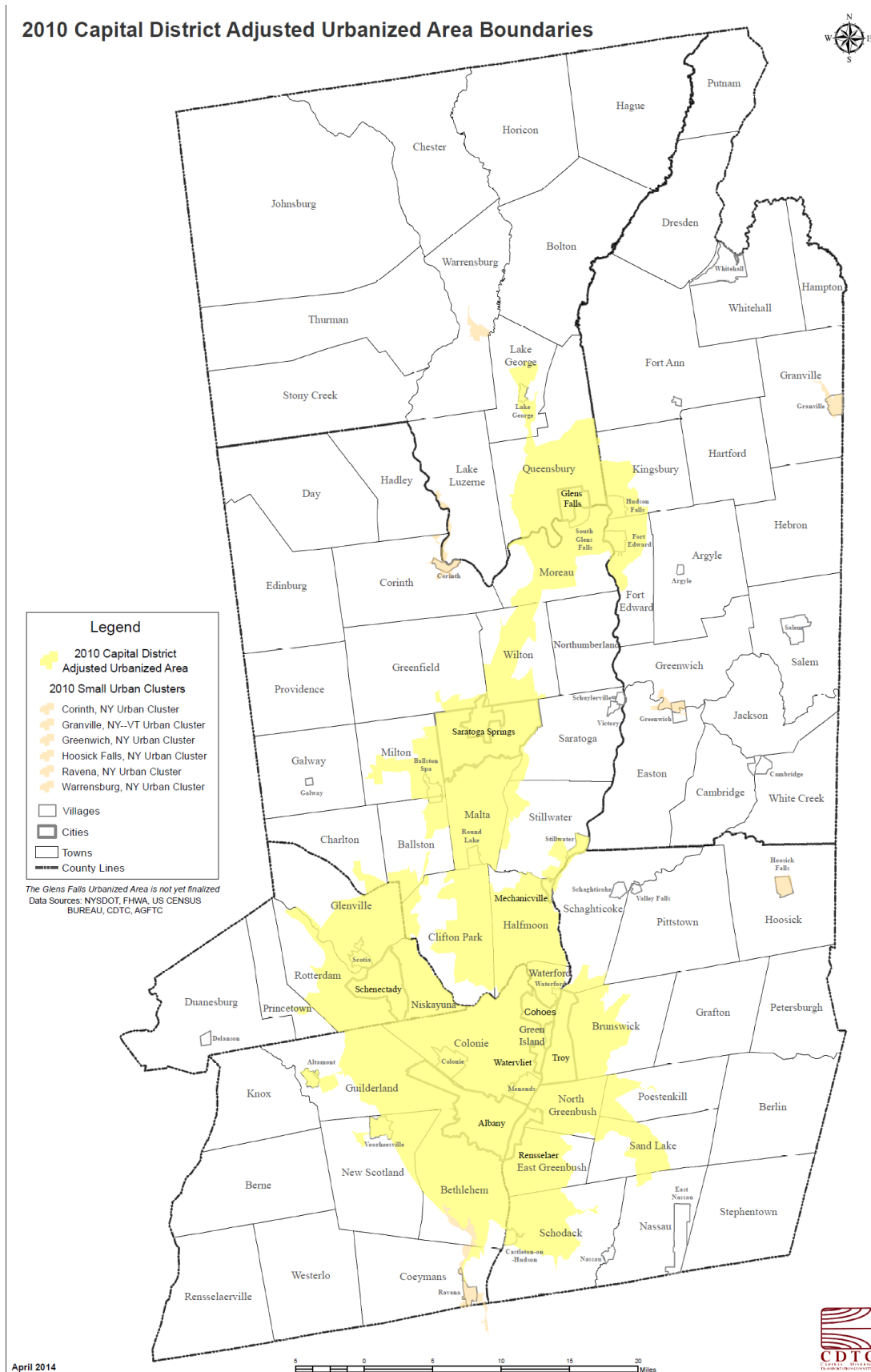
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In 2010 all three Large Urbanized Areas (Albany-Schenectady-Troy, Saratoga Springs & Glens Falls) expanded into each other and created one contiguous geographic area. The Mechanicville small urbanized area became part of the Albany-Schenectady-Troy Large Urbanized area and the Village of Altamont became part of the Albany-Schenectady-Troy Urbanized area.

The Census replaced the small urbanized areas with Small Urban Clusters. Ravena expanded and became a small urban cluster along with the newly designated small urban clusters of Corinth and Hoosick Falls in CDTC's planning area and Granville, Greenwich and Warrensburg in AGFTC's planning area.

# CDTC Quality Region Task Force White Paper

## 2010 Capital District Adjusted Urbanized Area Boundaries



## CDTC Quality Region Task Force White Paper

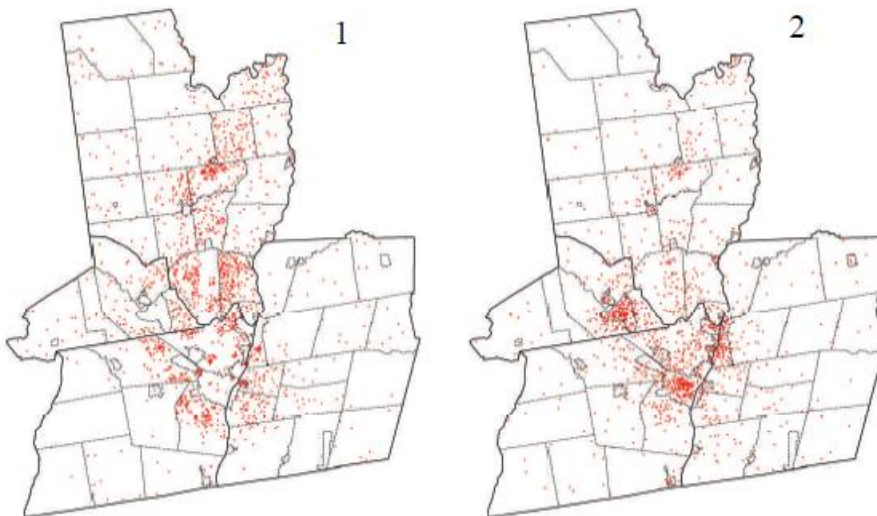
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In 2000 the 3 local urban areas (Albany-Schenectady-Troy, Saratoga Springs, and Glens Falls) were expanding out from their centers, but they were not connected. But in a relatively short period of time (only 10 years), by 2010 the urban areas were all connected along the I-87 corridor. If you ignore the geographical boundary lines of the villages, cities, towns, and counties, you see ONE very large urban area stretching from the Village of Lake George in the north to the Village of Ravena in the south!

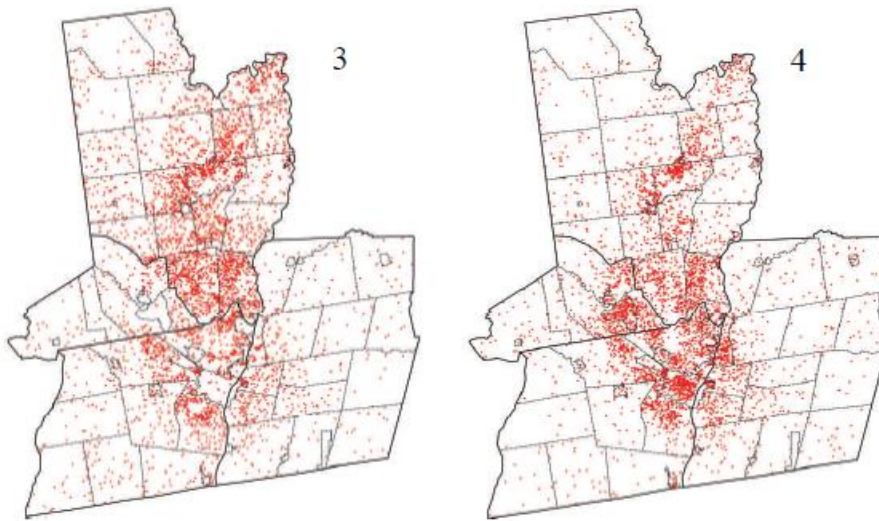
We think that when we look at the 2020 census data, the areas between the Albany-Schenectady-Troy and the Glens Falls urban areas will have continued to expand and fill-in. By 2020 our area will really be one metropolitan area with Interstate 87 and Interstate 90 running through its centers.

A third and final way to examine growth is by looking at the data produced by the Capital District Regional Planning Commission (CDRPC). In 2007 CDRPC conducted an in depth analysis of the demographic distributions and land use patterns for four scenarios to test the impacts of growth:

1. Status Quo Trend: CDRPC's baseline forecast (9% growth in population, 15% growth in households by 2030, current development patterns continuing); this was the official Plan forecast;
2. Concentrated Growth: the baseline growth rate with more concentrated development patterns resulting from urban reinvestment and suburban planning;
3. Trend Hyper-Growth: hyper-growth (29% population growth and 35% household growth by 2030), with status quo trend patterns of dispersed development;
4. Concentrated Hyper-Growth: hyper-growth occurring in a concentrated pattern resulting from more urban reinvestment and suburban planning.







Under any growth scenario, the benefits of concentrated development patterns for the transportation system and for regional quality of life are significant and greater than those for dispersed development patterns. Those benefits include fewer roads, sidewalks, etc. that are closer, and easier and less costly to maintain. The costs for infrastructure are less, but more people benefit from the existing infrastructure, so the benefits are greater. More people will have access to better infrastructure, including transportation.

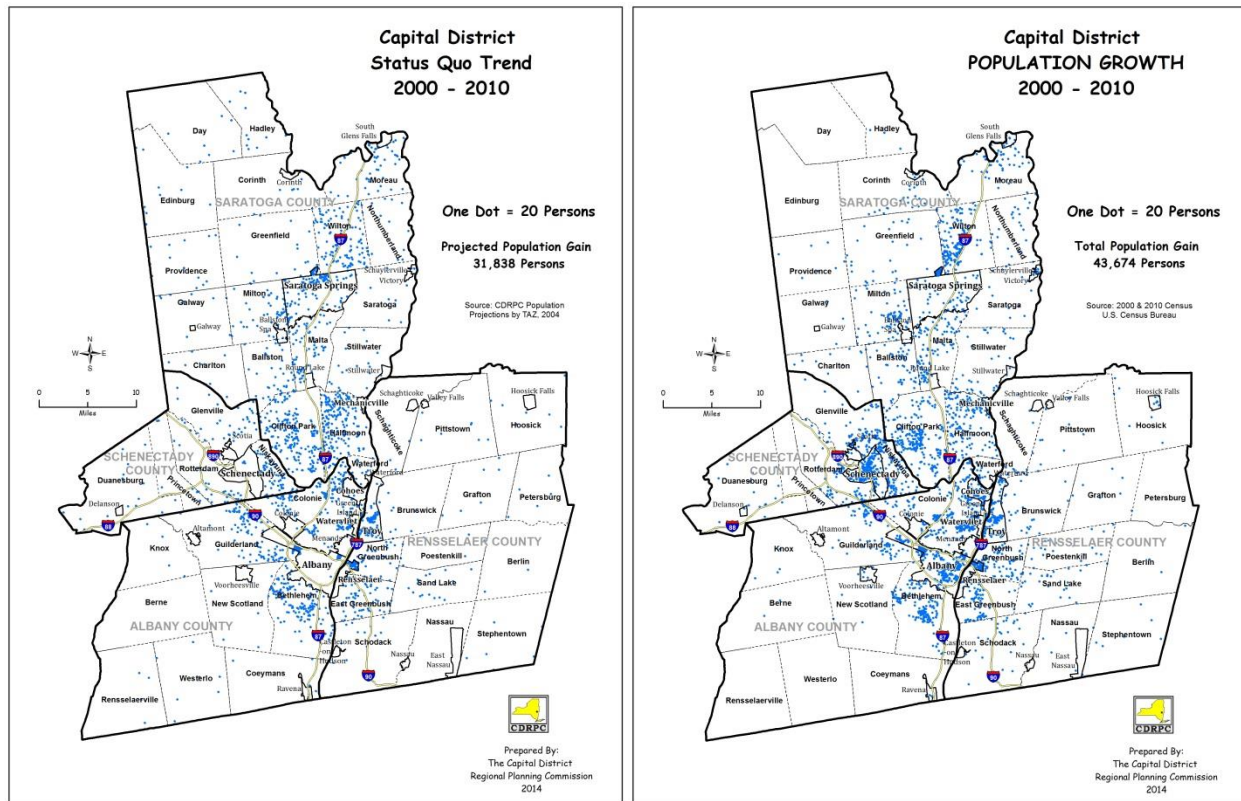
The New Visions Plan supports and encourages concentrated development in the Capital District. The urgency for concentrated development and coordinated, high quality planning is even greater under a scenario of high growth. This urgency would be necessary because the impacts of a high growth scenario with dispersed development patterns would threaten to make the region's quality of life worse and unsustainable.

Twelve years since the above analysis, it is time to take a measure of our growth since the above forecasts, and below is that measure. On the left is the "Status Quo" forecast of the Capital District's growth between 2000 – 2010, and on the right is the actual growth in those same years. We need to compare the growth and the distribution of that growth in the 10 year period.

Regarding this growth, notice that the actual growth between 2000 – 2010 (43,674) is about 37% higher than the projected growth (31,838) for the same period. Instead of a projected growth of about 4%, the actual growth is about 5.5% over the 10 year period. This is certainly a positive trend with slightly more than the modest growth forecasted in 2004.

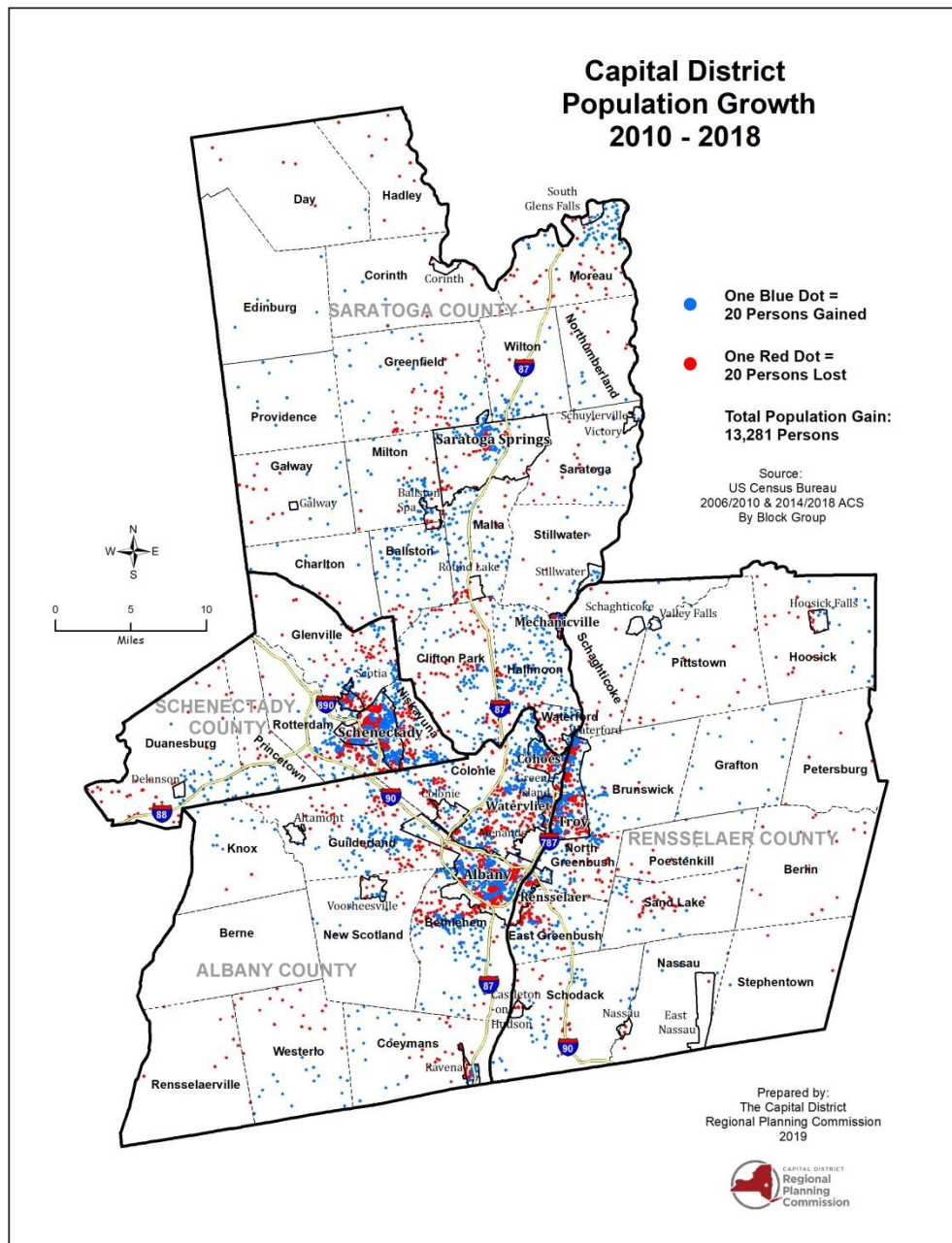
The other positive news is the distribution of that growth. Instead of the "Status Quo" forecast of dispersed development, our actual growth looks much more like the Concentrated Growth scenario (no. 2) above in the 2007 CDRPC analysis, which results from urban reinvestment and suburban planning. Obviously this is a positive trend that benefits both our suburbs and our cities, and that results in more efficient use of our transportation resources, more people have access to transportation, and a higher quality of life for our region.

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Below is the updated projected population growth between 2010-2018. The good news is that the 2010-2018 projected growth looks similar to the 2000-2010 actual growth, i.e. we see a concentration of growth in the existing communities which is much more like the Concentrated Growth scenario. The primary difference in these two maps is the decrease in population (signified by red dots) in our older cities.

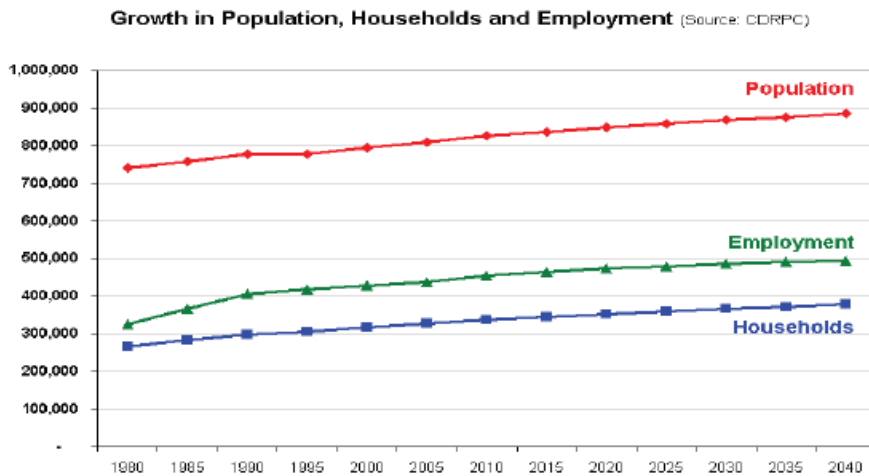
This is the best way to grow!



So, we have looked at our region's population growth from 3 different approaches, and we can now draw some conclusions regarding our population growth and its distribution. As we noted above, from 2000 – 2010 our population grew at a rate 37% higher than projected. If our population was able to continue to grow at this rate, it would certainly grow at a rate much higher (about 10%) than the 7% currently forecasted by CDRPC for 2010 – 2040. However over the last 35 years as demonstrated by the table below, our population has grown at a very modest, but very consistent rate. So with only one census indicating a higher growth and without a few more decades of higher growth data, we believe it is more reasonable to assume the consistent but modest trend below, and look to the next census before we draw any new conclusions.

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This modest, consistent population growth along the I-87 and I-90 corridors is also supported by the CDRPC 2010-2050 forecast below.





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construction that developers are building more rental units in our city's downtowns. For example the City of Albany is forecasting that 200 new rental units per year will be built in their city in the next decade. So there is strong quantitative and qualitative evidence that this growth will occur in our urban areas.

Our analysis of our changing urban area boundaries in the above paragraphs indicates there is also a strong trend to develop our suburban areas between Albany and Glens Falls along the Northway (I-87) corridor. Referring to the CDRPC map above of the Capital District Projected Net Population Change 2010 – 2050, we think that the distribution of our growth will be centered in the communities which have seen the largest growth in the last 10 years. This includes the Towns of Clifton Park, Halfmoon, and Wilton, with similar but slightly less growth in the Towns of Bethlehem, Colonie, Guilderland, Malta, and Milton. With that in mind, we eagerly await the results of the 2020 U.S. Census to support or challenge these conclusions.

For CDTC our next step is now to include this population growth in our planning efforts, and specifically in our travel demand computer model of the Capital District. We will distribute this population in our model, and examine the changes that occur in travel patterns, road and intersection levels of services, traffic congestion, etc. With these findings, we will be able to develop better conceptual, long-range strategies and transportation projects to address this growth.

## Scenario Planning

In New Visions 2040 (and in the above section) we examined the following 4 population scenarios:

1. Status Quo Trend: CDRPC's baseline forecast (9% growth in population, 15% growth in households by 2030, current development patterns continuing); this was the official Plan forecast;
2. Concentrated Growth: the baseline growth rate with more concentrated development patterns resulting from urban reinvestment and suburban planning;
3. Trend Hyper-Growth: hyper-growth (29% population growth and 35% household growth by 2030), with status quo trend patterns of dispersed development;
4. Concentrated Hyper-Growth: hyper-growth occurring in a concentrated pattern resulting from more urban reinvestment and suburban planning.

In that discussion we focused on the mostly likely or first two scenarios – Status Quo Trend and Concentrated Growth. We acknowledged that the most efficient and cost effective scenario is the Concentrated Growth for many reasons including more people would use the existing infrastructure, and new infrastructure will not need to be built and maintained.

“Unconcentrated” growth or Sprawl development creates needs for additional highways and bridges, more utilities (such as electric, water, sewer, gas, and internet), more housing, more schools, more services such as police, fire, and rescue, and more maintenance costs for all of the above, etc. Since our area's population, like most of the northeastern United States, is not growing regionally, sprawl results in increased costs without additional benefits. Benefits are not spread across the population but limited to a select few, making sprawl the least cost effective scenario.

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Since New Visions 2040, transportation planning has only become more complex. As with many things and all planning, there are more variables to considered, more unknowns, and more new technologies. Because of these trends, scenario planning, i.e. planning for more than one scenario, has become much more popular and much more utilized.

For New Visions 2050 we have developed the following 4 new scenarios and 2 overlay scenarios. Below are descriptions of those scenarios and overlays, which are applied to each scenario. These scenarios focus more on the different development scenarios and their impacts, and less on the regional population shifts. The descriptions also include impacts on transportation modes, land use, vehicles miles traveled (VMT), etc.

### Four Basic Scenarios

- A. **Base-Year 2050 Trend.** This scenario uses the population, employment, and land-use forecasts that are incorporated in CDTC's travel demand model, which was used in the LRTP update. In this scenario, the gradual adoption of automated vehicles (AV's) would not change trend land use and development patterns. Mobility as a Service would increase without dramatically changing travel behavior.
- B. **Sprawl Development.** This scenario assumes that adoption of AV technologies will encourage development further from urbanized areas. Some commentators suggest this will be the case, as people traveling in AVs will view commuting travel time as potentially productive. Private ownership of vehicles would remain similar to current ownership rates, and Mobility as a Service would be limited and concentrated in cities. The result would be increased sprawl development patterns beyond trend. This land-use pattern would run counter to the New Visions Plan goals. Provision of transit service would become more challenging.
- C. **Concentrated Development.** This scenario assumes that urban living will be made more attractive through new transportation options like Mobility-as-a-Service (MaaS) and AV technologies. In addition, this scenario assumed a high level of urban reinvestment, transit investments and suburban planning that encourage construction of transit-oriented development in the region's urbanized areas. New paradigms would increase the importance and success of transit. Success of Mobility as a Service and AV technologies could lead to reduced private ownership of vehicles. This land-use pattern furthers the New Visions Plan development goals.
- D. **Concentrated Development with Financial Incentives.** This scenario uses the land-use assumptions from the Concentrated Development Scenario to explore the impacts of increasing household transportation costs. This could result from instituting several incentive options, including a carbon tax, a VMT tax or fee structures to encourage ridesharing in MaaS, as well as local fees from curb pricing and/or congestion pricing. Many commentators predict that without the support of fee structures to encourage ridesharing with MaaS, congestion could increase because of increased vehicle miles of travel.

### Two Overlay Scenarios which could happen in combination with other scenarios

- 1. **Optimistic AV.** This scenario assumes that automated vehicles will be well integrated into the land use and transportation system with pricing and policy structures that encourage



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ridesharing and transit use. Under this scenario, empty self-driving cars on the road will be minimal and vehicle miles of travel will be less than trend. Increased efficiency of self-driving allows greater real capacity on expressways, and traffic incidents will be rare. The potential safety benefits of AV's will be fully realized.

2. **Pessimistic AV.** This scenario assumes that the availability of AV's result in significant increases in vehicle miles of travel due to empty cars circulating or returning to the car owner's home. Increased congestion results from inadequate facilities for AV's dropping off passengers. Transit service declines dramatically.

Below is a more detailed description of each scenario's impacts. Each scenario impacts transportation modes, VMT, land use, etc. differently. Some transportation modes or programs in this plan are significantly impacted by these scenarios, while others may not be impacted by these scenarios at all. As you might expect, for those modes and programs significantly impacted by these scenarios, there is a significant discussion of those impacts in their white papers; and for those not impacted at all, there is no discussion. Below this table of scenario impacts, is another table which includes each mode and programs in this plan and whether these scenarios (impacted that mode or program) or not (did not impact that mode or program) were analyzed in their white papers.

For the planning associated with each mode or program and each scenario, see the relevant White Paper which is included in this plan.

### Impacts of New Visions 2050 Scenarios

<b>Sprawl Development</b>	<b>Concentrated Development</b>	<b>Concentrated Development with Pricing</b>
Lower quality land use planning	Concentrated, walkable development patterns resulting from urban investment and suburban planning	Concentrated, walkable development patterns resulting from urban investment and suburban planning
Increased driving and congestion. With AV's, more miles driven with no passengers in the car	Decreases in congestion, AV's add capacity to expressways and arterials, multimodal travel	Decreased congestion, increased carpooling most efficient use of AV's, minimize potential negative impacts of AV's
Transit service declines, transit viability is threatened	Transit service serves more people, strong market share	Transit service highly attractive and competitive, reaches higher market share
Lower access to walking and cycling per person	Better walking opportunities; more walkable region	Better walking opportunities; more walkable region
Missed opportunity for regional attractiveness	Protection of regional quality of life	Protection of regional quality of life
Deterioration of urban and suburban character	Protection of urban, suburban and rural community character	Protection of urban, suburban and rural community character

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Additional loss of open spaces, environmentally sensitive lands and agricultural lands	Protection of open spaces, environmentally sensitive lands and agricultural lands	Protection of open spaces, environmentally sensitive lands and agricultural lands
Future vehicle miles of travel increased by 8%	Future Vehicle miles of travel increased by 3%	Vehicle miles of travel reduced by 3%
Less transportation choices	Provides more transportation choices	Provides more transportation choices
Less energy efficient housing choices	More energy efficient housing choices	More energy efficient housing choices

### Impact of Scenario Planning on each Transportation Mode or Program

Transportation Mode or Program	Impact Magnitude *	Impact Description
<b>Bicycle &amp; Pedestrian</b>		
<b>Complete Streets</b>		See the Environment & Technology White Paper.
<b>Environment</b>		
<b>Equity</b>		See the Environment & Technology White Paper.
<b>Freight</b>	+/-	In this case, it is assumed that population and employment growth and investment is closer to the region's urban centers. This brings consumers closer to their markets, requiring shorter trips for deliveries, resulting in decreased freight-related energy use and emissions. However, a charge or tax could increase the cost of operations for freight providers, in turn raising costs for goods and services.
<b>Human Services Transportation</b>		See the Environment & Technology White Paper.
<b>Infrastructure</b>		Not impacted.
<b>Operations</b>		Not impacted.
<b>Safety</b>	+	Concentrated development would allow non-auto modes to become more viable which would improve safety. If automated vehicles are fully deployed sooner than later and they have solved the challenges of

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		operating in an urban environment, the safety of the transportation system will greatly improve.
<b>Transit</b>	+	A future development pattern that supports urban areas in combination with increased transportation costs for personal vehicle use would make fixed use transit vital. CDTA could grow the fixed route transit system as demand would be high, adding many more BRT routes or other higher end transit services such as light rail. Demand would also increase in suburban and rural areas as personal transportation costs increase. Transit would need to receive high priority on surface streets, likely with a vast network of bus lanes.
<b>Travel Demand Management</b>		Not impacted.

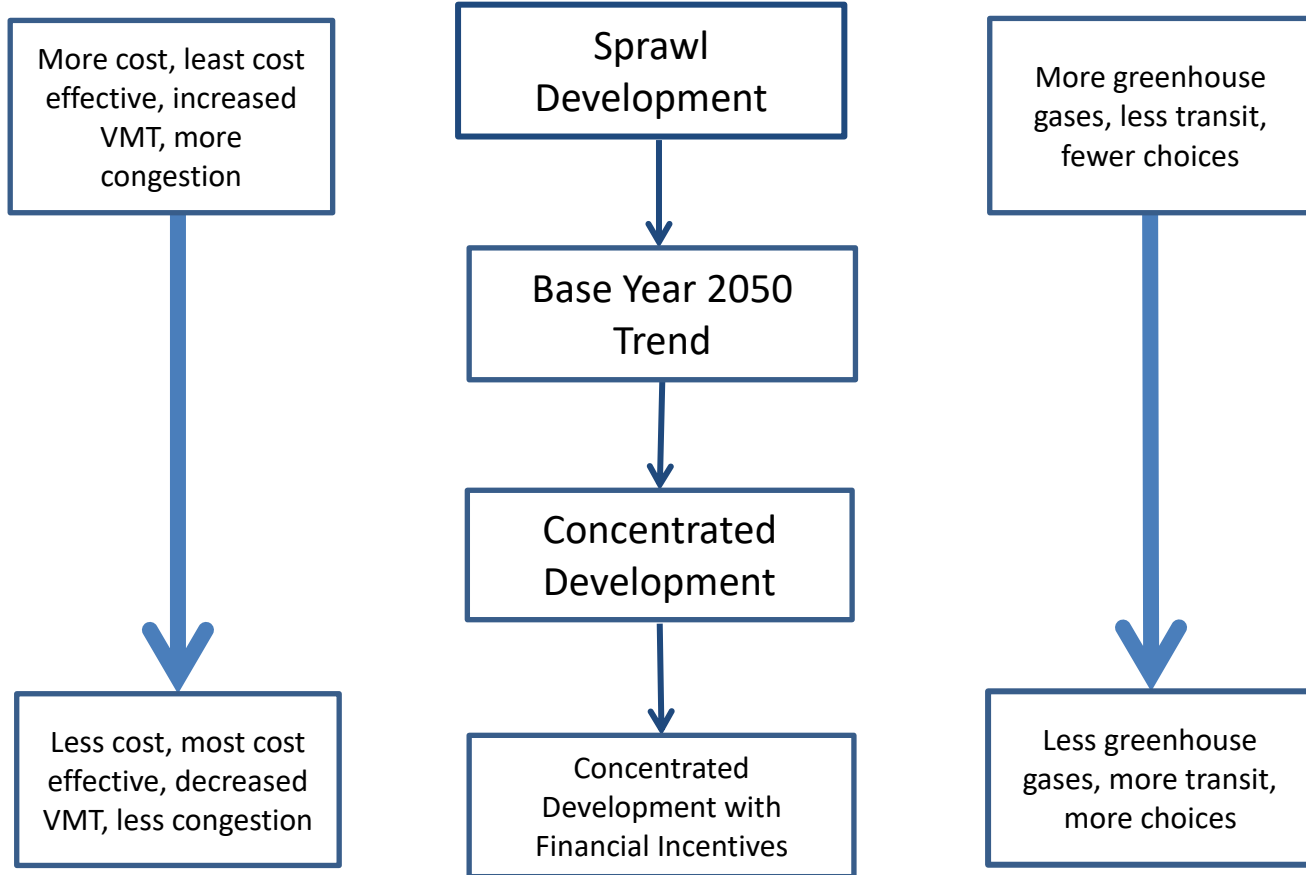
\* If a "+" or "-" symbol is found in the "Impact Magnitude" column, scenario planning is discussed in that mode's or program's white paper. Conversely, if a "+" or "-" symbol is not found in the "Impact Magnitude" column, scenario planning is not discussed in that mode's or program's white paper. The magnitude of each impact is represented by the number of "+" symbols (positive impact) and the number of "-" symbols (negative impact), the more symbols, the higher the impact. For example, "+++" would mean a major positive impact, while "+" would mean a minor impact. Scenarios can have both a positive and negative impacts on a mode or program.

As you might expect, the overall costs for each of the 4 scenarios would vary significantly with the higher cost scenarios requiring more funding.

If more funding was not available, those higher cost scenarios would result in more competition for the same amount of funding, which would be spread over even more demands for it. The opposite would be true for lower cost scenarios.

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For all the above reasons, the preferred scenario is the most effective, least costly, least polluting, and the scenario which will bring us closest to our goal of a Quality Region – the Concentrated Development with Financial Incentives. In order to achieve this scenario, we need to implement most, if not all, the recommendations in this plan.

Please note that the Transportation & Climate Initiative (TCI) Regional Proposal for Clean Transportation draft policy framework recommends a regional “cap and invest” program in cooperation with 12 Northeast U.S. States and the District of Columbia. The Memorandum of Understanding is expected to be approved by the region in spring 2020. The New York State Climate Leadership and Community Protection Act was passed in 2019 and would complement any regional efforts coordinated by TCI. This ambitious policy pledges to eliminate net greenhouse gas emissions by 2050 with all electricity coming from carbon-free sources. Implementation of the policy will be crafted by a council of state officials, and likely include a series of financial incentives to shift away from petroleum fuels and single occupancy vehicle travel. Both of these initiatives are consistent with the CDTC preferred scenario above.

### Financial Plan

For a detailed analysis, see the Financial Plan White Paper included in the Appendices. The following is a summary of that White Paper:

Federal law requires that New Visions 2050 Plan include a financial analysis that demonstrates how the recommendations can be implemented based on system level estimates of costs and reasonably expected revenues. Further, both costs and revenues must be expressed in year-of-expenditure (YOE) dollars to accurately reflect: (1) the anticipated revenues available to the region; and (2) the impact of inflation on the costs of labor and materials through 2050. These fiscal constraint requirements are critical to ensuring that the long-range plan is credible, and that it provides realistic expectations to what can be accomplished - not simply a wish list that has little chance of being advanced.

CDTC's New Visions Plan is unique among metropolitan plans in comprehensively assessing annual funding requirements for seventeen capital, operating, maintenance, and planning budget categories. Additionally, the plan's strength draws from CDTC's commitment to achieve "steady progress" across all categories, even if funding levels fall short of those needed for full implementation of all New Visions recommendations. Even under short-term fiscal challenges, CDTC expressed preference for "diet" rather than "retreat". A diet in this context reflects a healthy concern for balance -- smaller portions and the elimination of excess. In contrast, "retreat" brings to mind the abandonment of goals - a situation which could arguably have devastating impacts for the region.

Constructing, maintaining, and operating the public transit system, intermodal facilities, bicycle and pedestrian network, and street and highway system included in New Visions 2050 will cost an average of \$775 million each year between now and 2050. Federal, State, and local governments all contribute to the funding of the Region's transportation system, and that is expected to continue into the future. CDTC's budget analysis asserts that the 2050 Plan is fiscally balanced over time - but only if public funding increases regularly over the upcoming decades as it has done in the past. A reduced level of revenues would lead to serious declines in physical and service conditions, making even the most modest improvements difficult to accomplish.

In order to provide some background and some history of federal transportation financing. Below is a timeline:

- 1916 The Federal-Aid Road Act of 1916 was passed and the federal government began financing surface transportation. Since then Congress has passed many multi-year funding laws to build and repair the interstate road system.
- 1944 The Federal-Aid Highway Act of 1944 created the "National System of Interstate and Defense Highways."
- 1956 The Federal-Aid Highway Act of 1956 appropriated \$25 billion (about \$197 billion in 2009 dollars) to build 41,000 miles of interstate highways. It also established the Highway Trust Fund (HTF) to fund transportation improvements by directing that all new and existing fuel and vehicle tax revenues be deposited into the HTF.
- 1964 The Urban Mass Transportation Act of 1964 established federal capital aid for transit.
- 1972 The HTF was made permanent, and the federal transportation program was expanded beyond construction of interstate highways to include other highways, transit, bicycle and pedestrian projects, etc.

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- 1982 The Surface Transportation Assistance Act of 1982 raised the gasoline tax from 4 to 9 cents per gallon, and created the Mass Transit Account.
- 1991 The Intermodal Surface Transportation Efficiency Act (ISTEA) allowed greater flexibility in project selection and expanded the number of transportation programs.
- 1993 The gasoline tax was increased to 18.4 cents per gallon. The gasoline tax has not been increased since then.
- 1998 Transportation Equity Act for the 21st Century (TEA-21) authorized funding and transportation programs for a 6-year period.
- 2005 Safe, Accountable, Flexible Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) authorized funding and transportation programs for a 5-year period, and created 2 separate national commissions to study future options for transportation funding and programs.
- 2012 After 9 SAFETEA-LU extensions, the Moving Ahead for Progress in the 21<sup>st</sup> Century (MAP-21) law authorized funding and transportation programs for a 2-year period until September 30, 2014 after which the HTF was forecasted to run out of funds.
- 2014 In August the Highway and Transportation Funding Act of 2014 extended federal surface transportation programs and funding to May 31, 2015.
- 2015 The Fixing America's Surface Transportation Act, or the FAST Act, became law on December 4, 2015.

As can be seen above, the federal government has funded surface transportation programs for more than 100 years. In the last 50 years or so, those federal transportation programs included funding for more than just the interstate system, and included other highways, transit, bicycle/pedestrian projects and more. In addition in the past, critical federal transportation funding legislation was passed by both Democrat-controlled and Republican-controlled Congresses and approved by Presidents from both major political parties. Transportation programs such as Highway and Bridge, Bicycle/Pedestrian, Transit, and others usually received bipartisan support.

## How Should Federal Transportation Funding Be Spent?

Before we consider how this federal transportation funding should be spent in the future, we need to examine how this funding has been spent in our region in the past. To do this, we can look at the funding programmed in the last 5 Transportation Improvement Programs (TIPs).

The TIP table below shows funding for all federal-aid projects in the 5-year period in addition to funding in 1 previous committed year. The following tables and their corresponding pie charts include all the funding in all 6 years for the 2007-2012, 2010-2015, 2013-2018, 2016-2021, and the 2019-2024 TIPs. The Transportation Categories are defined below:

"Congestion Relief" includes projects which increase bridge, road, and intersection capacity by adding lanes, reconfiguring geometry, replacing traffic signals, etc.

"Bridge and Pavement Repairs" includes both bridge and pavement repairs and bridge and pavement replacements.

"Supplemental Actions" includes stand-alone bicycle and pedestrian accommodations, safety improvements, and goods movement actions, beyond those improvements incorporated into other

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projects.

“Intermodal” includes projects which deal with several modes of transportation such as Albany International Airport, Port of Albany and Rensselaer, Amtrak Stations, and freight intermodal facilities.

“Transit” includes bus rapid transit, bus replacements, transit signal projects, transit stop and bus shelter construction, commuter bus projects, human services transportation, etc.

“Demand Management” includes HOV (high occupancy vehicle) and HOT (high occupancy toll) lanes, ramp metering, 511 and commuter information services, carpooling, vanpooling, carshare, bikeshare, etc.

“Community/Economic Development” includes projects which improve community and economic development such as certain road relocations, service road construction, road diets, town and hamlet center development, road by-passes, etc.

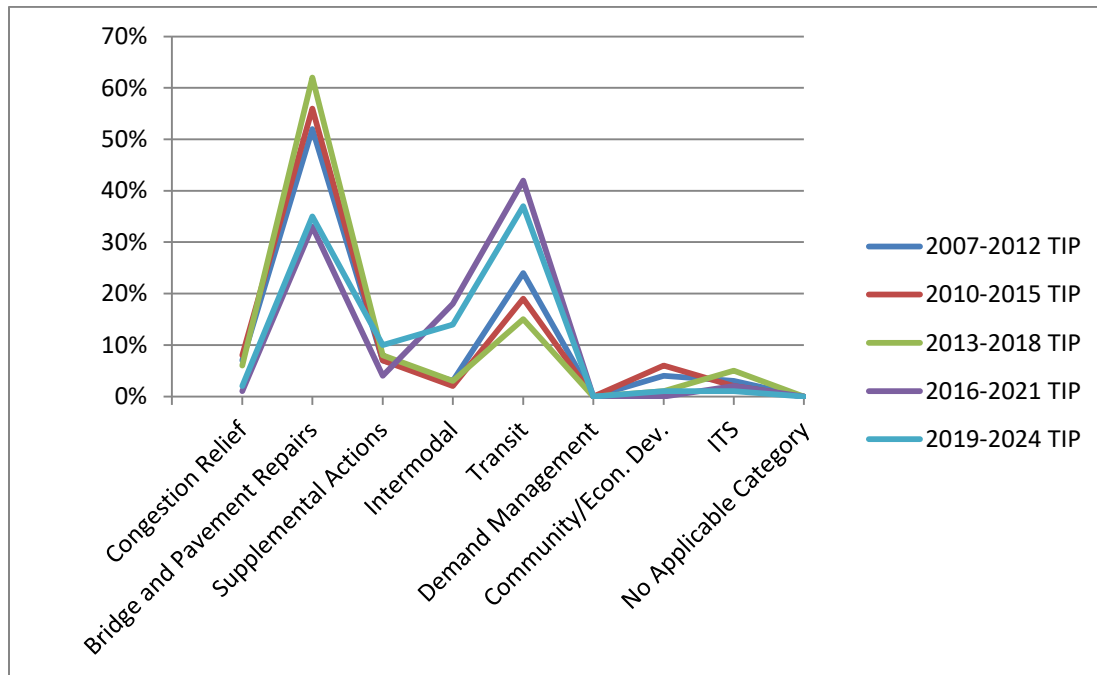
“ITS” includes the application and construction of intelligent transportation systems such as variable message electronic signs, detection and travel time monitoring, close circuit television, adaptive traffic signal control, speed harmonization equipment, traffic center improvements, etc.

Transportation Category	2007-2012 TIP		2010-2015 TIP		2013-2018 TIP		2016-2021 TIP		2019-2024 TIP		Average Percent
Congestion Relief	7%	\$105	8%	\$122	6%	\$52	1%	\$10.20	2%	\$22.20	4.8%
Bridge and Pavement Repairs	52%	\$743	56%	\$909	62%	\$508	33%	\$342	35%	\$408	47.6%
Supplemental Actions	7%	\$100	7%	\$105	8%	\$63	4%	\$36	10%	\$118.8	7.0%
Intermodal	3%	\$36	2%	\$39	3%	\$26	18%	\$186	14%	\$168	8.1%
Transit	24%	\$338	19%	\$308	15%	\$125	42%	\$432	37%	\$432	27.3%
Demand Management	0%	\$3	0%	\$2	0%	\$3.7	0%	\$3	0%	\$3.6	0.3%
Community/Econ. Dev.	4%	\$55	6%	\$98	1%	\$5.3	0%	\$2.4	1%	\$6.6	2.3%
ITS	3%	\$38	2%	\$39	5%	\$40	2%	\$16.8	1%	\$16.8	2.6%
No Applicable Category	0%	\$2.20	0%	\$0	0%	\$0	0%	\$0	0%	\$0	0.0%
Total		\$1,421		\$1,621		\$823		\$1,028		\$1,176	

The below graph shows the percent of total funding for each program and each TIP.



### TIP FUNDING BY PROGRAM BY PERCENTAGE



Examining the above funding data from the last 5 TIPs, we can draw the following conclusions:

- The average percent of total funding for “Bridge and Pavement Repairs” is 47.6% and is significantly higher than the percent for any other transportation category.
- For “Bridge and Pavement Repairs” the actual spending in dollars decreased from the 2013-2018 TIP to the 2019-2024 TIP. Some of this can be explained by the American Recovery and Reinvestment Act of 2009 (ARRA) funding in the previous 2 TIPs and by the shift from “Beyond Preservation” to only “Preservation” projects.

**Conclusion:** Bridge and Pavement Repairs remain a very high priority. Despite this high priority and the increasing needs as our bridges and roads continue to age, the funding amounts have decreased. See the Infrastructure White Paper for a more detailed analysis.

- The average percent of total funding for “Transit” is 27.3%, the 2<sup>nd</sup> highest, and the trend for this percentage of this spending is increasing.
- The “Transit” spending in dollars is also increasing.
- There are several explanations for this. First, the 2007-2012 TIP and the 2010-2015 TIP data is missing the transit operations funding because those numbers were not available at that time; second, transit operation funding has been increasing; and third, CDTA recently received a very large grant for their River Corridor BRT project.

**Conclusion:** Along with Bridge and Pavement, Transit has always been a high priority for CDTC members.

## CDTC Quality Region Task Force White Paper

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- The percent of total funding for “Intermodal” has increased slightly. This reflects the increase in funding for rail stations, airport projects, and even a few port projects, and the new dedicated freight funding which became available in the FAST Act.
- The trends for the percentages of the funding for the “Supplemental Actions” (stand-alone bicycle and pedestrian accommodations, safety improvements, and goods movement actions) and the “Demand Management” categories have been relatively stable and have remained relatively unchanged in all 5 TIPs, with the exception of the significant decrease in funding percentage for the “Supplemental Actions” category in the 2016-2021 TIP.
- Unfortunately the funding and the percentage of funding for the “Congestion Relief”, “Community/Economic Development”, and the “ITS” categories have decreased since the 2007-2012 TIP.

**Conclusion:** For all 5 TIPs in the above table, “Supplemental Action” projects have been consistently supported by CDTC members, while “Congestion Relief” projects, which increase traffic capacity, have not been supported. Over the same time period, very little funding has been programmed for “Demand Management”, “Community/Economic Development”, and “ITS” projects.

- The total spending for the 5 TIPs has been relatively stable with the exception of the 2013-2018 TIP.

**Conclusion:** While the total TIP funding has remained relatively stable, the needs have increased. Transportation infrastructure is aging and needs additional funding just to preserve and maintain the current system. Replacing transportation technology is cost effective but usually very expensive. And the public wants more transportation choices, not less. See the discussion below and the Infrastructure White Paper for more information.

That summarizes our past transportation spending, but what about the future. This is an opportunity for us to look to public input for some guidance.








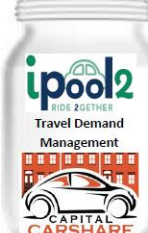
It is appropriate, necessary, and required that CDTC obtain public input regarding the development of our New Visions Plan. We do this by conducting public meetings and workshops, surveys, targeted and focused group meetings; by utilizing social media and the internet; by developing flyers, brochures, and videos, etc.

In order to obtain public input into the question, “How Should Federal Transportation Funding Be Spent?” in 2015 during the last New Visions update we developed the below funding poll. The poll is meant to be completed at all meetings scheduled by CDTC including our Policy and Planning Committee meetings; our advisory committee meetings such as our Bicycle/Pedestrian Advisory Committee, and Freight Advisory Committee; our project public meetings such as the I-787 Livable Corridor Study meetings; our Linkage Study public meetings; our New Visions meetings, etc.

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### **NEW VISIONS** *(Regional Transportation Plan)*



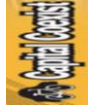













**Federal Transportation Funding Priorities-**  
**If you had \$100.00 how would you spend it on transportation?**

 \$ <input type="text"/>	 \$ <input type="text"/>	 \$ <input type="text"/>	 \$ <input type="text"/>	 \$ <input type="text"/>
 \$ <input type="text"/>	 \$ <input type="text"/>	 \$ <input type="text"/>	= <div>TOTAL \$ 100.00</div>	

Meeting attendees were given the poll, the funding categories were briefly explained, and attendees were asked to fill in the funding amounts so that the total added up to \$100.00. In many ways the poll was analogous to the funding decisions made by transportation planners at all MPOs (more than 400 MPOs in the U.S.) in their TIPS and in their long range plan updates. That is, “Given limited, finite federal transportation funding and many worthy and effective transportation programs, how should the funding be spent?” The poll results were collected at the meeting from the meeting attendees, and staff calculated the percent of funding for each transportation program.

The 2015 poll results from these meetings are shown below.

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<b>NEW VISIONS (Regional Transportation Plan)</b> <b>Federal Transportation Funding Priorities-</b> <b>If you had \$100.00 how would you spend it on transportation?</b>									
<b>Mode of Transportation</b>	<b>CDRPC Workshop 5/1/14 % dollars</b>	<b>CDTC Policy Board 6/5/14 % dollars</b>	<b>Freight Advisory 7/6/14 % dollars</b>	<b>CDTC Planning Committee 8/6/14 % dollars</b>	<b>Saratoga Traffic Study 9/10/14 % dollars</b>	<b>Albany Torch Club 10/6/14 % dollars</b>	<b>Bicycle &amp; Pedestrian Task Force 11/25/14 % dollars</b>	<b>AVERAGE OF ALL SURVEYS</b>	
  <b>Alternative Fuel Technology</b>	8%	6%	10%	7%	10%	10%	6%	8.2%	
  <b>Bicycle &amp; Pedestrian</b>	12%	12%	6%	12%	8%	11%	21%	11.7%	
  <b>Freight</b>	9%	10%	27%	8%	11%	12%	8%	12.4%	
  <b>Intelligent Transportation Systems</b>	10%	7%	7%	7%	14%	11%	8%	9.1%	
  <b>Road &amp; Bridge Repair</b>	38%	38%	30%	42%	33%	25%	24%	32.9%	
  <b>Transit - Buses</b>	9%	15%	9%	15%	7%	15%	19%	12.7%	
  <b>Transit - Light Rail</b>	10%	8%	9%	5%	10%	10%	7%	8.4%	
  <b>Travel Demand Management</b>	4%	4%	2%	4%	5%	6%	7%	4.6%	

## CDTC Quality Region Task Force White Paper

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A comparison of “How we have spent federal transportation funding” from our TIP analysis and “How we should spend federal transportation funding in the future” from the analysis of the poll results is found in the table below.

Transportation Category	TIP Average Percent	Ballot Average Percent
Alternative Fuel Technology		8.2%
Congestion Relief	4.8%	
Bridge and Pavement Repairs	47.6%	32.9%
Supplemental Actions/Bike & Pedestrian	7.0%	11.7%
Intermodal/Freight	8.1%	12.4%
Transit	27.3%	21.1%
Demand Management	0.3%	4.6%
Community/Econ. Dev.	2.3%	
ITS	2.6%	9.1%
No Applicable Category	0.0%	
Total	100%	100%

Though the categories do not match perfectly, once again we can draw a few conclusions.

- The public completing the funding poll would prefer a more balanced program. Instead of spending a majority of the funding on bridge and pavement repairs, the funding is spread out among the 8 programs in the poll relatively fairly.
- Bridge and pavement repairs and Transit are still the programs receiving the most and second-most funding.
- Significantly more funding is recommended in the poll for Bicycle & Pedestrian (Supplemental Actions), Freight, Demand Management, and ITS (intelligent transportation systems) projects than is spent in the previous TIPs.
- The public thought a good portion of the transportation funding should be spent on alternative fuel technology/vehicles.

Knowing that fewer young people are obtaining their vehicle driving licenses and that young people want more public transit, that vehicle miles traveled in our area is decreasing slightly, that people from young professionals to retirees are moving back into our cities, that the demand for freight is increasing significantly and will continue to increase, and knowing that most people want transportation choices like transit and bicycle/pedestrian facilities, the preferences expressed in our ballot exercises are very reasonable.

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During the last New Visions update in 2015 we did receive many constructive comments on how we could improve our poll. Based on those comments, we did change a few of the categories, and tried to better explain what all the categories represented. Following are some of those changes:

- Alternate Fuel Technology was changed to Electric Vehicle Infrastructure.
- The 2 different Transit categories (Buses and Light Rail) were combined into one category.
- A Safety category was added.
- On our online version, the poll keeps tracks the spending and automatically adds up the funding; additional explanations for each category are available, and comments can be included.

The new poll is found on our website, and will be used at meetings at and outside of CDTC during the New Visions 2050 update process. The following is a copy:









### Regional Transportation Funding Priorities Poll

CDTC is the Metropolitan Planning Organization for the Capital Region, which means we're tasked with determining how federal transportation funding is spent in Albany, Rensselaer, Saratoga and Schenectady counties. One of our major products is the long range transportation plan, which we refer to as *New Visions*. This plan is currently being updated and we're seeking input and feedback from anyone that lives, works, and/or plays here in the Capital Region and relies on the transportation system.

**We're asking you to spend \$100 to improve the transportation system.** Based on the categories of projects below, how would you spend \$100? Divide your money among all the categories, choose a few categories, or invest it all in one, as long as you're using round numbers there are no wrong answers.

For more information about each topic, click the information icon at the right corner of the topic heading. If you would like to add a comment or elaborate on why you are spending your money on a certain topic area, select the Add/Edit Comment box under each topic. Comments are not required and can be edited. You must spend all \$100 before you can submit your final answers.

#### Enter your Allocations

<b>Electric Vehicle Chargers</b>  \$ 0 <a href="#">Add/Edit Comment</a>	<b>Bicycle &amp; Pedestrian Facilities</b>  \$ 0 <a href="#">Add/Edit Comment</a>	<b>Freight and the Movement of Goods</b>  \$ 0 <a href="#">Add/Edit Comment</a>	<b>Technology to Decrease Congestion</b>  \$ 0 <a href="#">Add/Edit Comment</a>
<b>Road &amp; Bridge Repairs</b>  \$ 0 <a href="#">Add/Edit Comment</a>	<b>Public Transit</b>  \$ 0 <a href="#">Add/Edit Comment</a>	<b>Safety</b>  \$ 0 <a href="#">Add/Edit Comment</a>	<b>Programs to Reduce Driving</b>  \$ 0 <a href="#">Add/Edit Comment</a>

#### My Funding Priorities

Total \$0

You have \$100 left to allocate

[Submit](#)



CDTC recommends that these ballot funding preferences be used to guide New Visions funding preferences, and preferences in our TIP and our other planning documents, and that future regional transportation funding be programmed, as close as reasonably possible, in the portions or percentages found in the latest funding poll results.

## CDTC Funding Needs

CDTC follows a funding, programming, and spending process in the development of our Transportation Improvement Program (TIP) that is similar, if not identical, to the process followed by other MPOs in New York State. That process begins with the development of “planning targets” by the NYS Department of Transportation (NYSDOT) and the MPOs, and results in the amount of federal funding distributed by the Federal Highway Administration (FHWA) to the NYSDOT, and then the amount of federal funding distributed by the NYSDOT to the MPOs. This amount is always broken down into the many different federal fund sources, each with their own spending eligibility rules.

The regional NYSDOT offices and the MPOs then use the planning targets to program project funding in the 5-year TIP. Sponsors of projects programmed on the TIP decide when and how to finance their projects (TIP funds are not grants, and sponsors are reimbursed for their actual expenses.). When sponsors have completed an approved federal-aid design process, the project funding is then obligated to that project by the FHWA, and the sponsor can begin project construction. During the preliminary design, right-of-way, final design, construction inspection, and construction phases of the project, funding changes are sometimes made to include more or less funding to each phase. The final project cost is never exactly the same as the funds originally obligated to the project.

In order to develop estimates for federal funding needed in the future, we need to fully examine the past funding at all 3 stages of the federal-aid process, i.e. planning targets, TIP programmed funding, and obligated funding.

Because TIP programmed funding is 6-year funding (actually 5 current years with new projects and 1 previous years with committed projects) and because planning targets and obligated funding are annual funding, we will examine the TIP programmed funding first. Below are the levels of TIP funding programmed in our last 8 TIPs. In the first 3 TIPs listed, the level of programmed funding (mostly federal funding with very small amounts of state funding) was generally consistent, in the \$810 – \$868 million range, and averaged \$841.13 million per year.

In the next 2 TIPs (the 2007-2012 and 2010-2015 TIPs) the levels of programmed funding are anomalies (exceptions or outliers). These 2 TIPs were significantly higher than the other TIPs because they included the following:

- A backlog of old TIP projects carried forward from older TIPs
- An over-programming of new TIP projects without funding commitments in the future years of these TIPs
- Projects funded with stimulus funding from the American Recovery and Reinvestment Act of 2009 (ARRA) and the New York Works Program in 2012
- Very large projects such as the Patroon Island Bridge repair and the regional Passenger Rail projects

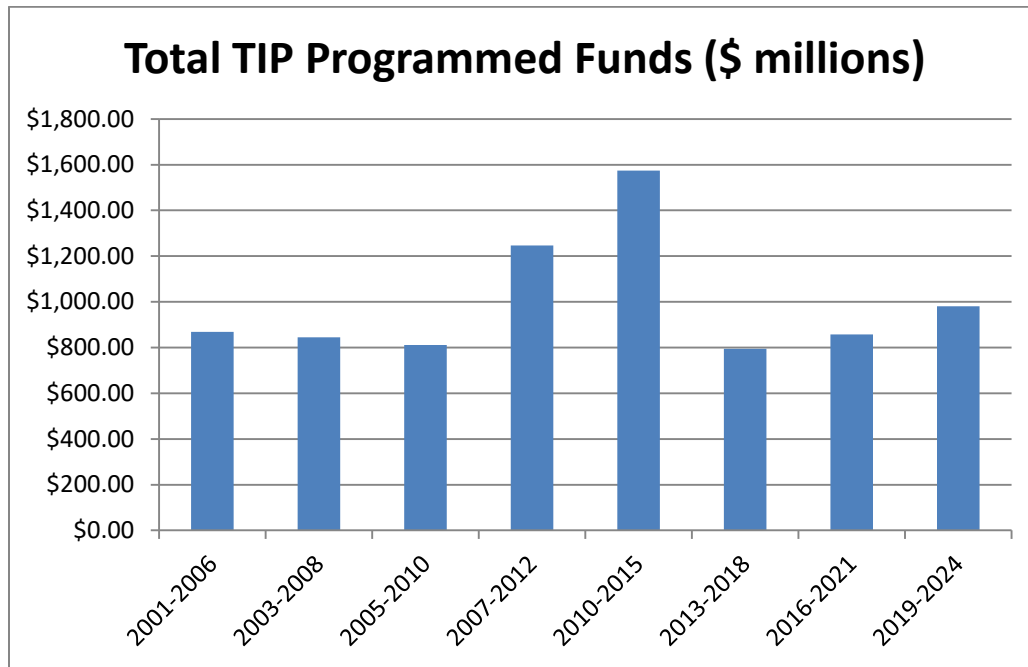
## CDTC Quality Region Task Force White Paper

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These 2 TIPs (the 2007-2012 and 2010-2015 TIPs) actually defy previous funding trends. In the past a strong national economy would result in more transportation spending, and a poor national economy would result in less transportation spending. During these 2 TIP years our Country was experiencing the “Great Recession”, the national economy was very poor, and we would normally receive less spending. However in 2009 and 2012, our national and state leaders decided to increase transportation spending in order to stimulate or boost our economy.

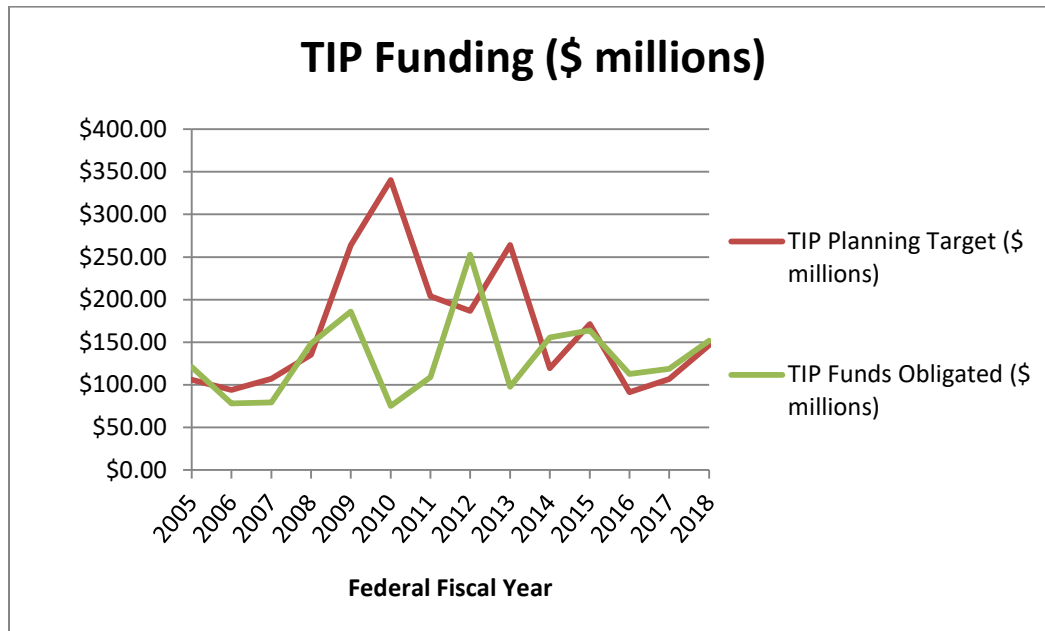
In the current TIP (2013-2018) the level of funding is lower because the federal transportation funding did not keep pace with the needs and because of the lower State planning targets allocated to MPOs. This lower trend continues in the next 2016-2021 TIP, but increases slightly in the next 2019-2024 TIP because of increases in funding from the Fixing America’s Surface Transportation Act, or FAST Act in 2016.

TIP	Total TIP Programmed Funds (\$ millions)
2001-2006	\$868.19
2003-2008	\$844.61
2005-2010	\$810.59
2007-2012	\$1,246.00
2010-2015	\$1,574.00
2013-2018	\$795.00
2016-2021	\$857.00
2019-2024	\$980.00



These significant changes in TIP programmed funding levels make it more difficult to forecast the future funding need. Therefore we will continue our examination of funding levels by reviewing the past planning targets, obligated funds and expended funds. Below are the annual funding levels for those funds, and one chart showing those 3 levels of funding for the past 10 years.

Federal Fiscal Year	TIP Planning Target (\$ millions)	TIP Funds Obligated (\$ millions)
2005	\$106.15	\$121.02
2006	\$93.95	\$78.23
2007	\$106.93	\$79.19
2008	\$135.32	\$148.39
2009	\$263.83	\$186.00
2010	\$340.43	\$75.14
2011	\$204.17	\$109.11
2012	\$186.58	\$252.67
2013	\$264.17	\$97.76
2014	\$119.54	\$155.42
2015	\$171.34	\$163.91
2016	\$91.38	\$112.75
2017	\$106.69	\$118.64
2018	\$146.62	\$151.66



In the above chart, 2 dominant peaks occur in 2010 (red line) and 2012 (green line). Once again we see the effects of the projects funded with stimulus funding from the American Recovery and Reinvestment Act of 2009 (ARRA) and the New York Works Program in 2012. In the case of the stimulus funding there is a 2 year lag between the planning target peak and the expended funding peak, because it took project sponsors that long to obligate and spend their funding. There is no lag or delay in obligating or spending New York Works Program funds because this program consisted mostly of State funding and required that the funds be expended within one year.

We see a 2<sup>nd</sup> peak in the planning target (red line) for 2013 and a sharp decline in 2014. Since these funds are predominantly federal funds, we should see a following delayed peak in obligated and expended funds 2 years later in 2015, and a sharp decline after that.

If we do not consider the 2 dominant peaks in 2010 and 2012, we see an average annual funding of approximately \$150 million for planning targets, obligated funds, and expended funds. Because of this and other trends, we believe that in the short term (5-10 years) that funding will be about \$100-150 million per year. However, these funding trends and lack of any strong correlations do not allow us to forecast funding trends for the long term (10-15 years).

At this point in our examination of past funding, we need to delve down deeper into the numbers to be sure to remove any irrelevant funding and to include all relevant funding. For more information and discussion on future funding levels, see the Financial Plan and Infrastructure White Papers.

In the meantime, we will examine previous estimates of our region's funding deficit (i.e. total funding need – actual funding). In 2004 CDTC's 2030 New Visions Plan determined that the level of funding fell short of the levels needed to meet basic infrastructure requirements by nearly \$200 million annually. This included all transportation funds sources in the CDTC area including local, state, and federal funds.

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If we assumed a “steady state”, i.e. that the past 10 years of TIP funding has been sufficient to maintain the current bridge and pavement conditions (and there is evidence for the opposite); and knowing that the 2013-2018 TIP funding was more than \$46 million below the average funding in the first 3 TIP periods, and that annual inflation was approximately 2% in the previous 10 years, then we can calculate an updated estimate of the funding deficit or shortfall of approximately \$250 million annually.

In this day and age where every special interest group is requesting more public funding, it is truly difficult to determine which requests are legitimate. Every time a public agency or government develops a new budget, they deal with the same issues – which funding requests are really needed. One fact we think is certain – compared to other developed countries, the United States for many years has spent less than many on infrastructure (as a percentage of gross domestic product).

According to the Congressional Budget Office:

“Almost all spending on transportation, drinking water, and wastewater infrastructure is done by the public sector. Federal, state, and local governments **spent \$416 billion** on it in 2014. That amount equaled about 2.4 percent of gross domestic product, a percentage that has been fairly stable for roughly 30 years. The largest amount of public infrastructure spending in 2014 went to highways (\$165 billion), followed by water utilities and mass transit and rail.”

### **Annual average infrastructure expenditures as percent of GNP worldwide from 2010 to 2015, by country**

Country	Percentage
China	8.3
India	5.6
Saudi Arabia	5.1
South Africa	4.7
Australia	4.4
Russia	4.0
Turkey	3.7
Canada	3.4
Indonesia	3.4
Japan	3.2
Mexico	2.5
United States	2.3
Brazil	2.3
Italy	2.3

According to Statista.com & McKinsey.com

We need to spend more on transportation infrastructure and we need to find a new reliable source of funding to replace the federal gasoline tax, whose total amount has been decreasing for years and whose rate has not been increased since 1993.

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	15 MPG	30 MPG	45 MPG	Electric/CNG
	Truck or Van	Average Car	High Mileage Car	New Car
Miles/Year	15,000	15,000	15,000	15,000
Gallons of Gas	1,000	500	333	0
Fed. Gas Tax	18.4¢	18.4¢	18.4¢	18.4¢
Gas Tax/Year	\$184	\$92	\$61	\$0









### Big Idea/Big Ticket Initiatives

CDTC first examined “Big Ideas/Big Initiatives” in July 2006 during the development of the New Visions 2030 Plan. A working group was formed to review 16 big initiatives in other metro areas as case studies to determine what they had in common. See the table below for a list of these 16 “Big Ticket Initiatives.”











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### Maximum Twenty-Year Scale of Hypothetical "Big Initiatives" In the Capital District (Implementation between 2010 and 2030)

	Hypothetical "Big Initiative"	Approximate Maximum Twenty-year scale in the Capital District	Twenty-year cost estimate	Comments
	Regional greenway program	10 miles per year; 280 total including existing	\$150 M	Scale reference is Seattle's plan for 800 miles of paths. Cost at approximately \$500 K/mile based on local experience.
	Riverfront access and urban development program	Implementation of a majority of existing plans	\$1,000 M	Could draw from multiple fund sources, not just transportation. If significant Interstate redesign is included, could approach \$3 B - \$4 B based on Boston's Central Artery precedent.
	Street Reconstruction and Reconfiguration	40 lane miles per year; 800 total	\$2,400 M	New Visions intended to address 25 lane miles per year; this is 50% more aggressive. Cost at approximately \$3 M per lane mile.
	Roadway widening and connections program	10-15 lane miles per year; 200 total	\$1,000 M	Scale comparable to double the intended ten-year implementation in New Visions 2021 plan. Mix of modest (\$2.5 M per lane mile) and costly (\$7 M per lane mile) projects.
	Major highway system construction	Approx. 20-25 arterial and 5-10 lane miles of expressway annual	\$3,000 M to \$5,000 M	Not consistent with community values or public policy (such as the State Energy Plan, State Transportation Plan and the New Visions Plan).
	Suburban town center development	5-10 lane miles per year; 150 total	\$175 M	Cost at approx. \$1 M+ per lane mile as mix of access and collector roads. Developer-built or financed connections not included in the total.
	Bus service expansion, BRT program with transit oriented development	100 route miles total including NY 5	\$200 M capital \$400 M add'l oper.	Scale and cost estimated at 5-10 times that for NY 5 BRT.
	Guideway transit system with transit-oriented development	50 route miles guideway with 50 route miles of non-guideway BRT.	\$2,100 M capital \$1,450 M add'l oper.	Scale comparable to planned expansion in Portland over 20 years; capital cost of \$40 M/mile derived from Portland, Phoenix, and Columbus plans. Operating cost estimated at \$1.25 M/year per linear mile. Includes ½ of BRT non-guideway plan also.

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	Hypothetical "Big Initiative"	Approximate Maximum Twenty-year scale in the Capital District	Twenty-year cost estimate	Comments
	Managed lane program	50 route miles total with approx. 75 lane miles	\$750 M \$10 M operating	Scale at one or two lanes per center-line mile where physically feasible in Interstate system in Albany County, extensions north, east, west. Cost at \$10 M per lane mile.
	Take-a-lane program	No feasible implementation for contra-flow lanes. Tolling existing toll-free facilities in theory could reach 100 route miles	more than supported with toll revenue-	Not supported by traffic dynamics; no excess capacity in off-peak to yield a lane. Tolling existing toll-free facilities not yet politically plausible.
	Highway noise program	40 locations on expressway system	\$40 M	Scale addresses all existing warrants; noise mitigation costs for widenings are included in guideway and managed lane budgets above.
	Demand management program	40,000 participants	\$50 M (public)	Scale at 10% of regional workforce; Cost estimated at \$20/month for ¼ of participants, self-financed by employers for remaining participants. \$20/month is derived from CDTC experience.
	Clean, efficient vehicle program	public transit fleets, private vehicle incentive to double hybrid sales (2010), declining incentive to 2030	\$550 M	Scale at 30% purchase price incentive in 2010 to double hybrid sales to 2,800; incentive declines as hybrid market expands. Estimated \$100,000 price increase for 300 transit vehicles of varied sizes.
	Intelligent traffic management program	Full ITS deployment on priority network; including real-time traffic info on entire system	\$135 M	Working Group B estimates as continuation of current \$6.7 M/yr; purchases more as costs decrease. Cost does not include rapidly-expanding private investment (vehicles, services)
	Video surveillance and enforcement program	Full deployment on priority ITS network	Supported by fines	Red light running cameras and possibly, speed enforcement cameras
	Comprehensive Traffic Safety program	Capital investment at several times the set aside in SAFETEA-LU, plus other features	\$200 M	Capital improvements, driver education, traffic enforcement, improved community and site design.

Since 2006 and the New Visions 2030 Plan, during every plan update, these "Big Ticket Initiatives" have been examined and evaluated to determine their relevancy, i.e. whether they should continue as initiatives, be modified, or be deleted. New initiatives are also examined to determine if they meet the following criteria to be included in the plan.

The review of the 17 big initiatives resulted in the following conclusions regarding the pre-requisites for the implementation of these initiatives:

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- A sense of urgency is typically present.
- The initiative reflects the sensibilities and community values of the region, producing a strong community consensus.
- A champion is typically a critical element as catalyst and sustainer of the initiative.
- Commitment to a major initiative is as much related to a subjective rationale as to objective analysis.
- Funding is achieved through a combination of local sources and state or federal funds – reflecting a willingness to pay.
- In the absence of the conditions to support big initiatives, it is difficult to attain comparable impact through incremental changes.

There are 3 reasons why initiatives are removed from this list. They can be removed if:

1. Good progress has been made such that the concept has transformed from an initiative to an actual CDTC program. The initiative is integrated into all levels of CDTC's planning efforts.
2. The region (municipalities or transportation users) no longer expresses interest in or support the initiative.
3. The initiative is determined to be not feasible in a statewide or regional study, not supported by current or forecasted population growth, or not supported by current or forecasted funding.

For a more detailed history of the Big Ticket Initiatives, please see previous versions of our New Visions plans.

The following 7 big ticket initiatives were included in the 2040 New Visions Plan:

- Regional Greenway Program
- Riverfront Access and Urban Development Program
- Street Reconstruction and Reconfiguration
- Suburban Town Center Development
- Guideway Transit System with Transit-Oriented Development
- Integrated Corridor Management Program
- Demand Management Program

Since the 2040 New Visions Plan development several changes have occurred which effect these big ticket initiatives. They include:

Regional Greenway Program – In the last 5 years much progress has been made. The Albany County Rail Trail has been opened as a walking trail, and the City of Albany is building a connection between Rail Trail and the Hudson Mohawk Bike Trail. In Saratoga County the County has extended the Zim Smith Trail and is planning another extension to the City of Mechanicville. Saratoga Springs has built sections of their Greenbelt Trail. The Empire State Trail is under construction, and many more. For a complete list of this progress and future goals, see the Bike and Pedestrian White Paper in this plan and the 2018 Capital District Trails Plan with its goal of 200 more miles of trails in the next 20-30 years.

Unfortunately despite this progress, bicycle/pedestrian infrastructure funding has not kept up with demand. There is still considerable regional interest in this initiative which is demonstrated by the many applications submitted for state, regional, and federal grant funding programs.

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**Riverfront Access and Urban Development Program** – In August 2012 CDTC, in partnership with NYSDOT and the City of Albany, was awarded a Transportation, Community, and System Preservation (TCSP) Program grant of \$240,000 for the I-787 Livable Corridor Planning Initiative. This integrated transportation and land use planning effort included the I-787 corridor of the City of Albany, the City of Watervliet, the Village of Menands and the Town of Colonie (from Exit 2 to Exit 9), including its related structures and access roads. It will identify future design concepts for I-787 that support downtown economic development efforts, brownfield redevelopment and improve walking, biking and transit access to the waterfront. The study funding includes state and local matched funds and staff hours bringing the total study effort to approximately \$440,000. The study was completed in 2019. Regional interest remains high for this initiative.

**Street Reconstruction and Reconfiguration** – Since the 2035 New Visions Plan the NYS DOT and local governments have pursued a “preservation first” asset management strategy, sometimes referred to as “maintaining a state of good repair.” One of the primary reasons for this strategy has been the growing infrastructure funding needs, the flat federal transportation funding, and the resulting funding deficit. Since this new strategy, there has been very limited funding for infrastructure reconstruction or new infrastructure, and as a result little progress made toward this big ticket initiative. However regional interest and infrastructure needs still exist which support this strategy.

**Suburban Town Center Development** – Since 2010 and the development of the 2035 New Visions Plan there has been significant regional interest in this initiative. Since then 6 Town or Hamlet center linkage studies have been completed in Towns of Bethlehem, Clifton Park, Malta, New Scotland, Sand Lake, and Schodack. However the funding has not kept up with the demand and more funding is needed to implement more town center study recommendations.

**Guideway Transit System with Transit Oriented Development** – CDTC staff continues to study this option and hopes to receive important input from regional transportation users during our current New Visions public outreach efforts. So far in recent New Visions funding surveys completed at public meetings, light rail transit continues to receive significant support. These surveys show that transportation users believe that approximately 9% of our region’s federal funding should be spent on light rail. At some point in the future (say 5-10 years), we believe it will be time to conduct a more detailed feasibility study.

More and more transportation and transit professionals believe that there is an evolution in transit services from lower level services to higher level services. That is, fixed route bus service evolves into bus rapid transit (BRT) services, and that bus rapid transit service evolves into light rail service. If this is true, we should wait until our existing BRT lines develop the ridership needed to support light rail. At the same time, we should also keep in mind one of the findings (above) found in our first examination of big idea/big ticket initiatives in 2006 that “Commitment to a major initiative is as much related to a subjective rationale as to objective analysis.”

If the need for a light rail system develops, because of the very high costs, most systems are constructed in phases over many years. One suggested phasing would be to connect our intermodal transportation centers first (i.e. our Airport to our Rail Center), then to connect the Cities of Schenectady and Troy, then to connect the City of Saratoga Springs, and finally to

## CDTC Quality Region Task Force White Paper

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connect other suburbs. These options are discussed in much greater detail in the Transit Task Force White Paper.

Integrated Corridor Management – a broader, phased, integrated corridor approach, which was explored in the 2014 I-87 Corridor Study, can and should be supported. Acknowledging the existing peak hour congestion on I-87 between Albany and Saratoga Counties southbound in the morning and northbound in the evening, this integrated corridor approach would be part of an incremental approach to addressing this congestion, which would involve the entire I-87/Route 9 corridor and include:

- Freeway and Arterial Management Systems such as adaptive traffic signal control on Route 9, variable speed limits on I-87, and possibly in the future managed lanes
- Better traveler information and other travel demand management strategies such as carpooling and vanpooling
- Improving the existing Northway Express service, and possibly in the future bus rapid transit (BRT) or a fixed guideway transit (or light rail) service.

Demand Management Program – CDTC has implemented several travel demand management (TDM) strategies, including carpooling (ipool2), vanpooling, carsharing, commuter buses, park & ride lots, and guaranteed ride homes. We have also examined other shared mobility services like bikeshare, and will continue to develop this option. That said TDM strategies are cost effective ways to reduce the number vehicles on our roads and decrease congestion, and community interest in them continues to increase. CDTC will continue to develop and encourage the use of these strategies.

Based on the above examination, we recommend that the Guideway Transit System with Transit-Oriented Development initiative be removed from the list of big ticket initiatives. See the Transit White Paper for more analysis of this initiative. We also recommend that Financial Incentives to Reduce Greenhouse Gases, Ridesharing System for All Users, Regional Electric Vehicle Charging System, and Enhanced BRT initiatives be added to the list, with the following descriptions:

Financial Incentives to Reduce Greenhouse Gases – This initiative increases the transportation costs for those vehicles using gasoline and on-road diesel fuel. This could result from instituting several incentive options, including a carbon tax, a VMT tax or fee structures to encourage ridesharing in Mobility as a Service (MaaS), as well as local fees from curb pricing and/or congestion pricing. Currently States in the Northeast U.S. including New York are considering a “cap and invest” strategy in which fuel suppliers are charged allowances and these allowances are capped. The funds generated are used to encourage the use of alternative fuel vehicles using electricity, hydrogen, fuel cells, etc.

The Transportation & Climate Initiative (TCI) Regional Proposal for Clean Transportation draft policy framework recommends a regional “cap and invest” program in cooperation with 12 Northeast U.S. States and the District of Columbia. The Memorandum of Understanding is expected to be approved by the region in spring 2020. The New York State Climate Leadership and Community Protection Act was passed in 2019 and would complement any regional efforts coordinated by TCI. This ambitious policy pledges to eliminate net greenhouse gas emissions by 2050 with all electricity coming from carbon-free sources. Implementation of the policy will be crafted by a council of state officials, and likely include a series of financial incentives to shift away from petroleum fuels and single occupancy vehicle travel.

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**Ridesharing System for All Users** – This initiative assumes that automated vehicles will be well integrated into the land use and transportation system with pricing and policy structures that encourage ridesharing and transit use. Empty self-driving cars on the road will be minimal because riders will share and use the same vehicles. Vehicle miles traveled (VMT) will be less than trend, because financial incentives will make it more expensive to drive. People will buy “miles” and not cars; and all riders, including people who have disabilities or low income, and seniors, will have similar access.

**Regional Electric Vehicle Charging System** – According to most computer models including our own VERPAT model for the CDTC planning area, in order to achieve the greenhouse gas reductions in the New York State plan, there needs to be a complete change-over of the vehicle fleet from gasoline powered vehicles to electric vehicles. In order to accommodate the increase in electric vehicles, a more robust charging system, which includes on-street charging, must be built. See the Environment and Technology White Paper in this plan for more information.

**Enhanced BRT** – Continue to support CDTA with federal funds to complete the construction of the Washington/Western and River Corridor BRT projects. Continue to support CDTA’s application for FTA Small Starts funding. As these projects are implemented, work with CDTA upgrade what is now basic BRT to a more enhanced BRT system that potentially incorporates off-board fare collection, additional articulated buses, additional queue-jumpers and stations with level boarding and an increased service frequency.

Finally with the above changes and descriptions, the New Visions 2050 plan includes the following 10 big ticket initiatives:

- Regional Greenway Program
- Riverfront Access and Urban Development Program
- Street Reconstruction and Reconfiguration
- Suburban Town Center Development
- Integrated Corridor Management Program
- Demand Management Program
- Financial Incentives to Reduce Greenhouse Gases
- Ridesharing System for All Users
- Regional Electric Vehicle Charging System
- Enhanced BRT

## Land Use

Unfortunately without the proper planning, land uses often come into conflict with transportation, and transportation often conflicts with land uses. Just some examples of land uses conflicting with transportation include:

- Residential developments constructed too close to a highway, airport, or marine port
- Large commercial developments constructed adjacent to roads with insufficient traffic capacity
- Town and hamlet centers developing around 5-lane principal arterial highways



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- Small adjacent businesses each with driveway access to the same 5-lane principal arterial highway
- Senior or low-income housing built with little or no transit access or in areas with low environmental quality

Some examples of transportation conflicting with land uses include:

- Truck access routes near or through residential communities
- Freight facilities such as railroads and intermodal centers constructed too close to residential properties
- New access roads or new traffic lanes constructed too near residential properties
- Roads constructed without needed bicycle, pedestrian, and transit facilities
- Bicycle, pedestrian, and transit facilities built without the appropriate connections

Land use/transportation conflicts always impact quality of life for the people living near the conflict. Conflicts can result in excessive noise, excessive traffic, excessive lighting, excessive air emissions, unsafe conditions, increased traffic accidents, increased transportation costs, and more. These impacts can range from slight impacts which are sometimes ignored to significant impacts which can impact a people's daily life.

The best way to limit or eliminate these conflicts is transportation and land use planning. Planning can identify and forecast these conflicts before they occur. It can develop zoning and building guidelines to prevent conflicts. It can develop multi-modal transportation plans, and develop alternative strategies and mitigation measures. Planning, through public outreach efforts, can even help develop a community identity, consensus, and support which can unite a community behind specific solutions. CDTC encourages and provides funding for transportation and land use planning through our Community and Transportation Linkage Planning Program.

CDTC's Community and Transportation Linkage Planning Program (referred to as the Linkage Program) is an integrated land use and transportation planning program created to implement the land use principles in our New Visions Plan. Linkage studies are joint regional-local planning initiatives that represent partnerships with local communities, transportation agencies, and local stakeholders.

The Linkage Program provides financial and technical assistance (from CDTC staff and consultants) to communities undertaking local planning initiatives that integrate land use and transportation. It also assists communities with integrating into local planning the New York State Complete Street and Smart Growth policies, which are consistent with *New Visions* principles.

CDTC has been recognized in four national case studies on incorporating livability into transportation planning and was awarded the 2010 Transportation Planning Excellence Award (TEPA) by FTA/FHWA/APA for our Linkage Program.

The Linkage Program has been used to complete an 89 land use/transportation community planning studies since its inception in 2000. Linkage studies completed or underway include the following:

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### Albany County

Albany Bicycle Master Plan  
Albany Bike Share/Bike Signage Strategy  
Albany Complete Streets Policy Design Manual  
Albany County Commercial Transportation Access Study  
Albany County Albany Shaker Road Corridor Study  
Albany Education District Enhancement Study  
Albany Lawn Avenue Gateway Design Study  
Albany Mansion Neighborhood Parking Study  
Albany North Swan Street Multimodal Accessibility Study (Albany)  
Albany North Waterfront Redevelopment Strategy  
Albany/Menands/Watervliet Broadway Commercial Corridor Development  
Albany Waterfront Connector Feasibility Study  
Albany Patroon Creek/Washington Avenue Corridor Study  
Albany Bicycle and Pedestrian Master Plan Update  
Altamont Bicycle/Pedestrian Master Plan  
Bethlehem Delaware Avenue Hamlet Enhancement Study  
Bethlehem Route 9W Corridor Study  
Bethlehem Delaware Avenue Complete Streets Feasibility Study  
Cohoes Route 470 Corridor Study  
Cohoes Van Schaick Island Transportation and Revitalization Plan  
Colonie Route 5 Corridor Design Guidelines  
Colonie Route 7/Route 2 Corridor Transportation and Land Use Study  
Colonie/Watervliet/Menands Route 32 Linkage Study  
East Berne Hamlet Strategic Plan and Design Standards (Berne)  
Guilderland Fort Hunter/Carman Road Neighborhood Transportation Plan  
Guilderland Hamlet Neighborhood Plan  
Guilderland McKownville Corridor Study  
Guilderland Neighborhood Master Plan for the Guilderland Center Hamlet  
Guilderland Westmere Corridor Study  
Guilderland/Princeton Route 20 Land Use and Transportation Plan  
Guilderland Westmere Corridor Study  
Harriman Campus-University at Albany Transportation Linkage Study (Albany/Guilderland)  
Menands Route 32 Transportation Access and Land Use Improvement Study  
New Scotland Hamlet Area Master Plan  
New Scotland Hamlet Zoning Refinements and Site Design Guidelines  
Railroad Avenue Corridor Study (Albany County/Colonie/Guilderland)  
Patroon Greenway Trail (Albany)  
Pinebush Transportation Study Update (Albany/Guilderland/Colonie)  
Watervliet Bicycle Master Plan

### Rensselaer County

East Greenbush Route 4 Corridor Study  
East Greenbush Route 9 & 20 Corridor Master Plan  
East Greenbush Route 151 Corridor Study

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East Greenbush Site Design Standards  
Hoosick Falls Parking and Pedestrian Study  
Rensselaer County Waterfront Trail  
Rensselaer Route 20 Corridor Study  
Troy Hoosick Street Phase II Corridor Study  
Troy Lansingburgh 112th Street Corridor Study  
Troy Bicycle Connections Plan  
Troy Hoosick Hillside Study  
Sand Lake Hamlets Master Plan  
Schaghticoke Route 40 Corridor Study  
Schodack Town Center Zoning Code Amendments and Site Design Guidelines  
Schodack Town Center Plan

### **Saratoga County**

Ballston/Malta Route 67 Corridor Study  
Charlton Historic Main Street Improvement Plan  
Clifton Park Town Center Plan  
Clifton Park Town Center Strategic Zoning Code Revisions  
Clifton Park/Halfmoon Exit 9 Land Use and Transportation Study  
Clifton Park Town Center Strategic Zoning Code Revisions  
Hadley Hamlet Pedestrian Linkage Study and Main Street Improvement Plan  
Halfmoon Center Master Plan  
Malta Downtown Master Plan Implementation  
Malta Highway Access Guide and Pedestrian Plan (DISTRICT Plan)  
Malta Route 9 Reconfiguration Feasibility Study  
Malta Route 9 North and South Corridor Plan  
Mechanicville Central Avenue Corridor Linkage Study  
Saratoga Springs Bicycle, Pedestrian and Public Transit Master Plan  
Saratoga Springs Downtown Parking Study  
Saratoga Springs Downtown Transportation Plan  
Saratoga Springs Weibel Avenue-Gilbert Road: Lake Avenue Country Gateway  
Stillwater Route 4 Corridor Plan  
Stillwater Route 4 Zoning and Site Design Standards

### **Schenectady County**

Glenville Freemans Bridge Road Master Plan  
Glenville Town Center Master Plan  
Glenville Freemans Bridge Road Complete Streets Concept Plan  
Rotterdam Burdeck Street Corridor Traffic Study  
Rotterdam Five Corners Transportation and Land Use Linkage Study  
Rotterdam NY 7 & NY 146 Land Use and Transportation Study  
Rotterdam Route 7, I-88, Thruway Exit 25A Land Use & Transportation Study  
Rotterdam Thruway Exit 26 & I-890 Land Use and Transportation Study  
Schenectady Central State Street Neighborhood Land Use and Transportation Study  
Schenectady Gateway Plaza Implementation Plan  
Schenectady Nott Terrace Conceptual Plan

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Schenectady Route 5 Transit Gateway Study  
Schenectady State Street Transit Oriented Development Study  
Schenectady Urban Bike Route Master Plan  
Schenectady Urban Bike/Ped Infrastructure Master Plan  
Scotia Waterfront Concept Implementation Plan

A summary of these linkage studies appears below:

Study Type	Albany County	Rensselaer County	Saratoga County	Schenectady County	Total
Corridor	8	8	5	3	24
Transportation/Land Use	8		2	6	16
Bike/Ped	9	3	2	2	16
Town/Hamlet/District Center	4	2	4	1	11
Zoning/Design Guidelines	3	2	3		8
Gateway	1		1	2	4
Parking	1		1		2
Waterfront Redevelopment	1			1	2
Commercial/Multimodal	2				2
Road Diet			1		1
Complete Streets	2			1	3
Total	39	15	19	16	89

As you can see from above, sixty-seven (67) of our 89 linkage studies have been corridor, transportation/land use, bicycle/pedestrian, or town/hamlet/district center studies. More recently CDTC has been emphasizing implementation strategies. This effort has resulted in several studies which have developed zoning and design guidelines which have been adopted by the municipality. Also more recently there has been strong interest from our local communities to explore implementing road diets and developing Complete Streets plans.

To be relevant, we believe that linkage studies need to be implementable and implemented. In the next few months we will complete an analysis of all 89 studies to determine how many of their study recommendations have been implemented. This will allow us to focus study efforts, to make more studies implementable and implemented, and to become even more relevant to our members.

CDTC reviews the Linkage Study Program annually before each study solicitation to ensure that it complies with new requirements and new interests. We will also conduct regular evaluations and community interviews to determine the program relevancy and the study implementation.

### Economic Development

The link between economic development and transportation is strong. Transportation improvements can stimulate economic development by improving access and mobility, decreasing transportation costs, improving safety, etc. For example, the construction of transit stations and stops increases access and mobility to an area, and results in “transit oriented development.” Restaurants and coffee houses move into the area to provide for the transit users’ food needs. Service businesses move to provide dry cleaning, cell phone services, and even bicycle repair shops for bicycle commuters switching to transit and leaving their bikes at the station. Retailers move into the area to provide pharmaceutical needs, gift shopping, groceries, etc. And housing developers build in the area for those who want to walk to transit. Other examples of transportation improvements stimulating economic development include new or improved roads which reduce travel time, improve safety, and improve access by including bike/pedestrian facilities; freight intermodal facilities which improve freight efficiency, and airport improvements which improve accessibility.

On the other hand, economic development also stimulates transportation improvements by increasing the number of workers, customers, and freight moving into or out of an area. This type of economic development usually increases the need for more and better roads and more transit services such as park and ride lots, shuttle services, and commuter buses. Economic growth can also create a need for more airport services such as new gates and larger terminals, and more marine port services such as improved rail service and better truck access.

CDTC has programmed and funded many transportation projects which have promoted local economic development. They include:

- Slingerlands By-Pass, Town of Bethlehem – new road which improved capacity and provided access to the new Vista Technology Park.
- South Troy Industrial Park Road, City of Troy – new road which provides access to reclaimed, developable industrial property on the waterfront.
- Albany Shaker Road/Watervliet Shaker Road Airport Improvements, Town of Colonie – new road alignments which improved access to regional airport and provided clear runway safety zones.
- Western Gateway Transportation Center, City of Schenectady – construction of new passenger rail station with improved access, parking, and amenities.
- Round Lake By-Pass, Town of Malta – new road which provided access to the Luther Forest Technology Campus and access to I-87.
- Fuller Road/Washington Ave. Intersection Project, City of Albany – new road alignment which improved the intersection and allowed Albany Nanotech to access adjacent property and to expand their facilities.
- Relocation of Maxwell Road Part 2, Town of Colonie – provides a new Wolf Road service road and access to adjacent developable property.
- Bus Rapid Transit Implementation, City of Albany, Town of Colonie, City of Schenectady – provides new service and improves access and mobility throughout the entire corridor.
- I-87 Exit 4 Connector, Town of Colonie – replaces I-87 bridge and improves access to the Airport and adjacent developable property.
- Saratoga County Regional Traffic Study, Towns of Malta and Stillwater – develops a transportation plan to address economic growth in the Luther Forest Technology Campus area.

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Recognizing and identifying transportation economic development impacts is only a first step. CDTC will continue to consider the economic impacts of transportation facilities when we evaluate future projects for programming and funding. At the same time we will also develop better ways of measuring these impacts, so that we can assign quantitative values to each transportation project.

CDTC will also continue to work with the Center for Economic Growth, local Chambers of Commerce, and the New York State Economic Development Council to articulate regional economic development needs and the transportation investment needed to support regional economic growth. There is strong support from the business community for urban reinvestment and concentrated growth patterns, and a strong transportation system that will support sustainable economic growth for the region.

## Regional Equity

The Executive Order, "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations" was issued in February 1994. This Executive Order is closely related to Title VI of the Civil Rights Act of 1964. As a federally funded agency, CDTC is required to be in compliance with both of these federal requirements.

Executive Order 12898 was created to bring federal attention to the environmental and human health conditions in low-income and minority communities with the goal of achieving Environmental Justice (EJ). The goal of Environmental Justice is to ensure that any adverse human health or environmental effects of any government activities do not disproportionately affect minority or low-income populations. EJ does not intend to provide preferential treatment to these populations, but rather fair treatment to all populations. Specific to transportation, Executive Order 12898 has been issued in order to ensure that all federally funded transportation-related programs, policies, and activities that have the potential to cause adverse effects, specifically consider the effects on minority and low-income populations. EJ is a public policy objective that has the potential to improve the quality of life for those whose interests have traditionally been overlooked.

CDTC's Title VI-Environmental Justice (EJ) initiative is intended to ensure that EJ principles are inherently integrated into the planning process at both the system and project level. The Environmental Justice Analysis Report documents the equitable distribution of transportation projects throughout the region and provides an evaluation of CDTC's plans, programs and processes in relation to EJ issues. A copy of CDTC's recently updated 2014 Environmental Justice Analysis Report can be found on our website.

Policies related to public involvement are addressed in detail in CDTC's Public Involvement Policy. As part of our New Visions Public Participation Plan, we have scheduled public workshops in the Cities of Albany, Schenectady, and Troy to specifically target underserved populations. Additional transportation concerns with Title VI / Environmental Justice aspects (noise, etc.) have been fairly examined in the "big ticket, big ticket initiative" work. CDTC's approach to Title VI/EJ policy, analysis, and documentation will continue to be updated and enhanced as programs change and as more recent and improved data becomes available.

CDTC will continue to consider the Environmental Justice impacts of transportation projects when we evaluate future projects for programming and funding.



## Quality Region Principles and Recommendations

As discussed previously on page 6 of this paper, the following 3 New Visions Planning and Investment Principles support the region's quality of life:

***Investing in a Quality Region – Transportation programming and planning is multi-modal and multi-program. Fair and equitable investments in all these modes and programs are needed to make our region a Quality Region.***

*Transportation investments will help preserve and enhance the Capital District's existing urban form, infrastructure, and quality of place. Neighborhood-based local planning efforts are important to the success of an overall regional plan that emphasizes livable communities and smart growth.*

*Transportation investments will:*

- *Plan and build for all modes of transportation, including pedestrian, bicycle, public transit, cars, trucks, marine, aviation, and rail;*
- *Support healthy urban, suburban, and rural communities;*
- *Encourage concentrated development patterns and smart economic growth;*
- *Link transportation planning and land use planning in order to reduce conflicts and improve both;*
- *Protect our environment.*

The following recommendations are related to the above "Investing in a Quality Region" Principle:

### FUNDING

1. **Continue to Seek Adequate Funding to Fully Implement the Plan** – CDTC should program adequate funding to maintain the existing infrastructure and to make small improvements as our population and our needs grow. Currently we are assuming flat funding (no significant funding increase or decrease) in the near future, and probably for the next several years (5-6 years). This flat funding will lead to serious, unacceptable declines in physical and service conditions and make even modest improvements difficult to accomplish. Securing adequate funding is clearly going to require cooperative efforts, innovative thinking, and a lot of public support.
2. **Program Multi-modal, Equitable and Balanced Funding** – Funding should be programmed fairly to all transportation modes – vehicles, transit, bike, pedestrian, air, marine, and rail. It should also be programmed equitably to all municipalities (state, cities, towns, villages) and to all populations (urban, suburban, and rural, disadvantaged populations, people with disabilities, etc.). And it should also be balanced among transportation programs, as detailed in the Financial Plan section of this paper.

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### DEVELOPMENT AND LAND USE

- 3. Encourage Cooperation and Coordination with Local Planning Departments** – CDTC should continuously engage local planners to ensure whenever possible that CDTC’s planning efforts and local planning efforts do not conflict. Local Comprehensive Plans should contain transportation elements that are consistent with New Visions. CDTC should encourage inter-municipal planning and information sharing, and should assist local planners whenever possible. CDTC should also encourage zoning and site design guidelines that create a coordinated pattern of land use that limits direct access to major roadways, is transit friendly, supports pedestrian circulation, contributes to the safety of the traveling public, and enhances the environment.
- 4. Continue to promote our Community and Transportation Linkage Planning Program and to seek adequate funding to implement study recommendations** – CDTC’s Linkage Program serves several objectives:
  - Provides federal funding to help municipalities conduct local planning.
  - Reduces the conflicts between land use and transportation.
  - Improves local planning and helps ensure that local planning is consistent with community goals.
  - Develops strong relationships between CDTC and local planning departments.
  - Improves coordination, information sharing, and cooperation among local planning departments and between CDTC and local planning departments.
  - Helps implement many CDTC’s goals and principles.
  - Provides opportunities for public input and educates the public about local planning and CDTC’s regional planning.
  - Recommends local improvements which can be funded in CDTC’s Transportation Improvement Program (TIP).

For all these reasons and more, the CDTC Linkage Program has been successful, has received national recognition, and should be supported, promoted, and enhanced whenever possible.

- 5. Encourage drivers to drive less by developing a stronger Travel Demand Management (TDM) Program.** – Travel Demand Management is a program whose primary objective is to manage travel demand by reducing it and “getting people out of their cars.” It includes carpooling, vanpooling, walking & biking, carshare, bikeshare, transit, commuter buses, park & ride lots, etc. and since it requires that drivers actually change their behavior, it is no easy task. It accomplishes these changes by offering financial incentives, free trial periods, pilot programs, education and marketing, etc. For more information about TDM, see the TDM white paper in this plan. CDTC, along with CDTA and our other members, needs to improve our TDM efforts. In order to do this, we need to develop a plan and to dedicate resources to its implementation. Again see the TDM white paper in this plan for further discussion.

### PLAN DEVELOPMENT

- 6. Improve CDTC public outreach and marketing efforts** – Too many transportation users, municipalities, businesses, etc. are not aware of the scope and impact of CDTC’s long-range transportation plan (New Visions Plan). CDTC should improve and increase efforts to engage all users, to educate them and to obtain their input.

7. **Refine and further articulate the Big Idea/Big Ticket Initiatives for the Capital District** – As we discussed earlier in this paper, the interest, support, and reasons for Big Idea/Big Ticket Initiatives change over time. CDTC should continue to evaluate the needs for these initiatives and their status, and should foster the discussion of these initiatives with the Planning Committee and the Policy Committee members, and the public to measure interest. CDTC should also be prepared to implement these initiatives, partially or completely, if and when the need arises.
8. **Improve the collection of transportation data to support regional transportation planning and analysis, especially in the new technology modes such as ride-hailing and bikesharing** – Good planning must be supported by good data. As technology improves, the sources of data and the data itself are also improving. CDTC should continuously look to develop new and better sources of data either on its own or in cooperation with other MPOs, and state, regional, and federal agencies. Some areas of improvement include:
  - Freight data
  - Local pavement and safety data
  - Traffic congestion data
  - Pedestrian and bicycle counts
9. **Promote and support the New York State climate change strategy of “cap and invest”** –The Georgetown Climate Center’s Transportation & Climate Initiative (TCI) Regional Proposal for Clean Transportation draft policy framework recommends a regional “cap and invest” program in cooperation with 12 Northeast U.S. States and the District of Columbia to reduce greenhouse gas emissions from transportation. The Northeast Region, with many of the same TCI stakeholders, successfully implemented the first mandatory market based program in the United States to reduce greenhouse gas emissions. This “cap and trade” program for power generating stations, also known as the “Regional Greenhouse Gas Initiative” (RGGI), has been very successful and continues to create investments in clean energy today. The TCI Proposal for Clean Transportation “cap and invest” program to reduce greenhouse gases from transportation would sell greenhouse gas allowances to petroleum-based fuel (gasoline and diesel) suppliers, with the number of allowances decreasing over time. Because of fewer allowances, greenhouse gas emissions would decrease. This would be a significant contribution to reaching the New York State goal in the Climate Leadership and Community Protection Act of net greenhouse gases in 2050. For more information, see the Environment and Technology white paper.
10. **Promote and support the electrification of the transportation system** -
11. **Regarding self-driving vehicles, promote and support ridesharing and the “purchase of miles” instead of longer commuting and increases in vehicle miles traveled (VMT)** -
12. **Promote and support the pedestrian safety strategy, “Vision Zero”, in all our communities** -

### ***Economic Development – Transportation is critical to our region’s economy.***

*New Visions articulates the transportation investment needed for sustainable regional economic growth. All indications are that the region's quality assets are becoming apparent to decision makers outside the*

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*region. Transportation choices, strong urban areas, affordable and diverse housing locations, good schools, colleges and universities, ease of mobility, modern air and rail transportation facilities, cultural and recreational opportunities and a clean environment are significant criteria in location decisions of advanced technology firms. These factors support Tech Valley and the region's economic development and business climate. CDTC will partner with New York State to encourage regional efforts to build a strong, sustainable economy.*

The following recommendations are related to the above “Economic Development” Principle:

1. **Maintain a program for transportation projects directed explicitly at community enhancement or regional economic development** – Transportation projects have impacts beyond transportation, such as improving the environment and promoting economic development. Whenever possible CDTC should program projects with multiple objectives including economic development and community enhancement. Well-designed projects with multiple objectives can improve traffic flow, help create a town center, create a walkable and bikeable community, even provide space for business development, and more.
2. **Work more closely with regional economic development agencies, e.g. Chambers of Commerce and CEG -**
3. **Promote economic development efforts between public and private sector -**
4. **Continue to promote regional solutions -**

### ***Regional Equity – Transportation investments will address all needs fairly and equally.***

*Funding for appropriate repair, replacement and reconstruction will be based on the function and condition of the facility -- not ownership. Investments should meet the needs of all users of the transportation system, in a manner that increases access to transportation or does not disproportionately impact people with disabilities, and minority and low-income populations.*

The following recommendations are related to the above “Regional Equity” Principle :

1. **Regularly update CDTC’s Environmental Justice (EJ) Analysis** – CDTC’s EJ Analysis should be updated after every Transportation Improvement Program (TIP) update. The analysis should be well publicized and public input should be sought, especially from affected populations.
2. **Reach out for full participation** – Reach out to local communities, policy makers, businesses and individuals through an open, participatory process with information, technical assistance and on-going opportunities to assist CDTC and its members in their planning and programming decisions.

Partnerships should be built among all transportation stakeholders so that transportation investments achieve multiple community objectives.

3. **Emphasize public participation in transportation planning, programming and implementation** – Transportation planning, programming, and project implementation must have a high level of representative and meaningful public participation. CDTC should encourage municipalities to plan for public participation. Traditionally underrepresented and poorly served communities, such as the mobility-impaired, low income, minorities and senior citizens, deserve special outreach efforts as well as those in rural towns and villages that are not often directly involved with CDTC. CDTC will continue to find new and better ways to engage these populations.