

Role of Transportation System Operations in Supporting Livability and Sustainability: An MPO Perspective

New Visions for a Quality Region



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Capital District Transportation Committee

The CDTC New Visions Plan and Congestion Management Process (CMP) strongly support livability principles.

The CMP places a significant emphasis on management and operations.

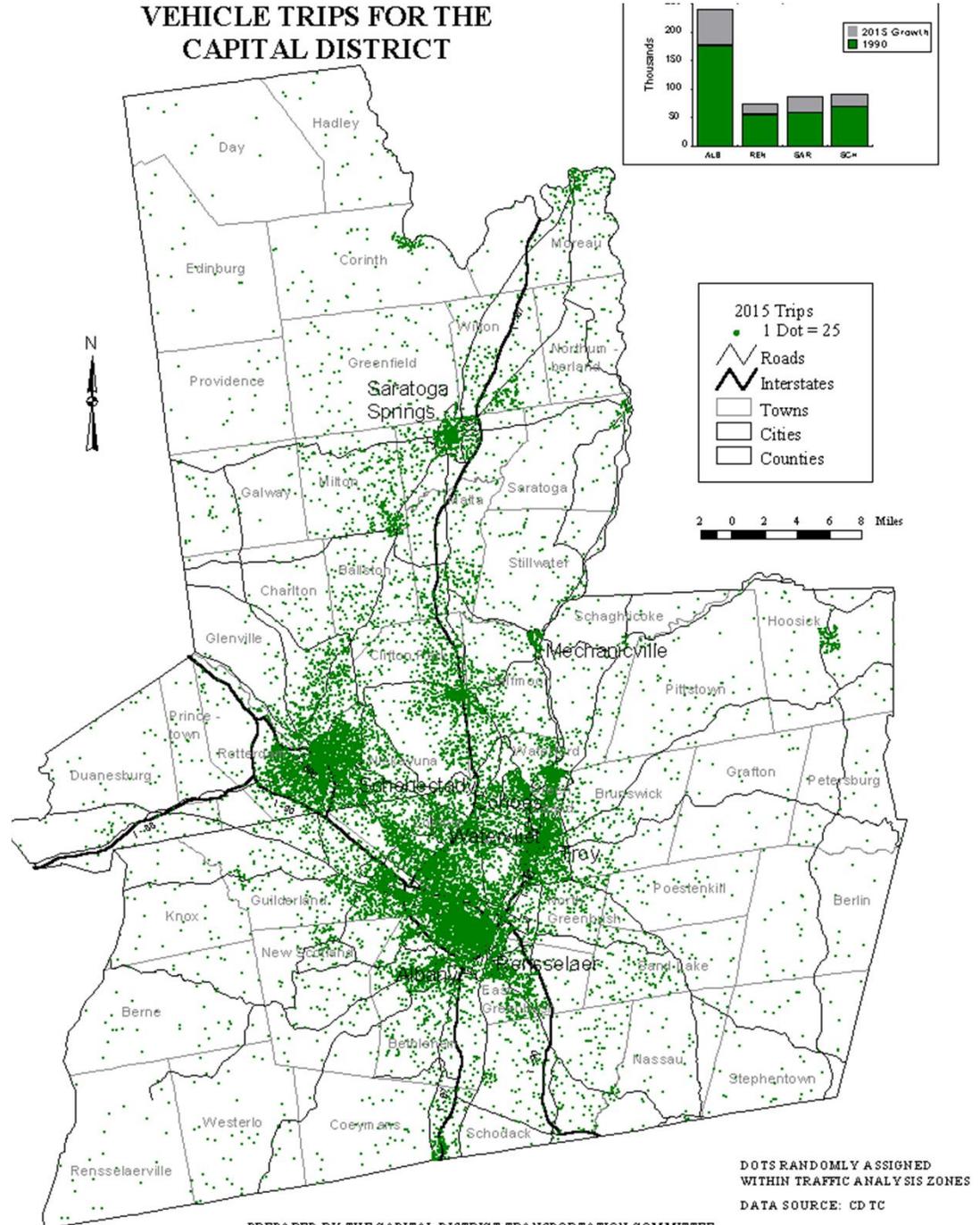
There is a strong connection between management and operations and livability.

Capital District

Albany
Troy
Schenectady
Saratoga Springs

800,000
population

VEHICLE TRIPS FOR THE CAPITAL DISTRICT



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Capital District Transportation Committee



- Four counties
- Eight cities
- largest town
- CDTA, NYSDOT, CDRPC, NYSTA,
- Port, Airport
- Rotating membership for two towns at a time

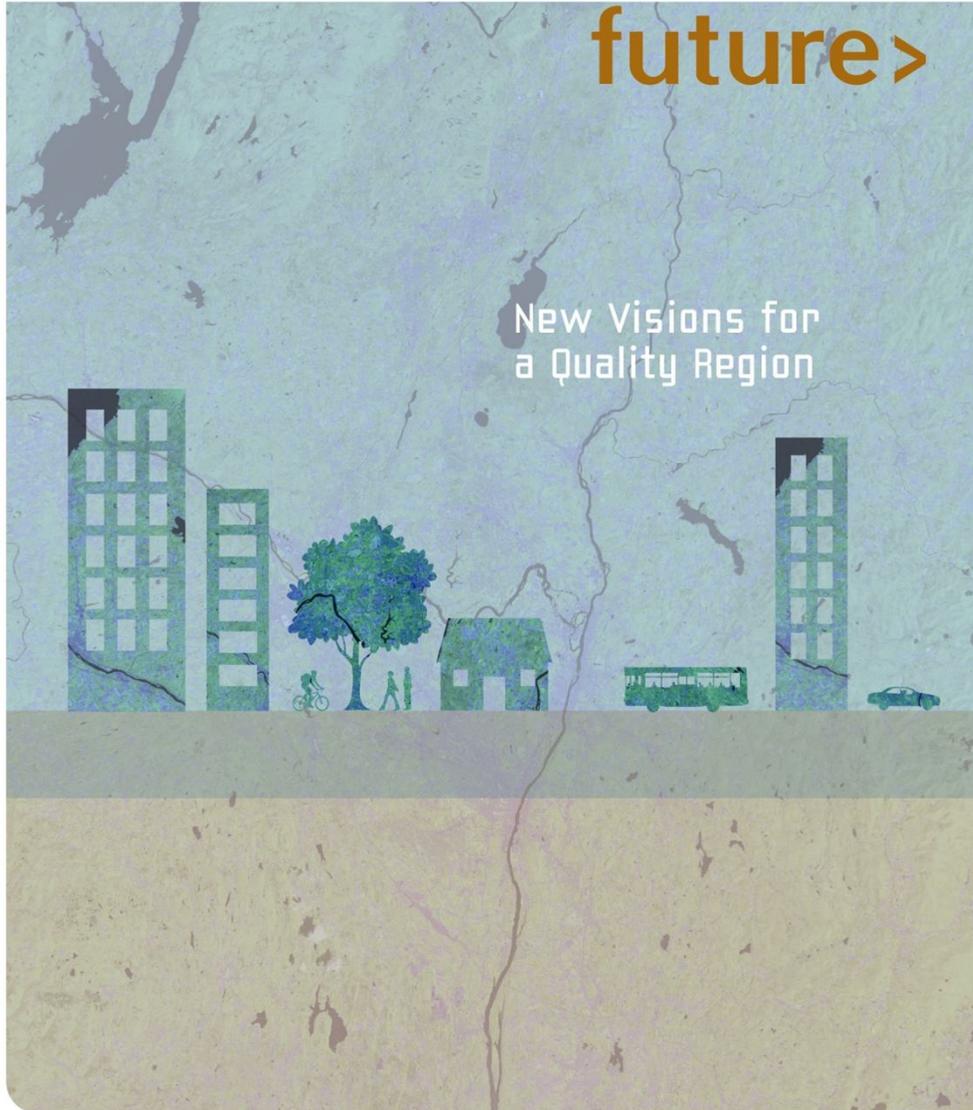
- Based on an extensive and in-depth public participation process, which included the business community, we reached a broad regional consensus that the New Visions Plan should go beyond transportation,
- And should support a “**Quality Region**” for the CDTC area



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New Visions for
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New Visions **Regional Plan**

**The Plan calls for a
strong livability
agenda—**

- **land use planning,**
- **urban reinvestment,**
- **transportation choices**
- **community values**

New Visions for a Quality Region reflects a regional consensus of residents, businesses, state and local government representatives and transportation providers to use transportation and public policy to:

- *Promote sustainable economic growth with good-paying jobs*
- *Revitalize urban areas*
- *Help build community structure in growing suburbs*
- *Preserve open space and agricultural land*
- *Make communities more walkable and livable*
- *Provide meaningful transit options*
- *Connect all residents with job opportunities*
- *Manage increasing traffic congestion and maintain reasonable mobility on the highway system*
- *Encourage land use and transportation planning*

CMP Performance Measures

The CMP includes Performance Measures that support Livability

They help guide investment decisions at CDTC and go beyond traditional transportation measures.

CMP Performance Measures

The New Visions performance measures:

- Access (Transit, Bike, Pedestrian)
- Accessibility (travel time)
- Congestion severity
- Flexibility
- Safety
- Economic Cost
- Pavement and Bridge Condition

CMP Performance Measures

- **Community Quality of Life-** qualitative measure that has been used at the regional level, at the community level, at the project selection level, and at the project design level
- Just because its not quantitative doesn't mean its not real

CMP Performance Measures

Community Quality of Life:

- Qualitative and subjective
- Use public input, reach consensus
- Real and important
- Can use an “A” through “F” rating, analogous to level of service



CMP Performance Measures

Community Quality of Life:

- New Visions described urban, suburban, and rural community quality of life
- This was used to incorporate an explicit land use and development component into the regional transportation plan
- Urban reinvestment was found to have a positive effect on this measure

CMP Performance Measures

To say congestion should be invested in because it has measurable outcomes, but livability should not be invested in because there are no measurable outcomes is an unfair statement. Both are measurable; but both are subject to uncertainty in future forecasts. Both are subjective and require community consensus to define objectives for.

CMP Performance Measures

Historically, transportation projects have been selected and designed with the goal of eliminating all congestion, minimizing travel time, maximizing speeds.

This can lead to highway facilities that have no room for bicycles or pedestrians, streetscaping or a sense of community.

CMP Performance Measures



“**Complete Streets**” is a concept supported in the New Visions Plan which says that all modes— pedestrians, bicycles, transit and autos— should have quality access to the street.

CMP Performance Measures

Trade offs are needed among all performance measures. -- *This is a choice to be made with public input, not a mechanical determinism.*

Not “minimize congestion at any cost, consider other impacts if possible”

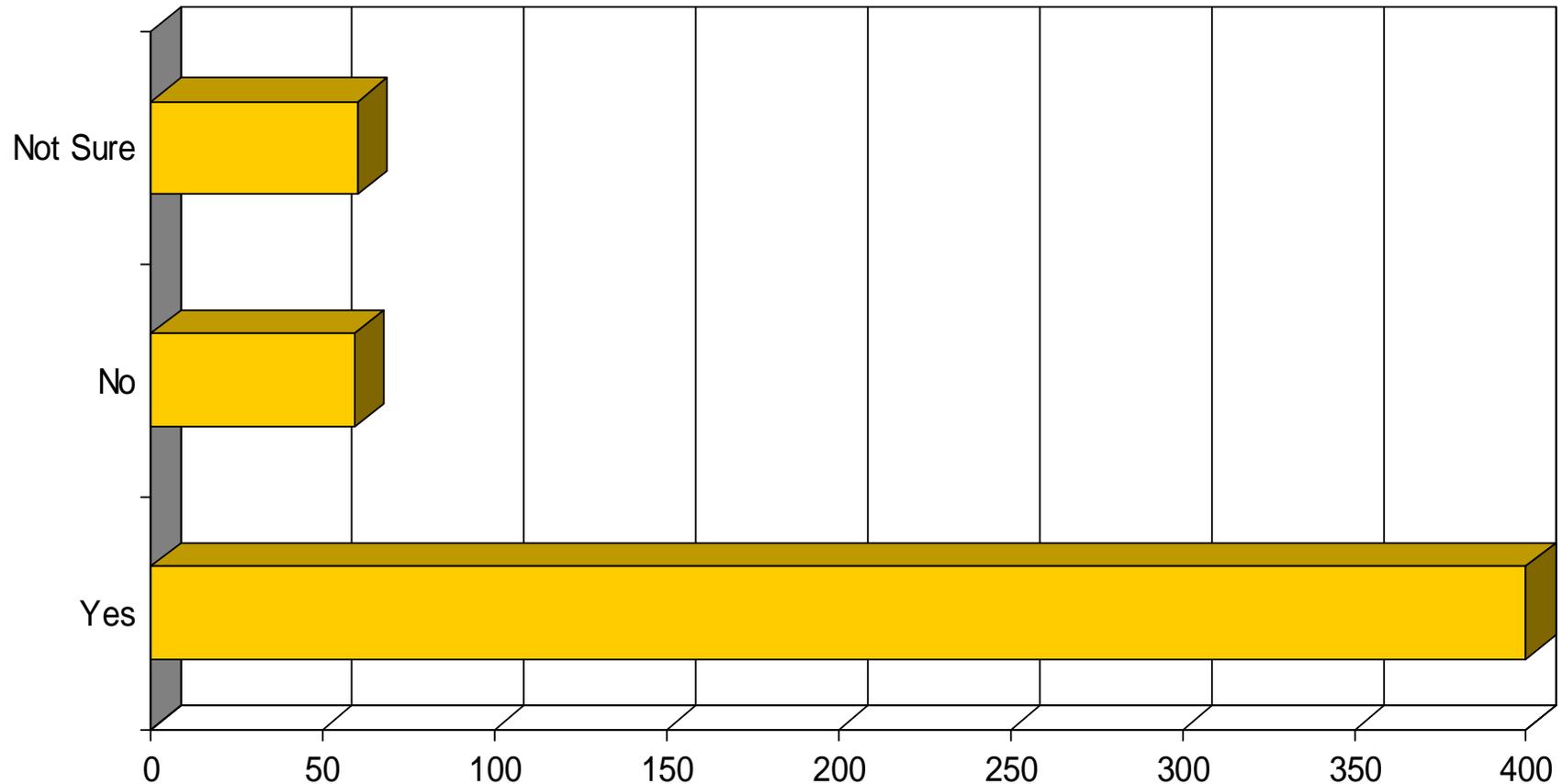
CMP Performance Measures

Get public input into the trade-offs between performance measures.

In many cases, the trade off between, say, traffic congestion and community quality of life is an easier choice than we think for the public;

while planners and engineers can get stuck thinking there is a mandate to address traffic level of service as the first priority

Would you be willing to accept traffic levels and congestion roughly as they are on Route 5 now if we could improve transit, walking, biking, landscaping, attractiveness and safety?





The Route 5 Corridor Study led to the development of a 17 mile BRT project between two downtowns, passing through three suburban communities.

The public process in the New Visions Plan has led us to the conclusion that the public experiences recurring delay as tolerable;



while unpredictable, non-recurring delay is not tolerable.

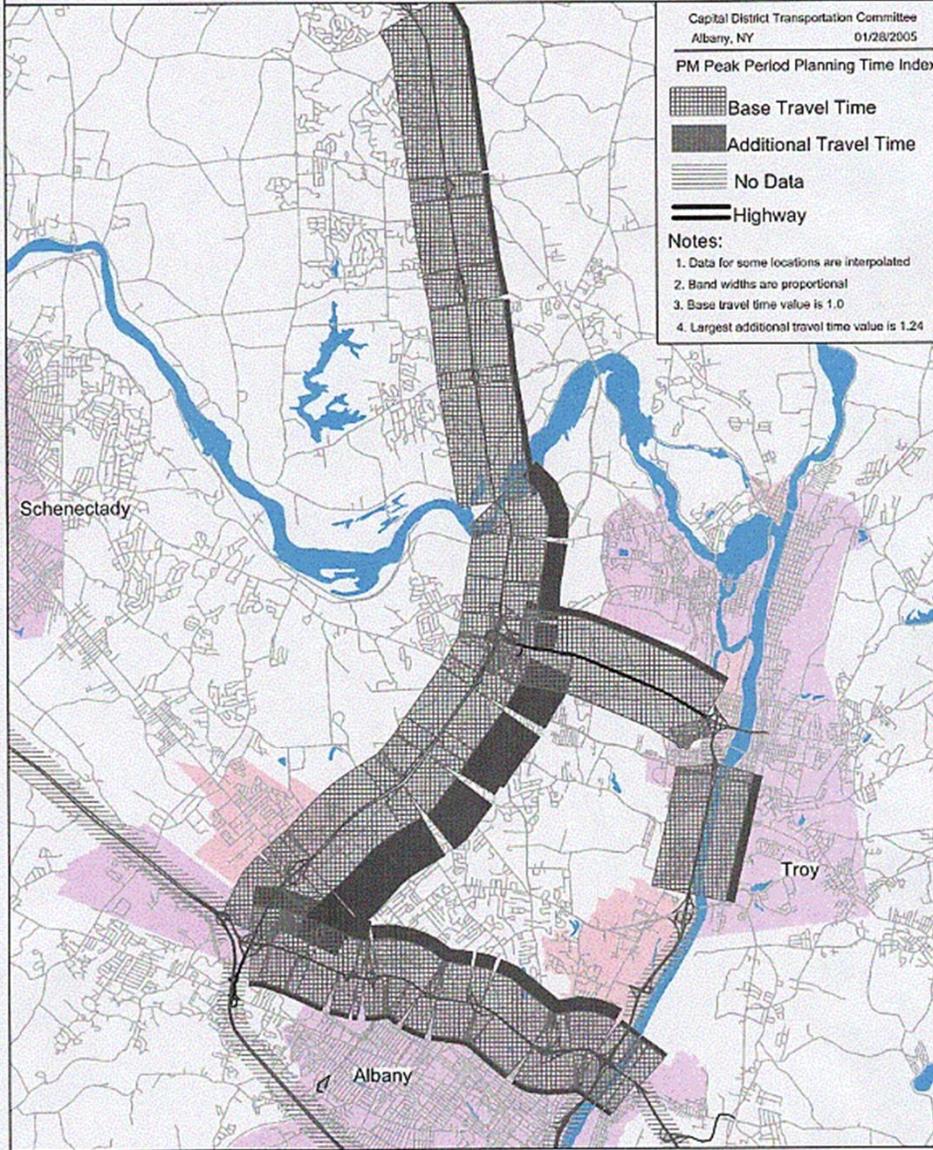
CMP Performance Measures

If you know your commute home every day is 10 minutes longer than you would expect at 10 PM, you can plan around this.

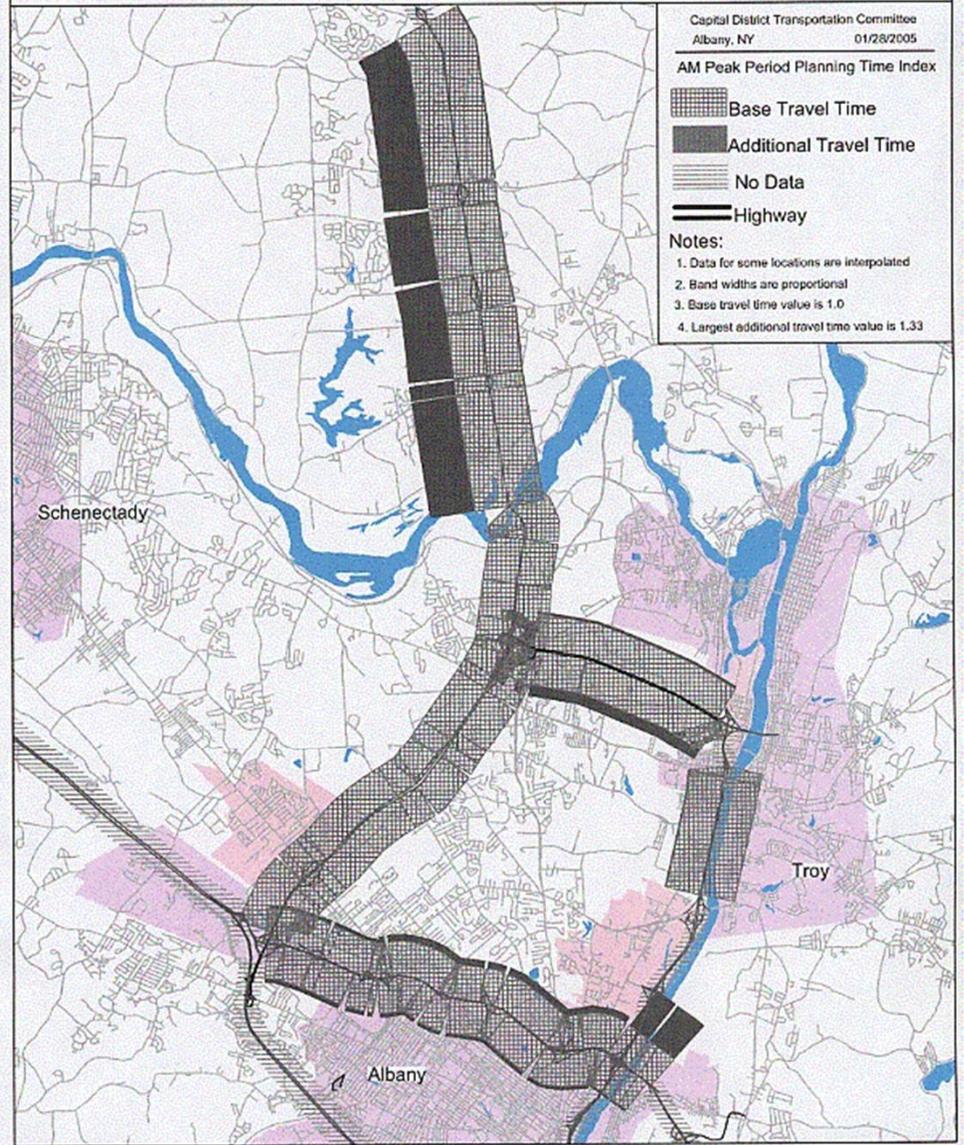
But if your commute home one day is an hour and fifteen minutes longer, because of an incident, this is a much more significant hardship.



Map 9: PM Peak Period Planning Time Index in 2003



Map 10: AM Peak Period Planning Time Index in 2003



I-87: PM peak NB: 1.66
 I-90: PM peak WB: 1.37
 I-787: PM peak NB: 1.26
 Alt Rt-7: PM peak WB: 1.20

AM peak SB: 1.46
 AM peak WB: 1.55
 AM peak EB: 1.34

Congestion Management Process

- Integrated Operations and Management into the Plan and the Congestion Management Process (CMP)
- The CMP gives strong preference for management and operations over capacity expansion

Congestion Management Principles

- **Management of demand is preferable to accommodation of single-occupant vehicle demand growth**
- **Incident management is essential to effective congestion management.**
CDTC provides significant funding for incident management and the Transportation Management Center (TMC). (over \$4 M per year)



Congestion Management Principles

- **Any major highway expansion considered by CDTC will include a management approach**
- **Trade offs between performance measures are necessary—congestion is only one of many**



Congestion Management Process

- Wide public support for Operations & Management components of the Plan
- Operations & Management consistent with regional land use vision and preferable to capacity expansions

Northway Corridor Integrated Corridor Management

Analysis using the travel demand model indicated that widening the Northway would result in filling up with traffic on the day of opening; without reducing incident delay.

An M & O strategy was recommended for the Northway corridor.



Northway Corridor Integrated Corridor Management

- I-87/US 9 Corridor managed as a system
- ITS permits informed travel decision making
- Enhanced incident response limits impacts
- Transit solutions, TOD, smart growth, access management, and complete streets support ICM plans



Northway Corridor Integrated Corridor Management

- The Northway ICM is strongly supported in the regional New Visions Plan
- Incorporating livability components is supported by the Plan





*Transit, walking, quality of life, access management—
important components of congestion management.*

Transit Priority

Transit Signal Priority was implemented in the Route 5 BRT Corridor.

The CDTC New Visions Plan supports transit as a livability investment. The Plan gives priority to TSP, and asserts that it is more important than intersection level of service.

Analogous to an emergency vehicle having priority.



Institutional Barrier	MPO Livability Approach
<p>Performance measures based chiefly on quantifiable measures of “recurring” traffic flow</p>	<p>Develop performance measures with input from the public, such as reliability, bike/ped, transit and quality of life measures– livability</p>
<p>Quantitative measures often put a priority on auto speed</p> <p><i>The design process requires 85th percentile design speed and emphasizes auto level of service</i></p>	<p>When traveling through a community, reducing speeds supports livability goals</p>

Institutional Barrier	MPO Livability Approach
Agencies are focused on capital projects; funding and staffing are set up for capital projects	Improving operations has large benefits, and supports livability; set priorities for operations
Transit investments are given lower priority by focusing on auto level of service	Regional planning context should set priorities for transit investment such as TSP

Institutional Barrier	MPO Livability Approach
<p>Transportation engineering traditionally has relied chiefly on technical skill sets.</p>	<p>Transportation decisions must be informed by meaningful dialogue with public, and with stakeholders.</p>
<p>Participating agencies protect their own authority and are reluctant to share decisions within the planning forum.</p>	<p>Process must build technical and political credibility and acknowledge others' authority. MPOs have an important role.</p>

The Regional Transportation Plan and Livability

- The CDTC New Visions Plan encourages biking, walking, transit, and complete streets, smart growth, urban reinvestment; important components of livability.
- Performance measures include community quality of life- a qualitative measure based on public input– supportive of livability

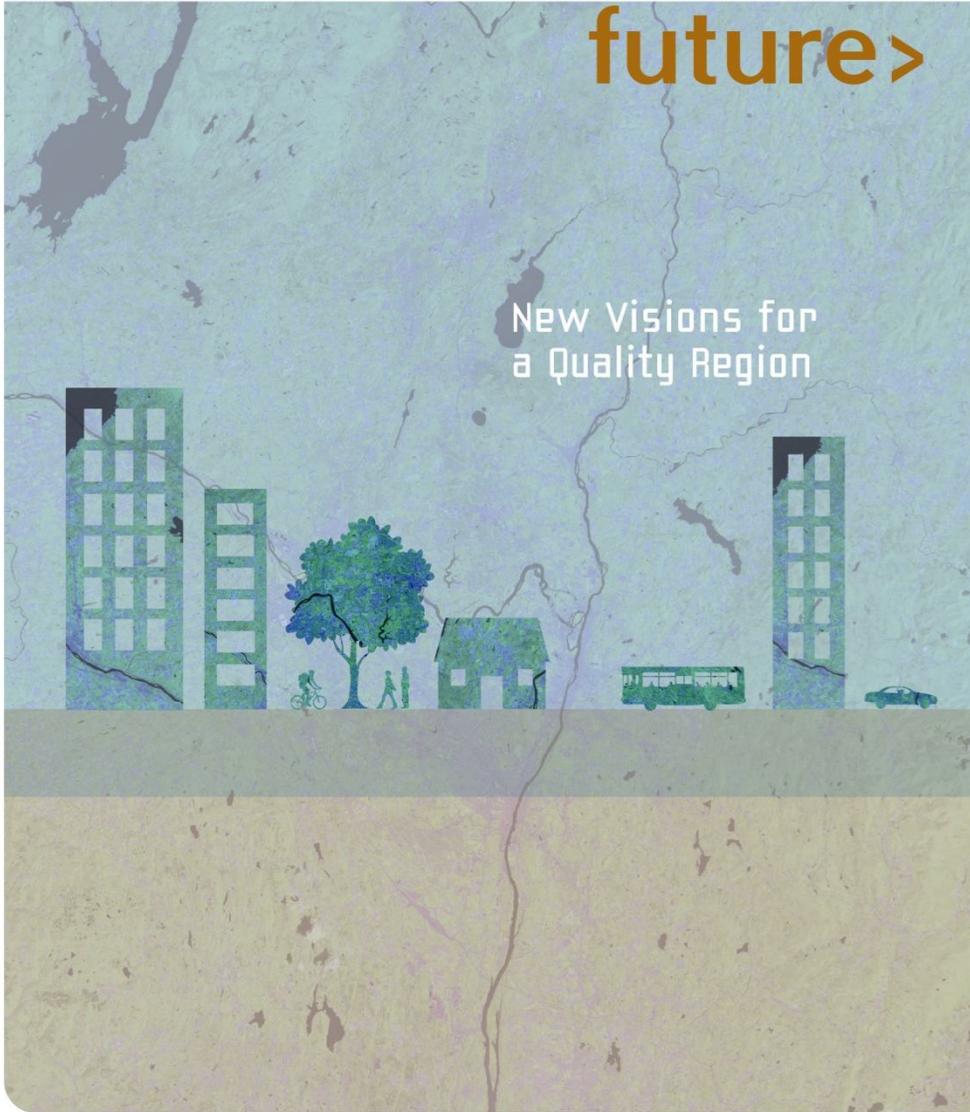
The Regional Transportation Plan and Livability

- Public involvement is a valuable tool used in developing a regional vision that supports livability and is important for operations planning.
- The federal livability agenda provides a unique opportunity for MPOs to provide regional leadership
- Management and operations is an important tool to support the regional vision for livability

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Thank You

Capital District Transportation Committee
Metropolitan Planning Organization (MPO)



Six Principles of Livability

- **Provide more transportation choices** to decrease household transportation costs, reduce our dependence on oil, improve air quality and promote public health.
- **Expand location- and energy-efficient housing choices** for people of all ages, incomes, races and ethnicities to increase mobility and lower the combined cost of housing and transportation.
- **Improve economic competitiveness of neighborhoods** by giving people reliable access to employment centers, educational opportunities, services and other basic needs.
- **Target federal funding toward existing communities** – through transit-oriented, mixed use development and land recycling – to revitalize communities, reduce public works costs, and safeguard rural landscapes.
- **Align federal policies and funding** to remove barriers to collaboration, leverage funding and increase the effectiveness of programs to plan for future growth.
- **Enhance the unique characteristics of all communities** by investing in healthy, safe and walkable neighborhoods, whether rural, urban or suburban.