

















Final August 4, 2020

Long-Range Transportation Plan September 2020

A Message from the Chair

Dear Capital Region resident,

The Capital District Transportation Committee released its first New Visions Plan over 20 years ago. This plan presents a regional consensus about the future of transportation in the Capital Region and was developed in consultation with residents, businesses, transportation providers and state and local government leaders.

New Visions 2050 is the next step in shaping transportation policy and investment in the coming years. We have prepared this document to provide an overview of the Plan for the region and the opportunity to participate in its continued development. Rapidly changing technology, an aging population, a climate in crisis, and a changing economy makes the future more uncertain than ever before.

The last decade was the warmest on record and transportation continues to be the largest contributor of greenhouse gas emissions, a driver of climate change. At the same time, our country and region are facing deepening inequality and communities must make investments that correct past oversights while creating new opportunities that make the region more sustainable. We are confident the Capital Region will be able to adapt and thrive despite the challenges we face.

This Plan is a framework that describes how to meet the region's transportation needs in a cost-effective manner while promoting safety, resiliency, more equitable communities, and improving the overall quality of life. New Visions 2050 advocates for continued urban investment, concentrated development, and smart land use. From renewing road and bridge infrastructure to developing a connected system of safe walking and bicycling facilities, it supports a robust, connected transportation network that provides affordable and safe transportation choices to move people and goods.

A quality region requires your commitment to participate in local and regional planning initiatives. We invite you to share your ideas: write a note, visit our webpage at <u>https://www.cdtcmpo.org/transportation-plans/nv2050</u>, comment, request a presentation, or organize a meeting in your community. The choices we make now will affect our future.

We look forward to continuing this important collaboration as we choose the future of the Capital Region.

Kathy M. Sheehan Mayor, City of Albany

Capital District Transportation Committee Long Range Transportation Plan

New Visions 2050

September 2020

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About CDTC

The Capital District Transportation Committee (CDTC) is the designated Metropolitan Planning Organization (MPO) for the Albany-Schenectady-Troy and Saratoga Springs metropolitan areas. CDTC is responsible for fostering regional cooperation and coordination of planning activities in Albany, Rensselaer, Saratoga (excluding the Town of Moreau and South Glens Falls), and Schenectady counties. This means working not just with municipalities and elected officials, but state and federal agencies and regional organizations, as well as transportation industry experts to make decisions about major transportation infrastructure investments.

Monument Square, City of Troy Kelly DeLay Photography

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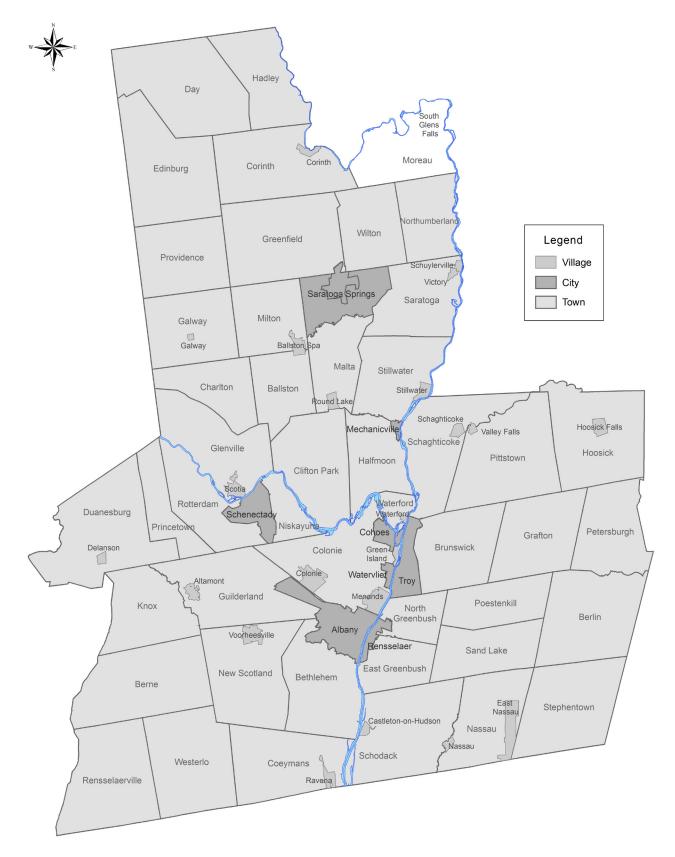
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CDTC Planning Area



Federal Requirements

MPOs are tasked with certain responsibilities in accordance with the most recent federal transportation legislation, Fixing America's Surface Transportation (FAST) Act. The policy and provisions of this legislation are still in the process of being carried out by the U.S. Department of Transportation (USDOT) through the regulatory process. Federal regulations require CDTC to produce three major products: (1) regional transportation plan (RTP, New Visions); (2) Transportation Improvement Program (TIP); and (3) Unified Planning Work Program (UPWP).

LRTP The Long Range Plan establishes	TIP		 National Goals Safety Infrastructure condition
investment policies & principles that guide decision- making & activities for a planning horizon of no less than 20 years & updated every 5 years.	The Transportation Improvement Program is the 5-year capital program of projects.	UPWP The Unified Planning Work Program is a 2-year plan that contains all MPO activities & task budgets.	 Congestion reduction System reliability Freight movement & economic vitality Environmental sustainability Reduced project delivery

CDTC refers to its RTP as *New Visions*. *New Visions* is a 30-year plan that outlines investment principles and planning strategies that will guide the region towards developing the transportation network we need. The plan addresses national, state, and regional funding priorities and reflects the needs and concerns of local communities.

New Visions 2050 was developed in coordination with CDTC's partners from the Capital District Transportation Authority (CDTA), the Capital District Regional Planning Commission (CDRPC), the New York State Department of Transportation (NYSDOT), the Albany Port District Commission, Albany County Airport, and representatives from the region's counties, towns, cities, and villages. Additionally, the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA) provided guidance on the construction of the overall plan and adoption process.

Federal Planning Factors

Support the <i>economic vitality</i> of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency.
Increase the <i>safety</i> of the transportation system for motorized and non-motorized users.
Increase the <i>security</i> of the transportation system for motorized and non-motorized users.
Increase the <i>accessibility</i> and mobility of people and freight.
Protect and enhance the <i>environment</i> , promote energy conservation, improve the <i>quality of life</i> , & promote consistency between transportation improvements and State and local planned growth and economic development patterns.
Enhance the <i>integration and connectivity</i> of the transportation system, across and between modes, for people and freight.
Promote efficient system management and operation.
Emphasize the <i>preservation</i> of the existing transportation system.
Improve the <i>resiliency and reliability</i> of the transportation system, and reduce or mitigate stormwater impacts of surface transportation.
Enhance travel and tourism.

Planning & Investment Principles

1	Invest in a Quality Region
2	Support Economic Development
3	Make investments regionally equitable
4	Preserve and manage the transportation system
5	Maintain travel reliability
6	Invest in safety
7	Invest in security
8	Invest in Complete Streets
9	Encourage bicycle and pedestrian travel
10	Move freight efficiently
11	Invest in transit
12	Provide essential mobility for all
13	Prioritize affordable and convenient travel options
14	Preserve the environment
15	Leverage technology

New Visions 2050

New Visions 2050 Highlights

The New Visions 2050 is a minor update to the New Visions plan released in 2015. This update is a major undertaking of CDTC staff, members and interested parties that participated in a number of Task Forces. CDTC engages the public and collects input on an ongoing basis through its Transportation and Community Linkage Program, collecting feedback on key policy questions, transportation concepts, and needs of stakeholders including local governments, transportation professionals, chambers of commerce, environmental groups, neighborhood associations, and the general public. This plan reflects the input received and consensus building efforts of previous longrange planning activities.

Planning the Capital Region's transportation system for the year 2050 presents vast opportunities and real challenges. How will our region grow and evolve? What type of transportation system will best meet the future needs of our residents and visitors? How do we maintain a high quality of life while expanding access to transportation choices and creating new economic opportunities? Will new technologies present opportunities, create challenges, or "disrupt" the transportation system? What kinds of projects will we be able to afford?

New Visions does not contain a list of all projects that CDTC expects to undertake over the next 20 years. And it is not a substitute for the careful project-by-project priority setting that takes place in creating the TIP, or the careful examination of alternative solutions to site-specific problems that encompasses the planning and design process. This Plan is a statement of principles, strategies, and budgetary emphasis to guide more detailed project decisions as the region invests in a next generation transportation system. The Planning and Investment Principles are the centerpiece of the New Visions plan.

What's in the Plan?

- System Performance Report
- Public Participation Plan
- 11 Technical Area Papers
- Financial Plan
- Glossary of Terms & Abbreviations

CDTC's approach to transportation planning is comprehensive and holistic. It shifts the emphasis on routine transportation projects like highway and bridge repaying to a structured balance between actions that reduce congestion and improve safety, increase access to transportation choices like transit, walking, or bicycling, and benefit economic development efforts. The plan calls for investments that are consistent with local growth, encourage smart land use, and simultaneously improve transportation for all ages, abilities, or modes of transportation. This means prioritizing investments in the existing system of roads and bridges while continuing to invest in high quality transit service, bicycle facilities, pedestrian infrastructure that improves safety, and technology to help manage traffic congestion.

All segments of the Capital Region – individuals, families, communities, and businesses - rely on and benefit from the transportation system. Quality of life is impacted by the transportation system – mobility and accessibility, the built environment, and vehicle traffic. It creates economic, social, educational, cultural, and recreational opportunities. Not everyone shares the same quality of life because the transportation system does not serve all populations equally. CDTC's goal is to develop New Visions through an equity lens, as a series of strategic investments that shape the region and our communities into their best versions.



A review of all 11 technical papers reveals an ambitious plan with many recommendations. Full implementation of New Visions 2050 will achieve national and state transportation goals and performance measures. The technical papers have common themes and touch on many goals and actions to meet the economic, social, educational, cultural, and recreational needs of the region. These categories are:

Safety

- Continue a strategy of holistic and systemic approaches to engineering, education, and enforcement that improve traffic safety.
- Prioritize the safety of the most vulnerable road users, including pedestrians, bicyclists, and motorcyclists, but especially children, older adults, and people who have disabilities.
- Cultivate a culture of empathy and responsibility among drivers, pedestrians, bicyclists, and others who share roadways.

Resiliency

- Adapt, reorganize, and evolve the transportation system into a more desirable configuration that is better prepared for flooding, hazards, and the future impacts of a changing climate.
- Provide reliable service drivers, transit riders, pedestrians, bicyclists, freight shippers, air travelers, and even tourists value reliability and the efficient use of their time.
- Reduce greenhouse gas emissions from transportation.

Accessibility

- Maintain or improve overall service quality and infrastructure conditions.
- Support economic development by improving access to affordable transportation.

Technology

- Foster the use of technology to innovate and develop solutions for real gaps and weaknesses in the transportation system.
- Make cyber-security a priority adopt smart data policies that protect the privacy of individuals.
- Recognize the potential for technology to move towards zero vehicle deaths.

Equity

- Build strong urban, suburban, and rural communities.
- Transportation investments will address all needs fairly and equitably.
- Develop all plans and projects and analyze all transportation policies through an equity lens to eliminate negative impacts to underserved and marginalized individuals and groups.

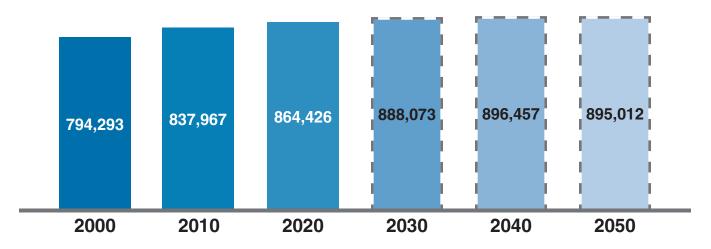
Are We There Yet?

Since New Visions 2030 was adopted in 2015, CDTC has put forth ambitious programmatic and system goals with the understanding that future funding was uncertain. With limited funding and resources, the region has completed many noteworthy projects. Some examples are:

- Initiated implementation of the Pedestrian Safety Action Plan
- Built the regional trail network at a rate of 7 miles per year.
- Developed a Local Road Safety Action Plan
- Evaluated alternatives for I-787 in the I-787/ Hudson Waterfront Corridor Study
- Developed a Zero Emission Vehicle Plan (EV Charging Plugs Plan)
- Established an Equity Task Force and Smart Communities Task Force
- Completed a regional sidewalk and bike facility inventory
- Launched interactive public involvement features through the redesigned CDTC website
- Constructed 17 miles of Bus Rapid Transit

- Trained 8 communities on implementing Complete Streets
- Supported the launch of a regional bike share system, as well as a car sharing service
- Reduced fatal and serious injury crashes
- Funded 89 Transportation and Community Linkage studies since 2000

The Capital Region is a unique, multi-nodal area that includes 8 cities and a number of unique towns and villages connected by a series of highways and arterials and economy. The region is situated at the crossroads of two major interstates (I-90 and I-87) and two rivers (the Mohawk and Hudson). There are diverse communities, from vibrant urban centers to rural agricultural lands and villages, which are attractive destinations for visitors due to the number of social, cultural, and recreational opportunities they have created. It is the home of a state Capitol and enjoys a stable economy bolstered by a large state government workforce, a number of colleges and universities, and large medical institutions. Despite these advantages and consistent development, the region has experienced little growth, and population is not projected to significantly increase.



Slow Growth Region

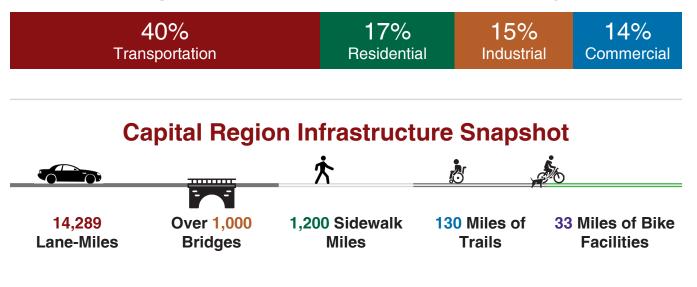
Much of the region's roads and bridges were constructed during a period of rapid growth and development in the mid-20th century. During this period, federal spending on infrastructure was twice what it is today. Preserving this system of roads built decades ago so that they last for generations, while meeting changing needs, remains a top priority for all levels of government. The region's street and highway system has a replacement value exceeding \$30 billion and many of the region's key assets are expected to reach the end of their useful service life during the planning horizon of the 2050 plan. We have to begin a conversation on how to fund the renewal of these vital pieces of the region's transportation system now.

The combination of continued development without growth and an extensive network of highways and bridges have created a development pattern that increases driving. This means that transportation, mainly singleoccupant vehicles, continues to be the largest source of greenhouse gas emissions, a driver of climate change. A network of paved trails, onroad bike facilities, and sidewalks complements the region's network of highways and bridges. This system is vital to support transit, to protect people walking and bicycling, and to create economic opportunities and activity, particularly in town centers and downtown areas. Communities in the region continue to invest in their walking and bicycling infrastructure and bring their sidewalks, intersections and other street crossings into compliance with the Americans with Disabilities Act (ADA). While this is a challenge, CDTC is providing technical and funding assistance to local communities. Transit and other intermodal facilities, like the Port of Albany and Rensselaer and Albany County Airport, rely heavily on the quality of the network of roads, bridges, sidewalks, and other infrastructure that connect them. These facilities move people and goods to where they need to be and are vital to the region's economy.

While declining revenues have created challenges and contributed to declining conditions within the transportation system, CDTC has employed innovative strategies to deliver access to transportation choices to more people than ever before. The number of miles of sidewalk and paved trails has increased, meaning more residents are within reach of safe walking and bicycling facilities. Major investments in the transit system, like bus rapid transit, have brought high quality transit to more people. New programs and services, such as bike share and car share, carpool ride matching services, vanpool incentives, and complimentary weekend trolleys have closed gaps in the transportation network and attracted new activity to the region's cities.

New Visions 2050

Capital Region Greenhouse Gas Emissions by Source



As transit ridership grows and reaches new populations, and we provide more safe walking and bicycling options, continued strategic and systemic safety improvements are needed. Vehicle crash fatalities are trending downward because of improved vehicle safety features and systemic changes to roadway design, but bicycle and pedestrian fatalities and serious injuries have increased. Safety is a top priority and CDTC will continue to offer support to local communities in assisting with strategic safety programming and education.

CDTC is cautious as we look out to 2050 and anticipate what resources will be available to preserve the system we currently have. Since 2008, the Highway Trust Fund (supported by the gas tax), has depended on over \$140 billion in transfers from other sources to fund transportation. This has resulted in flat funding over the past decade and created significant gaps in funding for infrastructure maintenance, reconstruction and new construction. New revenue sources must be explored as we think about investing in a transportation system for the next generation (and beyond).

Capital Region Snapshot

Since New Visions 2030



Daily Regional VMT 22.7 million



80% Drive Alone to Work

10% Walk or Bike to Work



At about 30%, Speeding was the largest traffic ticket type issued to drivers in 2018



346 EV Charging Plugs

270,000 vehicles cross the Hudson 230,000 vehicles cross the Mohawk River daily Fatal crash & injury rates are trending downward

Non-motorized crashes are trending upward



The Port of Albany generates \$813 mill annually in economic activity



Albany International Airport generates \$750 mill annually in economic activity



Multi-unit housing development is outpacing construction of new single family housing.

Thaddeus Kosciusko "Twin" Bridges Philip Kamrass Photography

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Driving Forces

There is very little certainty about the future and how technological innovations will impact the region's transportation system. Given what we know today, we can see glimpses of this future system based on what we've learned from the past, changing policies and values, and the economy. In the past 10 years smartphones have changed the ways in which we interact, shop, navigate, research, and more. Transformative innovations in the transportation sector are poised to have an equally, if not more revolutionary impact on our cities and economies in the next three decades. We are on the cusp of three revolutions transportation: vehicle electrification. in automation, and widespread shared mobility. These revolutions will fundamentally change transportation around the world and here in the Capital Region, separately, and together. Together, the positive and negative aspects of each revolution will interact in impossible to predict ways. However, there are pathways and policies that can help cities, regions, and states expand access to mobility, reduce transportation costs and meet climate goals through the convergence of the three revolutions.

Electrification refers to the shift to EV technologies from petroleum-based fuels. In recent years battery electric and plug-in hybrid vehicles have increased in numbers in the region. Vehicle electrification has the potential to cut vehicle energy use and eliminate greenhouse gas emissions if power generation shifts away from fossil fuels.

Anticipating connected and automated vehicles (C/AVs) is a major theme in long range transportation planning. The timeline for deployment of a vehicle that can travel without a driver is uncertain, but new vehicles are beginning to include C/AV features like adaptive cruise control, lane centering and automated breaking. A system dominated by self-driving cars by the year 2050 is not improbable. C/AVs can provide important safety benefits, reduce labor costs & enable cheaper travel & productivity.



Automated vehicles, eliminating the need for

a driver

Hybrid-electric and all-electric vehicles

People took 84 million trips on shared bikes, e-bikes, and e-scooters in 2017 in the U.S. Shared mobility took hold in the Capital Region in 2014 with the launch of Capital CarShare and has since grown to a regional scale with CDPHP Cycle! bike share, operated by CDTA. Shared vehicle trips & public transport can lead to more efficient use of urban space, reduce traffic congestion enable more walking & bicycling, and cut energy use & emissions. Vehicle electrification and automation may create significant and important benefits to safety and emissions reductions, but without a corresponding shift towards shared mobility, greater transit use, walking and bicycling, these two revolutions could increase congestion and sprawl development. In contrast, supporting and encouraging trip sharing, transit use, walking, and bicycling through the New Visions 2050 investment principles and policies, these revolutions will converge to create more livable, walking communities, make it easier and more affordable to get to jobs and other opportunities, reduce infrastructure maintenance costs, and significantly reduce emissions.

Social, Cultural, Economic & Environmental Changes

Capital Region growth has been slow but the rising cost of living and growing threat of the climate crisis in large U.S. cities on the coasts and in the south, could make the region's small cities and communities more attractive to new businesses and residents. The region's cities were built for larger populations than what they currently support and are better able to absorb population growth. This type of potential growth could increase the tax base and create more jobs and vibrant communities.

Land use and transportation have influenced the direction of society for decades. In the Capital Region, post-World War II prosperity produced massive growth and infrastructure development, like the Adirondack Northway (I-87). Economic growth of the 1980s produced a commercial building boom that brought us Crossgates Mall, Corporate Woods, and other new office spaces. After decades of population loss and urban disinvestment towards the end of the 20th century, the region's cities began to see population growth, reinvestment, and new activity in their downtowns in the early 21st century. But while cities and the region as a whole, benefited from renewed interest and lifestyle shifts from the Millennial and Baby Boom generations, the 2010s were also marked by the effects of the Great Recession.

Climate Leadership & Community Protection Act (CLCPA)

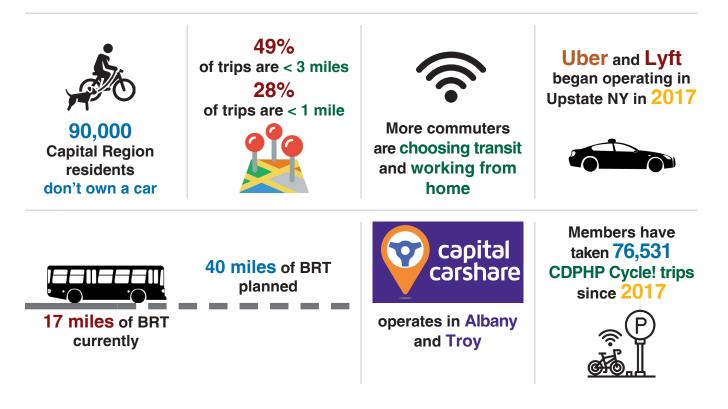
The CLCPA was signed by the Governor in 2019. Considered to be the "most ambitious climate target in the country," this legislation establishes aggressive legally binding targets to move NY's economy off fossil fuels. Based on these targets, NY must achieve a 40% reduction in GHG emissions from 1990 levels by 2030 and 85% by 2050. This means developing a carbon-free energy system through strategic investments.

Local and state governments struggled during the Great Recession and austerity budgets meant deferred infrastructure maintenance, consolidation, and sometimes the elimination of social programs. While the American Recovery and Reinvestment Act (ARRA) of 2009 helped support the continued progress of modernizing infrastructure and investing in sustainability programs and projects, local budgets are still recovering and the post-Great Recession economy has exposed worsened economic inequality, a lack of affordable housing options, and access to opportunity for low-income persons.

Awareness and dialogue related to equity and how past policies and funding decisions have impacted low-income and minority communities has persuaded CDTC to make a push to create just communities for all through efforts like environmental justice and community engagement. CDTC has incorporated equity, not as a topic in and of itself, but as a lens through which all new policies and programs should be focused. Improving connectivity to employment and activity centers is needed, as 90,000 residents do not have a vehicle and the costs of owning a vehicle are between 14-32% of a household's income. There is no doubt that transportation options have widened in the last decade. Rapid technological change led to transportation innovations, like ride-hailing and bike share. These new modes and services are having a disruptive effect on the transportation system – changing travel behavior and stealing riders from the transit system. Technology has similarly transformed commerce. In a world where customers can purchase nearly anything from their smartphone, and have it delivered to their doorstep, brick and mortar stores are finding it difficult to compete with web-based businesses. What types of activities will fill these vacant storefronts and shopping malls?

As transportation emissions continue to go unchecked, the climate crisis looms large. The transportation sector is the largest source of GHG emissions in New York and the Capital Region. This makes reducing the amount we drive and electrification of the transportation system an imperative. While climate change mitigation and sustainability initiatives have fallen short, priorities have shifted from planning for a sustainable region to planning for a resilient one. A changing climate is expected to have a significant impact on agriculture and natural resources which increases the region's vulnerability to severe flooding. Achieving New York's goal of reducing greenhouse gases by 85% by 2050 requires shifting to electric vehicles and significantly reducing driving by making it easier to walk, bike or use transit.

More travel options than ever before





Local communities play an important role in the regional transportation planning process. They are on the front line in choosing and developing a quality region through the local level planning decisions they make every day.

Choosing Our Future

Understanding the likely effects of growth and change on the region is essential to identifying decisions the region's leaders might make to meet state, regional, and local goals. Rapid technological, social and cultural change has made the future more uncertain than ever before. New Visions 2050 lays out four potential futures and how transportation and available funding for infrastructure could be impacted.

Scenario planning is a structured way of thinking about an uncertain future by identifying what conditions or events are probable, understanding their likely consequences, and determining how to respond to or benefit from them. Scenario planning cannot tell you what will happen, because there are an infinite number of possibilities, and social, political, economic, technological, and environmental forces are rapidly changing. Rapidly changing trends and technology have upended traditional long-range planning and its more important than ever before for communities to be able to adapt quickly to changes.

The four scenarios contemplated for the Capital Region are potential development strategies for the future. Considering the tradeoffs and opportunities between competing development scenarios inform stakeholders and can lead to mutually beneficial outcomes for better linking land use, urban design, and transportation decisionmaking in the region. The strategies are: A) Based-Year 2050 Trend (Status Quo), B) Sprawl Development, C) Concentrated Development, and D) Concentrated Development with Financial Incentives. The status quo scenario assumes the gradual adoption of connected and automated vehicles and more availability of shared mobility services would not change trend land use and development patterns or travel behavior. The other three scenarios and their impacts were examined.

Anticipating Automation

Anticipating Connected and/or Autonomous Vehicles (C/AVs) is a major theme in long range transportation planning. They are the most significant transportation technology on the horizon. They are currently being tested in controlled and real-life conditions, but a timeline for their deployment in any considerable numbers is unknown. CDTC is proposing two divergent and potential scenarios that have the potential to be created by the deployment of C/ AV technologies in the Capital Region. These scenarios are "overlays" to the four development scenarios proposed earlier.

Overlay 1: Optimistic C/AV

This scenario assumes that connected/ automated vehicles will be well integrated into the land use and transportation system with pricing and policy structures that encourage ridesharing and transit use. Under this scenario, empty self-driving cars on the road will be minimal and vehicle miles of travel will be less than trend. Increased efficiency of self-driving allows greater real capacity on expressways, and traffic incidents will be rare. The potential safety benefits of C/AV's will be fully realized.

Overlay 2: Pessimistic C/AV

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

Sprawl Development	Concentrated Development	Concentrated Development with Financial Incentives
Lower quality land use planning	Concentrated, walkable development patterns resulting from urban investment & suburban planning	Concentrated, walkable development patterns resulting from urban investment & suburban planning
Increased driving & congestion. With C/AVs, more miles driven with no passengers in the car.	Decreases in congestion, C/AV's add capacity to expressways & arterials, multimodal travel	Decreased congestion, increased carpooling most efficient use of C/AVs, minimize potential negative impacts of C/AVs
Transit service declines, transit viability is threatened	Transit service services more people, strong market share	Transit service highly attractive & competitive, reaches higher market share
Lower access to walking & cycling per person	Better walking opportunities; more walkable region	Better walking opportunities; more walkable region
Missed opportunity for regional attractiveness	Protection of regional quality of life	Protection of regional quality of life
Deterioration of urban & suburban character	Protection of urban, suburban & rural community character	Protection of urban, suburban & rural community character
Additional loss of open spaces, environmentally sensitive lands & agricultural lands	Protection of open spaces, environmentally sensitive lands & agricultural lands	Protection of open spaces, environmentally sensitive lands & agricultural lands
Future VMT increased by 8%	Future VMT increased by 3%	VMT reduced by 3%
Less transportation choices	More transportation choices	Provides more transportation choices
Less energy efficient housing choices	More energy efficient housing choices	More energy efficient housing choices

Local communities play an important role in the regional transportation planning process. They are on the front line in choosing and developing a quality region through the local level planning decisions they make every day. Their decisions directly affect the link between land use and transportation. Where and how the region's communities plan and design the places we work, live, and shop have a direct impact on the region's network of streets, the ability to access destinations affordably and efficiently by all modes, and related to quality-of-life issues. If we want to continue to enhance transit service and provide reliable transportation options for the workforce, communities and decision-makers must orient development towards existing transit and transportation infrastructure.

New Visions 2050 sets the stage for local planning decisions. CDTC's Transportation and Community Linkage Program provides funding for cities, towns, and villages to prepare community-based transportation and land use plans consistent with New Visions principles. These principles help provide an achievable pathway to a desired future. CDTC's continued support for this program, in addition to the training and technical assistance it provides all local communities, will ensure the region is prepared for potential development scenarios. Regardless of changing technoloav and economic conditions, the region will continue to support a safe, resilient, equitable, smart and accessible transportation system.

Prediction









Quality Region

Investing in a Quality Region

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

Make Investments Regionally Equitable

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.



Support Economic Development

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

The metropolitan planning process is intended to be continuing, collaborative and comprehensive. Furthermore, CDTC has taken a holistic, multimodal approach to transportation planning, examining the transportation system as a network of many, connected modes and infrastructure. 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 is central to the direction of New Visions toward urban investment, concentrated development patterns and smart economic growth. This strategy ensures sustainable and resilient urban, suburban, and rural communities. It leverages infrastructure investments for economic growth and the creation of educational, social, cultural and recreational opportunities for all residents.

- Continue to seek funding to fully implement the plan
- Program multi-modal, equitable & balanced funding
- Encourage cooperation & coordination with local planning departments
- Continue to promote the Community & Transportation Linkage Planning Program
- Encourage drivers to drive less by developing strong alternatives
- Improve CDTC public outreach & marketing efforts
- Refine & further articulate the "Big Idea/Big Ticket" initiatives
- Improve data collection
- Promote & support NYS climate goals
- Promote & support the electrification of the transportation system
- Promote shared mobility to mitigate any negative impacts of future vehicle automation
- Move towards zero deaths from traffic crashes
- Work more closely with regional economic development agencies
- Promote economic development
 efforts
- Continue to promote regional solutions
- Regularly update CDTC's
 Environmental Justice Analysis
- Reach out for full participation
- Emphasize public participation in transportation planning, programming & implementation

Infrastructure

Preserve & Manage the Transportation System

Transportation funding must be sufficient to both repair and sometimes replace our highway, bridge, and transit infrastructure.

New Visions has made a strong commitment to keeping the region's transportation system functioning and in good condition. CDTC remains committed to the maintenance, repair, and renewal of the existing passenger and freight transportation facilities in a cost-effective manner that protects and enhances rideability, public safety, accessibility, and serviceability.

Currently the needs for repairing/reconstructing bridges and pavement, and investing in transit and port facilities outweigh available resources. Renewing existing infrastructure in our communities is fiscally responsible and consistent with New York's Smart Growth policy.

CDTC needs to ensure that system preservation and system renewal are balanced, and that roads and bridges in our cities and rural communities are equitably considered. Continued capital investment in the region's transit system, port, and airport – and their connections to other surface transport – will remain a priority.

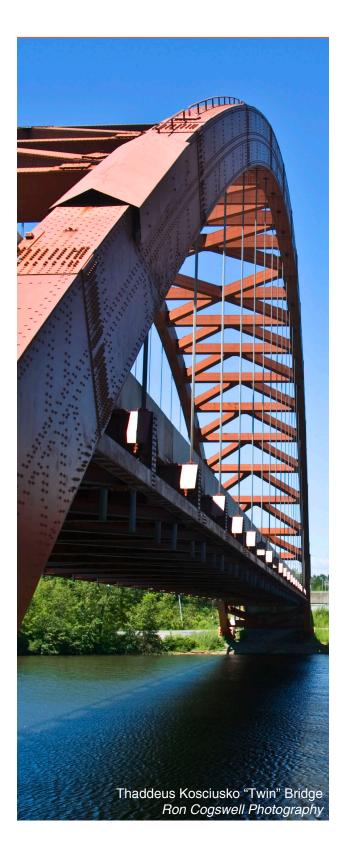
The Capital Region's transportation system is comprised of critically important highways and bridges, along with intermodal and multimodal facilities like ports, airports, railways, sidewalks, and trails. As noted earlier, road and bridge infrastructure conditions have declined, particularly on roadways that are not owned and maintained by the state or eligible for federal aid. Infrastructure is essential to the regional economy and maintaining system conditions is required to remain economically competitive. A well-maintained network of roads and bridges is vital to the region's economic success. Condition of road pavements in the Capital Region has remained about the same since 2009 due to continued investment in preservation of the existing system. Over 90% of the Capital Region's interstate highways have maintained "qood" "excellent" condition and ratings. However, local roadways that are not eligible for federal aid continue to be in the poorest condition. Years of wear and tear, steady traffic growth, an explosion of heavy trucks, extreme weather conditions, and delayed maintenances in some communities because of tight budgets and increasing construction costs have made it difficult to substantially improve these roadways.

Bridge conditions in the region, like the rest of the nation, continue to decline. Despite significant efforts and continued investment to reduce deficient bridges, conditions are deteriorating faster than they can be repaired. Whereas the condition of bridge structures has improved, bridge decking, or the bridge surfaces, have declined and approximately 10% (local, NHS, and state owned) are classified as "structurally deficient" according to the FHWA condition rating framework. This problem is more pressing for locally owned bridges than state owned and interstate bridges.

Preserving & managing the existing system is CDTC's highest stated priority.

60% "Preservation First" refers to the investment strategy of committing limited funding to the maintenance of existing infrastructure.

40% "Beyond Preservation" is the strategy which funds the rehabilitation of infrastructure or projects that improve existing conditions but also enhance the economy or provide other additional benefits.



- Prioritize funding for & devote significant TIP resources to infrastructure preservation & renewal.
- Support less costly & repair strategies for the foreseeable future.
- Encourage the use of alternative funding approaches.
- Encourage technology innovation.
- Encourage preservation & ADAcompliance of existing sidewalk network.
- Support the integration of Complete Street features in preservation projects.
- Support non-required ADA accessibility elements in pavement & bridge projects.
- Support NYSDOT's freight screening technology initiatives.
- Re-evaluate pavement & bridge performance measures & goals.
- Collect data on bicycle & pedestrian infrastructure & maintenance costs.
- Collect & maintain a regional traffic signal inventory.
- Evaluate the region's C/AV & EV-Readiness.
- Determine the most cost-effective mix of preservation & renewal strategies.

Regional Operations & Travel Reliability

Managing traffic flows is critical for the social and economic health of the region. Congestion management is much more cost effective than highway capacity increases or new lanes. Congestion alone does not justify increasing highway capacity or adding new lanes. Some congestion is acceptable when the community deems it acceptable, or when it results from balancing the needs of other transportation modes like walking, bicycling, and transit.

Any congestion management actions must recognize the important of, and balance the needs and access of pedestrians, bicyclists and transit users. Investments in programs that promote transportation choices and reduce the number of commuters driving alone to work, as well as the integration of technology and other innovative strategies that improve system operations should be prioritized and incorporated into all congestion management plans (CMP) and projects.

Maintain Travel Reliability

Reliable traffic flow is more important than reducing congestion – traffic congestion is often a sign of an area's economic vitality.

Prioritizing routes for adopting and integrating "Intelligent Transportation Systems" (ITS), like signal priority for transit buses, traffic signal coordination to help move traffic more efficiently and electronic travel information, is an ongoing effort in the region. A vital component of congestion management is the Transportation Management Center (TMC) operated by NYSDOT in partnership with the New York State Police, located in Troop G headquarters in Latham. The TMC uses traffic cameras and road sensors to deliver travel information to regional



video and message feeds like 511NY, as well as quickly responding to and clearing incidents along major roadways. CDTC supports the TMC through funding support, which also underwrites the HELP Trucks program.

Data is vital to better understanding how and why the transportation system operates. CDTC has access to anonymous data from GPS devices carried by cars and trucks to record highways speeds. This data helps us understand travel times and reliability on major transportation routes. It also helps measure change before and after major projects, like the installation of roundabouts or addition of a turning lane. Collecting additional data will help us identify problems and needs and develop solutions in partnership with stakeholders and the community, as well as which strategies are cost-effective and successful.

- CDTC should continue to support funding for operations
- Major Highway Expansion Should Not Be Considered
- Right-size our existing roadways
- Establish a community traffic engineering services program.
- Conduct data-driven, performance measures-based screen of regional traffic signal timing on major arterials.
- Establish an Incident Management Committee
- Assess management of recent incidents & plans for upcoming events in coordination with emergency service providers & stakeholders.
- Inventory & assess existing traffic signals
- Work with regional operating agencies to compile a survey of ITS & TSMO strategies currently is use.
- Adopt a data-driven approach to prioritize corridors for traffic signal upgrades.



Safety

Invest in Safety

Our region will move toward eliminating transportation related deaths and serious injuries by 2050.

A "move to zero" will require creating a travel environment for all users that reduces risk and considers the context of communities. Through continued encouragement of best safety practices, evaluation of current data, and by monitoring the effectiveness of implemented countermeasures, over time CDTC's safety program will support the potential reduction of fatal and serious injury crashes. This will require a long-term commitment at all levels of government to shift policy and transportation infrastructure design to support a cultural change in how our transportation system is used and operated.

Capital Region Crashes

30,405 crashes total on public roads 2011-2016.

More than half
 occurred on local roads.

11.3%

are fatal or serious injury crashes.

- Plan & implement Complete Streets
- Further develop the regional crash profile
- Adopt Safe Systems & Vision Zero policies
- Collaborate with safety partners
- Support goals in the NYS Strategic Highway Safety Plan & Pedestrian Safety Action Plan
- Coordinate with other Local Road Safety
 Plan sponsors
- Create an Incident Management Committee
- Develop a Road Safety Assessment program
- Encourage land use planning that supports safety
- Encourage safety in all projects
- Prioritize safety over speed
- Prioritize safety in all funding decisions
- Improve crash data systems
- Encourage implementation of state and regional systemic countermeasures
- Identify & address high risk locations
- Plan to be C/AV-Ready
- Fund the TMC
- Expand Capital Coexist to be a comprehensive safety education program
- Provide data, training, & resources to law enforcement on traffic safety
- Collaborate with advocacy groups, schools & other transportation safety stakeholders

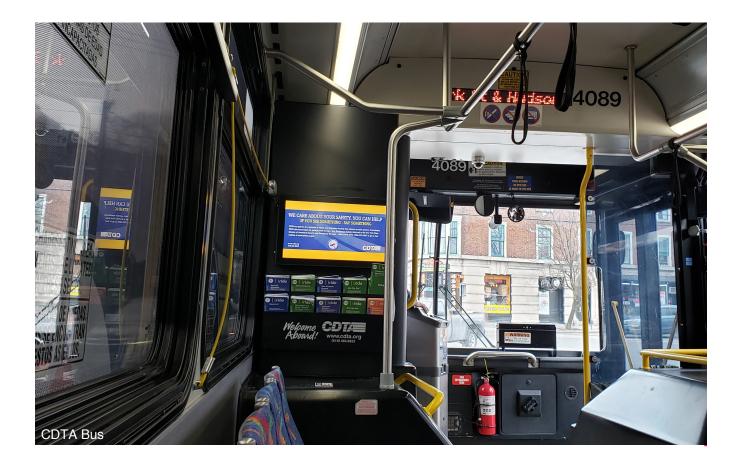
Security

Invest in Security

Protection of critical infrastructure from natural disasters, acts of terrorism & cyberattack is of increasing concern. Scenario planning & computer modeling will support regional security planning efforts.

CDTC will support regional security planning efforts through modeling transportation system related scenarios, encouraging resiliency planning and providing technical support to all levels of government as they develop security plans. Through these efforts, CDTC will be available to assist with the reduction of threats to the regional transportation system, transportation facilities, and transportation system users.

- Create a more secure transportation system
- Collaborate with security partners on scenario planning & travel demand modeling
- Develop a Climate Resiliency Plan & Vulnerability Assessment Tool
- Retrofit infrastructure to mitigate flooding and other natural hazards
- Encourage land use planning that supports security



Complete Streets

Invest in Complete Streets

Street design will serve all users equitably, including pedestrians, bicyclists, transit riders, freight & personal vehicle drivers & riders.

Transportation investments are made based on complete streets framework which supports the convenient and safe travel of all people – of all ages and abilities as appropriate to a facility's community context. Utilizing a complete streets framework ensures that transportation investments are consistently planned, programmed, designed, operated and maintained with all users in mind – including bicyclists, public transportation vehicles and riders, pedestrians of all ages and abilities, and local delivery needs.

Successful implementation of a complete streets framework will be achieve by working with municipalities to improve communication and coordination, training and education, and design standards and other resources.



Key Recommendations & Planning Strategies

- Finalize the Complete Streets
 Design & Implementation Guidelines
- Continue the education and technical workshop series
- Continue documenting the outcomes of Complete Streets projects funded with federal transportation funds
- Collect data on the impacts of Complete Streets Projects
- Identify a reliable method for measuring level of service for pedestrians and transit users

To date, 8 municipalities in the Capital Region have adopted their own Complete Streets policy, ordinance, or resolution. CDTC has assisted these and other communities through its educational and technical workshop series and other measures. Continued progress means safer streets, more walking and bicycling trips, less congestion, and a healthy economy that supports economic growth. New Visions 2050 strongly supports the adoption and implementation of Complete Streets at all levels of government.

On left: Madison Avenue in Albany was reconfigured from 2 lanes in each direction with parking on both sides to 1 lane in each direction with bike lanes and the preservation of as much parking as possible. This project required extensive public outreach and coordination among city agencies and with business owners and other stakeholders. It was done in three phases as the City of Albany pursued various funding opportunities.

Bicycle & Pedestrian

Encourage Bicycle & Pedestrian Travel

Recognize walking & bicycling as socially, economically, & environmentally responsible & healthy approaches to improving the performance of our transportation system. Bicycle and pedestrian improvements will be considered from the perspective of developing a system and not just based on whether a particular facility is currently used. A regional system of sidewalks, bicycle facilities, & multi-use trails will encourage safe bicycle & pedestrian use.

This investment principle builds off of the New Visions Complete Streets principles and recommendations. Many people rely on walking and bicycling for transportation every day. All streets must be able to safely accommodate emerging mobility services and technologies like bike share, electric pedal-assist bikes, and possible electric scooters in the future. Safeguarding pedestrians from these potential conflicts and slowing motor vehicles is an attainable short-term goal of the Plan. New Visions 2050 advocates for the adoption of technology in conjunction with basic changes to street design and transportation policy in order to improve safety, meet climate goals, and make equity gains.

A connected, safe, and reliable network is crucial for accessible transit, necessary for children, the elderly, people who have disabilities, and other residents who cannot or choose not to own a vehicle. In order to create CDTC's vision for a connected network of walking and bicycling facilities, the region must continue building multiuse trails, sidewalks, in-road designated spaces for bicycles and facilities that are separate from motor vehicle traffic. Intersections and pedestrian crossings must to make it easier for the most vulnerable populations cross the street and to travel throughout their communities.

Key Recommendations & Planning Strategies

- Develop a robust bicycle & pedestrian data collection program
- Measure the economic value of walking & bicycling infrastructure
- Plan to be Connected/Automated Vehicle (C/AV)-Ready
- Implement a regional trail network
- Evaluate health impacts of infrastructure projects and transportation programs and policies
- Leverage emerging technology to promote walking & bicycling as transportation
- Cultivate partnerships in the Capital Region with public & private sector agencies & organizations
- Provide training, educational opportunities, tools & resources specifically on bicycle & pedestrian infrastructure design to local planners & engineers

Maintaining a system of sidewalks in good condition and that are in compliance with ADA regulations is vital for facilitating the efficient movement of people and access to places and opportunities. The region should focus on filling gaps and identifying gaps that create obstacles to mobility. The Plan advocates for a balance between preservation efforts with investments in the regional trail network. Being at the crossroads of the Empire State Trail presents an enormous opportunity for the region to capitalize on tourism, economic development, and expanded mobility. Growth in trail use has outpaced trail construction in the region despite incredible progress in implementing this New Visions "Big Ticket" initiative.

Transit & Human Services

Invest in Transit and Provide Essential Mobility for All

Innovative and viable transportation services support concentrated development by providing equitable access to reliable and affordable transportation.

The future transit system will:

- Be an essential element of the region's social, economic, and cultural fabric
- Provide high quality fixed route transit in core areas of the region
- Reduce congestion, improve air quality, and save energy
- Form the backbone for managing travel demand

Concentrated development patterns, a network of walking and bicycling facilities providing safe access to transit, additional travel options such as microtransit and a consolidated fixed route system on priority transit corridors will increase ridership and reduce private vehicle trips. Expansion of Bus Rapid Transit and the addition of mobility hubs, on-demand services, and integrated technologies (i.e. smartphone app) allowing users to purchase transportation when needed and seamlessly transfer between travel options is desired.

The Capital Region is home to over 98,000 people reporting a disability, affecting how they are able to travel and use transportation most people take for granted. Additionally, about 130,000 people in the region are over 65 years old, and this population is expected to increase through at least 2030. For many people, sensory and mobility loss are associated with aging, impacting their ability to drive and making it more difficult to access and use transit. In addition, many of the region's low-income residents

- Update and implement CDTA's
 Transit Development Plan
- Complete and upgrade 40 Miles of Bus Rapid Transit (BRT)
- Study the feasibility of bus lanes and future BRT lines
- Communicate land use impacts on transit
- Develop a transit access toolkit
- Develop a regional parking policy guide
- Adopt consolidated performance measures for transit
- Support State worker and large employer transportation options
- Develop and monitor transit related pilot programs
- Plan for an Albany Intermodal
 Center and additional transit centers
- Invest in a safe and sustainable transit fleet
- Plan for Montgomery County transit service
- Explore the need for a consolidated CDTA facility
- Develop an app for public transportation services
- Explore conversion of enhanced BRT to light rail
- Revise CDTC Transit Priority Network and TIP merit score methodology
- Support replacement of the Livingston Avenue bridge
- Support high speed rail and electrification

face challenges related to access to jobs either because they don't have access to a private vehicle or because public transit is not available for their trip.

The Regional Transportation Coordination Committee (RTCC) fosters communication and coordination among a variety of groups in an effort to better serve people with transportation challenges.

CDTC collected surveys from human services agencies and visited senior centers across the region to learn about transportation experiences and challenges of older adults and people who have disabilities. Surveys indicated many people have difficulty leaving their home due to a lack of transportation. About a third of survey respondents had walked somewhere in the last few weeks, although some noted difficulty with sidewalk condition.

CDTC also surveyed human services transportation providers in 2018. Of 58 completed surveys, most are willing to partner with other providers in a variety of ways. The use of volunteer drivers seems to be increasing. Many providers had to deny trips during the previous year due to insufficient vehicle capacity. In the next five years, over half of respondents' vans and cars need to be replaced.



Key Recommendations & Planning Strategies (cont'd.)

- Prioritize coordination efforts for 5310 funding
- Broaden the reach of the RTCC
- Hold transportation provider workshops to support quality & efficient services
- Seek presenters for the RTCC meetings
- Encourage mutually beneficial transportation partnerships
- Facilitate ADA Transition Plans & associated physical improvements
- Incentive & prioritize accessible features in federally funded transportation projects
- Ensure public listings of available human services transportation are accurate
- Identify mechanisms for locationefficient siting of facilities serving transportation disadvantaged populations
- Explore opportunities for coordinating other federal programs that fund transportation
- Enhance future provider surveys
- Clarify disposal & transfer rules for 5310-funded vehicles to encourage transfer to other agencies in need
- Research public charging for electric mobility devices
- Distribute the Senior Transportation
 Guide
- Document the extent & severity of isolation, & consider methods to reduce negative impacts

Mobility Management

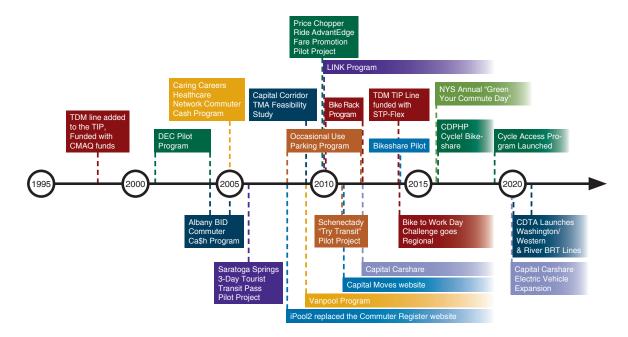
Prioritize Affordable and Convenient Travel Options

Regional efforts will prioritize affordable and convenient travel options and programs that encourage behavioral shifts away from single occupancy vehicle (SOV) travel and help balance the transportation system among driving, bicycling, walking, transit, carpooling, vanpooling, and telework.

Incorporating Transportation Demand Management (TDM) into transportation planning helps optimize infrastructure and land use investments by balancing the system among all travel modes. Travelers in our region should be able to choose from an array of travel options for their work commutes and all other trips. Regional mobility programs and services make it easier for everyone to travel, regardless of the mode they choose. CDTC, all mobility service providers, employers and the region's municipalities should work together to increase access to all travel modes by expanding public and private infrastructure for non-SOV modes.

Regional decisions about transportation shall investments consider whether TDM programs and policies should be modified to address infrastructure capacity limitations before allocating funds to expand infrastructure. CDTC has invested in various TDM programs and services, such as carpooling matching services that began as a paper registry and evolved into iPool2, an online ride matching program. CDTC's regional coordination and encouragement of TDM programs have resulted in exciting transportation options being added to the transportation system, like bike sharing.

Developing a cohesive regional TDM strategy that brings together the various transportation service providers and related businesses throughout the region is needed and will be pursued. This type of support for TDM can encourage shared mobility as the potential for viable vehicle automation technology develops and is deployed. As the debate over whether C/AVs will change the vehicle ownership model from private to shared and whether the technology will increase or decrease VMT, having a strong TDM framework can mitigate potential drawbacks created by automated vehicles.





Key Recommendations & Planning Strategies

- Establish data and project management strategies for executing TDM pilot projects
- Establish data sharing agreements with programs and service partners
- Identify TDM performance measures
- Conduct commuter surveys
- Maintain up-to-date park & ride lot data
- Implement the 2011 Park & Ride Study
- Measure park & ride lot use
- Coordinate program partners to identify region-wide goals & establish priorities
- Develop an engagement & outreach strategy and technical assistance for employers and municipalities
- Consider bringing together partners for a regional discussion related to parking and TDM
- Conduct parking inventories
- Collaborate with NYSDOT and CDTA on TDM marketing initiatives
- Evaluate the feasibility of Transportation Management Associations (TMAs)
- Develop a model ordinance for local municipalities related to TDM
- Launch a Commuter Benefits pilot that includes all available modes and transportation services
- Evaluate the need for a TDM Advisory Committee that provides advisement to the CDTC Planning Committee & Policy Board

Move Freight Efficiently

Our freight system is crucial to the economy; it will be efficient and automated and will minimize its impact on communities. CDTC's freight planning efforts will be comprehensive enough to encompass all modes, including air, water, rail and highway. Maintaining the health and improving the efficiency of freight facilities in the region through public/private partnerships is a high priority. CDTC's planning efforts will embrace freight's key contributions to regional prosperity, while also trying to mitigate the negative impacts of all modes of freight movement on local communities.

CDTC released a Regional Freight Plan in 2016 which documented trends and ongoing issues related to the movement of goods within the region, out of the region and between regions. The Plan also identifies strategies for improving the efficiency and safety of freight movement. Changes in the economy which have created driver shortages, changing technology and new regulations have created enormous challenges in freight. Additionally, growth in e-commerce and deliveries have increased truck congestion and emissions. Improved facilities and infrastructure, electrification of vehicles, and delivery hubs will facilitate more reliable, safe, and efficient freight and goods movement throughout the region through 2050.

Freight in the Capital Region moves primarily by 5 modes: truck, rail, water, air, and pipeline. Not all trips are by a single mode but require transfers at terminal facilities – like water to rail or rail to truck. Each mode has advantages and disadvantages to shippers, receivers, consumers, those living in close proximity to freight facilities, and the environment. Freight-related projects have a higher potential for creating or exacerbating equity issues because freight facilities are often co-located with disadvantaged populations. Improving the efficient movement of goods throughout the region requires both projects, or the construction and reconstruction of physical infrastructure, and programs, policies and studies that employ regulatory, guidance or planning tools to facilitate more cost-effective and efficient use of existing and planned transportation infrastructure. CDTC will continue to bring together freight and community stakeholders together to discuss and mitigate the impacts of moving goods and identify solutions. Improving and renewing infrastructure like highways and bridges will make the transportation more resilient for moving goods while also benefiting other modes.







Key Recommendations & Planning Strategies

- Expand freight data collection
- Maintain a state-of-good-repair on pavements & bridges on the Freight Priority Network
- Renew major infrastructure vital to regional goods movement
- Support the implementation of the New York Statewide Freight Transportation Plan (2019) & CDTC Regional Freight Plan (2016)
- Improve access at major freight facilities.
- Public official training & model ordinance development
- NY 7 Freight & Land Use Study
- Expand & improve facilities at the region's maritime ports & the Albany County Airport
- Cargo-supportive improvements to canal system & container on barge service
- Mitigate the hazardous material rail transportation in urban areas
- Support & facilitate safe & efficient goods deliveries in dense, urban areas
- Add interstate lighting to improve safety
- Relieve truck parking demand in region
- Enhance Commercial Vehicle
 Operation through ITS & technology

Environment & Technology

Preserve the Environment

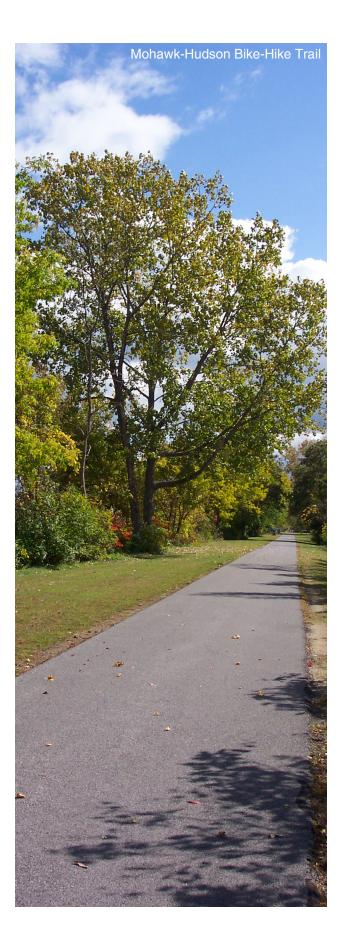
Transportation choices should improve our environment, not harm it. Environmental stewardship is crucial to the success of and guality of life in this region. Transportation investments must improve or preserve the region's cultural and natural environment. Transportation investments will not encourage development in environmentally sensitive areas and will help preserve rural character. Transportation investments will support alternative fuel vehicles and greenhouse gas reduction. Environmental best practices will be incorporated into all projects.

Leverage Technology

We must plan for new, smarter, better, rapidly-changing transportation technology. Advancements in technology, such as selfdriving cars, self-adjusting traffic signals, smart phone applications, and shared mobility will have tremendous and wide-reaching impacts on future transportation. These impacts include, but are not limited to, decreasing congestion, providing transportation to older adults and people who have disabilities, reducing traffic crashes, and more.

Transportation is the largest source of greenhouse gas emissions (about 40%) in the Capital Region, a driver of climate change. Greenhouse gas emissions also effects air quality and public health. New Visions explores transportation planning strategies and actions for reducing greenhouse gas emissions in transportation through the adoption of technologies and actions that preserve the natural environment while building a more resiliency transportation system.

In 2019, NYS passed the Climate Leadership and Community Protection Act (CLCPA) which pledges to eliminate net greenhouse gas emissions by 2050. This law commits to reducing greenhouse gas emissions by 40% by 2030 and 85% by 2050. Achieving these goals will require aggressive measures to shift more vehicles to hybrid and electric, and increase trips made by transit, walking and bicycling. Smart land use planning and design strategies, coupled with technology and new shared transportation services (e.g. bike share) could expand mobility and help meet environmental goals. New Visions 2050 recommends strategies and actions for preserving the natural environment while building a more resilient transportation system. Sound planning, regional coordination, and strategic infrastructure investments can improve mobility, giving more residents of the Capital Region the ability and freedom to get where they need to go, more efficiently. New Visions 2050 principles will help the region achieve the full potential of vehicle electrification, automation and shared mobility to eliminate greenhouse gas emissions from transportation, improve safety, and create a more equitable and accessible system of choices.



Key Recommendations & Planning Strategies

- Create a virtual forum to network & coordinate on technology & transportation
- Develop a climate resiliency plan & vulnerable asset assessment tool
- Identify & prioritize corridors for enhanced technology integration, like smart signals
- Implement the ZEV Plan Develop C/AV-readiness guidance for local communities
- Adopt new technologies & tools for virtual public involvement
- Compile GHG emissions data from transportation
- Adopt the Mobility Energy Productivity metric to address the challenge of measuring how mobility impacts a person's quality of life.



Implementation

The Metropolitan Planning Process

New Visions 2050, the Regional Transportation Plan, plays a central role in coordinating investments in projects and programs the region has identified as priorities and these relationships between the various state, regional, and local agencies and organizations. This Plan reflects regional and national trends as well as needs. Previous New Visions plans have successfully created policy and programming frameworks for transportation investments. They have influenced land use, environmental and social service plans and programs in the region.

CDTC's Unified Planning Work Program, or list of tasks and budget for each fiscal year, is consistent with New Visions principles. Many of its programs and planning studies are directly related to New Visions recommendations and system goals, such as the update to the Capital District Trails Plan and development of the Regional Freight Plan. These planning documents provide details regarding on-theground conditions of parts of the transportation system, gaps, and needs based on extensive stakeholder involvement and feedback. The final plans outline specific tasks and projects that CDTC and its members must undertake in order to continue to improve and enhance transportation facilities and services.

There are a large number of state, regional, and local government agencies and organizations, economic developers, schools, employers, and advocacy groups throughout the region. While they have competing interests and goals, New Visions represents a regional consensus and policy pathway for investing in a modern and resilient regional transportation system. As a regional organization, CDTC plays a role in coordinating programs and projects and collaborating with the wide range of stakeholders in the region. However, CDTC cannot initiate the construction of infrastructure and its funds are limited by federal transportation legislation limitations.

An ongoing conversation on locating and pursuing diverse funding sources is needed to implement New Visions 2050. As CDTC supports municipalities in transportation and land use planning through its Community Transportation Linkage Program, and the development of safety education campaigns through Capital Coexist Traffic Safetv Ambassador Grants. other funding and assistance for transportation studies, it also assumes supplementary state, regional, and local funding sources will be pursued in conjunction with federal planning funds. Everyone in the region plays a role in shaping the transportation system and influencing development in their communities. The next page provides examples of how different entities can support New Visions goals.

The New Visions investment principles will move the region towards achieving state, regional, and local safety and climate goals and shape the transportation system into one that moves people and goods efficiently and cost-effectively. It will create compact development and smart land use, a seamless network of walking and bicycling infrastructure, enhanced mobility options for all, and sustainable economic growth.

We're All In This Together

		• Develop plans that consider bicycle & pedestrian access & mobility, and transit-oriented
Municipalities	Planning	 development strategies. Ensure that zoning laws allow high density, concentrated development along major travel corridors, especially where transit routes are located; incorporate suitable sidewalk & bicycle parking requirements; create parking maximums rather than minimums. When developing street & subdivision standards, incorporate paths & connecting links when possible; locate public services like schools, colleges & local shops within easy bicycling & walking of residences or transit service. Require development of housing for older adults or other populations with mobility limitations to locate on transit routes. Encourage coordination among municipal agencies and staff on development and land use policy decisions. Use Generic Environmental Impact Statements & other tools to recover costs of necessary infrastructure projects & mitigate the impacts of congestion.
	Engineering	 Prioritize infrastructure maintenance projects over construction of new facilities; Develop maintenance plans for facilities likes trails. Design facilities in a way that prioritizes the most vulnerable road users; lower & manage speed, provide separated facilities for bicyclists & pedestrians.
	Law Enforcement	 Provide training for traffic enforcement staff; establish bicycle & pedestrian safety programs. Coordinate with courts & other law enforcement agencies on bicycle & pedestrian safety goals. Establish bike patrols to demonstrate viability of bicycling in community & safe bicycling practices.
	Parks & Open Space	 Develop walking & bicycling routes to public parks, playgrounds & preserves. Look for opportunities where parks can be included in walking & bicycling networks. Provide secure bike parking at parks & playgrounds.
Schools	All Schools	 Locate schools in areas connected to walking & bicycling paths; in close proximity to residential areas. Encourage Safe Routes to Schools programs - perform pedestrian & bicycle audits around schools; identify funding sources to improve pedestrian & bicycle access to schools & related destinations.
Private Sector	Utilities	 Construct trails on utility corridors where feasible. Coordinate utility infrastructure projects/maintenance with transportation infrastructure maintenance/reconstruction. Strategically upgrade electrical supply infrastructure to accommodate a growing network of EV charging plugs.
	Economic Development	 Provide suitable pedestrian & bicycle facilities to tourist attractions; support the regional trail network as a tourist attraction & seek to provide public transit access to the trails & other destinations. Support paid parking & the implementation of smart parking systems Encourage development along major transit corridors. Partner with local governments & other organizations to promote transportation alternatives & bicycle & pedestrian safety campaigns.
	Employers	 Encourage the use of transportation alternatives; participate in CDTA's Universal Access program; provide parking cash outs to employees who agree not to drive to work. Provide secure bike parking, lockers & shower facilities for employees. Support flexible schedules & telework to reduce congestion & greenhouse gas emissions. Provide electric vehicle charging at the workplace for employees.

New Visions 2050 "Big Initiatives"

CDTC TAXISTERICT TAXISTERICT	Hypothetical "Big Initiative"	Approx. Max. 20-Year Scale	20-Year Cost Estimate (\$ mill)	Comments
, in the second	Regional Greenway Program	10 miles/year; 280 miles total including existing	\$150 M	Scale reference is Seattle's plan for 800 miles of paths. Cost at approx. \$500 K/mile based on local costs.
	Riverfront Access and Urban Development Program	Explore recommendations from the I-787 Study		Could draw from multiple fund sources, beyond transportation.
	Street Reconstruction and Reconfiguration	40 lane miles/year; 800 miles total	\$2,400 M	New Visions intended to address 25 lane miles per year; this is 50% more aggressive. Cost at approx. \$3 M per lane mile.
	Suburban Town Center Development	5-10 lane miles/year; 150 miles 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 this total.
	Enhanced BRT with TOD			
	Demand Management Program	40,000 participants	\$50 M (public)	Scale at 10% of regional workforce; estimated at \$20/month for 1/4 of participants, 3/4 of participants financed by employers. Based on CDTC exp.
	VMT, Carbon Tax, or Carbon Cap, Reduce, and Invest			
ZI	Integrated Corridor Management Program			
	Ridesharing System for All Users			
۷	Regional Electric Vehicle Charging System			

Financial Plan

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

Taxes paid at the gas pump fund transportation.

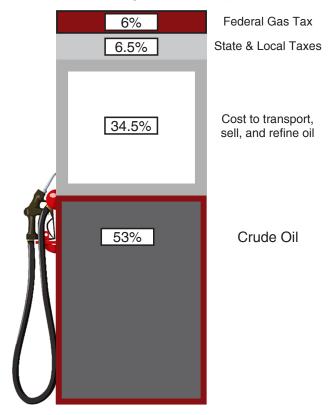
The FAST Act, the bill that authorizes funding and governs the federal share of transportation spending, was signed in 2015 and is due to expire September 30, 2020. This bill authorized \$305 billion for federal highways, highway safety, transit, and passenger rail programs from 2016 – 2020. The FAST Act continues to rely on the increasingly unreliable Highway Trust Fund, which is supported through federal fuel taxes. Since 2008, this Fund has only been sustained through transfers of \$140 billion without a longterm funding solution.

To continue the momentum the region has made in terms of infrastructure investment and renewal requires (1) reauthorization of the FAST Act, continuing similar levels of funding; or (2) new, comprehensive and long-term surface transportation legislation that increases funding and/or creates new priorities and performance measures for how funding is used. With that being said, CDTC's *New Visions 2050* financial plan is fiscally constrained on the same basis as have previous New Visions plans. It provides a fiscally conservative outlook governed by a realism about the resources required to implement the recommendations within the plan. Based on system level estimates of costs, current revenues and a modest increase (2.6% annually) over the life of the plan, the total 2050 annual revenue is expected to total roughly \$775 million under the full implementation future. This includes federal, state, and local government contributions.

Continue to prioritize and fund maintenance, not expansion.

The majority of federal funding in the Capital Region is spent on the preservation of roads and bridges, and this funding commitment will likely

How Do We Pay For Transportation?



For each gallon of gasoline purchased, \$0.184 goes to the Highway Trust Fund. This federal gas tax has not been increased since 1993 and the Highway Trust Fund has been insolvent since 2008. Improved vehicle efficiency and a growing number of electric vehicles on the road means less money available to fund surface transportation projects throughout the U.S. and Capital Region. continue as a well-connected street and highway system, maintained in good condition, is critical to the region's economy. While federal funding support is critical and significant, it is only onethird of the investment in the Capital Region, with most of the investment in transportation facilities and services coming from state and local revenue sources, across all modes of travel.

Commit to making steady progress in all programs.

CDTC's budget analysis asserts that the New Visions 2050 Plan is fiscally balanced over time - but only if public funding increases regularly over the upcoming decades as it has done in the past. A reduced level of revenues would lead to serious declines in physical and service conditions, making even the most modest improvements difficult to accomplish. The plan's strengths draw from CDTC's commitment to achieve "steady progress" across all categories, even if funding levels fall short of those needed fur full implementation of all New Visions recommendations. Rather than retreat or abandon the region's goals, New Visions recommends continued incremental progress, with continued smaller investments while eliminating excess.

Identify a variety of funding sources for big ideas and transformative projects.

New Visions 2050 emphasizes maintenance of the existing transportation system. Discussion since the adoption of New Visions 2030 on "big idea and big ticket" initiatives, like development of a regional greenway, riverfront access and urban development programs, etc. cannot fit into the region's financially constrained longrange plan at the moment. Big ticket projects are discussed in separate program technical papers. These projects have significant quality of life and economic development benefits for the region and CDTC must assist local communities in pursuing them. However, they will require funding contributions from a variety of sources and programs to become accomplished, which must be explored simultaneously with discussion of short-term budget gaps for basic maintenance

and repairs. It may be prudent to link the "urgent" with the "desired" to elicit sufficient public support legislative action to provide the necessary resources.

Invest now to reduce future costs.

CDTC's approach to New Visions has always been continued, incremental progress. If growth development continues unchecked, the demand on transportation infrastructure will continue to be dispersed throughout the region, increasing maintenance and repairs costs, while adding no improvement to mobility, recreation or economic vitality. On the other hand, investment in the transportation infrastructure today will pay off over the long term by increasing transit use, encouraging economic growth in urban areas, adding to our inventory of recreational opportunities and open spaces.

Unplanned development could result in a decline in the region's quality of life. By implementing *New Visions 2050*, we can avoid the mistakes of other fast-growing regions, where residents are stranded with long, expensive commutes, increased housing costs, suburbs with no identity and overwhelming infrastructure costs. Doing nothing also leaves the Capital Region heavily dependent on the automobile and vulnerable to the full impacts of volatile fuel costs, the changing climate, and other security hazards.

Maintaining adequate funding levels for transportation is crucial. Keeping people and jobs in the region requires an investment to rehabilitate and improve the transportation system in order to avoid escalating infrastructure costs and tax increases without improved quality of services that could make the region less attractive to families and employers. CDTC and its partners continue to work with federal, state and local agencies and officials to secure the funds that are needed to implement New Visions 2050.

Regional Transportation Plan Budget by Element

(Annualized Cost in Millions)

Regional Programs		Previous Investment	Current Investment Levels (2016-2021)	New Visions 2050 Full Implementation		Netes		
		Levels (2007-2012)		Reduced Full Funding Funding		Notes		
1	Intermodal Facilities	31.9	31.0	25.0	42.0	New estimate.		
2	Transit Infrastructure	30.0	36.0	36.0	55.0	New estimate.		
3	Transit Service	80.0	85.0	80.0	130.0	Operating funds include Federal and State operating funds.		
4	ITS (Technology) and Traffic Infrastructure	6.0	2.8	4.5	8.0	Derived from regional operations working group and TIP discussions. Reflects		
5	ITS (Technology) and Traffic Operations	6.3				reduced need for TMC under C/AV future.		
6	Highway Rehab, Reconstruction, and Redesign – Priority Network	67.5	23.3	60.0	154.0	Estimate from infrastructure model		
7	Highway Rehab, Reconstruction, and Redesign – Other	07.5				results, infrastructure task force and ADA working group discussions.		
8	Bridge Rehab and Construction	55.1	33.5	72.0	106.0	Local need based on CDM bridge study. State need developed from info reported in NYSDOT's draft Asset Management Plan.		
9	Highway and Bridge Maintenance	191.0	191.0	218.0	242.0	With inflation to reflect increase in labor and material costs.		
10	Strategic Highway and Bridge Actions – CMP- based (Capacity)	17.4	11.7	3.7	5.0	Updated projects. Current budget focuses on complete streets and roundabouts.		
11	Strategic Highway and Bridge Actions – Economic Development/Community Compatibility	9.5	10.4	2.0	3.0			
12	Supplemental Goods Movement Accommodations	14.8	0.0	2.5	7.0	New estimate based on Freight Plan and discussions with the Freight Advisory Committee. Assumes allocation under the FAST Act's NHFP.		
13	Supplemental Bike and Pedestrian Accommodations		5.8	3.0	7.0	Updated based on discussions with Bicycle & Pedestrian Advisory Committee.		
14	Supplemental Access Management Actions		0.0	0.0	0.0	Incorporated into pavement preservation and reconstruction work.		
15	Supplemental Safety Actions		2.6	3.0	10.0	Reflects increased focus on safety through the State's Strategic Highway Safety Action Plan.		
16	Demand Management	0.5	0.5	0.7	3.0	Supports TDM-related transportation programs.		
17	Integrated Planning and Outreach	2.6	1.0	1.5	3.0	Key aspect is development of safety management system for local roads.		
	Total Plan Cost	506.0	435.2	512.0	775.0			
	Expected Revenue			512.0	775.0			

The New Visions Plan is unique among metropolitan plans in comprehensively assessing annual funding requirements for 17 capital, operating, maintenance, and planning budget categories. Additionally, the plan's strength draws from CDTC's commitment to achieve "steady progress" across all categories, even if funding levels fall short of those needed for full implementation of all New Visions recommendations. Even under short-term fiscal challenges, CDTC expressed preference for "diet" rather than "retreat." A diet in the context reflects a healthy concern for balances - smaller portions and the elimination of excess. In contrast, "retreat" brings to mind the abandonments of goals - a situation which could arguably have devastating impacts for the region.

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

Expected Federal, State, and Local Resources and Staged Expenditures Attendant to Implementation of CDTC's New Visions 2050 Plan: 2016-2051 Budgets

Period of Expenditure									
	2016-21	2021-26	2026-31	2031-36	2036-41	2041-46	2046-51		
Federal (Highway, Transit, Airport, and Rail)	\$570M	\$707M	\$876M	\$1,087M	\$1,348M	\$1,671M	\$2,072M		
New York State and Local (Federal-Aid Match, SDF, CHIPS, CDTA, Airport, and Local Investment)	\$1,603M	\$1,819M	\$2,065M	\$2,344M	\$2,660M	\$3,019M	\$3,427M		
Total (Federal + State + Local)	\$2,173M	\$2,526M	\$2,941M	\$3,431M	\$4,008M	\$4,690M	\$5,499M		



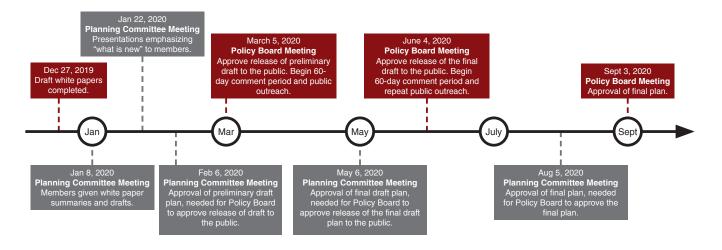
Public Participation

Creating a transportation plan that spans decades requires two key things: 1) sound technical work and 2) diverse public input.

This Public Participation Plan ensures the community has a voice in the development of the 2050 Plan by creating opportunities to be informed and engaged throughout the planning process in the way that is convenient and understandable to you. The Participation Plan guides CDTC's outreach efforts, and ultimately maps out how we will successfully achieve public involvement objectives.

CDTC is committed to community outreach that is thorough, inclusive, creative, & continuous. Outreach will be conducted in two phases and consist of online survey opportunities, public event tabling, and presentations. Interested residents can request "meeting-in-a-box" information to conduct their own events within their community or invite the CDTC outreach team to present at an upcoming meeting or event. Information about the New Visions 2050 Plan will be available on the CDTC website and through in-person events. The public is invited to provide feedback and comment on the draft plan various ways.

The Draft New Visions 2050 Plan is expected to be adopted in March, which will trigger the first phase of public outreach and activities. Comments and feedback received during this time will influence adjustments made to regional goals and priorities. These adjustments will be reflected in a final draft which will be presented in June 2020 for adoption. This presents the second phase of public outreach and then approval of a final plan in September 2020.



Creating Change

Together we can all make a difference for ourselves, our children and our environment. By supporting New Visions, we will choose a future that offers vital urban centers, vibrant communities, sustainable economic growth, improved air quality and a resilient and renewed transportation system that is accessible and connects us all. Many voices are already part of the conversation. Make sure yours is heard in your local community. Get involved in your city, town, or village's lane use and transportation planning initiatives. With your commitment, we can make this happen.



Online at www.cdtcmpo.org/NV2050

Learn more about how long range planning works, take surveys, & sign up for our newsletter & email list to get updates on planning initiatives in the Capital Region & comment opportunities.



In person

Invite us to attend your event or present to your group by contacting our community outreach staff.



Become a citizen planner

Participate in CDTC's Citizen Planner training, plan & hold your own New Visions 2050 meeting with your friends, family, or other community in the Capital Region. A "meeting-in-a-box" will be provided to citizen planners with all the tools & information needed to present & collect comments on the New Visions 2050 Plan.



On Social Media

Follow us on Facebook, Twitter & Instagram to learn about transportation news & when we'll be out in the community.



Request Printed Material

If you don't have digital access & prefer information in paper form, you can make that request by calling the number below.



Questions?

Contact our community outreach staff at NewVisions@CDTCMPO.org or (518) 458-2161.

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