CDTC
CAPITAL DISTRICT
TRANSPORTATION COMMITTEE

CDTC New Visions

Quality Region Task Force

White Paper

September 2015

Capital District Transportation Committee
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Table of Contents

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 25 years. Our previous plan was called New Visions 2035, and our new, updated plan is called New Visions 2040.

CDTC assigned the tasks of updating our New Visions Plan to the following 5 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
- Quality Region Task Force
- Transit Task Force
- Infrastructure Task Force
- Environment and Technology Task Force

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 2035 Plan, and to develop strategies and recommendations for our 2040 Plan. Over the last 8-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.

The Quality Region Task Force 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 2040 Plan. This Task Force 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
- Economic Development
- Regional Equity
- Reviewing and focusing New Visions guiding principles

Many of these topics are already considered and supported in the New Visions 2035 Plan. The Task Force considered ways in which the Plan could be updated and strengthened. The Task Force is not a policy decision making committee, but rather has been asked to make recommendations to CDTC's Planning Committee and Policy Committee. The Task Force members include:

Quality Region Task Force:

- Carm Basile, CDTA
- Robin Dropkin, Parks & Trails New York
- Steve Feeney, Schenectady County
- Rocky Ferraro, CDRPC
- Peter Fleischer, Empire Future
- County Executive Kathy Jimino, Rensselaer County
- Eric Kriss, AARP
- Nadine Lemon, Tri-State Transportation
- David Lewis, UAlbany
- Mayor Gary McCarthy, Schenectady
- Mayor Kathy Sheehan, Albany
- Mayor Lou Rosamilia, Troy
- Michael Tucker, CEG
- Monique Wahba, South End Improvement Corporation
- Mayor Joanne Yepsen, Saratoga Springs
- Sam Zhou, NYSDOT
- Anne Beware, CDTC staff
- Mike Franchini, CDTC Executive Director
- Sandy Misiewicz, CDTC staff
- Chris O'Neill, CDTC staff

The following are recommendations by the Quality Region Task Force for CDTC Planning Committee consideration.

Quality Region Committee Recommendations

1. **Multi-modal and Equitable Funding** – Funding should be programmed fairly to all transportation modes – vehicles, transit, bike, pedestrian, air, marine, and rail. It should also be programmed evenly to all municipalities (state, cities, towns, villages) and to all populations (urban, suburban, and rural, disadvantaged populations, people with disabilities, etc.). This topic will be discussed in more detail in the Financial Plan section of this paper.

2. **Require Travel Demand Management (TDM) Plans from Developers** – Currently most local municipalities require large residential and commercial developers to complete a Traffic Engineering Study. Based on the information submitted by the developer, these studies forecast the increase in the number of vehicles which results on adjacent roads and which are attributed to the construction of the development. This vehicle increase is then added to the existing traffic, and its impacts on traffic operations on adjacent roads and intersections is determined. Since these studies only deal with vehicles, the recommended solutions also only deal with vehicles, and ignore the other travel demand management strategies which can decrease the number of vehicles and still provide transportation options to and from the development. These strategies include carpooling, vanpooling, walking & biking, carshare, bikeshare, transit, commuter buses, park & ride lots, etc. Considering both vehicles and these TDM strategies in a TDM Plan would increase the number of solutions, and give municipalities and developers the ability to choose the most cost effective strategies.

3. **Improve 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. New ways of obtaining truly representative public input beyond, but including public information meetings, must be utilized such as targeted small group meetings, videos, and social media.

4. **Update and Upgrade Project Selection Criteria** – The existing project selection criteria is relatively technical, relies too heavily on the benefit/cost ratio, does not reflect current priorities or recently emphasized criteria (e.g. economic development, freight, environmental justice, etc.), and is not easily understood by all members. It also needs to be more directly related to the implementation of the current New Visions principles. In order to accomplish this goal, staff should conduct an analysis which reviews the current criteria, compares current criteria to criteria used by other MPOs and to current New Visions principles, and recommends changes.

5. **Explore the Use of Innovative Funding Sources** – Because federal funding is not keeping up with transportation needs, other sources of funding should be explored, including impact or mitigation fees, user fees, dedicated transportation fees, public/private partnerships, etc. Because current transportation funding is not sufficient to maintain our existing system, new funding sources will be needed to make improvements to our region's transportation system.

These Committee recommendations are incorporated with other Quality Region recommendations in the Quality Region Principles and Recommendations section of this paper.

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 – A great transportation system with great choices will help 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 sensitive environmental resources.*

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 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.

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.

What is 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:

- Promote sustainable economic growth with good-paying jobs
- Revitalize urban areas
- Help build community structure in growing suburbs
- Preserve open space and agricultural land
- Make communities more walkable 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

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.

Fostering Community Quality of Life

A Quality Region must have a good transportation system, but <u>should</u> have a great transportation system. While we may be able to live without other forms of basic infrastructure such as water and sewer lines (with wells and septic systems), power and natural gas lines (with solar panels, electric generators, propane and heating oil tanks), and telephone and cable lines (with cell phones and satellite systems), we cannot live without transportation. We rely on our transportation infrastructure to go to work, to the grocery store, to school, to entertainment, to exercise and recreate, etc. And there is no substitute for a road, a bridge, a sidewalk, or a bus, unless it's another mode of transportation.

New Visions and transportation planning impacts everyone's quality of life, whether it is the congestion or lack of congestion on your way to work, the repairs to the bumpy road which damages your vehicle, your ability to walk or bike safely, your need for quick and efficient freight (product) deliveries, your ability to take transit, and more. By developing this long-range transportation plan and the strategies to implement it, New Visions can either improve or worsen your quality of life (hopefully the former). The following are specific examples of New Visions issues and how they will impact your future.

Transportation Safety

New Visions offers an integrated and effective approach to reduce risk and enable safe access for all users of the transportation system — especially bicyclists, pedestrians, children, and the elderly. CDTC will examine traffic safety data, identify high crash locations, and characteristics across roadway systems that are common to locations with a crash history, analyze potential mitigation measures and solutions, and develop 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.

Transit Service

New Visions works with our regional transit provider, CDTA, and incorporates CDTA's 5-year Transit Development Plan. Beyond the 5 year period, CDTC will examine future population growth trends, forecast transit ridership, and identify 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. Transit should accomplish multiple objectives besides transportation, including transit-oriented and urban development, neighborhood revitalization, connecting communities and cities, and others.

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 2040. Maintaining and replacing our existing infrastructure will be our highest priority, and will require most of our existing resources. New highways and bridges will need to compete for funding which is becoming less and less available.

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 transit, pedestrian and bicycle travel, carpooling, vanpooling, carsharing and bikesharing, which can all reduce the number of vehicles on our roads.

Complete Streets

New Visions endorses local Complete Street policies and resolutions which encourage 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 biking, slow traffic, improve air quality, promote local business, and even encourage social interaction.

Bicycle and Pedestrian Transportation

New Visions encourages development that incorporates bicycle and pedestrian accommodations into highway and bridge construction and city, village, and town plans. It also provides for recreational opportunities through creation of bike/hike trails. The health and recreational benefits of bicycle and pedestrian facilities are well documented.

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.

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.

Environmental Justice
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.

Human Services Transportation
New Visions works with the many human services transportation providers in our area to identify the transportation needs of individuals with disabilities, older adults, 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.

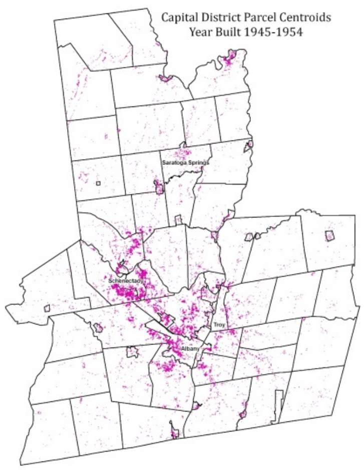
Local Communities
New Visions acknowledges the importance of land use & development, and of reducing conflicts between land use, development and transportation. CDTC sponsors the Community and Transportation Linkage Planning Program, which provides funding for cities, towns, & villages to prepare & implement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

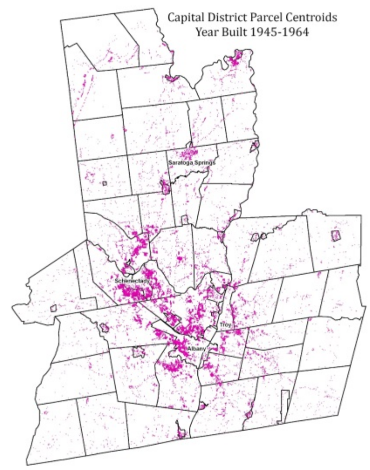
Public Participation
New Visions seeks public participation and input in every stage of the planning process. It is one of the primary objectives of this plan because without public participation and input, the plan will not have public support. And without public support the other plan goals and objectives will never be implemented. CDTC receives public input from the 9 New Visions committees and their members, from the 8 public meetings held in each of the 4 Counties, from meetings with stakeholder groups, from our website, surveys, and polls, from social media, and from other CDTC projects' meetings.

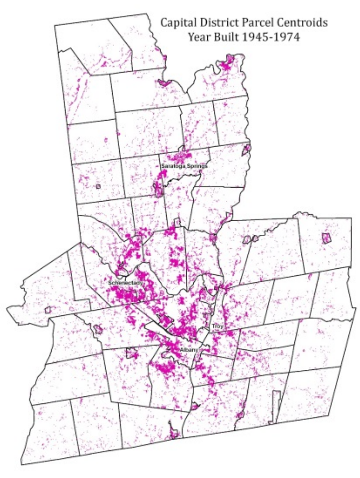
Big Idea/Big Ticket Initiatives
The New Visions 2040 Plan reaffirms support for consideration of potential "big ticket" initiatives. These initiatives would be supported by higher growth scenarios, yet they could be pursued with trend growth as well. Funding is not identified, yet the plan puts forward the vision of bold investments that could be feasible if the public supports the vision and funding can be found.

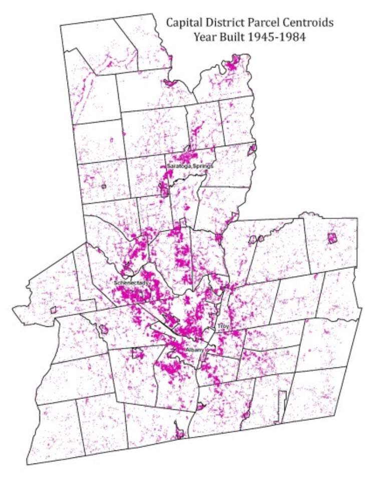
Forecasting Regional Growth and Transportation Needs

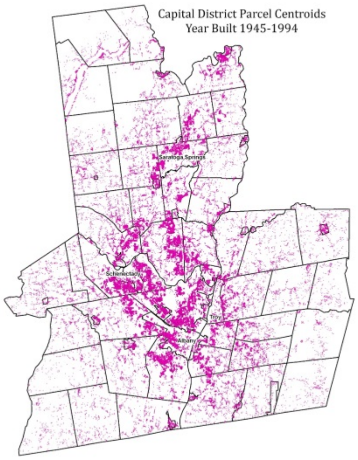
Transportation has a huge impact on growth, and growth has a huge impact on transportation. Look at the following maps showing the number of developed single family parcels in the 4-County area. In 1945-1954 there were few developed single family parcels in the Towns between the City of Albany and the 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 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. As we said, growth follows transportation improvements.

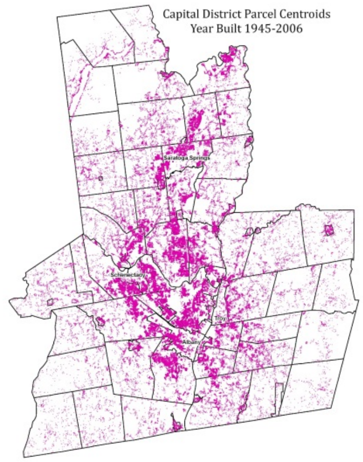






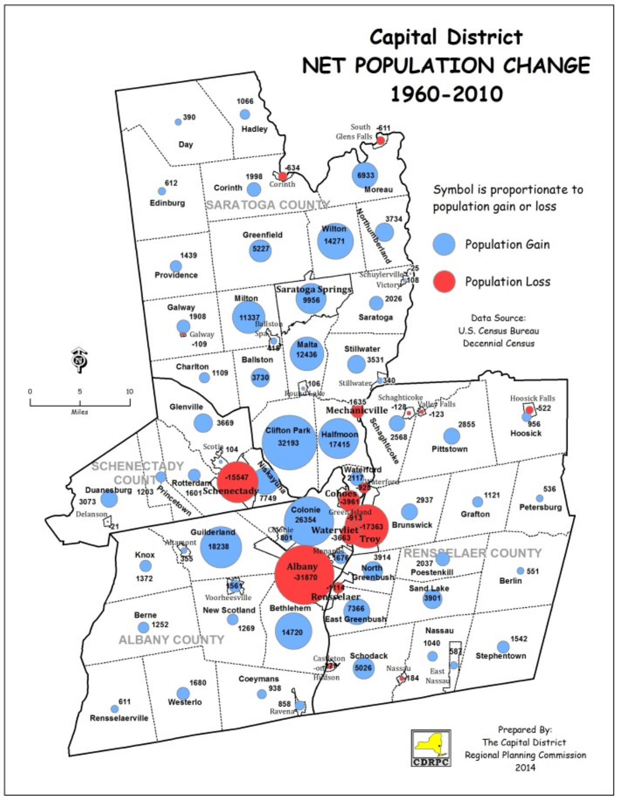


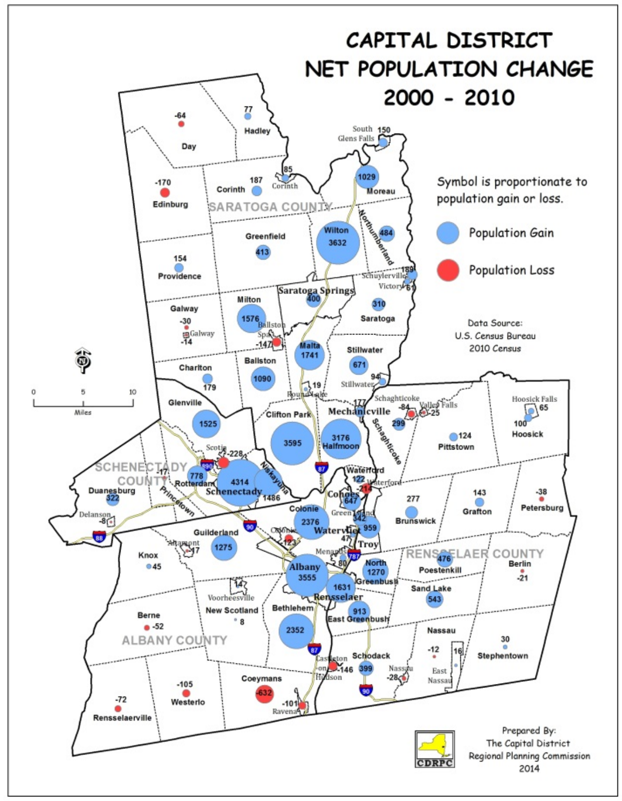




On the other hand, transportation will also follow growth. Many new roads needed be constructed in the Towns of Malta and Stillwater because of the growth at the Luther Forest Technology Campus and the growth of Global Foundries. Even now we are considering other transportation improvements because of 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 will be built with 4 travel lanes instead of 2 lanes, because transportation will follow growth.

So what does our future growth mean for our future transportation and vice versa? One way to look at future growth is to look at the change in population in the last few decades. Below are maps showing populations changes in 1960-2010 and 2000-2010. The first map (1960-2010) shows population growth in our suburban towns and population losses in the Cities of Albany, Schenectady, and Troy. It shows the "move to the suburbs" – a well understood and documented trend nationwide.



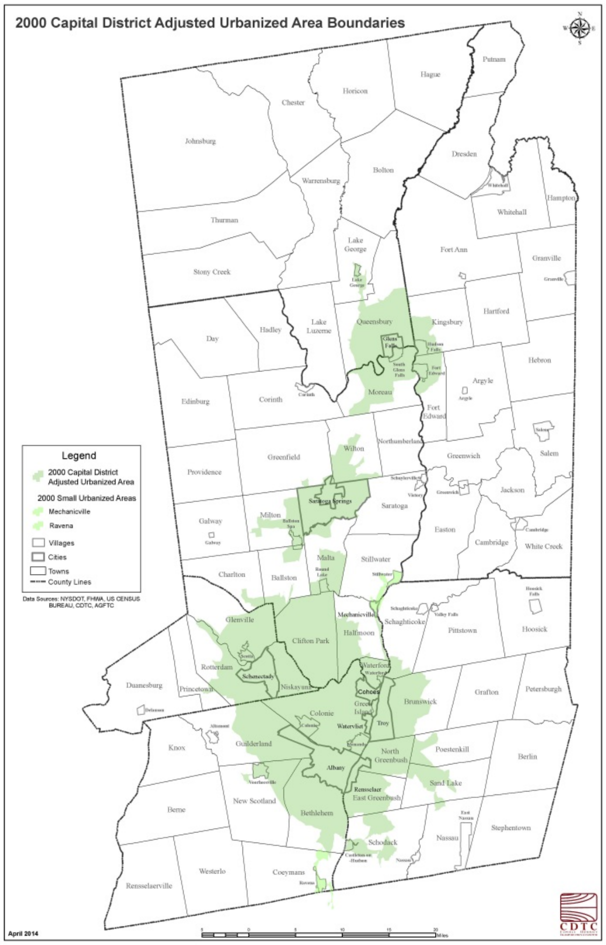


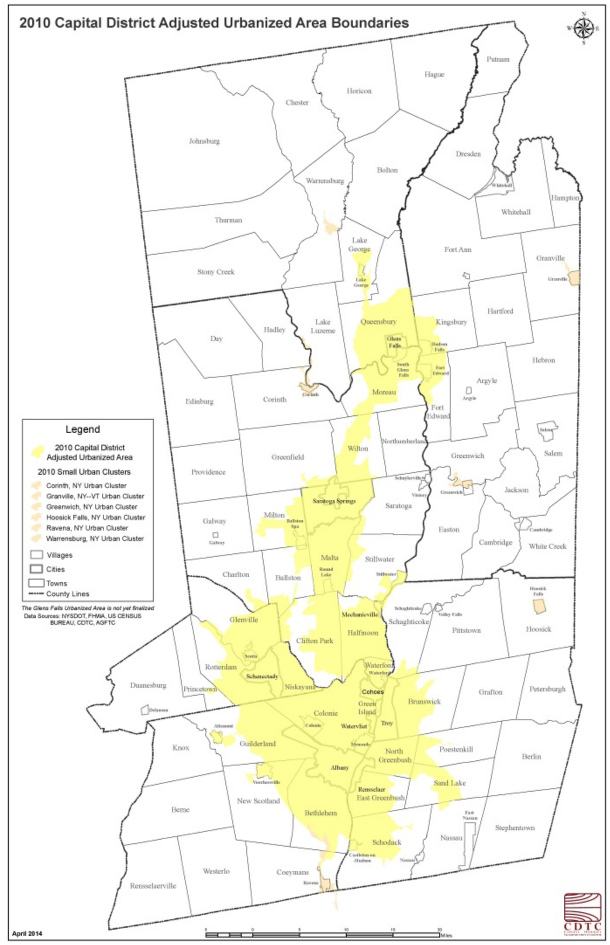
But look at the second map (2000-2010) and the growth in the last decade. For the first time in 50 years our cities are growing, and people are moving back into them. Developers understand this trend, and are building more and more rental and condominium units in the downtown areas of these cities. Young 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?

A second way to examine growth is by looking at the U.S. Census "urban area boundaries" from the last 2 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 there are 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 2000 census (green highlighted area) and the 2010 census (yellow highlighted area).





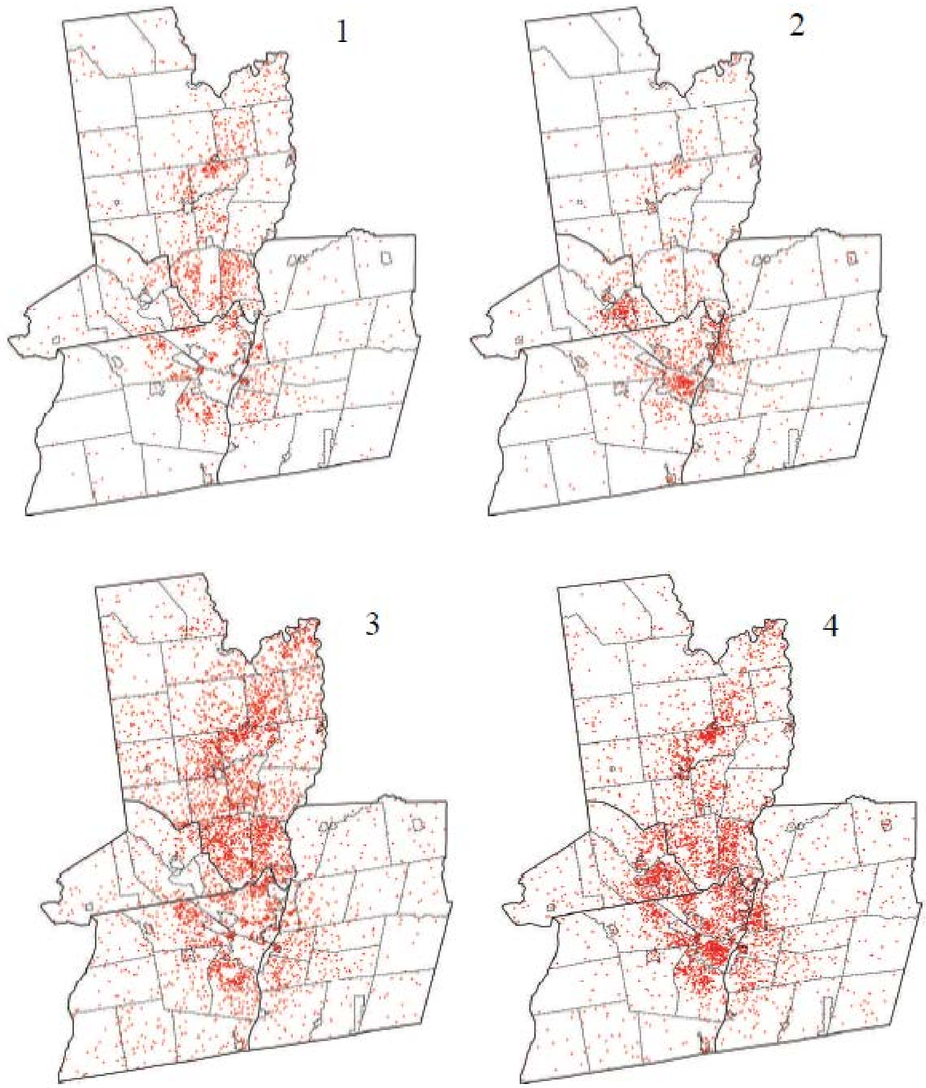
In 2000 the 3 local urban areas (Albany-Schenectady-Troy, Saratoga Springs, and Glens Falls) were expanding out from their centers, but they were not connected. But in a relatively short period of time (only 10 years), in 2010 the urban areas are connected. Our urban areas are continuing to expand outward, but in 2010 they have bumped into each other. If you ignore the geographical boundary lines of the villages, cities, towns, and counties, you see ONE urban area stretching from the Village of Lake George to the Village of Ravena!

It is safe to say that in the next 10 years by the next federal census, the areas between the Albany-Schenectady-Troy and the Glens Falls urban areas will continue 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 <u>third and final way</u> 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.



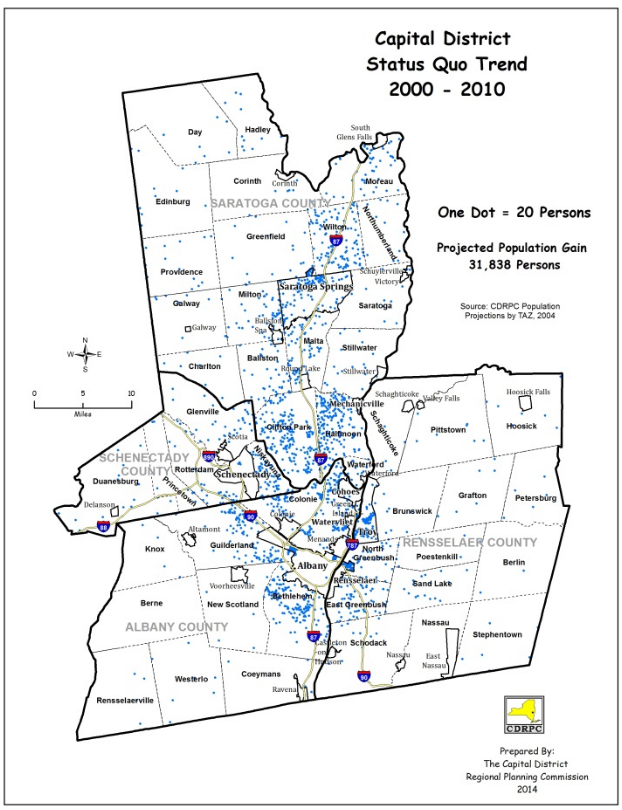
Under any growth scenario, the benefits of concentrated development patterns for the transportation system and for regional quality of life are significant and greater than those for dispersed development patterns. Those benefits include fewer roads, sidewalks, etc. that are closer, and easier and less 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.

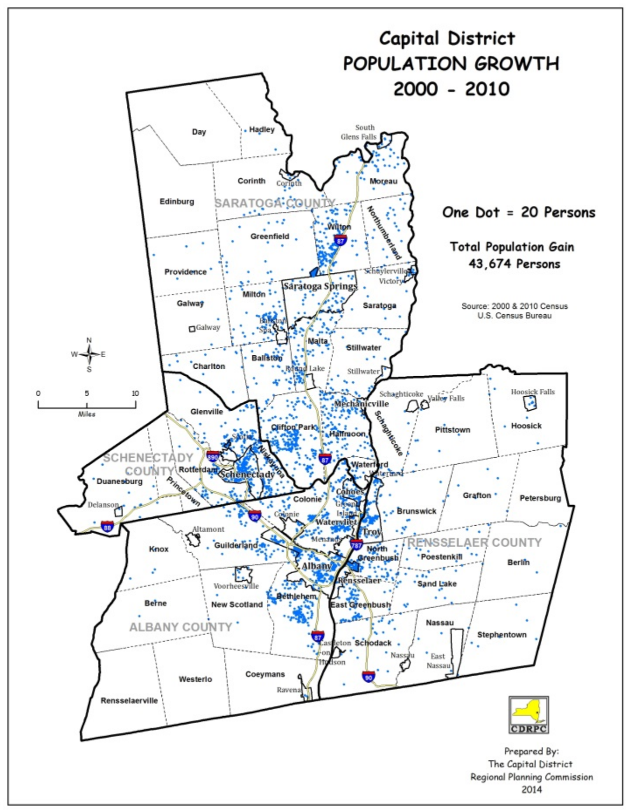
The New Visions Plan supports and encourages concentrated development in the Capital District. The urgency for concentrated development and coordinated, high quality planning is even greater under a scenario of high growth. This urgency would be necessary because the impacts of a high growth scenario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

Seven years since the above analysis, it is now 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.

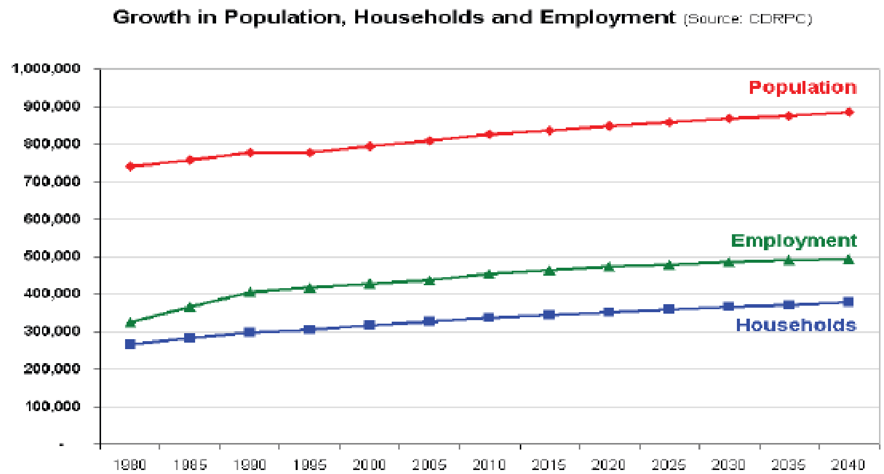
The other positive news is the distribution of that growth. Instead of the “Status Quo” forecast of dispersed development, our actual growth looks much more like the Concentrated Growth scenario (no. 2) above in the 2007 CDRPC analysis, which results from urban reinvestment and suburban planning. Obviously 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.





This is the best way to grow!

So, we have looked at our region’s population growth from 3 different perspectives, and it’s time to 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.



For the purpose of this planning period, we will use the CDRPC rate of about 7% growth in the next 30 years, and we will apply that rate to the latest 2010 census population number. This results in Capital District population increase in the years between 2010 – 2040 of approximately 58,658 and a population in 2040 of approximately 896,625 people.

Regarding the distribution of this population growth in the 4-County region, once again it is difficult to forecast concentrated growth based on one comparison of the 2000 and 2010 census numbers. However, plenty of information exists that describes young professionals and retired “baby boomers” moving back into other American cities. It is possible even though this trend of population moving back into cities has been recognized for several years in other cities, that this trend has been delayed or just begun more recently in our cities. We also know from existing new construction and projected future 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.

However, 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 back to our “bubble” map of the Capital District Net Population Change 2000 – 2010 on page 12, 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 Cities of Albany and Schenectady, and the Towns of Clifton Park, Halfmoon, and Wilton, with similar but less growth in the Towns of Bethlehem, Colonie and Malta. With that in mind, we believe that about 57% of the 2010 – 2040 population increase of 58,658 will be distributed throughout these 8 communities.

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.

Financial Plan

Developing a Financial Plan involves answering 2 distinct sets of questions.

1. How much spending will Congress authorize for federal surface transportation?
   A. What are the prospects for a new federal surface transportation law to re-authorize the current Moving Ahead for Progress in the 21st Century (MAP-21) law which expired on September 30, 2014 and has been extended to May 31, 2015?
   B. How will Congress divide the spending among the different fund sources, i.e. National Highway Performance Program, Surface Transportation Program, Transportation Alternatives Program, Highway Safety Improvement Program, etc.?
   C. Will the next surface transportation spending authorization be another extension, a 2-year bill like MAP-21, or a 5-year bill like its predecessor, SAFETEA-LU (which was extended 9 times)?
   D. How will the federal surface transportation program be financed?
   E. What are the long-term prospects for federal surface transportation funding?

2. How should our region's federal surface transportation funding be spent?
   A. How has CDTC spent transportation funding in the past?
   B. How should transportation funding be spent in the future? In other words, on what programs (highway, transit, bicycle/pedestrian, etc.) should the funding be spent?
   C. How will our region's funding needs change?

Before we address the above questions, we need 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.

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 21st 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.

As can be seen above, the federal government has funded surface transportation programs for almost 100 years. In the last 40 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.

Current Federal Transportation Funding Authorization

Like many issues today, it all comes down to money. And despite all these surface transportation laws and reauthorizations, and 2 national commission reports, the funding (the HTF predominantly) has not kept pace with the expenditures. There are 3 primarily reasons for this:

1. The federal gasoline tax has not been increased since 1993. It also has not been indexed to increase with inflation.
2. Increased vehicle fuel efficiency has resulted in less gasoline used and less taxes. Fuel efficiency will continue to increase because new federal Corporate Average Fuel Efficiency (CAFE) standards will require cars and trucks to average 54.5 miles per gallon by 2025.
3. Decreased vehicle miles traveled has also resulted in less gasoline used. Americans are driving less (not more, as in the past) and many younger Americans are not even obtaining drivers licenses.

These are not new trends. They are the reasons why in 2005 SAFETEA-LU created 2 separate national commissions to study future options for transportation funding and programs. So despite these trends and these commissions, the federal government has not addressed the problem of not enough funding and too many transportation needs.

This transportation funding shortfall has been and continues to be documented by many national professional and advocacy organizations. In December 2014 the American Association of State Highway and Transportation Officials and the American Public Transportation Association issued the following news release estimating a nationwide shortfall of $63 billion annually:

"AASHTO and APTA's 2015 Bottom Line Report Estimates $163 Billion Needed Annually to Fix Nation's Aging Surface Transportation System

WASHINGTON – The "2015 Bottom Line Report" on transportation investment needs, released today by the American Association of State Highway and Transportation Officials and the American Public Transportation Association, estimates that to meet current demand it will require an annual capital investment over six years by all levels of government in the amount of $120 billion in the nation's highway and bridge network and $43 billion in America's public transportation infrastructure. To meet the combined surface transportation needs, it would require an investment of $163 billion investment per year in surface transportation over a six year period. Despite those dramatic investment needs, currently only $83 billion is invested in roads and bridges, while just $17.1 billion is invested in public transit." See the following presentation for an AASHTO presentation discussing the latest trends in transportation, http://www.transportation.org/SiteAssets/Pages/Presentations/Lee-2013-09-24.pdf.

So with this background and history, what are the prospects for a new federal surface transportation law to re-authorize MAP-21? Here are some of the negative and positive factors.

Negative Factors:

1. State funding continues to decline - the majority of dedicated state funding goes to debt service for previous borrowing, and a substantial amount will go to the Tappan Zee Bridge project. This increases the need for federal transportation funding for State roads, and leaves less federal transportation funding available for local roads.
2. There is a history of federal funding legislation surviving on short term extensions.
3. HTF revenues from the gasoline tax, etc. continue to decline and the federal surface transportation program continues to rely on General Fund revenue to make up the difference.
4. Operating funds for transit and our own Capital District Transportation Authority have been reduced.
5. Pavement and bridge conditions have worsened.
6. Some members of Congress now believe that federal surface transportation funding should be spent only on the National Highway system (interstates and principal arterials) and that the States and local governments should pay for all other road and bridge repairs and replacements. This is sometimes called "devolution" since this was the federal program before 1972.
7. In MAP-21 the federal government increased the amount of National Highway Performance Program (NHPP) funding which can only be expended on the National Highway System roads, and decreased the amount of Surface Transportation Program (STP-Flex) funding which can be used to fund many different types of projects. Funding for bicycle and pedestrian projects in the Transportation Alternatives Program (TAP) was also reduced.
8. The federal government's ability to pass legislation continues to shrink because of partisan politics, lack of political will, and "gridlock."

Positive Factors:

1. Construction cost inflation is low.
2. Bridge preservation (repair) program has saved millions of dollars fixing bridges and extending their useful life, instead of completely replacing them.
3. Reducing or restricting the number of new bridges and roads has not added substantially to our overall transportation operating and maintenance budgets.
4. Capital District residents are still very interested in multi-modal projects, including bicycle and pedestrian, transit, complete streets, road diets, carshare, bikeshare, etc.
5. Big idea, big ticket initiatives are still supported.
6. Nationwide traffic congestion is getting worse, and the costs of this congestion and the costs of not repairing and replacing transportation infrastructure continue to increase.
7. Federal and state discussions of funding needs continue.
8. There is substantial support for a new federal surface transportation law which increases funding and includes 5 – 6 years' funding from the public, state and local governments, private

sector businesses, the construction industry, etc.

9. New systems for charging user fees for vehicle miles traveled (VMT) which could replace the gasoline and diesel taxes, are being successfully tested and implemented.

Conclusions

With so many uncertainties and so many unknowns, it is reasonable to assume that federal surface transportation funding will neither increase nor decrease in the near future, and probably for the next several years (5-6 years). In fact the last several federal funding extensions just kept funding at its current levels with small increases for inflation. This is mostly likely the course for federal transportation funding, and these extensions may actually be the course until the next presidential election in 2016. The next Presidential election along with its Congressional elections will have a significant impact on the future of federal transportation funding.

The history of federal transportation funding has had its peaks and valleys, and in the past increases and decreases in federal transportation funding were directly related to our Country's economic condition. That is, during good economic times we spent more on transportation, and during bad economic times we spent less. So there is certainly a much smaller chance that transportation funding will see substantial decreases or increases in the future. Both Houses of a U.S. Congress controlled by one national political party and a President from the same political party would certainly increase the chances of a major change in transportation funding.

However planning for these substantial decreases or increases or even other, more modest scenarios would only make planning more difficult, raise or lower public expectations, and program transportation projects that could not be funded. As we have seen in the past for the ARRA (American Recovery and Reinvestment Act of 2009) funding and the NY Works Program, if there is an infusion of transportation funding, the system can react quickly to generate and progress projects.

That said, the future of transportation planning and funding is not completely bleak. There are other competitive fund sources such as the Federal Transit Administration's Small Starts Program and the U.S. DOT TIGER (Transportation Investment Generating Economic Recovery) Program, for which our region has successfully competed, and will compete in the future. There are also innovative sources of funding such as private sector funding from major traffic generators and local utilities (such as the National Grid Economic Development Grants) which are sometimes available for transportation improvements and studies.

And of course there is some State and local funding. Municipalities may need to use New York State CHIPS (Consolidated Local Street and Highway Improvement Program) for more capital projects and fewer repair or pavement projects. Municipalities may also, if possible, need to borrow to make major transportation repairs or replacements. All these sources of funding will need to be explored more and more as our transportation needs continue to increase.

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 3 Transportation Improvement Programs (TIPs).

The TIP shows funding for all federal-aid projects in the 5-year period in addition to funding in 2 previous committed years. The following tables and their corresponding pie charts include all the funding in all 7 years for the 2007-2012, 2010-2015, and the 2013-2018 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 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.

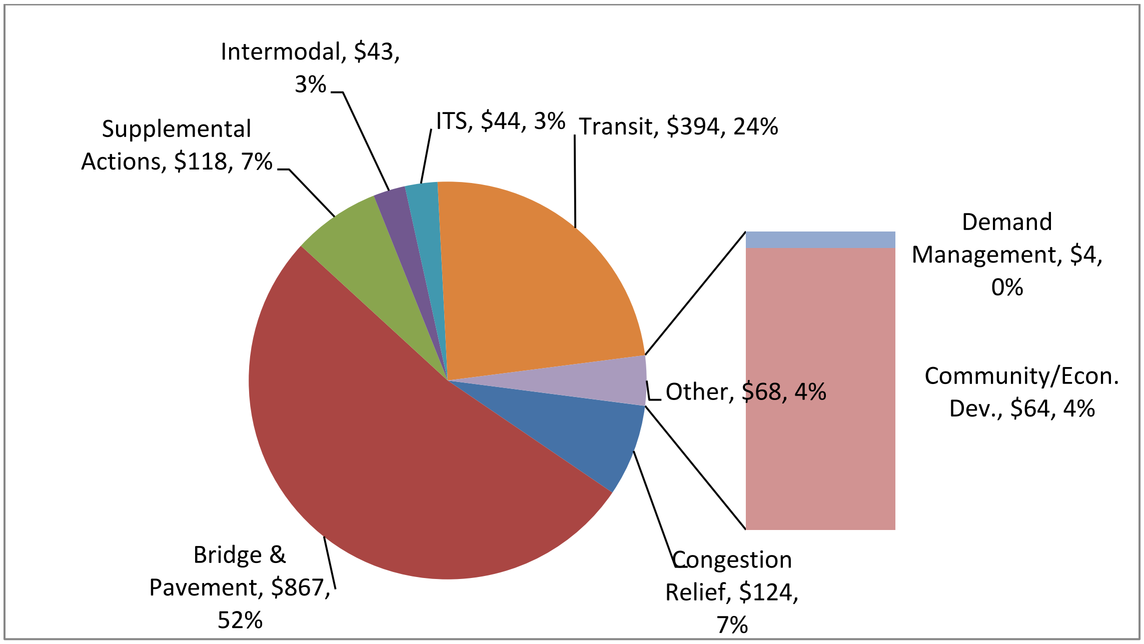
“Demand Management” includes HOV (high occupancy vehicle) and HOT (high occupancy toll) lanes, ramp metering, 511 and commuter information services, carpooling, vanpooling, carshare, bikeshare, etc.

“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.

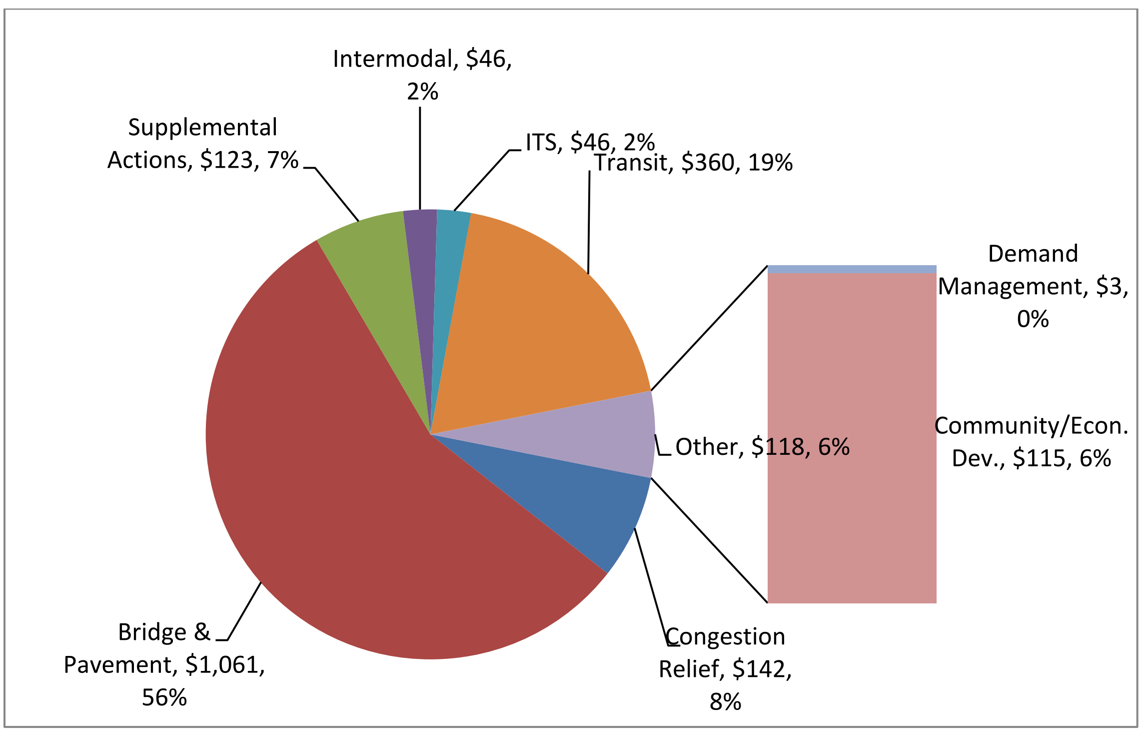
Transportation Category	2007-2012 TIP		2010-2015 TIP		2013-2018 TIP		Average Percent
Congestion Relief	7%	$123.542	8%	$142.143	6%	$52.589	7%
Bridge and Pavement Repairs	52%	$867.899	56%	$1061.374	62%	$508.746	56.6%
Supplemental Actions	7%	$117.997	7%	$123.044	8%	$63.582	7.3%
Intermodal	3%	$42.873	2%	$45.731	3%	$26.376	2.6%
Transit	24%	$394.647	19%	$359.515	15%	$125.535	19.3%
Demand Management	0%	$3.726	0%	$2.676	0%	$3.752	0.2%
Community/Econ. Dev.	4%	$64.485	6%	$114.705	1%	$5.395	3.6%
ITS	3%	$44.349	2%	$45.947	5%	$40.042	3.3%
No Applicable Category	0%	$2.264	0%	$0.00	0%	$0.00	0.1%
Total		$1661.781		$1895.135		$826.018	

* The dollar amounts for each TIP are shown in “millions of dollars.”

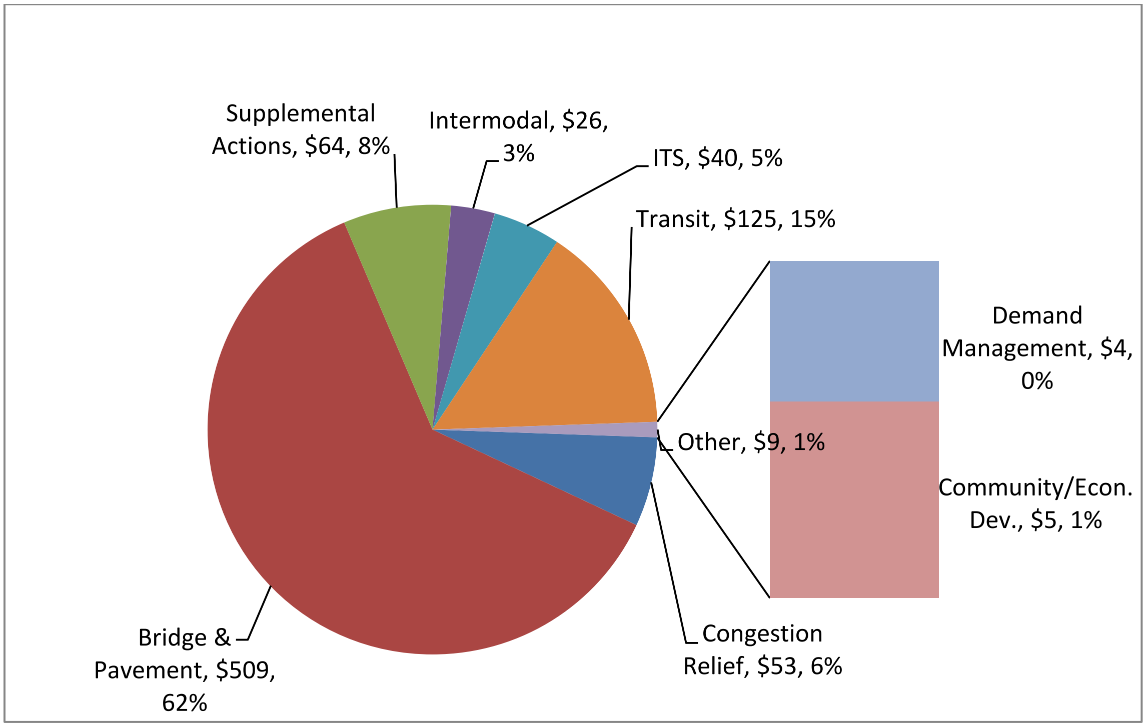
2007-2012 TIP



2010-2015 TIP



2013-2018 TIP



Examining the above funding data from the last 3 TIPs, we can draw the following conclusions:

- The "Bridge and Pavement Repairs" spending (56.6%) has been significantly higher than spending for any other transportation category, and the trend for the percentage of this spending is actually increasing.
- Though the "Bridge and Pavement Repairs" percentage is increasing, the actual spending in dollars decreased by more than 50% from the 2010-2015 TIP to the 2013-2018 TIP.

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 significantly.

- The "Transit" spending (19.3%) is the 2nd highest, and the trend for the percentage of this spending is decreasing.
- The "Transit" spending in dollars decreased by 68% from the 2007-2012 TIP to the 2013-2018 TIP.

Conclusion: Transit is also a high priority, but once again funding amounts have decreased significantly.

- The trends for the percentages of the other transportation categories have been relatively stable and have remained relatively unchanged in all 3 TIPs, with the exception of the "Community/Econ. Dev." category which has varied significantly.
- The "Demand Management" spending in dollars and "ITS" spending in dollars were the only 2 that remained relatively unchanged in all 3 TIPs.

Conclusion: All spending categories have decreased since the 2007-2012 TIP. However, since Demand Management and ITS are cost effective strategies to address traffic congestion without building new capacity, we continue to spend about the same amounts for these categories in each of the last 3 TIPs.

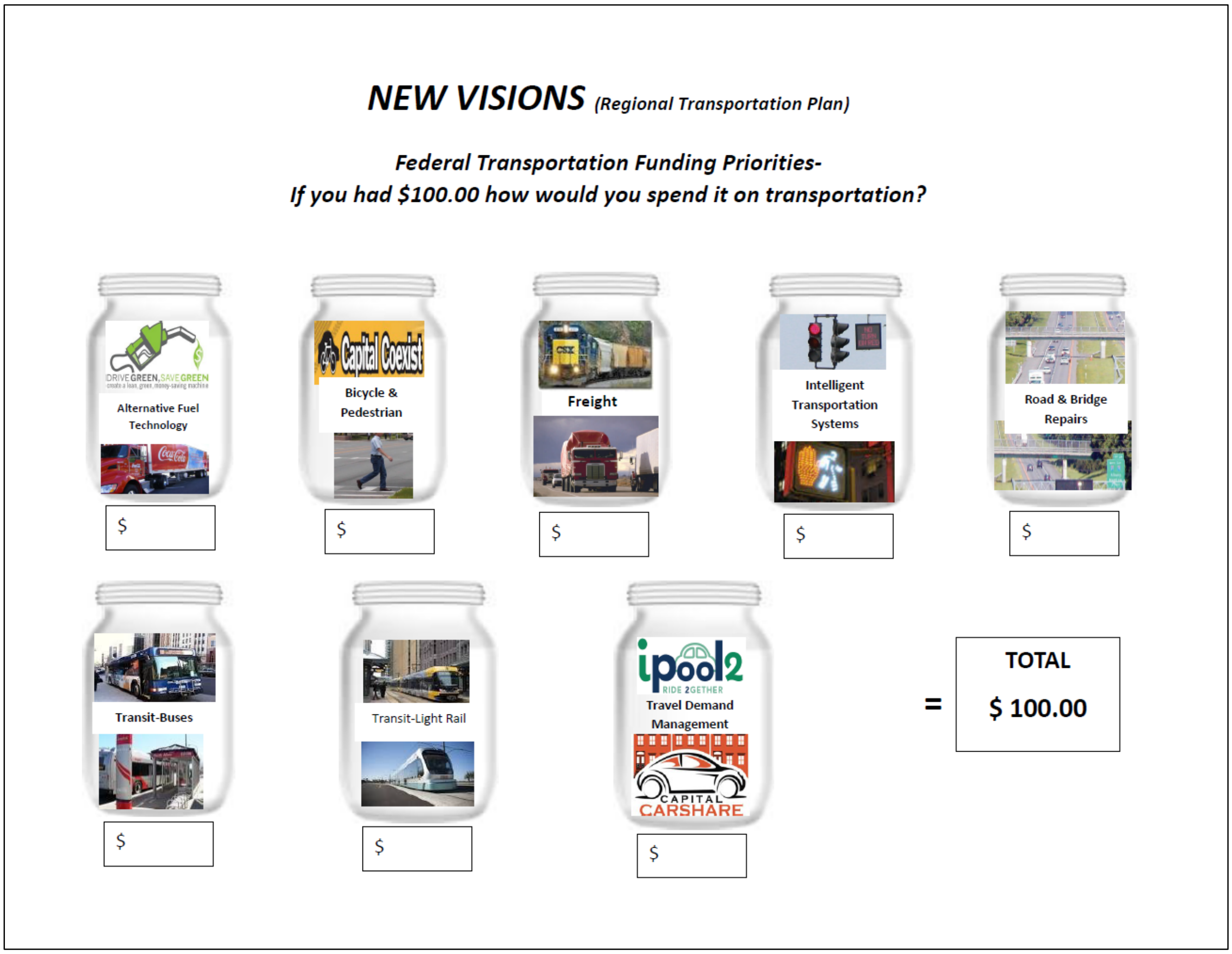
- The total spending for the 3 TIPs has also varied significantly, and is decreasing.

Conclusion: Like other infrastructure, transportation infrastructure is aging and needs additional funding just to preserve and maintain the current system. Either the federal government provides more transportation funding, the private sector and local governments provide additional funding, or our transportation infrastructure worsens. (See the Infrastructure Task Force 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?” we developed the below funding ballot. The ballot 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.



Meeting attendees were given the ballot, 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 ballot exercise 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?” Ballots were collected at the meeting from the meeting attendees, and staff calculated the percent of funding for each transportation program.

The ballot results from these meetings are shown below.

NEW VISIONS *(Regional Transportation Plan)*

Federal Transportation Funding Priorities-

If you had $100.00 how would you spend it on transportation?

Mode of Transportation	*CDRPC Workshop 5/1/14 % dollars*	*CDTC Policy Board 6/5/14 % dollars*	*Freight Advisory 7/6/14 % dollars*	*CDTC Planning Committee 8/6/14 % dollars*	*Saratoga Traffic Study 9/10/14 % dollars*	*Albany Torch Club 10/6/14 % dollars*	*Bicycle & Pedestrian Task Force 11/25/14 % dollars*	*AVERAGE OF ALL SURVEYS*
Alternative Fuel Technology	8%	6%	10%	7%	10%	10%	6%	8.2%
Bicycle & Pedestrian	12%	12%	6%	12%	8%	11%	21%	11.7%
Freight	9%	10%	27%	8%	11%	12%	8%	12.4%
Intelligent Transportation Systems	10%	7%	7%	7%	14%	11%	8%	9.1%
Road & Bridge Repair	38%	38%	30%	42%	33%	25%	24%	32.9%
Transit - Buses	9%	15%	9%	15%	7%	15%	19%	12.7%
Transit - Light Rail	10%	8%	9%	5%	10%	10%	7%	8.4%
Travel Demand Management	4%	4%	2%	4%	5%	6%	7%	4.6%

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 ballot results is found in the table below.

Transportation Category	TIP Average Percent	Ballot Average Percent
Alternative Fuel Technology		8.2%
Congestion Relief	7%	
Bridge and Pavement Repairs	56.6%	32.9%
Supplemental Actions/Bike & Pedestrian	7.3%	11.7%
Intermodal/Freight	2.6%	12.4%
Transit	19.3%	21.1%
Demand Management	0.2%	4.6%
Community/Econ. Dev.	3.6%	
ITS	3.3%	9.1%
No Applicable Category	0.1%	
Total	100%	100%

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

- The public completing the funding ballots 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 ballot 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 ballots for Bicycle & Pedestrian projects and Freight 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 the entire Country are decreasing, 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.

CDTC recommends that these ballot funding preferences be used with other sources of input to guide New Visions funding preferences, and preferences in our TIP and our other planning documents. Because of the above trends, we also recommend that future regional transportation funding be programmed, as close as reasonably possible, in the portions or percentages found in the funding ballot exercises above.

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 and reviewed 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 fully examine the past funding at all 4 stages of the federal-aid process, i.e. planning targets, TIP programmed funding, obligated funding, and expended funding.

Because TIP programmed funding is 5-year funding (actually 5 current years and 2 previous years) and because planning targets, obligated funding, and expended funding are annual funding, we will examine the TIP programmed funding first. Below are the levels of TIP funding programmed in our last 6 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.

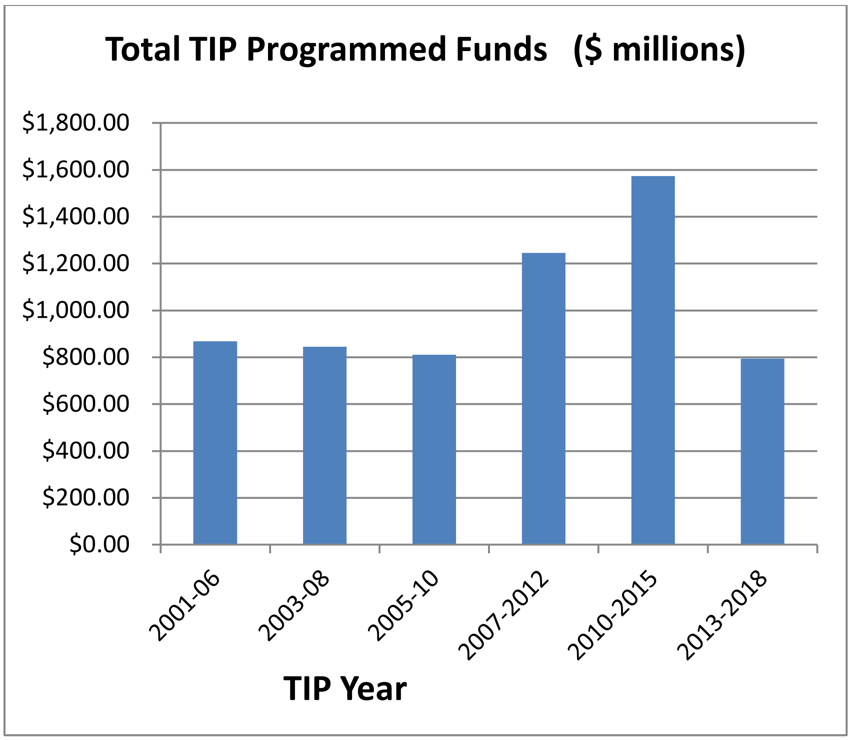
In the next 2 TIPs (the 2007-2012 and 2010-2015 TIPs) the levels of programmed funding are anomalies (exceptions or outliers). These 2 TIPs were significantly higher than the other TIPs because they included the following:

- 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

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 should have seen less spending. However in 2009 and 2012, our national and state leaders decided to use proven economic strategies and to increase transportation spending in order to stimulate or boost our economy.

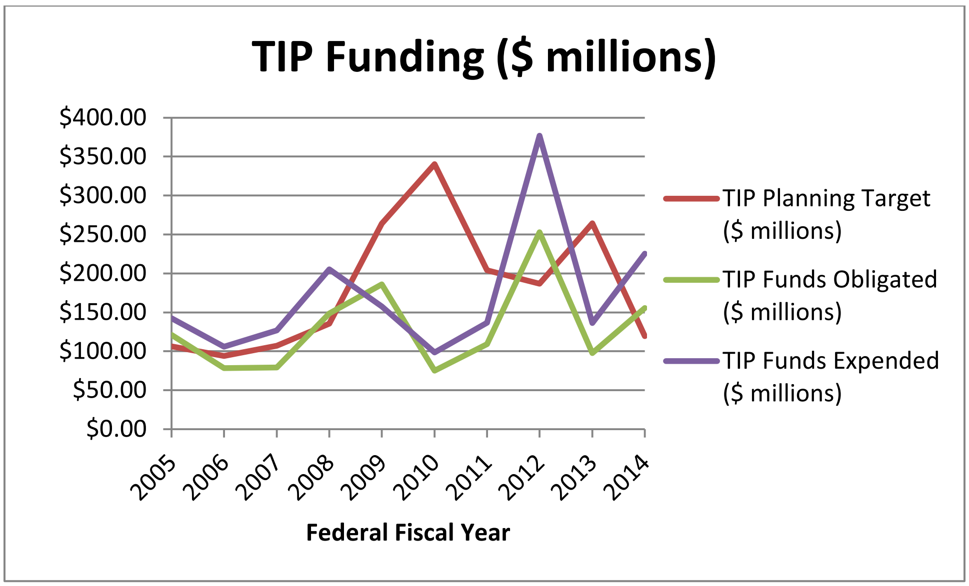
In the current TIP (2013-2018) the level of funding is lower because the federal transportation funding did not keep pace with the needs and because of the lower State planning targets allotted to MPOs.

TIP	Total TIP Programmed Funds ($ millions)
2001-06	$868.19
2003-08	$844.61
2005-10	$810.59
2007-2012	$1,246.00
2010-2015	$1,574.00
2013-2018	$795.00



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)	TIP Funds Expended ($ millions)
2005	$106.15	$121.02	$142.44
2006	$93.95	$78.23	$105.90
2007	$106.93	$79.19	$126.99
2008	$135.32	$148.39	$205.26
2009	$263.83	$186.00	$157.60
2010	$340.43	$75.14	$98.54
2011	$204.17	$109.11	$136.75
2012	$186.58	$252.67	$376.94
2013	$264.17	$97.76	$136.44
2014	$119.54	$155.42	$225.34



In the above chart, 2 dominant peaks occur in 2010 (red line) and 2012 (purple 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 2nd 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. However once again as in our examination of the TIP programmed funds, these funding trends and lack of any strong correlations do not allow us to forecast funding trends for the long term (10-15 years).

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.

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.

The public must realize that these and the many other estimates of transportation infrastructure shortfalls are realistic, and are not the "boy crying wolf." These shortfalls have been researched, agreed upon by many divergent groups, reported upon by the news media and many professional associations, and even discussed in government. The longer we take to fund transportation projects which reconstruct and renew our current infrastructure, the higher the cost and longer it will take to rebuild. Transportation infrastructure like all other "hard" infrastructure will not last forever.

CDTC will have a better estimate of this funding shortfall once we have collected the necessary data to run our Highway Condition Projection Model. We will have this estimate in the coming months.

Big Idea/Big Ticket Initiatives

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

To understand how these "big initiatives" developed, the working group selected six of the case studies for more in-depth examination by staff. These six initiatives were selected because they were considered the most probable for serious consideration in the Capital District. The working group concluded that though our region was not yet ready to consider serious implementation of these initiatives, a sense of urgency for action could emerge quickly and unexpectedly, and that we should be prepared to respond.

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

- A sense of urgency is typically present.
- The initiative reflects the sensibilities and community values of the region, producing a strong <u>community consensus</u>.
- 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 –

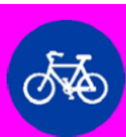
reflecting a willingness to pay.
- In the absence of the conditions to support big initiatives, it is difficult to attain comparable impact through incremental changes.

Fourteen regional long range plans from other metro areas were also reviewed leading to the following conclusions:
- System expansion plans in growing areas are very substantial and expensive.
- Major expansion plans rely on substantial revenue programs beyond federal aid.
- Most rapidly growing areas expect to lose ground in terms of overall system quality and performance, despite significant system expansion.

The working group and staff concluded that not all the pre-requisites for big initiatives are present in the Capital District, but this could change in the future. They developed a list of 16 potential Capital District big initiatives (see table below) and concluded that CDTC in our long range planning and public outreach efforts would:

- Continue to clarify, document and secure a broad consensus for community values and regional objectives.
- Explore in other CDTC regional plans potential Capital District application of those hypothetical “big initiative” concepts outlined in table below that are consistent with community values and standing a good chance of achieving a regional consensus for implementation. CDTC’s Regional Greenway Concept Plan which is found on our website is an example of this effort.
- Monitor the emergence of a sense of urgency and of potential champions that are necessary to generate support and financial resources for implementation of the consensus concepts.
- Be prepared to initiate serious consideration of the consensus concepts as soon as warranted by urgency and other conditions. Urgency can come from desire as well as need. The region may choose to pursue ideas because they are good, not just because they seem necessary.

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.

	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.

In the New Visions 2035 Plan update CDTC once again examined these potential "big ticket" initiatives. Funding was not identified, yet the plan put forward the vision of bold investments that could be feasible if the public supports the vision and funding can be found. The Plan was cautious, because it did not commit to any of the "big ticket" initiatives without the funds to support them. These initiatives still represented a creative approach, since the plan empowers CDTC members and others to continually explore big ideas. This innovative approach ensures that the Capital District maintains vision during periods of financial constraint.

The 2035 Plan recognized that investments in the big ticket initiatives can catalyze a more concentrated development pattern under any growth scenario. The caveat was that the big ticket initiatives were still unfunded, and by themselves would not induce high growth.

Three big ticket initiatives were removed from the 2030 New Visions list in the 2035 New Visions Plan update. They were deemed no longer feasible, needed, or supported by community values or Statewide Plans. Those 3 deleted big ticket initiatives were:

- Major Highway System Construction
- Take-a-lane Program
- Intelligent Traffic Management Program

For Major Highway System Construction, new road construction was deemed unnecessary based on current trends of decreasing vehicle miles traveled, no longer feasible under the current funding, and not consistent with community values. Regarding the Take-a-lane Program, since I-87 is our most heavily traveled interstate highway, this concept was once again explored in the 2014 I-87 Corridor Study, and deemed not feasible. In the case of the Intelligent Management Program, the New York State Department of Transportation (NYS DOT) has steadily progressed this initiative on a smaller scale.

The 2035 Plan Big Ticket Initiatives included:

- Regional Greenway Program
- Riverfront Access and Urban Development Program
- Street Reconstruction and Reconfiguration
- Roadway Widening and Connections Program
- Suburban Town Center Development
- Bus Service Expansion, BRT Program with Transit Oriented Development
- Guideway Transit System with Transit-Oriented Development
- Managed Lane Program
- Highway Noise Program
- Demand Management Program
- Clean, Efficient Vehicle Program Intelligent Traffic Management Program
- Video Surveillance and Enforcement Program
- Comprehensive Traffic Safety program

As with every Plan update, the 2040 New Visions Plan update is our opportunity to review the status of these big idea/big ticket initiatives, and determine if they still belong in our regions list of lofty goals. There are 3 reasons why these 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.

Since the 2035 New Visions Plan development several changes have occurred which effect these big ticket initiatives. They include:

Regional Greenway Program – Portions of the Albany County Rail Trail have been opened as a walking trail, and the last segment connecting Delmar to Downtown Albany will be constructed in 2015. The City of Albany is not looking at ways to connect the Rail Trail to the Hudson Mohawk Bike Trail. Unfortunately 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.

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 should be completed by the end of 2015. 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.

Roadway Widening and Connections Program – For the same reasons above, little progress has been made toward this big ticket initiative. Since the last plan update there has been little regional interest in this type of project. In fact recently there has been more interest in “right-sizing” or road dieting our region’s roads than there has been for widening. Demographic trends such as reduced vehicle miles traveled (VMT) per capita, fewer young people obtaining drivers licenses and purchasing vehicles, increased transit ridership, and the repopulating of our urban centers also discourage these types of projects. All these things considered, CDTC staff is recommending that New Visions no longer include this big ticket initiative.

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.

Bus Service Expansion, BRT Program with Transit Oriented Development – Significant progress has been made towards the implementation of this initiative. In 2012 CDTA began the first Bus Rapid Transit Service in upstate New York, their BusPlus (Red Line) on the Route 5 Corridor between the Cities of Albany and Schenectady. CDTA is currently in the planning and design stages for 2 additional BusPlus lines, the Purple Line on the Washington Ave./Western Ave. corridor in the City of Albany, and the Blue Line River Corridor between the City of Albany and the City of

Cohoes with service to the City of Troy. When operational, these 3 BusPlus lines will provide the region with 40 miles of BRT, and we will be well on our way to our goal of 100 miles. Because of this progress, CDTC staff is recommending that BRT Expansion no longer be considered a big ticket initiative in our New Visions Plan.

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 near future (say 2-3 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."

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

Managed Lane Program – This initiative cannot be supported by current or forecasted funding. However 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.

Highway Noise Program – This initiative was partially implemented on the New York State Thruway during their expansion project between Exits 23 and 24. This project added one travel lane in each direction and constructed noise barriers in 9 separate locations between adjacent residential developments and the highway. The Federal Highway Administration only requires owners of interstate highways to mitigate highway noise impacts when highways are widened. Because of this and because of the funding and demographic trends discussed in the "Roadway

Widening" initiative above, CDTC staff is recommending that New Visions no longer support this big ticket initiative.

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 bikesharing, and will continue to develop this option. That said TDM strategies are cost effective ways to reduce the number of 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.

Clean, Efficient Vehicle Program – CDTC hosts the Capital District Clean Communities coalition for our region. This U.S. Department of Energy program continues to make impressive progress in their campaign to reduce petroleum used in transportation. The Capital District Clean Communities coalition consists of many public agencies and private fleet owners who are committed to changing their fleets to alternative fuel vehicles, and the amount of petroleum fuels displaced in their annual reports continues to increase each year. Significant public and private funding is available to make these improvements. Because of this progress, CDTC staff is recommending that the Clean, Efficient Vehicle Program no longer be considered a big ticket initiative in our New Visions Plan.

Video Surveillance and Enforcement Program – This program has had very limited support and interest from municipalities in our area. In 2014 the City of Albany received New York State Legislature approval for a trial program consisting of red light running cameras at 20 intersections, but no other municipality has expressed interest at this time. Because of its limited application, controversial use, and lack of interest, CDTC staff is recommending that New Visions no longer support this big ticket initiative.

Comprehensive Traffic Safety Program – CDTC continues to work with its members and the NYS DOT to develop these programs on a case-by-case basis. Recently a comprehensive safety program led by the NYS DOT was completed for the Route 5 corridor between the Cities of Albany and Schenectady. The program participants included representatives from all the municipalities along the corridor, and traffic safety enforcement, education, and engineering professionals from throughout the region (including CDTC). The program developed a public relations campaign, a coordinated enforcement effort by all the law enforcement agencies along the corridor, and several engineering improvements. CDTC also continues to work with its members to develop a local road safety improvement program based on the latest traffic crash data. For more information about CDTC safety programs, see the Operations and Safety portion of our New Visions Plan.

Since traffic safety is completely integrated into our programs and our project selection criteria, CDTC staff is recommending that a comprehensive traffic safety program no longer be considered a big ticket initiative in our New Visions Plan.

Based on the above examination, we recommend that the Roadway Widening; BRT Expansion; Highway Noise; Clean, Efficient Vehicle Program; Video Surveillance; and Traffic Safety initiatives be removed from the list of big ticket initiatives and that the following 7 big ticket initiatives be 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

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
- 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

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 crashes, increased transportation costs, and more. These impacts can range from slight impacts which are sometimes ignored to significant impacts which can impact people's daily lives.

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 support 83 land use/transportation community planning studies since its inception in 2000. Linkage studies completed or underway include the following:

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 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
Altamont Bicycle/Pedestrian Master Plan
Bethlehem Delaware Avenue Hamlet Enhancement Study
Bethlehem Route 9W Corridor 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/Princetown 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
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
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
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
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

Schenectady Route 5 Transit Gateway Study
Schenectady State Street Transit Oriented Development Study
Schenectady Urban Bike Route 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	6	7	5	3	21
Transportation/Land Use	8		2	6	16
Bike/Ped	8	3	2	2	15
Town/Hamlet/ District Center	4	2	4	1	11
Zoning/Design Guidelines	3	2	2		7
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				2
Total	36	15	17	15	83

As you can see from above, sixty-three (63) of our 83 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.

Overall several linkage study recommendations have been totally or partially implemented by their municipal sponsor. In 2014 one of our linkage studies completed in the City of Schenectady received a $400,000 implementation grant from the New York State Economic Development Council.

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 SUNY Polytechnic Institute 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 and Village of Colonie, own of Niskayuna, City of Schenectady – provides new service and improves access and mobility throughout the entire NY 5 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.

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

On February 11, 1994, President Clinton issued Executive Order 12898, "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations". 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 affects, 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 outreach effort, 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 – A great transportation system with great choices will help 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 sensitive environmental resources.*

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 evenly 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.
3. **Explore the Use of Innovative Funding Sources** – Because federal funding is not keeping up with transportation needs, other sources of funding should be explored, including impact or mitigation fees, user fees, dedicated transportation fees, public/private partnerships, etc. In additions, technological advances will permit time-based (higher for congested times) and impact-based (higher for heavy vehicles) fee structures. Legal authority would be required to extend these fee structures beyond current toll roads. The new funding sources will be needed to go beyond maintenance and repair needs and to improve our region's transportation system.

DEVELOPMENT AND LAND USE

4. **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.

5. **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.

6. **Recommend Travel Demand Management (TDM) Plans from developers** – Currently most local municipalities require large residential and commercial developers to complete a Traffic Engineering Study when they develop properties within their boundaries. Based on the information submitted by the developer, these studies forecast the increase in the number of vehicles which results on adjacent roads and which are attributed to the construction of the development. This vehicle increase is then added to the existing traffic, and its impacts on traffic operations on adjacent roads and intersections is determined. Since these studies only deal with vehicles, the recommended solutions also only deal with vehicles, and ignore the other modes and travel demand management strategies which can decrease the number of vehicles and still provide transportation to and from the development. These strategies include carpooling, vanpooling, walking & biking, carshare, bikeshare, transit, commuter buses, park & ride lots, etc. Considering vehicle traffic, other modes, and these strategies in a TDM Plan would increase the number of solutions and give municipalities and developers the ability to choose the most cost effective strategies.

PLAN DEVELOPMENT

7. **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.

8. **Update and upgrade project selection criteria** – The existing project selection criteria is relatively technical, relies too heavily on the benefit/cost ratio, does not reflect current priorities or recently emphasized criteria (e.g. economic development, freight, environmental justice, etc.), and is not easily understood by all our members. It also needs to be more directly related to the implementation of the current New Visions principles. In order to accomplish this goal, staff should conduct an analysis which reviews the current criteria, compares current criteria to criteria used by other MPOs and to current New Visions principles, and recommends changes.

9. **Develop a Training Program that specifically targets local planners, local planning board members and other local decision makers** – CDTC should provide training to local decision makers so that they can make informed and educated planning decisions. Potential training topics should include:

   - Bicycle and Pedestrian Planning & Strategies
   - Transportation Safety Planning & Strategies
   - Smart Growth
   - Complete Streets
   - Road Diets
   - Transportation and Land Use
   - Transportation Economic Development
   - Environmental Justice

   This training program must be consistent with and promote New Visions principles. Local officials educated on these topics will help CDTC further implement our New Visions principles.

10. **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.

11. **Improve the collection of transportation data to support regional transportation planning and analysis** – 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

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 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. **Include economic development criteria in project selection** – Project sponsors and their projects should receive "credit" in CDTC's project selection process for an economic development element. In our analysis of project selection process, CDTC should encourage sponsors to consider economic development in their project planning and programming, and should develop and include such criteria in our project selection.

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. **Include environmental justice criteria in project selection** – Project sponsors and their projects should receive "credit" in CDTC's project selection process for an environmental justice element. In our analysis of project selection process, CDTC should encourage sponsors to consider environmental justice in their project planning and programming, and should develop and include such criteria in our project selection.

3. **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.

4. **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.