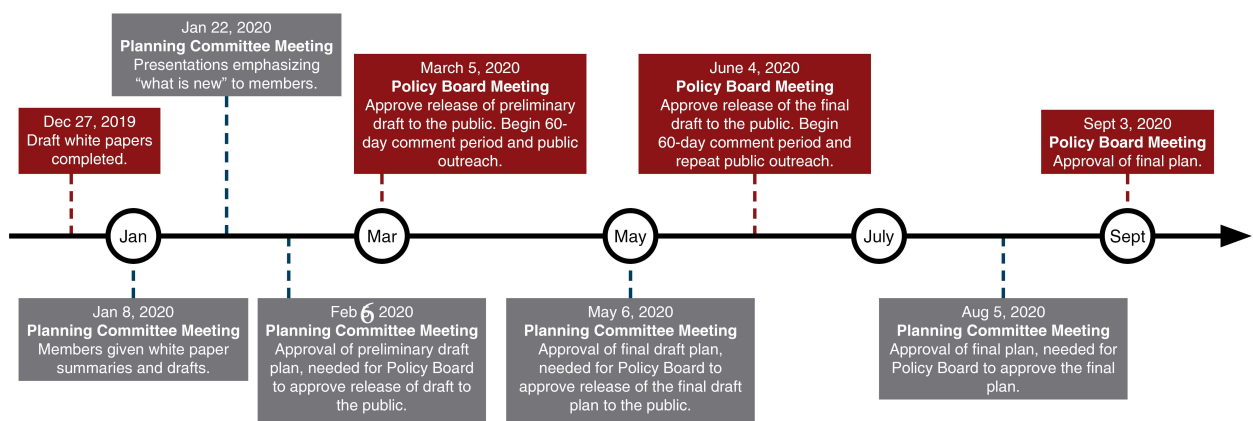




New Visions 2050

Long Range Transportation White Paper Summaries

Capital District Transportation Committee
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New Visions 2050 Quality Region White Paper Summary

- Transportation by its nature is multi-modal because no one mode can meet all the demands on the system.
- All transportation modes (and programs) are inter-connected and inter-related.
- Improving one mode or program can sometimes improve or worsen other modes.



Quality Region Recommendations:

Completed
 Existing
 New

1. Continue to Seek Adequate Funding to Fully Implement the Plan.
2. Program Multi-modal, Equitable and Balanced Funding.
3. **Explore the Use of Innovative Sources.**
4. Encourage Cooperation and Coordination with Local Planning.
5. Continue to promote our Community and Transportation Linkage Planning Program and to seek adequate funding to implement study.
6. **Encourage drivers to drive less by developing a stronger Travel Demand Management (TDM) Program.**
7. Improve CDTC public outreach and marketing efforts.
8. **Update and upgrade project selection.**

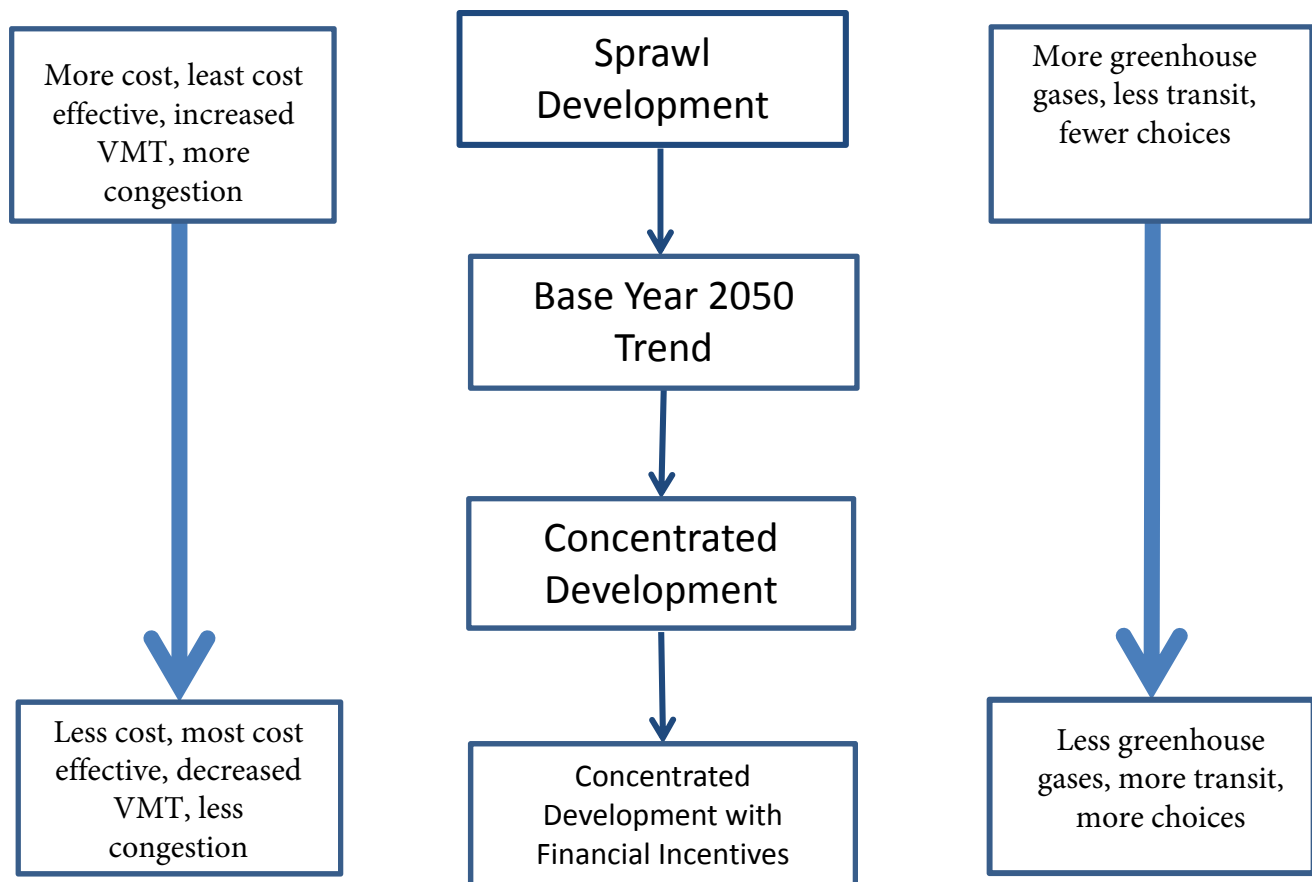
9. **Develop a Training Program that specifically targets local planners, local planning board members and other local decision makers.**
10. **Refine and further articulate the Big Idea/Big Ticket Initiatives for the Capital District.**
11. **Promote and support the New York State climate change strategy of “cap and invest.”**
12. **Promote and support the change-over of petroleum fueled vehicles to electric vehicles.**
13. **Improve the collection of transportation data to support regional transportation planning and analysis, especially in the new technology modes such as ride-hailing and bikesharing.**
14. **Regarding self-driving vehicles, promote and support ridesharing and the “purchase of miles” instead of longer commuting and increases in vehicle miles traveled (VMT).**
15. **Work with local Departments of Health to promote the connections between transportation and health.**
16. **Promote and support the pedestrian safety strategy, “Vision Zero”, in all our communities.**

Four Basic Scenarios

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

Two Overlay Scenarios which could happen in combination with other scenarios

- **Optimistic AV.** This scenario assumes that automated vehicles will be well integrated into the land use and transportation system with pricing and policy structures that encourage ridesharing and transit use. Under this scenario, empty self-driving cars on the road will be minimal and vehicle miles of travel will be less than trend. Increased efficiency of self-driving allows greater real capacity on expressways, and traffic incidents will be rare. The potential safety benefits of AV's will be fully realized.
- **Pessimistic AV.** This scenario assumes that the availability of AV's result in significant increases in vehicle miles of travel due to empty cars circulating or returning to the car owner's home. Increased congestion results from inadequate facilities for AV's dropping off passengers. Transit service declines dramatically.



New Visions 2050 Financial Plan White Paper Summary:

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

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

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

New Visions 2050 Infrastructure White Paper Summary

The Capital District's transportation system is comprised of critically important highways and bridges, along with intermodal and multimodal facilities including ports, airports, railways, sidewalks, and trails. This infrastructure is the essential substrate of the regional economy and maintaining it in a condition of good repair is vital for New York State and the Capital District to remain economically competitive in the future.

Much of the region's highway and bridge infrastructure was constructed during a period of build-out in the mid-20th century. During this period, federal spending on infrastructure as a percentage of total federal spending was twice what it is today. Highways and bridges built during this period will soon reach (or already have reached) the end of their intended service life. Preservation and repair projects may extend the usable life of these assets, but ultimately each must be replaced – or the region will lose a key link in its transportation network.

The principle of preserving and managing the region's transportation system continues to be CDTC's highest stated priority. CDTC's investment strategies indicate that preservation has higher priority than investment in expanded capacity and has the first claim on available resources.

Infrastructure Planning and Investment Principal:

Infrastructure – 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.

CDTC's Approach and Strategies

CDTC recommends integrating the following strategies and future actions into the planning process to meet the regional and statewide goals for the future of transportation infrastructure.

- Devote significant TIP resources to infrastructure preservation and renewal, including continued local and State investment in routine maintenance.
- Support less costly and shorter-lasting road and bridge repairs for the foreseeable future. This maximizes the investments in pavement and bridges in the short term.
- Evaluate TIP projects according to CDTC identified merit categories. Criteria identified in the appropriate infrastructure merit category prioritize projects that propose preservation and renewal of existing infrastructure. **New Strategy**
- Encourage the use of alternative funding approaches, especially local funding mechanisms and small-scale public-private financing opportunities. In this constrained funding environment, undertaking major highway or transit initiatives must include local and private investment. The use of mitigation cost, developed through the GEIS process, can free-up public resources for more routine kinds of projects.
- Encourage technology innovation within New York State. Although it may take years to adopt new technologies and new ways of designing and building our bridges and highways, the long-term savings cannot be minimized.
- Encourage sidewalk repairs, transition plan implementation, and connecting gaps in the existing bicycle and pedestrian network before extending new bicycle and pedestrian infrastructure. **New Strategy**
- Support the integration of complete street features in preservation and renewal treatments wherever possible and heavily consider community context regardless of facility ownership.
- Support the integration of non-required ADA accessibility elements in pavement and bridge preservation and renewal treatments wherever possible.
- Support NYSDOT efforts to expand coverage of weigh-in-motion (WIM) and e-screening technologies on the State Freight Core Network. **New Strategy**
- CDTC will evaluate re-establishing both the bridge and pavement goals originally developed in 1995 relative to current needs and funding. As part of this process CDTC will re-evaluate pavement and bridge Performance Measure categories. **New Future Action**
- CDTC will evaluate resources needed to collect and maintain better data on regional costs of bicycle and pedestrian infrastructure construction and maintenance. **New Future Action**
- CDTC will evaluate resources needed to collect and maintain a regional traffic signal inventory, documenting the quantity and condition of the traffic signals in the Capital District. **New Future Action**
- CDTC will evaluate the needs of emerging vehicle technologies like Automated and Electric Vehicles (AVs and EVs) and assess the impacts they might have on the physical transportation infrastructure as their total market share increases. **New Future Action**
- CDTC will evaluate scenarios to determine the most cost effective mix of preservation and renewal treatments using HCPM and other available models. We know that the region cannot continue to rely on preservation treatments to improve overall pavement and bridge conditions. More significant reconstruction strategies that result in longer useful life will be necessary in the future.

New Visions 2050

Draft Regional Operations and Travel Reliability: CDTC's Congestion Management Process

Summary

The Regional Operations and Safety Advisory Committee was asked to examine issues relating to the operations, congestion and travel reliability for the New Visions Regional Transportation Plan update, and to make recommendations for policies and actions for the New Visions 2050 Plan. The topics considered include:

- Reliability of Travel
- Intelligent Transportation System Priority Network
- Congestion Management Process
- Use of a new data set to estimate performance measures

Many of these topics are already considered and supported in the New Visions 2040 Plan. This paper, when incorporated into the New Visions 2050 Plan, will serve as an update to the **CDTC Congestion Management Process (CMP)**. The Advisory Committee considered ways in which the Plan could be updated and strengthened.

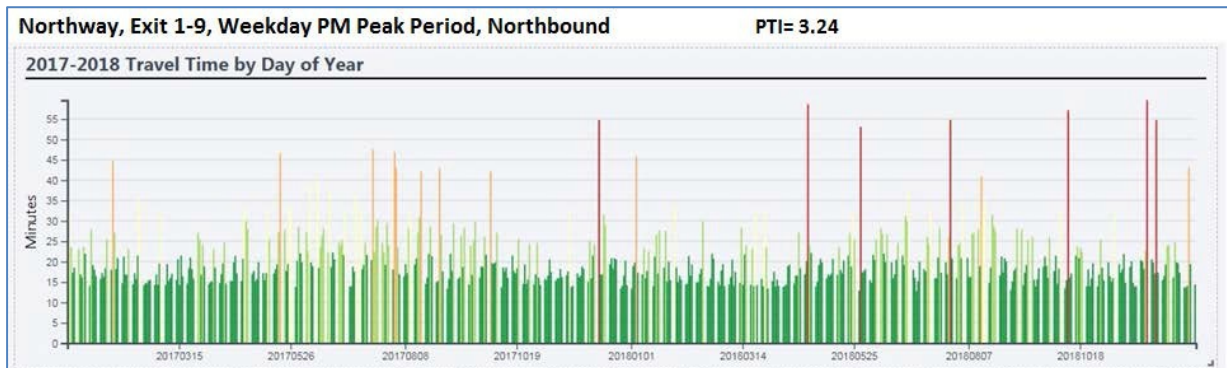
CDTC has studied **traffic congestion and traffic operations** in the Capital District. The New Visions Plan recognizes that managing traffic flows is critical for the health of the region. The New Visions Plan also recognizes that because it is not possible to eliminate all congestion, reliability of traffic flow is emphasized. Congestion Management must be consistent with the entire New Visions Plan and must support growth in economic activity and maintain the quality of life in the Capital District.

The **National Performance Management Research Data Set (NPMRDS)** uses anonymous data from variety of GPS devices carried by both trucks and cars to record highway speeds. Data is collected under contract with the Federal Highway Administration twenty-four hours a day, 365 days a year, for both passenger cars and trucks. The NPMRDS data can be used to better understand reliability. Non-recurring delay is more unacceptable to the average commuter because it is unexpected and disrupts plans, while predictable, recurring delay can be more tolerable. For example, the NPMRDS data shows that on an average day, in the PM peak period, average travel time from downtown Albany to Northway Exit 9 in Clifton Park is 29 minutes or 11 minutes longer than free flow. However, the 95th percentile travel time (incident related) is 51 minutes, which is 22 minutes longer than regular PM peak travel time. The incident related travel time is more disruptive. See the following page for charts demonstrating the NPMRDS data. **The NPMRDS data has great potential for improving congestion management and operations in the CDTC region.**

New recommendations include:

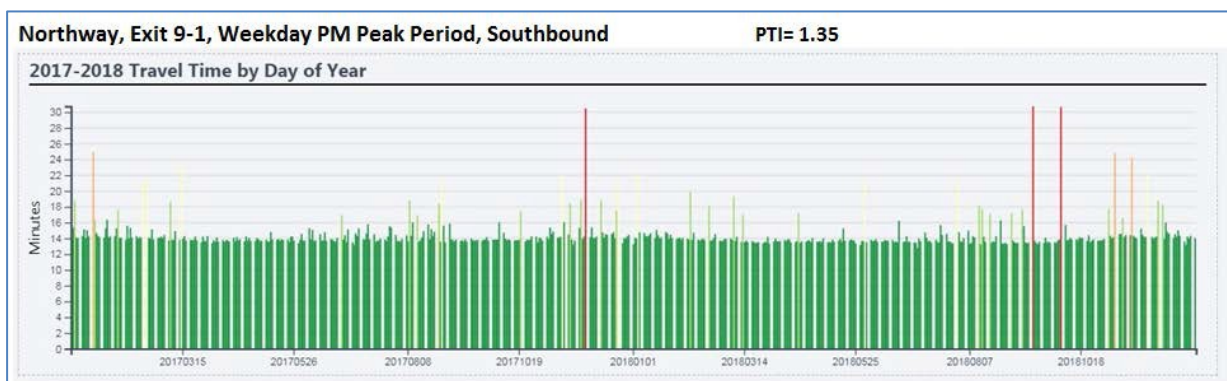
- **Community Traffic Engineering Services Program** – CDTC should explore the option of establishing a community traffic engineering services program.
- **Regional Traffic Signal Timing Program** – CDTC should establish a Regional Traffic Signal Timing Program to conduct a data-driven, performance measure-based screening of regional arterials to determine which would benefit most from timing optimization.

- **Traffic Incident Management Committee** – A Traffic Incident Management Committee should be formed that will meet regularly and assess management of recent incidents and plan for upcoming events. Emergency service providers, State Police, NYSDOT staff and others should be included.
- **Inventory of Signals and Signal Coordination Systems** – CDTC should develop a plan to inventory signals in the region and assess their level of operational capability for performance reporting purposes, and as a first step toward developing a Traffic Signal Management System
- **ITS/TSMO Strategies Survey and Self-Assessment** – CDTC should work with regional operating agencies to compile a survey of ITS and TSMO strategies currently in use.
- **Classification of Signalized Arterials** – CDTC should adopt a data-driven approach to prioritizing corridors for traffic signal upgrades and transit ITS deployment. Signalized arterials should be mapped and classified based on traffic volumes, transit use, access management, signal delay, travel time reliability, safety, and other factors.
- **Automated Traffic Signal Performance Measures Pilot** – Signals with vehicle detection can record and archived high-resolution operations data when the appropriate software is installed on the controller. This data can be used for modeling purposes, signal retiming, and for planning future improvements.
- **Regional Transportation Systems Management Operations (TSMO) Plan** – CDTC will develop a Regional Transportation Systems Management Operations Plan. The TSMO Plan would be developed in accordance with Federal guidance on Advancing Metropolitan Planning for Operations.



Above: Northbound travel time on the Northway during the PM peak period, every weekday for 2017 and 2018. The spikes indicate major delays, mainly caused by incidents.

Below: Southbound travel time is much more reliable during the PM period, as most traffic is heading north.



New Visions 2050 Safety & Security White Paper Summary

The safety of the region's transportation system is CDTC's top priority. It is possible that technology in 2050 will greatly contribute toward reducing if not nearly eliminating transportation related fatalities and injuries but the region should not wait for these technologies to become widely available. Instead, the region should support changes in the safety culture to design safe streets, encourage safe transportation system user behavior and to improve the security of the transportation system for all.

The Safety and Security White Paper describes the progress made over the last five years to improve transportation system safety, discusses the availability of funding and how that funding is being used, reviews emerging regional and national trends in safety and security and recommends a new set of strategies and actions to be considered for incorporation into New Visions 2050. Federal Safety Performance Measures, CDTC's Local Road Safety Action Plan (2019), the New York State Strategic Highway Safety Plan (2017) and other state and regional plans for safety and security were also considered.

Safety and Security Planning Principles

The existing New Visions safety and security planning and investment principle has been revised creating two principles as follows.

Safety Principle: 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.

Security Principle: Protection of critical transportation infrastructure from natural disasters, acts of terrorism and cyberattack is of increasing concern. Scenario planning and 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. Increased coordination and communication of available resources to emergency services providers will remain paramount. 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.

Safety Performance Measures

CDTC is required to integrate safety performance-based planning and programming into its decision-making processes by adopting performance measures and targets developed by New York State. To monitor the region's performance, CDTC reviewed crash data and tracked progress in five federal safety performance measures. In 2018, the most recent year for which crash data is available, progress has been made to reduce fatalities but the region only met one of the state's five safety targets.

CDTC 2018 Safety Performance Summary

Performance Measures	2018 CDTC and NYSDOT % Reduction Target	CDTC 2011-2015 5-Year Average	CDTC 2014-2018* 5-Year Average	CDTC 2018 % Change
Number of Fatalities	- 5.0%	54	53	- 1.8%
Rate of Fatalities (Fatalities per 100 Million VMT)	- 3.0%	0.67	0.64	- 4.5%
Number of Serious Injuries	- 6.0%	614	655	6.7%
Rate of Serious Injuries (Serious Injuries per 100 Million VMT)	- 5.0%	7.6	7.9	3.8%
Number of Non-motorized Fatalities and Non-motorized Serious Injuries	- 1.0%	98	101	1.1%

**2018 fatality data is preliminary and subject to change. Sources: Fatality Analysis Reporting System (FARS), FARS Annual Report File (2018), Traffic Safety Statistical Repository (TSSR) and the Highway Performance Monitoring System (HPMS) for vehicle miles traveled (VMT) data.*

Proposed Strategies and Actions

Safety and Security Planning:

- 1) Provide more options for transportation network users by planning for complete streets.
- 2) Further develop the regional crash profile.
- 3) Encourage local governments to adopt Safe Systems or Vision Zero policies.
- 4) Continue CDTC's collaborations with numerous safety and security partners.
- 5) Support the state with the development and implementation of state action plans.
- 6) Coordinate with Other Local Road Safety Plan Sponsors.
- 7) Create an Incident Management Committee.
- 8) Develop a Road Safety Assessment (Audit) Program.
- 9) Encourage land use planning that supports safety and security.
- 10) Support the creation of a more secure transportation system.

Engineering:

- 1) Encourage safety in all transportation projects.
- 2) Design streets for safety over speed.
- 3) Prioritize safety in all funding decisions.
- 4) Support state efforts to improve crash data systems.
- 5) Encourage regional implementation of State and Regional Systemic Countermeasures.
- 6) Continue to identify and address high risk locations.
- 7) Begin to plan for fully Connected/Automated Vehicles (CAVs).
- 8) Continue funding for the Transportation Management Center and ITS technologies.

Education and Enforcement:

- 1) Develop Capital Coexist into CDTC's comprehensive safety education and awareness program.
- 2) Provide law enforcement with data, educational tools and training to impact road user behavior.
- 3) Expand CDTC's collaborations with advocacy groups, schools and other transportation safety stakeholders.

New Visions 2050

Environment & Technology White Paper

Summary

The Environment & Technology White Paper explores transportation planning strategies and actions for preserving the natural environment and building a more resilient transportation system. It also evaluated emerging technologies, how they could shape travel behaviors and future infrastructure as well as how they can be leveraged to improve mobility, or the ability of Capital Region residents to get where they need to go, most efficiently. This document reviews the status of the New Visions 2040 performance measures and goals, outlines the region's accomplishments and completed tasks that have contributed to those goals. Major themes throughout the paper include the anticipated effects of a changing climate, building for resiliency, creating equitable access to the transportation system, and using technology for everything from decision-making to managing traffic. It also explores the three revolutions in transportation: automation, electrification, and shared mobility and how they might (and already are) converge to disrupt the transportation systems.

The New Visions planning and investment principles regarding environment and technology were amended as follows:

Preserve the Environment – transportation choices should improve our environment, not harm it.

Environmental stewardship is crucial to the success of and quality 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 to 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 self-driving cars, self-adjusting traffic signals, smart phone apps, ridesharing, carsharing, and bikesharing will have tremendous and wide-reaching impacts on future transportation. These impacts include, but are not limited to, decreasing congestion, providing transportation to more seniors and people with disabilities, reducing traffic crashes, and more.

Below are the action items recommended to implement the plan. A review of the draft white paper will also find a funding plan and evaluation of how four different future scenarios could impact performance measures, such as greenhouse gas emissions.

Recommended Action Items:

1. **Build a virtual forum for cross-disciplinary coordination and network.** The CDTC Smart Communities Task Force is a forum for the public and private sector to meet, network, and coordinate the integration of technology in the transportation system. The rapid changes brought about by technology impact a diverse array of sectors and organizations in the Capital District. The multi-dimensional nature of these impacts requires coordination and integration among these groups in order to maximize available resources and develop a shared vision and framework for how technology can improve mobility, accessibility and equity, and what metric should be used to evaluate the region's progress. This action is broken into two subtasks: 1) create a virtual forum that can lay the groundwork for the development of a Smart Mobility Innovation lab for the Capital Region and 2) explore the feasibility of developing an open data portal.
2. **Develop a climate resiliency plan and vulnerability assessment tool.** Guidance on maintenance and construction of infrastructure in the face of the climate crisis will reduce vulnerabilities and make the region more resilient. This might include strategies for integrating green infrastructure into federally-funded local transportation projects and/or innovative construction techniques and materials.

3. **Identify and prioritize “Smart Corridors.”** Integrating and implementing new mobility and emerging technology requires the consideration of all modes of transportation, adjacent land uses, and connections within the street network(s). The corridor approach that CDTC promotes through the Transportation and Community Linkage Program can be modeled to identify and plan for connected, smart corridors that respect and enhance the natural and human environments, are consistent with *New Visions* goals, and support mobility. For example, the region might identify a frequently congested major arterial that could benefit from smart signals and other technology & mobility concepts discussed in this paper to move people faster and easier. This might be an existing or potential bus rapid transit route.
4. **Develop AV-readiness guidance for municipalities.** The transportation revolution is at the Capital District’s doorstep. The combination of electrification, automation, and shared mobility could be the key to reducing GHG emissions and slowing the impacts of the climate crisis. It is exciting and full of both opportunity and potential as it opens up mobility solutions to populations who have long been excluded from driving like the disabled, elderly and youth. CDTC must develop a regional vision for how C/AV technology will be adopted and supported. This vision should identify existing transportation gaps that create barriers to jobs, services, and other opportunities, and explore how C/AV technology can address them. How can towns, cities, and villages working to pass or implement Complete Streets legislation consider C/AVs and what policies are needed to ensure they are safe, efficient, and help achieve regional sustainability, economic, and safety goals.
5. **Adopt new technologies and tools for virtual public involvement.** Virtual public involvement (VPI) includes a host of tools and platforms that can efficiently be made accessible to communities, at a low cost, to communicate essential project information and collect comments. CDTC should research and evaluate available VPI tools and how they can be used to develop quick videos, crowdsource data and information, conduct polls, visualize projects, and build a social media following. Better public engagement also means cultivating relationships with unconventional partners and stakeholders, such as local bloggers and media that can help expand CDTC’s reach.
6. **Compile GHG emissions data from transportation.** There is currently no single source of up-to-date GHG emission from transportation data to compare and evaluate progress the region has made. CDTC should coordinate with CDRPC to compile GHG data, at least for transportation, regularly.
7. **Adopt the MEP metric.** The USDOE has developed the Mobility Energy Productivity (MEP) to address the challenge of measuring how mobility impacts a person’s quality of life. CDTC should explore the feasibility of integrating MEP into its model to measure new transportation projects and services.

New Visions 2050 Environment & Technology Performance Measures:

Measure	Date Source
Greenhouse Gas Emissions from Transportation*	TBD
Energy use from Transportation	TBD
Percent of TIP that invests in projects with a positive impact on GHG emissions	TIP/STIP
Volatile Organic Compounds (VOCs) & Nitrogen Oxide (NOx)	NYSDEC
Petroleum Displacement	CDCC Annual Fleet Survey

*Primary performance measure

New Visions 2050

Coordinated Public Transit Human Services Transportation Plan

Summary

Why is a Coordinated Plan important? It will become increasingly important to address the growing mobility service needs of individuals with disabilities, seniors and low income residents.

Currently, the Capital District is home to over 98,000 people with reported disabilities, affecting how they are able to travel and use the variety of transportation choices most people take for granted. Over 130,000 people in the Capital District are over 65 years old, and this population is expected to continue 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 face challenges related to access to jobs either because they do not have access to a private vehicle or because public transit is not available for their trip.

Plan Purpose and Required Elements: A Coordinated Public Transit – Human Services Transportation Plan should identify opportunities to assist more people, reduce service gaps and overlaps, and increase the cost effectiveness of the services provided. Recognizing the benefits of better communication and working together to help meet these needs, efforts to coordinate public transit and human service transportation in the Capital District began over three decades ago. In 2005 formal adoption of a coordinated plan became a requirement of federal transportation legislation.

Metropolitan Planning Organizations such as the [Capital District Transportation Committee \(CDTC\)](#) must “identify the transportation needs of individuals with disabilities, older adults, and people with low income, provide strategies for meeting those local needs, and prioritize transportation services for funding and implementation.”

As a result the [Regional Transportation Coordination Committee \(RTCC\)](#) was officially formed and continues to foster communication and coordination among a variety of groups in an effort to better serve people with transportation challenges. This Plan is the fourth developed with the assistance of the RTCC.

Projects funded under one federal transportation program, called “Enhanced Mobility of Seniors & Individuals with Disabilities,” must be listed within the regional Coordinated Plan. Other federally funded transportation should be coordinated.

Federal guidance directs a Coordinated Plan to include four elements:

1. An assessment of available services that identifies current transportation providers (public, private, and non-profit);
2. An assessment of transportation needs for individuals with disabilities, older adults, and people with low incomes;
3. Strategies, activities and/or projects to address the identified gaps between current services and needs, as well as opportunities to improve efficiencies in service delivery; and
4. Priorities for implementation based on resources (from multiple program sources), time, and feasibility for implementing strategies and/or activities identified.

A Coordinated Plan must be crafted with participation by seniors; individuals with disabilities; representatives of public, private, and nonprofit transportation and human services providers; and other members of the public who can provide insights into local transportation needs. The RTCC assisted CDTC in developing this Coordinated Plan and increasing participation and input.

CDTA and human services agencies provided information on their services in a 2018 survey. Results indicate an increasing reliance on volunteer drivers. In the next five years, over half of respondents' vans and cars need to be replaced.

CDTC visited 16 senior centers, mostly during lunchtime congregate meals, to learn about transportation experiences and challenges of seniors in attendance, and collect survey responses from willing participants. CDTA distributed a short survey about transportation patterns to a random sample of 200 STAR riders. Over 60% of all survey respondents said they have difficulty leaving their home due to a lack of transportation.

Strategies and Actions for Improvement:

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

New Visions 2050 Complete Streets White Paper Summary

Invest in Complete Streets.

Planning and Investment Principle: Street design will serve all users equitably, including pedestrians, bicyclists, transit riders, freight, and personal vehicle drivers and riders.

Transportation investments are made based on a 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 achieved by working with municipalities to improve communication and coordination, training and education, and design standards and other resources.

In addition to the importance of land use and equity considerations, the Complete Streets chapter discusses laws and design standards, implementation and funding, and design considerations, namely road diets, green infrastructure, signals, new technologies, level of service, and maintenance.

Recommendations are proposed as follows:

A. Finalize Complete Streets Design and Implementation Guidelines

CDTC staff will continue drafting guidelines applicable throughout the Capital Region. These will include design guidance on sidewalks, bikeways, transit infrastructure, green infrastructure, curbside space, and maintenance. Once completed, CDTC will encourage municipal adoption and will distribute the guidelines to municipalities, consulting firms, and other interested parties.

B. Continue the Educational and Technical Workshop series

CDTC staff will continue the Workshop series to build local capacity to implement complete streets approaches, strengthening relationships between transportation practitioners, other departments, and the community. These free workshops are interactive, build local capacity to implement complete streets, and strengthen relationships between transportation practitioners, other departments, and the community. Attendees learn how to more effectively balance the needs of all users and routinely create and maintain complete streets.

Staff will make a concerted effort to reach out to municipalities that haven't participated. After the third round of Workshops in 2020, staff may re-evaluate the Workshop goals and materials to maintain relevance as municipalities develop their capacities. In addition, staff will consider creating template policies or resolutions, as well as checklists, sensitive to the context of the Capital Region. These can assist smaller municipalities and those with less staff to better serve all roadway users equitably.

C. Continue Documenting TIP Project Outcomes

Staff will conduct field visits to document in photos or videos completed TIP projects that included at least one complete street element in the application or Project Justification Package (PJP). In instances where complete streets elements listed in the application or PJP are not part of the completed project, staff will seek to understand reasons for the change to improve outcomes.

D. Recommend Pedestrian and Transit Level of Service Methodologies

Staff will determine a preferred methodology for both pedestrian and transit level of service for CDTC-funded planning studies.

E. Collect Data on the Impact of Complete Streets Projects

In partnership with the Bicycle and Pedestrian Advisory Committee, staff will collect economic, crash, and usage data on infrastructure projects that include significant complete streets elements.

Performance measures are proposed as follows.

- F. Number of communities in the region adopting complete streets policies via governing body action
- G. Number of CDTC complete streets training sessions held and number of attendees
- H. Number of funded TIP projects including complete streets features
- I. Number of municipalities that maintain year-round usability
- J. Number of municipalities utilizing a checklist for project development

New Visions 2050 Transit White Paper Summary

CDTC reestablished its Transit Task Force in May 2019 to update the 2015 Transit White Paper. The group met bi-monthly to review what has changed in the region over the last five years and to recommend a new set of strategies and actions to be considered for incorporation into New Visions 2050. Transit related data, changes in the regional transit system and demographic data, CDTC's regional development scenarios and federally required transit performance measures were all considered in the update of the White Paper. The Transit White Paper will also support the update of CDTA's Transit Development Plan expected in 2020. A key finding of the white paper is that the desired future land use scenario for transit is one that includes concentrated development patterns. Improving transit service, making transit more accessible and keeping it affordable are all basic principles that the region should adopt as part of New Visions 2050.

Transit Planning Principle

It is recommended that the existing New Visions transit planning and investment principle be revised as follows:

Our transit system will include a variety of modern, innovative, and viable travel options.

Fixed route transit, other travel services and transit facilities are essential elements of the region's social, economic, and cultural fabric. Sufficient operating funding, capital funding and supportive policies must be in place to maintain a viable transit system. Advanced technology, innovative travel options and fixed route services located near concentrated development are critical to developing a high quality transit system.

The future transit system will:

- *Maintain high quality fixed route transit in core urban areas*
- *Support concentrated development and transit supportive land development*
- *Reduce congestion, improve air quality, and save energy*
- *Form the backbone for managing travel demand*
- *Provide essential mobility for those who do not operate a private vehicle*

Transit Performance Measures

CDTC is required to integrate transit performance-based planning and programming into its decision-making processes by adopting performance measures and targets for Transit Asset Management and Safety. Transit Asset Management targets were developed by CDTA and adopted by CDTC in 2019 while transit safety measures and targets will be adopted in 2021. These measures are required under federal transportation law. New Visions also included performance measures to monitor transit access, ridership, service quality and cost effectiveness. The data review shows that CDTA's transit fleet is aging, that the fixed route transit system is experiencing ridership declines which is impacting the cost effectiveness of the services being offered. At the same time, more people have access to transit than in the past and the overall quality of transit has improved.

Progress on New Visions 2040 Recommendations

The region made progress on a number of recommendations in the 2015 Transit White Paper that was incorporated into New Visions 2040. Recommendations that were completed or had significant progress included the following:

- The River Corridor (Blue Line) Bus Rapid Transit (BRT) system is in construction and the Washington/Western Avenue Corridor (Purple Line) BRT is in design.
- Articulated buses were reintroduced on BusPlus and trunk routes.
- Commuter coaches are now provided on all express routes.
- CDTA continues to review route performance to allocate resources to keep strong transit routes strong.
- CDTA has expanded its Universal Transit Access Program to three new partners since 2015 and is incorporating bike share into the services offered.

Strategies and Actions

Proposed strategies and actions in the short and long term for incorporation into New Visions 2050 include the following.

Short Term (2020-2030) Strategies and Actions

1. Coordinate with CDTA on its Transit Development Plan Update
2. Adopt Consolidated CDTC Performance Measures for Transit
3. Complete and Upgrade 40 Miles of Bus Rapid Transit
4. Undertake a Bus Lane Feasibility Study
5. Develop Transit Related Pilot Programs
6. Develop a Transit Access Toolkit
7. Support State Worker Transportation Options
8. Develop a Regional Parking Strategy
9. Develop an App for Public On-Demand Services
10. Support a Safe and Sustainable Transit Fleet
11. Monitor Microtransit Performance
12. Assist in the Planning for Montgomery County Transit Service
13. Revise CDTC Transit Priority Network and Merit Scoring Process
14. Plan for an Albany Intermodal Station

Long Term (2030-2050) Strategies and Actions

1. Explore the need for a Consolidated CDTA Facility
2. Pilot Automated Transit Vehicles
3. Upgrade Enhanced Bus Rapid Transit to Light Rail
4. Support a New or Rehabilitated Livingston Avenue Bridge with Bicycle and Pedestrian Access
5. Support High Speed Rail and Electrification

New Visions 2050 Freight White Paper Summary

“What is New”

Freight and goods movement in metropolitan regions is complex and does not lend itself to simple fixes. Trucks on area roadways and trains on the region’s railroads may pass through the Capital District without stopping, contributing to costs in terms of wear on infrastructure, congestion, emissions, and safety hazards without creating a direct benefit. Other trips that either begin or end at locations in the region provide the goods movement necessary to support local industries that do business beyond CDTC’s four counties. These trips include air and maritime cargo. Many truck trips travel entirely within the Capital District, moving goods from distribution centers to retail establishments, healthcare centers, or educational institutions.

In 2015, CDTC developed a Freight and Goods Movement Study to better understand the role and profile of freight transportation throughout the region. In 2016, the CDTC Policy Board adopted the Regional Freight Plan (“Freight Plan”). The Freight Plan helps guide CDTC and its members to make appropriate investments to support the efficiency and safety of goods movement. For this effort, the Freight Plan’s underlying data and assumptions were considered relevant and mostly accurate. The purpose of the Freight White Paper is not to replace the Freight Plan, but rather to review and update the status key elements of the plan as part of the New Visions 2050 process. The Freight Advisory Committee (FAC) served as the steering committee for the development of the Freight White Paper.

The CDTC Freight Priority Network (FPN) was reviewed as part of the New Visions 2050 effort. The FPN provides a logical system of routes that facilitate efficient and safe truck mobility within, to, and from the CDTC region. FPN designation is important because it provides CDTC and its constituent municipalities, counties, and State agencies with guidance on roadway investment, planning, design (e.g., clearances, turning radii), maintenance, pavement, signalization, and access management to help support freight mobility across the region. The proposed revisions to the FPN:

Proposed Removals:

- NY Route 32/S. Pearl St (I-787 to S Port Rd)

Proposed Additions:

- US Route 9W (I-787 to NY 32), NY 32/Corning Hill Rd (US 9W to S. Pearl St), NY 32/S. Pearl St (Corning Hill Rd to S. Port Rd)
- Port Route; S. Port Rd, Normanskill St, Raft St, and Smith Blvd (NY 32 to Port of Albany)
- NY Route 7 (I-88 to Rotterdam Industrial Park)
- Everett Rd (I-90 to Commerce Ave) and Commerce Ave

The FAC supported keeping all other roadways previously included on the FPN; see the Freight White Paper for a complete list and graphics.

The recommendations break out into two general categories: (1) Projects; and (2) Programs, Policies, and Studies:

- *Projects* involve construction, reconstruction and/or changes to physical transportation infrastructure.
- *Programs, Policies, and Studies* are non-capital initiatives that seek to employ regulatory, guidance and/or planning tools to facilitate more cost-effective and efficient use of existing and planned transportation infrastructure.

Proposed removal of projects (due to completion):

- I-87 Exit 4 Albany International Airport Access Project
- Port of Albany Expansion
- Port of Albany Cargo Handling Capacity Upgrade

Proposed new long-range projects:

- Maintain a State-of-Good-Repair on FPN Pavements and Bridges: Prioritize the construction/ reconstruction of pavements and bridges on the FPN to decrease pavements classified as “poor” and bridges classified as “structurally deficient”. This “new” project replaces and formalizes a ‘policy’ recommendation from the Freight Plan (2016).
- These projects were identified in the New York Statewide Freight Transportation Plan (August 2019), and the CDTC FAC supported addition to CDTC’s long-range plan for consistency.
 - Castleton Bridge over Hudson River: Construct/ Reconstruct the Castleton Bridge over Hudson.
 - Sand Bank Track/ Schenectady Mainline relocation: The project includes relocation and reconstruction of several rail lines.
 - Port of Albany Track Rehabilitation: Track rehabilitation for heavy-lift traffic at the Port of Albany.
 - Voorheesville Runaround Track Construction: The project is needed to increase the efficiency of train switching activities at the Northeastern Industrial Park.

Proposed removal of programs, policies, and/or studies:

- FPN Bridge Improvement Prioritization – formalized (above) as part of capital projects
- I-787 Rail Relocation Feasibility Study - stakeholders have indicated this is not a feasible option

Proposed new programs, policies, and/or studies:

- NY 7 Freight & Land Use Study - Examine freight movement and operations to, from, and through the corridor, and land use implications.

The FAC supported keeping all other recommendations from the CDTC Regional Freight Plan; see the Freight White Paper for a complete list.

New Visions 2050

Bicycle & Pedestrian White Paper

Summary

The Bicycle and Pedestrian White Paper is also referred to as the “Bicycle and Pedestrian Action Plan.” This document reviews the status of the New Visions 2040 performance measures and goals, outlines the region’s accomplishments and complete tasks that have contributed to those goals, and reviews local and national bicycle and pedestrian planning trends. Major themes throughout the paper include how technology has shaped and changed the transportation system, planning concepts for emerging technologies, how walking and bicycling play a role in climate policy and importance of equity and accessibility in the transportation system. Below are the action items recommended to implement the plan. A review of the draft white paper will also find a funding plan and evaluation of how four different future scenarios could impact performance measures, such as safety, health, and capital available for bicycle and pedestrian infrastructure projects.

The New Visions planning and investment principle regarding bicycle and pedestrian transportation was amended as follows:

Encourage bicycle and pedestrian travel and recognize walking and bicycling as socially, economically, and environmentally responsible and 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, and multi-use trails will encourage safe bicycle and pedestrian use.

Recommended Action Items:

1. **Develop a robust bicycle and pedestrian data collection program.** A comprehensive bicycle and pedestrian use database can provide accurate data for key stakeholders to communicate the value of walking and bicycling facilities to the public, pursue competitive funding opportunities, and promote walking and bicycling as viable modes of transportation. This data may also be used to identify vulnerable assets, develop ADA Transition Plans, locate gaps and barriers in the overall network, communicate relevant safety information, tailor public outreach efforts to communities, and create route maps and mapping tools.
2. **Measure the economic value of walking and bicycling infrastructure.** Information on infrastructure costs and the return on investment in bicycle and pedestrian facilities are also lacking. Collecting and compiling accurate and up-to-date cost data for specific design elements can help municipalities put together better project proposals and budgets.
3. **Plan to be Automated Vehicle (AV) Ready.** As AVs are the most anticipated transportation technology of the 21st century, Complete Streets and other bicycle and pedestrian design policies must adapt to include provisions for autonomous mobility that prioritize the safety of pedestrians and bicyclists. An AV-Ready Capital Region is a human-focused autonomous future.
4. **Implement a regional trail network.** The Capital District Trails Plan proposes 200 miles of new trails to be built to achieve a regional, connected network. The Capital District Trails Plan provides the information and tools to any municipality or grassroots organization interested in taking responsibility for marketing and shepherding the plan

through implementation. CDTC should encourage the development of trail maintenance plans as part of any new trail construction project as well as existing regionally-significant trails.

5. **Explore integrating Health Impact Assessments (HIAs) into the metropolitan planning process.** HIAs are tools that can help communities, decision makers, and practitioners make choices that improve public health through community design and minimize adverse health impacts. The tool allows MPOs to advance transportation projects that address public health priorities, like obesity and other chronic illness.
6. **Leverage emerging technology to promote walking and bicycling as transportation.** As vehicle and other transportation technologies come to market, CDTC should evaluate their viability and applicability in the Capital District. Technologies like mobility services, smartphone applications, and automated counting tools, should be used strategically to achieve New Visions goals. Examples of how CDTC might use these technologies include developing app-based trail maps and/or delivering bike/ped traveling information in real-time to commuters (ex. 511NY).
7. **Cultivate partnerships in the Capital District.** CDTC should continue to support the BPAC and include more organizations in order to continue to pursue New Visions goals, particularly in terms of equity, accessibility, and safety.
8. **Provide training, educational opportunities, tools, and resources specifically on bicycle and pedestrian infrastructure design to local planners and engineers.** Continued support for webinars and training that provide continuing education credits for planners and engineers will encourage municipalities and local practitioners to adopt New Visions principles. CDTC should also develop tools and resources that assist municipalities and local practitioners in developing transportation plans that are consistent with New Visions goals. Similarly, resources that promote bicycle and pedestrian safety and cultivate a culture of empathy for all road users must be disseminated and communicated to the public.

The primary indicator of a bicycle and pedestrian network that connects people to jobs and opportunities, is safe, and efficient, is the number of individuals who choose to walk or bike, especially for commuting. Mode share for walking and bicycling will be the primary indicator to evaluate the progress and condition of the network of walking and bicycling infrastructure in the Capital District. CDTC will supplement NHTS and Census data with local pedestrian and bicycling counts on trails, intersections, and other important routes.

New Visions 2050 Bicycle and Pedestrian Performance Measures:

Measure	Date Source
Crashes involving bicyclists & pedestrians	ALIS
*Mode share - rate of bicycling and walking	NHTS, Census, CDTC
Rates of cardiovascular disease, obesity & chronic illness related to inactivity	NYSDOH
Miles of trail constructed	CDTC GIS
Percent of TIP dollars for bike/ped projects	CDTC TIP
Miles of protected bike lanes	CDTC GIS

**Primary performance measure*