



NEW YORK STATE ASSOCIATION OF
METROPOLITAN PLANNING ORGANIZATIONS
Climate Change Working Group

**CONNECTING LAND USE
AND TRANSPORTATION
PLANNING
THE LINKAGE MODEL FOR
METROPOLITAN PLANNING
ORGANIZATIONS**

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Connecting Land Use and Transportation Planning - The Linkage Model for MPOs

Introduction

The integration of transportation planning and land use planning has strong potential to reduce regional greenhouse gas emissions. Two caveats must be mentioned: MPOs have no authority over land use decisions; and progress in changing land use and development patterns, even when highly successful, will achieve incremental reductions in greenhouse gas emissions. Nevertheless, improving land use and development patterns provides many benefits in addition to greenhouse gas reductions, and MPOs can play an important role in influencing land use and development patterns.

The Linkage Program is a tool developed by the Capital District Transportation Committee that encourages land use planning, and implementation of strategies that reduce VMT and greenhouse gas emissions. The Linkage Program has met with continued success and is very popular with municipalities in the Capital District. It represents a cooperative approach to land use planning at the municipal level that supports regional visioning and goals. While CDTC has no authority over local land use decisions, the Linkage Program emphasizes partnerships with municipalities and public participation. The NYSAMPO Climate Change Working Group is considering the applicability of this tool for MPOs in New York State to encourage reductions in greenhouse gas emissions. This paper provides an overview of the CDTC Linkage Program.

The CDTC Linkage Program represents a tool that can be used to reduce greenhouse gas emissions. While quantifying greenhouse reductions resulting from the Linkage program is difficult, the CDTC New Visions Plan does identify benefits that will result from the program. This paper describes the process used by CDTC to document benefits of the Linkage program. It should be noted that other MPOs have programs for transportation and land use corridor studies. For example, the Genesee Transportation Council (GTC) sponsors the Circulation, Accessibility and Parking (CAP) studies program. These programs can lead to reductions in greenhouse gas emissions, and provide other benefits as well.

Overview of the CDTC Linkage Program

The Community and Transportation Linkage Planning Program (referred to as the Linkage Program) is an integrated land use and transportation planning program created to implement the regional transportation plan New Visions 2035. The program has been recognized as a national best practice in livability planning and is the cornerstone of CDTC's public outreach efforts.

Linkage Program strategies are to:

- Support urban revitalization and redevelopment of existing commercial and/or residential areas;
- Improve street connectivity and reduce driveway conflicts through access management;
- Enhance and develop activity centers and town centers;
- Enhance and develop transit corridors and transit supportive built environments;
- Encourage a greater mix and intensity of land uses;
- Develop bicycle and pedestrian-friendly design standards;
- Create an integrated multi-modal transportation network.

Connecting Land Use and Transportation Planning - The Linkage Model for MPOs

Eligible applicants must be public entities within CDTC's planning area of Albany, Rensselaer, Schenectady and Saratoga Counties (with the exception of the Town of Moreau and Village of South Glens Falls). Preferred applicants are towns, cities, villages and counties

CDTC typically reserves \$200,000 of its federal planning funds for consultant activities and \$100,000 for staff technical assistance for the Linkage Program. For consultant efforts, there is no minimum total project cost and the maximum total project cost is \$90,000.

A local cash match of 25% is required for all initiatives. In certain instances, exceptions for larger or smaller consultant efforts may be made. The local cash match requirement fosters a sense of ownership for the local community. In addition to providing a cash match, the local municipality must agree that the Linkage study will support the goals of the CDTC New Visions Plan and the Linkage Program strategies. Participation is completely voluntary, but once a community decides to participate, they are invested in the outcome, and they are invested in the New Visions Plan.

CDTC has funded 71 integrated transportation and land use planning studies since year 2000 with sponsors representing 40 separate urban, suburban and rural municipalities, counties, not-for-profit groups and other public entities. Examples of previously funded implementation planning work include:

- **Guilderland Hamlet Neighborhood Master Plan** (\$42,000 consultant effort): This community planning effort addressed land use, design, and transportation issues for the Guilderland Hamlet Neighborhood. Through this planning process, consensus was established on the community's long term vision for the area and a strategy for enhancement of the neighborhood was developed. The objective was to create a neighborhood Master Plan that addresses access management, pedestrian facilities, streetscape improvements, natural/scenic topographic features, environmental features, architectural/site design and mixed uses. The study helped to facilitate Town approval of a significant mixed use development called Glassworks Village.
- **Lawn Avenue Gateway Design Study** (\$20,000 consultant effort): Lawn Avenue is located in the North Albany neighborhood of the City of Albany. The area is undergoing significant redevelopment and revitalization efforts spearheaded by the Albany Housing Authority and the HOPE VI Project Office. To complement the significant investment in new housing and community facilities in the area, this study attempts to address the transportation concerns of North Albany residents as they relate to the Lawn Avenue corridor. Following a planning process that included significant public input, several specific recommendations were developed. The recommendations include:
 - Creation of a gateway intersection at Lawn Avenue/Northern Boulevard/Van Rensselaer Boulevard.
 - Traffic calming and aesthetic improvements to the Lawn Avenue corridor outside of the gateway intersection area including truck traffic restrictions.
 - Modification of the Capital District Transportation Authority's (CDTA) #5 bus route to include stops along Lawn Avenue
- **Bethlehem Delaware Avenue Hamlet Enhancement Study** (\$75,000 consultant effort): This consultant study was developed to strengthen the main street characteristics of a portion of the

Connecting Land Use and Transportation Planning - The Linkage Model for MPOs

Delmar and Elsmere hamlet areas along Delaware Avenue in a manner consistent with the goals of the Town's Comprehensive Plan. The study addressed: 1) urban design guidelines/standards including building scale, massing, design and setbacks; 2) streetscape guidelines including a typical street cross-section; 3) parking and circulation for vehicles and bicycles; 4) access management on Delaware Avenue; and other transportation improvements focused on operational and management actions including bicycle, pedestrian, and transit accommodation along the Delaware Avenue corridor as well as links to surrounding neighborhoods.

- **Clifton Park/Halfmoon Exit 9 Land Use And Transportation Plan** (\$65,000 consultant effort): The Exit 9 vicinity was one of the first areas to be developed in Saratoga County as a result of the construction of the I-87 Northway. Since that time, the Exit 9 area has evolved into an auto-oriented, largely commercial area. Land uses have become disjointed and accessible almost exclusively by car. The purpose of this study was to develop a comprehensive multi-modal transport improvement plan for the Towns of Clifton Park and Halfmoon, in addition to improving the integration of land use and transportation in the area, in order to create a sense of place and identity for both Towns, in a pedestrian friendly, mixed use environment. The Plan presents a long-term vision for the area and recommends a number of short, medium and long-term transportation and land use strategies for achieving this vision over time. Transportation strategies developed for the study area address highway, pedestrian, bicycle and public transit modes. Land use, access management and aesthetic strategies support the long-term vision of the study.
- **Schenectady Route 5 Transit Gateway Study** (\$65,000 consultant effort): This was a gateway study of an area bounded by Erie Boulevard on the east, I-890 to the south, the area just north of State Street (NYS Route 5) and an area just west of Schenectady County Community College (SCCC). The study area is designated as distressed through its inclusion in the NY State Empire Zone and the Federal Renewal Community. This effort built upon the Route 5 Bus Rapid Transit and Land Use/Transportation Corridor studies and included analysis/documentation of planning measures/design standards to address the following elements: bicycle/pedestrian circulation and connections, better utilization of parking areas (representing 25% of the project study area), adaptive re-use options for the Armory and YMCA buildings, re-use options for the intercity bus terminal, identification of mixed use redevelopment opportunities, improved linkages to the Bus Rapid Transit system, other CDTA routes and the Amtrak Station, improved street designs, and better integration of SCCC into the community. This effort represented a follow-up activity to the City's Comprehensive Plan.

Municipalities can seek funding on the CDTC TIP for proposals and recommendations that result from Linkage studies. The CDTC TIP project selection process encourages project proposals that have resulted from a community planning process such as the Linkage Program. Municipalities are also encouraged to look for other sources of funding. The existence of an approved community land use and transportation plan that has been demonstrated to have strong public support puts the community in a position to expect that developers will build developments that are consistent with the existing plans, and allows the community to encourage private investment in implementing recommendations.

Connecting Land Use and Transportation Planning - The Linkage Model for MPOs

The Linkage Program is the centerpiece of CDTC's public participation efforts. Each study normally requires several public meetings. Because these meetings address local community transportation and land use issues, attendance and interest is usually high. The public meetings provide an opportunity to explain regional principles from the New Visions Plan with illustrations at the local level that make the principles tangible and easy to understand. Typically, public support for the New Visions Plan at these meetings has been strong.

Implications for VMT Reduction and Greenhouse Gas Reduction

CDTC Forecasts a Moderation of VMT Growth with the New Visions Plan. The CDTC New Visions Plan was developed with the expectation that increases in daily vehicle travel would be dampened from the trend forecast. The reduction of future VMT will result in direct reductions in future greenhouse gas emissions. The Linkage Program is an important component of the New Visions Plan. CDTC has not made an estimate of the VMT reduction directly attributable to the Linkage Program. However, the expected emissions benefits of the Linkage Program are real and can be considered a subset of the New Visions emissions benefits.

The New Visions Plan can be expected to reduce VMT through a combination of actions, including the substitution of communication for travel, increased carpooling, increased non-auto travel (transit, walking and cycling), shorter trip lengths (due to proximity of activities), spreading of peak hour trips to off-peak hour, increased telecommuting and slowing of the projected growth in the number of cars. The New Visions Plan is much broader than highway capital projects. It includes travel demand strategies, operational strategies, land use policies (such as urban reinvestment and encouragement of mixed use development) and investments in transit, walking, and bicycle facilities.

CDTC's New Visions policy forecast results from planned transportation investment, demand management and the shifts of vehicular traffic to other modes and other times of day produced by improved regional land use patterns, community structure, site design and the better accommodation of bicyclist, pedestrian and transit modes. The policy forecast remains CDTC's target traffic condition used in project design and reflects plausible success in implementing the plan through the horizon year of 2035. CDTC forecasts for the New Visions Plan assume that PM peak hour trip growth rate will dampen so that it corresponds to the growth rate in households.

If CDTC was to assume that the New Visions Plan will not succeed in moderating the growth of auto VMT, this would become a self-fulfilling prophecy. This is because design of highway projects is based on PM peak hour traffic forecasts for twenty years, and for bridge projects, for thirty years. Assuming linear trend forecasts of travel ignores the socioeconomic trends, trends in gas prices, and land use planning, and ironically leads to larger foot prints for highway projects, and diversion of resources into highway capacity and urban disinvestment. Linear trend forecasts for VMT would undercut the New Visions Plan and the CDTC Congestion Management System, and would encourage and contribute to increased fuel consumption and air quality emissions.

CDTC assumes that the desired outcome will be achieved by the set of land use and transportation actions in the plan. CDTC thus embraces its tempered, policy-based traffic forecasts for all planning and

Connecting Land Use and Transportation Planning - The Linkage Model for MPOs

design work – not the trend forecasts. As a result, TIP projects are implemented in the Capital District at scopes and with design details that reflect the desired outcome. If CDTC were to assume in its forecasts that the CDTC Plan will not be successful, then we would defeat the intended outcome. Put more simply, if we plan to fail, then we will fail.

Rationale for VMT Moderation with the New Visions Plan. Nationally, the increase in gas prices in 2008 led to a 5.6% reduction of VMT (based on comparing August 2008 to August 2007) and a five percent increase in transit ridership (based on comparing the second quarter of 2008 to the second quarter of 2007)¹. These changes in travel behavior suggest that changes in VMT growth trends are possible. While the New Visions Plan does not address the issue of gasoline pricing, it does call for investments in transit, pedestrian and bicycle facilities, planning for smart growth, demand management, and other investments that will encourage a reduction in VMT growth per capita.

The New York State Energy Plan recommends reducing VMT by 10% below projected levels by 2020. The New Visions Plan by itself will not achieve this level of VMT reduction. However, the New Visions Plan recommendations for VMT reduction are strongly consistent with the New York State Energy Plan goals for VMT reduction. The New Visions Plan represents an important component of implementing the New York State Energy Plan VMT reduction goals.

The New Visions Plan is expected to reduce VMT by 5% below projected trend levels by 2030. Working with the best secondary sources available, an attempt to quantify future VMT reductions was made. These estimates are not scientifically provable, yet they are as likely to be conservative as they are to be optimistic. The effects of the New Visions Plan will be cumulative over time, and the different components of the plan will reinforce each other. The various New Visions initiatives work together to create viable places to live, work, shop and play that provide shorter trip options and non-auto options for travel.

VMT reductions are expected to result from New Visions Plan investments as follows:

- Investments in **smart growth, mixed use development and transit oriented development**—a 1.5% reduction in future VMT.
- Investments in **transit**—a 1.5% reduction in future VMT
- Investments in **bicycle and pedestrian facilities**—a 1.5% reduction in future VMT
- Investment in **demand management**—a 0.5% reduction in future VMT

Each of these investments is explained in more detail in the CDTC document: *the CDTC STEP Model: Validation of the CDTC STEP Model*, April 2010. While the CDTC Linkage Program encourages progress in all of these areas that contribute to VMT reduction, there are a number of other important components of the plan that contribute as well, including transportation investments in urban areas, transit investments, and bicycle and pedestrian investments. The New Visions Plan does not quantify the levels

¹ New York State Energy Plan, December 2009.

Connecting Land Use and Transportation Planning - The Linkage Model for MPOs

of VMT reduction that can be attributable to the Linkage Program itself. Rather, the New Visions Plan takes credit for all of the actions in the Plan that are expected to cumulatively reduce VMT. The Linkage Program is an important part of the Plan, and therefore, an important part of the VMT reductions expected from the Plan.

Since greenhouse gas emissions are directly related to VMT, generally a 5% reduction in future VMT is expected to reduce future greenhouse gas emissions by 5%. A more thorough, model based analysis that was conducted using the CDTC model confirmed this finding. In addition, in 2011, the impacts of national fuel economy standards, combined with the New Visions Plan, were found to increase greenhouse gas emissions between 2010 and 2035 by 31%. (The impacts of more recent CAFE standards is expected to produce further greenhouse gas reductions).

While the New Visions Plan takes credit for a 5% reduction in future VMT and future greenhouse gas emissions, there are many other “co-benefits” of the New Visions Plan and the Linkage Program. These include: urban revitalization, improved transit access, improved bicycle and pedestrian access, more complete streets, better congestion management, better arterial access management, land use planning, and improved quality of life and economic attractiveness for the Capital Region. The Linkage Program makes an important contribution to greenhouse gas reduction, public participation for the New Visions Plan, and implementation of the New Visions Plan.

While emissions benefits for the Linkage Program have not been quantified, they represent an important contribution to the New Visions Plan benefits. If the benefits of the Linkage Program were only a fraction of the New Visions Plan benefits, the greenhouse gas reduction benefits alone would clearly be enough to more than justify the program. In addition, the other benefits—“co-benefits”—of the program are significant.