CDTC is the designated Metropolitan Planning Organization (MPO) for the Albany-Schenectady-Troy and Saratoga metropolitan areas.
- Four counties
- Eight Cities
- 850,000 Population

CDTC New Visions Plan and Automated Vehicles
- CDTC formed an Environment and Technology Task Force during the development of the Plan, starting in 2013. A Planning and Investment Principle resulted:

Technology – We must plan for new, smarter, better, and 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.
Potential Impacts of Automated Vehicles:

- Potential for near zero crash fatalities, near zero crash injuries.
- Significant increase in highway capacity—this has implications for modeling as well as highway design.
  - Reduction in congestion would seem to be the most likely outcome in the Capital District.
  - Eventual Near Elimination of Incident Related Delay due to crashes
- Potential for light vehicles—which will make them less expensive and more energy efficient.
- Seniors could drive longer in life, people with disabilities could drive.
  - Younger people could potentially “drive” as well, with parental supervision.

Potential Impacts of Automated Vehicles:

- Potential Impacts on Transit: The impacts of automated vehicles on transit are unknown. It is possible that in some markets, totally automated vehicles could make transit less competitive, but it is also possible that in some markets, transit could become more competitive and attractive. For example, automated shuttles could bring people to main line transit stops. In addition, totally automated transit vehicles could increase transit viability.

- Potential Impacts on Smart Growth: It is difficult to predict the impact of totally automated vehicles on development patterns. It is possible that commuting a longer distance will become more stress-free and more attractive, encouraging development further away from urban centers. However, auto use will still have a cost that will increase with distance. Totally automated vehicles could also make urban centers more attractive and more accessible. The increasing market appeal of urban living may counterbalance the attractiveness of driving longer distances hands free.

New Visions Recommendation: While the impacts of totally automated vehicles on smart growth are uncertain, the region should continue to develop as an attractive region with vibrant urban and suburban communities that are walkable; and rural character and open space should continue to be protected. As the impacts of automated vehicles unfold, the regional vision can prevail and technology should be used to enhance communities.

Potential for totally automated vehicles to impact highway and bridge design.

In designing for new capacity projects, intersection projects, and other infrastructure projects, 20 year traffic forecasts are considered, and for bridge projects, 30 year traffic forecasts are considered. The New Visions Plan has strong policies against the addition of physical highway capacity except under certain conditions. The design process currently seeks to provide level of service “D” or better in the design year (either 20 years from now or 30 years from now). The New Visions Plan asserts that future potential congestion is a lower priority than existing congestion, which in many locations is worse than level of service “D”. The potential for future increased capacity resulting from totally automated vehicles should be strongly considered in highway and bridge design.
Potential for totally automated vehicles to impact highway and bridge design.

Designing a larger footprint to anticipate 2040 traffic conditions may be totally unnecessary if automated vehicles are fully established in the fleet by then. Designing a larger footprint that is unnecessary is not only prohibitively expensive but can work against the New Visions policies to encourage complete streets and demand management. The New York State Department of Transportation should consider if changes to the current design approach are needed to reflect potential changes in future demand as well as potential changes in the congestion threshold that triggers a need for increased capacity. Further, as automated vehicles and other technology changes emerge, the New York State Department of Transportation should work with its partners within AASHTO and the Federal Highway Administration to consider implications to design standards such as lane and shoulder widths.

Variables that affect travel behavior:
1. Millennials are preferring to own less cars and drive less.
2. Increasing popularity of cities and walkable neighborhoods.
3. The internet/mobile technology is replacing many trips.
4. As baby boomers retire, their auto travel may decline, especially in the commuting peak hours.
5. The popularity of transit increasing: smart fares, universities providing free transit for students, real time information, bus rapid transit, discovery of transit during the recession.
6. New options: carsharing, bike sharing, taxi-booking, services, and real-time ride sharing.
7. The price of energy (gas, CNG, electric, renewables)—impossible to forecast for 2040.
8. Automated vehicles

Scenario Planning incorporates uncertainty into the forecasting process and the planning process. It should also be incorporated into highway design.