

**NEW VISIONS FOR
CAPITAL DISTRICT
TRANSPORTATION**

NEW VISIONS 2025 AMENDMENT

**REGIONAL TRANSPORTATION PLAN
DRAFT FOR PUBLIC REVIEW
JUNE 2004**

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RESOLUTION ADOPTING THE NEW VISIONS 2025 AMENDMENT

RESOLUTION 04-

WHEREAS, the Capital District Transportation Committee (CDTC) is the designated metropolitan planning organization (MPO) for transportation planning and programming in the metropolitan area of Albany, Rensselaer, Saratoga, and Schenectady counties, containing the Albany and Saratoga Springs urbanized areas and areas expected to become urbanized over the next twenty years; and

WHEREAS, the CDTC is responsible for developing and adopting a regional transportation plan for the metropolitan area; and

WHEREAS, the CDTC adopted the New Visions 2021 plan in October 2000; and

WHEREAS, CDTC has continued to implement the plan, refine its content and seek public involvement in assessing long-range regional transportation strategy; and

WHEREAS, CDTC's continued work with CDTA, NYSDOT other members and other partners in the region has reconfirmed the merit of the New Visions principles and policies; and

WHEREAS, CDTC has continually assessed the implementation success, budget needs, resource levels, travel forecasts and community attitudes toward New Visions concepts since 2000; and

WHEREAS, this review allows CDTC to reaffirm the vision, goals, objectives, principles, strategies, actions and budget contained in the *New Visions 2021* document through an amendment extending the plan to 2025 without material revision; and

WHEREAS, CDTC has completed its air quality conformity assessment for 2025 and has circulated the draft 2025 amendment for public review for over 30 days, and every comment has received a response; and

WHEREAS, the amended New Visions Plan has been determined by the New York Department of Transportation (NYSDOT) to satisfy the requirements of the Transportation Equity Act for the 21st Century (TEA-21); and

WHEREAS, CDTC's Planning Committee, through action at its _____ meeting recommends approval of the *New Visions 2025 Amendment* as CDTC's regional transportation plan update;

THEREFORE BE IT RESOLVED that the CDTC approves the *New Visions 2025 Amendment*, as CDTC's regional transportation plan update.

BE IT FURTHER RESOLVED that the Secretary is directed to transmit this action to appropriate state and federal agencies and that the staff is directed to publish and disseminate copies of the final report to CDTC participants, appropriate agencies, and other interested parties.

John T. McDonald.
Chairman, Capital District Transportation Committee

date

OVERVIEW

The Capital District Transportation Committee (CDTC) is the designated “Metropolitan Planning Organization” for a defined metropolitan area that includes the Albany and Saratoga Springs urbanized areas.¹ A key responsibility of every MPO is the maintenance of a long-range regional transportation plan. All federally-funded or federally-approved transportation actions such as highway or transit capital projects must derive from the regional plan.²

After four years of extensive outreach and detailed technical analysis, CDTC adopted its landmark *New Visions for Capital District Transportation* plan in March 1997. The plan established a set of principles to guide transportation planning and investment in the region for coming years. It also articulated a series of short-range and long-range strategies and actions to help achieve broad regional goals, and provided an innovative budget approach to ensure implementation of the plan.

On the heels of the plan’s adoption in 1997, CDTC and its members made great strides in implementation of the plan. The 1997-02 TIP included new projects that explicitly shifted the emphasis of the TIP to better match the balance of actions in the New Visions plan. Planning efforts were also shifted to reflect the priorities of the plan.

A thorough review of the plan was completed in 2000, leading to adoption of an updated plan, *New Visions 2021*. It was remarkable that the high level of success in pursuing the plan, along with growth in revenues consistent with the plan and continued public support for the plan, allowed adoption of the *New Visions 2021* plan with no alteration to the set of principles or the series of strategies and actions.

Because support for the plan remained strong, CDTC was in a good position to begin to explore more fundamental questions about the future of the region – its economic prospects, settlement patterns, social equity and sustainability. This exploration requires extensive engagement with individuals, groups and affected parties generally outside the routine MPO structure. This effort is underway in earnest with a goal to produce a *New Visions 2030* plan that goes beyond current principles, strategies and actions to more fully ensure that the future of the Capital District will be one in which the transportation system appropriately supports and helps foster economic health, environmental stewardship and a high quality of life.

¹ The “metropolitan area boundary” for CDTC’s responsibilities has been defined as the entire four-county Capital District of Albany, Rensselaer, Saratoga and Schenectady counties, minus the town of Moreau which is covered by the Adirondack – Glens Falls Transportation Council. The boundary includes all of the existing urbanized area as well as any area expected to become urbanized over the next 20 years. CDTC is responsible for transportation planning and programming throughout the urban and rural portions of the defined area.

² By law, the plan, in turn, must conform to the State Implementation Plan (SIP) for Air Quality to ensure that federal transportation actions contribute to the attainment of national ambient air quality standards. The Capital District is currently a non-attainment area for Ozone and must demonstrate that its plans and programs make a positive contribution toward attainment.

The New Visions 2030 effort is expected to be completed by October 2005. Work to date has included completion of and public dialogue on a comprehensive issues document, *Pursuing Quality in the Capital Region* and extensive engagement with interested parties through CDTC task forces and working groups, the Center for Economic Growth's public summits and working groups, the four-county faith-based and labor-based ARISE's public summits, workshops and committees, the Business – Higher Education Roundtable's forums and other venues.³ All this technical and public outreach effort continues to reaffirm CDTC's existing principles, strategies and actions while helping to refine the New Visions 2030 exploratory agenda.

As a result, CDTC formally endorses a New Visions 2025 amendment to the existing plan as a reaffirmation of the existing plan without a wholesale re-creation of the plan. Endorsing the amendment satisfies federal requirements that the plan's official status remain "fresh" and that the plan's horizon remain sufficiently long⁴ while allowing CDTC to focus its substantive effort on the issues identified in the New Visions 2030 effort.

The following sections of this report document the basis for the New Visions 2025 amendment endorsing the plan's current vision, goals, objectives, principles, strategies, actions and budget. The sequence of the items in this report follows the outline of the *New Visions 2021* document, which remains the primary reference document for CDTC's regional transportation plan.

³ Complete documentation of public outreach and environmental justice considerations of CDTC's planning process, including the continuing New Visions development, is included in *Capital District Transportation Committee Environmental Justice Analysis*, March 2004.

⁴ Federal regulation requires that an MPO in a non-attainment area endorse a long-range plan at least every three years and demonstrate conformity to the air quality plan at that time. The planning horizon must be a minimum of 20 years at the time of adoption. CDTC re-endorsed the New Visions 2021 plan and re-conformed the plan for air quality purposes in 2001 and 2003, but did not extend the planning horizon at that time. The New Visions 2025 amendment addresses that deficiency and maintains the Capital District's eligibility for federal transportation funds.

CAPITAL DISTRICT CONTEXT

Since the adoption of the New Visions 2021 plan in October 2000, CDTC has received results from the 2000 Census. The full detail of zone-to-zone commuting patterns has not been produced by the Census Bureau, but enough material has been released to assess the accuracy of previous assumptions.⁵

The basic 2000 Census population and household values have proved to be remarkably consistent with forecasts prepared by the Capital District Regional Planning Commission (CDRPC) and used by CDTC in the 2021 plan. CDTC commissioned CDRPC to produce new growth forecasts consistent with the 2000 Census. The new forecasts, going out to 2040, reaffirm previous forecasts with the continued forecast for a slow population growth and a slowing of the rate in outer years. The rate of population growth forecast to 2025 and beyond remains essentially the same as the rate used in the 2021 plan.

Similarly, analysis of journey-to-work data from the 2000 Census provided no surprises and is consistent with prior work.

Regarding travel growth, CDTC continues to use NYSDOT Region 1 annual estimates of average daily state-system vehicle miles of travel (VMT) to monitor the validity of New Visions traffic growth assumptions, and the plausibility of achieving the plan's objective of tempering the rate of growth in vehicular traffic. To date, the data support CDTC's New Visions long-range traffic forecasts. Appendix A includes a comparison of forecast and actual traffic growth in the region.

In conclusion, updated information reaffirms the validity of CDTC's understanding of the land use, demographic and travel behavioral context that provided the foundation for the New Visions 2021 plan.

⁵ In addition, CDTC awaits the full data set from the National Household Travel Survey of 2001. CDTC spent \$175,000 purchasing an enriched sample of households in this region in order to confirm or modify travel behavioral relationships in its modeling practices. These data are currently being reviewed and verified by NYSDOT and CDTC. It will assist CDTC in refining its modeling and forecasting methods, but CDTC is not yet in a position to use it to confirm or modify future traffic projections.

VISION AND GOALS

VISION STATEMENT

The vision statement in the *New Visions 2021* document – a narrative of future residents’ description of transportation service and quality of life – remains an accurate representation of CDTC’s vision for the region and its transportation system. Public outreach since 2000 continues to evoke statements of desires for the region that are well reflected in the vision statement.

SYSTEM GOALS

CDTC’s system goals are stated as follows in the *New Visions 2021* document.

Within the context of broader national, state, regional and local public and private actions to meet the economic, social, educational and other needs of the region, CDTC's long-range transportation system goals are:

- *Transportation Service*
 - ◆ *Maintain or improve overall service quality from current conditions.*
 - ◆ *Enhance the quality of life in the region.*
- *Resource Requirements*
 - ◆ *Reduce the per-capita resource requirements [including energy] related to provision, operation, use and mitigation of the impacts of the transportation system from current per capita costs.*
 - ◆ *Reduce the per capita cost of accidents (crashes).*
- *External Effects*
 - ◆ *Build strong urban, suburban and rural communities.*
 - ◆ *Knit them together into a cohesive metropolitan area.*
 - ◆ *Support economic and social interactions that accommodate population, household, employment and commercial and industrial growth while improving environmental quality and enhancing the natural and built environment.*

In the last few years, many initiatives to achieve these goals have been advanced. In addition to CDTC’s planning and programming activities, these initiatives include significant attention to “Context Sensitive Solutions”, preparation of a new State Energy Plan,⁶ the state’s Quality

⁶ State actions are required to be consistent with and contribute to the implementation of the recent State Energy Plan. The State Energy Plan contains strong commitments to advancing policies and actions that reduce the production of greenhouse gases in New York. The relationship of the New Visions plan to the State Energy Plan is discussed in Appendix B.

Communities initiative and state and local high-tech economic development initiatives. These all support and reinforce the legitimacy of CDTC's established system goals.

Performance Objectives

CDTC employs both "core" performance measures relating to aggregate system performance (such as the extent of congestion and the daily fuel consumption) and "supplemental" performance measures relating to specific elements of the system (such as the percentage of Interstate highway pavement in poor physical condition).

These performance measures have served CDTC and its members well, and several such as transportation – land use compatibility measures have been incorporated into project development activities as well. CDTC's performance measures have been recognized as a prototype for improved processes elsewhere and have been the subject of several case studies. They anticipated current attention to energy consumption and CO₂ generation, system reliability, land use compatibility, and a wide range of environmental impacts including wetlands and global climate change.

These measures continue to serve as CDTC's basis for planning and programming.

Likewise, established objectives for end-state performance of the system – both for core and supplemental measures – remain achievable and appropriate. The modest lengthening of the plan's horizon (shifting from 2021 to 2025) is insufficient at the expected modest growth in travel demand (approximately 1% per year in the outer years of the plan) to change CDTC's broad performance objectives.⁷ The lengthening of the time frame for plan implementation places additional importance on attaining success with regional land use management, community design and travel demand management to achieve the stated objectives. CDTC reaffirms these objectives.

⁷ The 4% to 5% difference between 2021 and 2025 traffic levels is well within the range of error of travel forecasting processes. CDTC has reassessed its air quality conformity analysis using the 2025 traffic values, but the small difference in traffic from 2021 does not warrant a full-scale recalculation of 2021 performance measures.

PRINCIPLES

As stated in the 2021 document, specific, adopted planning and investment principles guide decision-making at CDTC. The New Visions principles grew from CDTC's Congestion Management Principles and were developed in conjunction with extensive public review and comment. They are organized under four broad themes:

1. Preserve and Manage.
2. Develop the Region's Potential.
3. Link Transportation and Land Use.
4. Plan and Build for All Modes.

Within these four themes, 25 specific statements of CDTC's intentions and requirements regarding specific subjects are organized. These principles have truly guided decisions at the CDTC table since 1997 and remain fresh and valid today. The principles remain a primary reference when considering candidate actions.

As with performance measures, they anticipated and accommodate the increased attention regionally and at state and national levels on integrating transportation into a seamless system that supports community and regional life.

In addition, a brief summary of these 25 principles has been shared frequently with other parties in the region in recent years as a summary of CDTC's approach to transportation planning and programming, and reaction has affirmed that they continue to resonate with a broad audience.

The summary of CDTC's planning and investment principles is included as Appendix C to this document.

These principles continue to guide CDTC's implementation of the New Visions plan.

STRATEGIES AND ACTIONS

While CDTC's principles guide decisions at the CDTC table, the identified set of strategies and actions provides the broad plan of attack and the basis for budgetary priorities. Forty-three specific actions are identified in the plan, organized under the following ten strategies:

1. *Maintain infrastructure in good condition and focus on priority treatment networks for other improvements.*
2. *Pro-actively plan vibrant communities.*
3. *Reach out for full participation.*
4. *Design effective facilities.*
5. *Develop Intelligent Transportation Systems and manage traffic incidents effectively.*
6. *Support intermodal transportation.*
7. *Provide appropriate transit service [to meet 21st century needs].*
8. *Treat all modes fairly in the capital program.*
9. *Enhance demand management.*
10. *Secure adequate funding to fully implement the plan.*

Much progress has been made in these areas in recent years. CDTC and its members have been active in providing significant support for community planning⁸, transit service design⁹, intermodal development¹⁰, ITS deployment¹¹, demand management¹² and public participation.¹³ These strategies and actions remain valid and in tact. A list is found in Appendix D.

⁸ CDTC's Community and Transportation Linkage Planning Program has led to commitment of over \$1,500,000 in federal, state and local funds for 36 separate, local community visioning and transportation – land use integration efforts in over 20 communities since 2000. CDTC has few peers nationally with regard to this level of effort to plan vibrant communities and encourage walkable, livable community structures.

⁹ The NY 5 Land Use and Transportation Concepts Study has received national recognition for the integration of community visioning, economic forecasting, use of visualization and public involvement. It has led to a \$200 M strategy for land use restructuring, streetscaping, transit development and pedestrian, bicyclist, and safety improvements endorsed by all five municipalities in the corridor. The Capital District is among national leaders in pursuit of Bus Rapid Transit, focusing on the NY 5 corridor as a prototype for other applications.

¹⁰ CDTC is a rare MPO to have the transit agency, airport, port and Thruway Authority serve as voting members at the policy and planning levels. In addition, CDTC's commitments have included significant assistance to port and airport access projects as well as Amtrak station construction.

¹¹ The Capital District Transportation Management Center was one of the first in the nation deployed in a region of the Capital District's size. Additionally, the collaborative ITS deployment on NY 5 involving five municipalities, CDTA, NYSDOT, 72 traffic signals, GPS devices and signal priority equipment on buses and a tie-in to the TMC is a significant achievement and prototype. A Regional ITS Architecture has also been cooperatively established.

¹² The cooperative CDTC-CDTA TDM initiative includes a precedent-setting program for use of traffic mitigation fees for transit operating support in the airport area; a successful demonstration of transit subsidies and occasional parking permits with the NYSDEC site in Albany; and another successful demonstration of TDM incentives with the downtown Albany BID representing over 10,000 employees.

¹³ CDTC's 36 Linkage studies have effectively multiplied meaningful public involvement many times over. In addition, CDTC's staff director was recognized by ARISE as "ally of the year" in 2003 in recognition of CDTC's engagement with the inner-city empowerment agenda of that group.

MAJOR INVESTMENTS

CDTC maintains specific policies with regard to a few potential major investments that not currently commitments in the plan – particularly rail transportation and highway expansion or transit investment in the Northway corridor. There has been no reversal of policy on these issues from the statements in the 2021 document.

The updated status of policy refinement is listed below, relative to each policy statement in the *New Visions 2021* document:

1. **Continue to pursue near-term efforts to maximize transit’s effectiveness.** CDTC and CDTA continue to pursue a Transit Development Plan, fare restructuring, TDM, and ITS actions. Additionally, the significant Linkage planning commitment is geared at transit effectiveness, as well.
2. **Monitor technology developments and applications elsewhere.** CDTC has continued to actively engage with Cybertran and seek other technologies that might serve local needs. To date, there have been no breakthroughs with new guideway technology, but CDTC and CDTA have clearly picked up on national developments with regard to Bus Rapid Transit.
3. **Conduct the Commuter Rail Demonstration Program.** This has been pursued. On behalf of the region, CDTA took the lead to construct an achievable commuter rail demonstration using TEA-21 demonstration funds. The commuter rail demonstration was not implemented because the cost of even a temporary service was estimated to approach \$25 M. NYSDOT is revisiting the commuter rail question as part of a larger I-87 corridor effort.
4. **Pursue the NY5 Land Use and Transportation Concept.** This is actively being implemented; implementation funds are included in the 2003-08 TIP and a two-phase BRT design study is currently underway. Additionally, existing TIP projects have been refined to reflect the concept and Linkage studies have been advanced to help with the land use piece.
5. **Incorporate Major Transit Investment Considerations into the Northway Corridor Study.** A \$2.5 M I-87 corridor study is currently in progress. Transit considerations are a key element of this NYSDOT effort.
6. **Adopt and Pursue the Recommendations of the MIS.** The I-87 corridor study will stop short of a Major Investment Study (MIS), but will indicate whether one is called for in the near future.¹⁴

¹⁴ One issue related to the I-87 corridor study is the set of zoning changes approved in May 2004 to permit development of the Luther Technology Park in Malta. The GEIS for the park calls for highway actions in conjunction with certain levels of development. At present there are no active development proposals for the site, and NYSDOT Region 1 is advancing an assessment related to the feasibility of conceptual highway actions in the area between I-87 and US 9, between Exit 11 and Exit 12. No specific major investment project (funded privately or publicly) is included in the New Visions plan at present until completion of that assessment and other determinations are made.

BUDGET

There are three primary components of the New Visions budget: (1) the nature and scale of actions in each of seventeen categories; (2) the unit costs related to the actions; and (3) estimates of resource levels.

(1) **Nature and scale of actions.** The 2025 amendment represents no reversal or significant modification to the nature or scale of actions in the plan. Specifically, the intended pavement and bridge rehab program, ITS deployment, transit system maintenance and expansion, TDM and planning initiatives remain as stated in the 2021 document. Further, the set of strategic highway and bridge actions either to achieve Congestion Management System (CMS) objectives or to accomplish community compatibility / economic development purposes remains the same as in the 2021 plan. No new regionally-significant project commitments are introduced in the 2025 amendment and no deletion of prior commitments is made. Costs and schedules have been updated to reflect current expectations. Overall, the cost to complete the committed CMS and community compatibility / economic development projects is slightly less than estimated in the 2021 plan.¹⁵ The list at current budget estimates is shown as Appendix E.

(2) **Unit costs related to the actions.** Experience implementing new project types reflected in the New Visions plan provided CDTC the basis for formally updating a number of unit cost estimates – primarily those relating to pavement reconstruction, widening, and new highway and sidewalk construction -- when it developed the New Visions 2021 budget. Changes to unit costs since 2000 have been more modest, allowing the total budget for the New Visions plan to remain comparable to that for shown in the *New Visions 2021* document.¹⁶

(3) **Estimates of resource levels.** The New Visions budget approach is both innovative and flexible. The budget identifies the minimum funding level required for basic system preservation and shows that at all reasonably-expected levels of funding (including steady state funding), a wide range of system improvements is possible.¹⁷ The budget identifies that a modest growth in

¹⁵ Completion of several CMS and community/economic projects in recent years, a refinement of cost estimates for other projects, and a rescoping of others in the TIP leads to a 21-year annual estimate of about \$14 M for these projects, down from \$19 M in the 2021 plan. CDTC is re-valuating CMS need in the context of the New Visions 2030 effort to determine if additional commitments are warranted. “Mining” the wealth of MIST data from expressway operations will be a major contributing factor to enhanced understanding of the priority for capacity investments beyond those in the current plan.

¹⁶ Based on the work performed to update the New Visions budget in 2000, CDTC documented updated costs for federal-aid projects involving reconstruction, widening, streetscaping and sidewalk/ multi-use paths for use in adjusting project costs in the 2001-06 TIP. These updated values have proved to be more accurate than previous estimates. Refinement of these values for the 2003-08 TIP indicated that no noticeable adjustment in unit costs was necessary. As a result, categorical costs for the budget in the 2025 amendment are comparable to those in the 2021 plan.

¹⁷ CDTC’s definition of system preservation requirements is the amount of funding required over time to maintain, rehabilitate and replace current facilities and services *in kind*, while maintaining the same average physical condition of the system. Improvement in such measures as the percentage of bridges rated deficient; miles of sidewalk; traffic

funds (less than 1% in real terms annually)¹⁸ would be sufficient for full implementation of all aspects of the plan, and states a policy that, at any funding level short of the full implementation funding level, progress would still be achieved over all aspects of the plan. It also makes it clear that major investments above and beyond those contained in the plan, if CDTC were to add them to the plan at a later date, would require additional resources above the reasonably expected levels.

The events of September 11, 2001 led to significant impacts on the New York State budget. It may take time for the aggregate federal, state and local budget to return to the modest cumulative growth assumptions of the New Visions 2021 budget, but it is reasonable to expect that they will. The state's increases to state highway funding (before 9/11/01) in the absence of 2000 transportation bond revenues; the noticeable increases in state transit funding in recent years; the current efforts in the TEA-21 reauthorization actions by Congress and the Administration to increase the size of the federal transportation program by between 20 and 40%; involvement of Metroplex in funding transportation projects in Schenectady county and recent bonding actions by local government to carry out needed infrastructure work all demonstrate the long-term viability of the modest revenue estimates shown in the *New Visions 2021* document.

CDTC's policy requiring steady progress across all transportation elements of the plan at any funding level provides budgetary self-correction to the plan, making the accuracy of the revenue estimates less significant than in traditional regional transportation plans.¹⁹ Additionally, CDTC follows a unique practice in its TIP development to steer resources to projects in such a way as to construct a TIP that reflects the balance of projects in the plan. Appendix F shows the resulting high level of correlation between the budget emphasis of the plan and the budget emphasis of the 2003-08 TIP.

The result of these policies and practices is the continued validity of the plan and its budget construction.

level-of-service; or average age of the bus fleet are defined as *improvements*, and are not included in the basic system preservation budget.

¹⁸ A recent review of regional transportation planning practices at a number of MPOs throughout the nation confirms that CDTC's estimates of reasonably expected revenues are more conservative than most others. For instance, Atlanta's long range plan expects a 68% increase in federal funding (in real terms); San Diego's plan expects a 35-cent per gallon (in real terms) increase in federal and/or state gas taxes; Seattle's plan assumes a 93% increase (in real terms) in overall transportation taxes and fees. In contrast, CDTC's full implementation budget in the 2021 document requires only a 8% average funding increase in real terms (representing a 20% increase by the end of 20 years), relative to the budget of 2000. Excluding the anticipated 2000 transportation bond proceeds from the New Visions 2021 assumptions of steady-state funding, the real increase over 20 years still averages only 15% and represents an expected cumulative rise of only 30% by the end of 20 years, or 1.3% per year. Achieving this end state remains a reasonable expectation.

¹⁹ Planning, programming and project development actions in the Capital District attest to the validity of the steady progress policy. No particular proposed improvement types are routinely elevated over other improvements (after basic system preservation priorities are addressed). Each element of the plan, whether TDM, planning, ITS, bridge reconstruction, sidewalk implementation, traffic flow actions, economic development investment, transit system expansion or another one of the budget elements, receives funding and attention roughly proportional to its role in the full implementation plan. None of the elements has access to unconstrained levels of resources. This is the essence of CDTC's budget policy and the self-correcting nature of the CDTC budget assumptions.

APPENDICES

Appendix A: Relationship of Daily State Route Traffic Growth and Forecasts of PM Peak Hour System Traffic

Appendix B: Relationship of New Visions to the State Energy Plan

Appendix C: CDTC's Planning & Investment Principles

Appendix D: New Visions Strategies and Actions

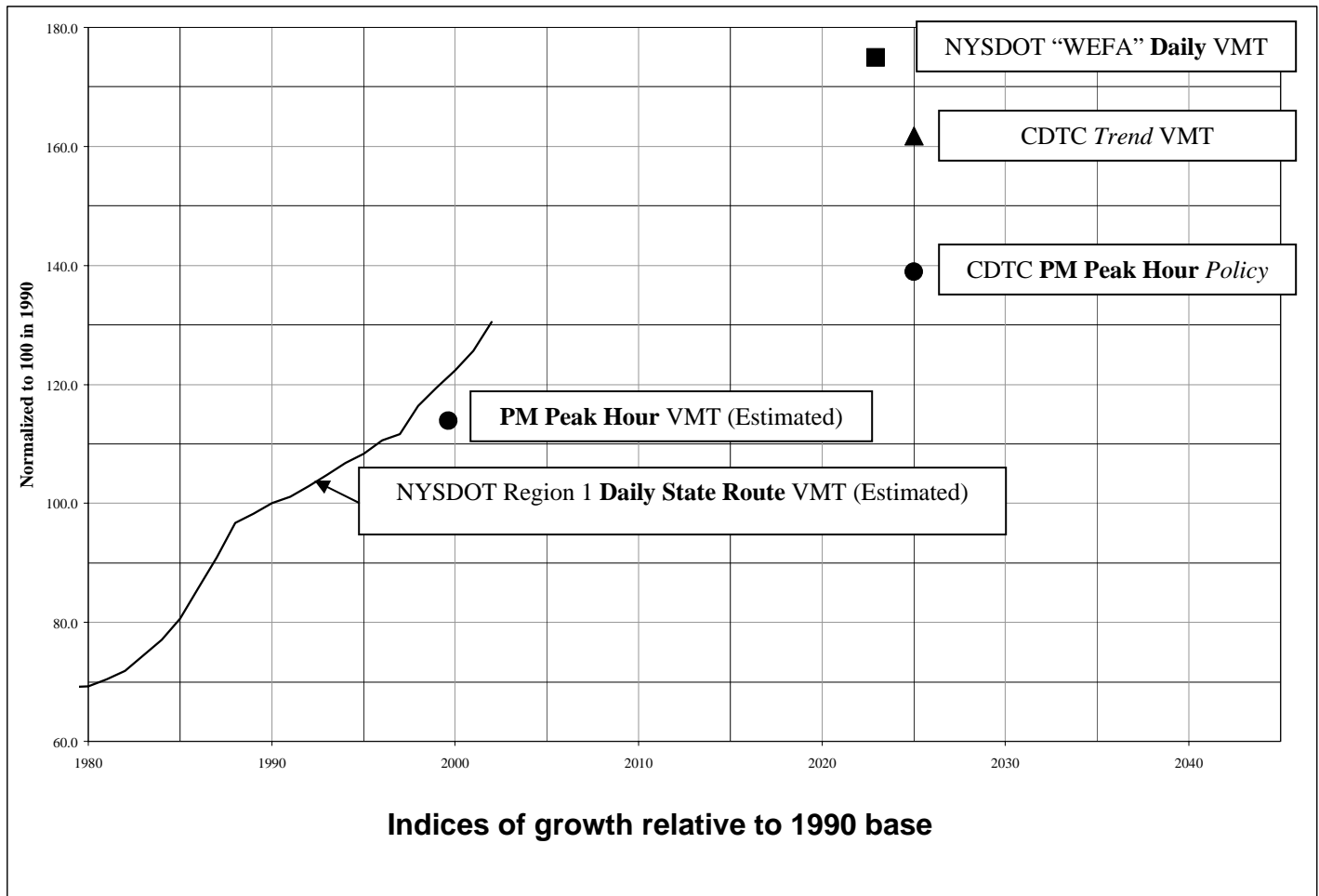
Appendix E: Strategic Highway and Bridge Actions

Appendix F: New Visions and 2003-08 TIP Budget Comparison

Appendix G: Air Quality Conformity Statement

APPENDIX A

RELATIONSHIP OF DAILY STATE ROUTE TRAFFIC GROWTH TO FORECASTS OF PM PEAK HOUR SYSTEM TRAFFIC



Daily State Route vehicle miles of travel (VMT) values are estimated by NYSDOT Region 1 from continuous counts in limited locations and limited-duration counts in other sample sites (factored to approximate average annual traffic) for the state highway system. VMT growth is occurring fastest on high-level state facilities such as Interstates, and faster on a daily basis than during the peak hour. Peak hour VMT is for the *entire system* (not just state facilities) based on traffic counts. “WEFA” forecasts are based on broad population and travel trends that are somewhat higher than those refined values used in CDTC’s planning process.

CDTC’s forecasts are for the *entire system*. Growth rates for the entire system are understandably lower than for only the state system, and lower for the peak hour than for the 24-hour traffic load. 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 over then next 21 years.

APPENDIX B

RELATIONSHIP OF THE NEW VISIONS PLAN TO THE STATE ENERGY PLAN

Among other recommendations, the New York State Energy Plan (as documented in the *2002 State Energy Plan and Final Environmental Impact Statement*) includes several recommendations that specifically affect transportation system decisions. The recommendations are set in the context of the state's commitments to ensure transportation – community compatibility, reduce traffic congestion and delays, encourage energy-efficient modes, provide support for intermodal freight capabilities and continue its emphasis on maintenance of existing infrastructure (each of which is reflected in CDTC's New Visions plan).¹

The specific action items in the Energy Plan's recommendations are listed below, along with a discussion of the relationship of the New Visions plan to the implementation of the recommendations.²

- * *Commit to a statewide goal of reducing greenhouse gas (GHG) emissions 5% below 1990 levels by 2010, and 10% below 1990 levels by 2020.* CDTC's maintains a long-standing goal to “reduce the per-capita resource requirements [including energy] related to provision, operation, use and mitigation of the impacts of the transportation system from current per capita costs.” Achieving this goal is central to the New Visions plan and would contribute significantly to achieving the state goals.
- * *Emphasize the greenhouse gas emission reduction potential, most notably of carbon dioxide (CO₂), as a criterion in developing new program initiatives in the State's public benefits programs.* CDTC includes energy consumption (CO₂) as a criterion in evaluating long-range plan elements and also as an explicit criterion in evaluation of candidate projects for the Transportation Improvement Program.
- * *Adopt a specific plan to develop an indigenous bio-fuels industry in New York to produce, refine, and market transportation and other fuels from indigenous biomass resources.* CDTC uses its transportation planning resources to sponsor and provide on-going staff support to the Clean Cities Coalition of the Capital District, assisting local public and private fleets in exploring bio-fuels and participating in NYSERDA bio-diesel programs. Additionally, when appropriate CDTC employs “full cost accounting” in the consideration of transportation alternatives. Among the non-traditional costs incorporated in this analysis is the

¹ This context is set on page 1-36 of the *2002 State Energy Plan*, under “Energy Policy Objectives and Recommendations”.

² These are among the 14 action recommendations under the section “Promoting and Achieving a Cleaner and Healthier Environment”, part D on pages 1-42 through 1-46 of the *2002 State Energy Plan*.

cost per gallon of fuel consumption for protection of the supplies of foreign oil, thus highlighting the cost of non-indigenous fuel resources.

- * *Redirect transportation funding toward energy-efficient transportation alternatives, including public transportation, walking, and bicycling, and provide incentives to encourage greater use of related alternatives that improve transportation efficiency.* CDTC's New Visions principles, strategies, actions and budget approach achieve this recommendation. Further, CDTC devotes significant resources (approximately \$1.5 M over the past four years) to its Community and Transportation Planning Linkage Program as an incentive to improved community design, street structure, and bicyclist, pedestrian and transit accommodation. Consistency with local planning is required for access to federal capital funds. CDTC's NY 5 Land Use and Transportation Concepts Study is a particularly important contribution to implementing the recommendation by committing to a \$200 M twenty-year program for transit, streetscaping, access management, site re-design and bicyclist and pedestrian accommodation while encouraging urban revitalization in a critical 16-mile corridor of the region.
- * *Include in the State transportation planning and State Environmental Quality Review Act (SEQRA) related processes, consideration of CO₂ production and mitigation strategies, as appropriate.* As noted above, CDTC's processes fully include CO₂ production and mitigation strategies in transportation planning efforts.
- * *Target open space funding to prevent suburban sprawl, promote Quality Communities, reduce vehicle miles traveled, and support, adopt, and enhance transportation measures that reduce energy use and pollutant emissions.* CDTC's principles carefully limit the amount of highway widening included in the plan; incorporate open space protection objectives; and clearly emphasize revitalization of traditional urban centers to temper suburban growth. CDTC's Linkage planning program is an order-of-magnitude financing commitment to Quality Community objectives above the funding levels available through state programs. Most critically, CDTC's adopted policy uniquely counts on and plans for a significant reduction in growth trends in vehicle miles traveled. Traffic forecasts used in design purposes in the Capital District reflect the anticipated success in vmt reduction (See Appendix A.)
- * *Support, adopt, and enhance transportation measures that reduce energy use and pollutant emissions, such as Commuter Choice, Ozone Action Days, diesel vehicle retrofits, improved traffic signal coordination with light emitting diode (LED) replacement technology, transportation system management, and other similar actions.* CDTC's plan and current planning activities are instrumental in achieving this recommendation. The plan seeks implementation of a full Commuter Choice program at state government work sites and efforts by CDTC and CDTA have been successful in demonstrating parking cash out and other TDM incentives at state and private employment sites. Diesel vehicle technology is a subject of Clean Communities of the Capital District activities. Improved

traffic signal technology including transit signal priority treatment is a budget priority of CDTC and its members and the New Visions budget devotes significant resources to further ITS deployment.

- * *Expand research, development, and demonstration (RD&D) of energy and GHG-efficient vehicle technologies, add GHG goals to vehicle tax credits and incentives, and coordinate with other states to encourage improvements in vehicle fuel economy.* CDTC's plan is supportive of improved vehicle fuel economy, but has no control over fuel economy standards or incentives.

- * *Working with regional and local planning organizations, analyze and quantify the energy use and air pollution emissions expected to result from transportation plans and programs.* CDTC calculates energy use and air pollution emissions expected from its plan and from its Transportation Improvement Program. Analysis of the New Visions plan, reflecting the New Visions 2025 Amendment, indicates that for the year 2025, the full New Visions Plan was found to reduce gasoline consumption and greenhouse gas emissions by 2% compared with year 2003 levels. Compared with the "no-build" condition for 2025, the Plan was found to achieve a 17% reduction in gasoline consumption and greenhouse gas emissions. Results of the energy analysis of the Plan are presented in Tables B-1 and B-2.

**Table B-1
Energy Impacts of the TIP and New Visions**

Scenario	Direct Energy Consumption (by motor vehicles)							Regionally Significant Projects: 5 Year TIP Indirect Energy Consumption (Billions of BTU's) (Construction)
	Gallons of Gasoline used per day	Percent Increase in Gallons of Gasoline from 2003	Daily Vehicle Miles Traveled (Thousands)	Miles Per Gallon (Daily)	Thousands of Gallons of Gasoline used per year	Direct Energy in billions of BTU's per year	Annual Direct Energy Net Change: TIP Build vs. No-Build (Billions of BTU's)	
Year 1990			17,740					
Year 1996			20,470					
Year 2003	1,155,344	na	23,498	20.3	300,389	37,549		
Year 2008 No-build	1,220,450	6%	24,774	20.3	317,317	39,665		0
2008 with 2003-08 TIP and Financially Constrained New Visions Plan (1)	1,137,133	-2%	23,167	20.4	295,655	36,957	(2,708)	931
Year 2015 No-build	1,281,436	11%	26,526	20.7	333,173	41,647		
2015 with 2003-08 TIP and Financially Constrained New Visions Plan (1)	1,134,009	-2%	23,780	21.0	294,842	36,855	(4,791)	
Year 2015 with full New Visions Plan (2)	1,079,338	-7%	22,734	21.1	280,628	35,079	(1,777)	
Year 2021 No-build	1,338,425	16%	27,756	20.7	347,990	43,499		
2021 with 2003-08 TIP and Financially Constrained New Visions Plan	1,177,103	2%	24,942	21.2	306,047	38,256	(5,243)	
Year 2021 with full New Visions Plan (2)	1,118,460	-3%	23,796	21.3	290,800	36,350	(7,149)	
Year 2025 No-build	1,354,457	17%	28,539	21.1	352,159	44,020		
2025 with 2003-08 TIP and Financially Constrained New Visions Plan	1,191,509	3%	25,651	21.5	309,792	38,724	(5,296)	
Year 2025 with full New Visions Plan (2)	1,130,062	-2%	24,502	21.7	293,816	36,727	(7,293)	

(1) The "Financially Constrained New Visions Plan" for 2008, 2015, 2021, and 2025 includes the TIP network as well as the VMT reduction that would result from the implementation of the financially constrained New Visions Plan. The year 2008 network includes projects scheduled in the five year TIP period; the year 2015, 2021, and 2025 network includes all TIP projects, including those scheduled in the post 5-year period of the TIP. It is assumed that 71% of the VMT reduction of the full implementation of the plan would be achieved by the financially constrained plan.

(2) Years 2015, 2021, and 2025 with full New Visions Plan include TIP projects plus additional economic development and congestion management projects, as well as VMT reduction that would result from the full implementation of the New Visions Plan.

**Table B-2
Greenhouse Gas Impacts of the TIP and New Visions**

Scenario	Greenhouse Gas Emissions Resulting from the Operation of Motor Vehicles				Regionally Significant Projects: 5 Year TIP Tons of Carbon Emitted from Construction
	Daily Vehicle Miles Traveled (Thousands)	Tons of Carbon Emitted per year	Percent Increase in Tons of Carbon Emissions from 2003	Vehicle Tons of Carbon Emission Net Change: TIP Build vs. No-Build	
Year 1990	17,740				
Year 1996	20,470				
Year 2003	23,498	800,912	na		
Year 2008 No-build	24,774	846,046	6%		0
2008 with 2003-08 TIP and Financially Constrained New Visions Plan (1)	23,167	788,290	-2%	(57,756)	20,263
Year 2015 No-build	26,526	888,323	11%		
2015 with 2003-08 TIP and Financially Constrained New Visions Plan (1)	23,780	786,122	-2%	(102,200)	
Year 2015 with full New Visions Plan (2)	22,734	748,224	-7%	(140,098)	
Year 2021 No-build	27,756	927,828	16%		
2021 with 2003-08 TIP and Financially Constrained New Visions Plan	24,942	815,998	2%	(111,831)	
Year 2021 with full New Visions Plan (2)	23,796	775,346	-3%	(152,483)	
Year 2025 No-build	28,539	938,944	17%		
2025 with 2003-08 TIP and Financially Constrained New Visions Plan	25,651	825,983	3%	(112,961)	
Year 2025 with full New Visions Plan (2)	24,502	783,387	-2%	(155,557)	

(1) The "Financially Constrained New Visions Plan" for 2008, 2015, 2021, and 2025 includes the TIP network as well as the VMT reduction that would result from the implementation of the financially constrained New Visions Plan. The year 2008 network includes projects scheduled in the five year TIP period; the year 2015, 2021, and 2025 network includes all TIP projects, including those scheduled in the post 5-year period of the TIP. It is assumed that 71% of the VMT reduction of the full implementation of the plan would be achieved by the financially constrained plan.

(2) Years 2015, 2021, and 2025 with full New Visions Plan include TIP projects plus additional economic development and congestion management projects, as well as VMT reduction that would result from the full implementation of the New Visions Plan.

APPENDIX C

CDTC'S 25 ADOPTED PLANNING & INVESTMENT *PRINCIPLES*

The following is a list of the principles adopted in CDTC's *New Visions for Capital District Transportation* plan. CDTC attempts to respect these principles in all its actions.

PRESERVE AND MANAGE

Improve System Performance

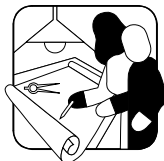
- 1) CDTC is committed to the maintenance, repair and renewal of the existing highway and bridge system in a cost-effective manner that protects and enhances rideability, public safety and accessibility.
- 2) Funding for appropriate repair and renewal will be based on the function and condition of the facility -- not ownership.
- 3) Encouraging bicycle and pedestrian travel is a socially, economically and environmentally responsible approach to improving the performance of our transportation system.
- 4) In addition to supporting desired land settlement patterns, transit service serves multiple objectives in the Capital District:
 - 4 to contribute to congestion management, air quality and energy savings;
 - 4 to offer an alternative travel mode to reduce dependence on the auto; and
 - 4 to provide essential mobility for those who do not operate a private vehicle.
- 5) The needs of the older driver will be considered as transportation facilities are maintained and rehabilitated.
- 6) More efficient utilization of existing vehicles/programs to provide for special transportation needs is preferable to fleet expansion, and will provide more choices for users.

Manage Congestion

- 7) Management of demand is preferable to accommodation of single-occupant vehicle demand growth.
- 8) Cost-effective operational actions are preferable to physical highway capacity expansion.
- 9) Capital projects designed to provide significant physical highway capacity expansion are appropriate congestion management actions only under compelling conditions.
- 10) Significant physical highway capacity additions carried out in the context of major infrastructure renewal are appropriate only under compelling conditions. (The revised design approach reaches a determination of facility design through a risk assessment [tradeoff analysis] that focuses on the opportunity cost of selecting alternative designs.)
- 11) Incident management is essential to effective congestion management.

Protect Our Investment

- 12) Managing traffic flows on the Capital District expressway and arterial system is critical for both economic and social reasons.
- 13) Major capital projects must have a plan for operating budgets for the life of the project.
- 14) Maintaining the health and improving the efficiency of the existing freight facilities in the region through public/private partnerships is a high priority.



DEVELOP THE REGION'S POTENTIAL

Build Upon Our Strengths

- 15) The transportation system of the Capital District is an important part of the region's attractiveness.
- 16) Transportation investments will help preserve and enhance the Capital District's existing urban form, infrastructure, and quality of place. The Capital District already has many unique attributes that other regions strive for:
 - 4 The region is a collection of communities that work together and that possess a livable, community scale.
 - 4 The region is multi-centered with the most intensive suburban development in the center of the region rather than at the fringe. Suburban and urban areas depend on each other for jobs, housing, and cultural activities.
 - 4 Traditional transit corridors link urban centers.
 - 4 The region's modest growth rate is a strength because it affords the time and the opportunity to put in place plans and policies that encourage growth in harmony with the region's objectives.
 - 4 The region is endowed with a diversity of parks, a relative abundance of open space and a wealth of recreation and tourism attractions.

Use Transportation Investment as a Tool

- 17) Transit facilities and services can be an essential element of the social, economic and cultural fabric of a metropolitan region if supportive policies and investments are in place.
- 18) Neighborhood-based local planning efforts are important to the success of an overall regional plan that emphasizes livable communities.

LINK TRANSPORTATION AND LAND USE

Encourage Local Land Use Management

- 19) Land use planning and management is critical to the protection of transportation system investment.
- 20) Design of street layout and location of complementary uses can create a pedestrian scale and provide increased accessibility without compromising the attractiveness of development.

Link Transportation Investments to Land Use Planning

- 21) Transportation investments will encourage residential and commercial development to locate within an Urban Service Area defined for the Capital District.
- 22) Transportation investments will not encourage development in environmentally sensitive areas and will help to preserve rural character.
- 23) Arterial management guidelines will be flexible enough to deal with the Capital District's various roadway types and the specific land use patterns surrounding them.

PLAN AND BUILD FOR ALL MODES

- 24) CDTC's planning efforts will be comprehensive enough to encompass all modes, including air, water, freight, intercity and local transit, pedestrian and bicycle.
- 25) Possible bicycle/pedestrian-related improvements will be considered from the perspective of **developing a system** -- not just based on whether a particular facility is currently used.

APPENDIX D

CDTC'S 10 ADOPTED *STRATEGIES* & 43 ADOPTED *ACTIONS*

The following is a list of the strategies and actions adopted in CDTC's *New Visions for Capital District Transportation* plan. They represent CDTC's intended implementation program.

MAINTAIN INFRASTRUCTURE IN GOOD CONDITION AND FOCUS ON PRIORITY TREATMENT NETWORKS FOR OTHER IMPROVEMENTS

- 1) Make the Capital District transportation system safer.
- 2) Continue adequate highway and bridge maintenance efforts.
- 3) Carry out an effective highway and bridge rehabilitation and reconstruction program.
- 4) Maintain transit equipment and facilities in a state of good repair.
- 5) Embrace a "risk assessment" approach to evaluating capacity-improving aspects in infrastructure project design.
- 6) Establish priority treatment networks for improvement beyond basic infrastructure renewal.
- 7) Adopt an access management policy for the arterial priority network.
- 8) Explore changes in road ownership as a way to better align infrastructure funding with function.

PRO-ACTIVELY PLAN VIBRANT COMMUNITIES

- 9) Prepare and maintain a comprehensive Regional Development Plan.
- 10) Establish an Urban Service Area.
- 11) Provide funding for and staff participation in community-based planning.
- 12) Develop access management plans for all priority network arterials.
- 13) Support local planning board consideration of the regional transportation impacts of development decisions.
- 14) Improve site design practices.
- 15) Elevate consideration of transportation alternatives in siting facilities that primarily serve elderly and handicapped populations.
- 16) Improve delivery access for commercial vehicles.
- 17) Establish a program for transportation projects directed explicitly at community enhancement or regional economic development.

REACH OUT FOR FULL PARTICIPATION

- 18) Emphasize public participation in transportation planning, programming and implementation.

DESIGN EFFECTIVE FACILITIES

- 19) Improve continuity between planning, programming and implementation.
- 20) Mitigate congestion only when such improvements are consistent with New Visions principles.
- 21) Routinely make road projects bicycle-, pedestrian- and transit-friendly.
- 22) Expand the regional road network to include greater use of service roads and collector streets.

DEVELOP INTELLIGENT TRANSPORTATION SYSTEMS AND MANAGE TRAFFIC INCIDENTS EFFECTIVELY

- 23) Implement Intelligent Transportation Systems (ITS) on the priority network.
- 24) Implement the Expressway Incident Management Plan.

SUPPORT INTERMODAL TRANSPORTATION

- 25) Improve intermodal passenger connections throughout the region.
- 26) Support intermodal transport of goods in and through the Capital District.
- 27) Improve surface access to the Port of Albany.
- 28) Implement improved surface access to the Albany International Airport.
- 29) Eliminate at-grade railroad crossings at every opportunity.

PROVIDE APPROPRIATE TRANSIT SERVICE

- 30) Restructure transit service to meet 21st century needs.
- 31) Support transit through design of the built environment and the use of technology.

TREAT ALL MODES FAIRLY IN THE CAPITAL PROGRAM

- 32) Direct transportation improvements and services to support New Visions concepts.
- 33) Provide funding for implementation of small, cost-effective improvements.
- 34) Develop Class I bicycle facilities in major travel corridors of the region.

ENHANCE DEMAND MANAGEMENT

- 35) Continue and expand demand management initiatives.
- 36) Engage New York State as a full partner parking management and transit promotion.
- 37) Consider highway pricing (particularly congestion pricing) and broad parking policies (including cashing out).

SECURE ADEQUATE FUNDING TO FULLY IMPLEMENT THE PLAN

- 38) Build a coalition to advocate for regional transportation projects.
- 39) Explore local funding mechanisms for implementation of the plan.
- 40) Actively pursue public/private partnerships that leverage the use of public funds.
- 41) Increase the use of mitigation fees to finance transportation improvements.
- 42) Include demand management and transit support in development-financed traffic mitigation programs.
- 43) Explore changes in funding rules and programs to better align funding with function.

APPENDIX E

STRATEGIC HIGHWAY AND BRIDGE ACTIONS, 2004 - 2025

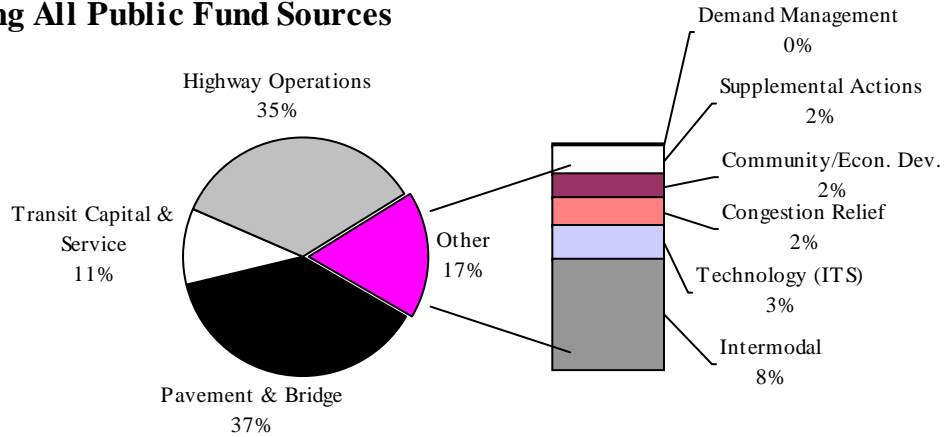
Project Title	Total Cost	Infra - structure Part	CMS Need	Comm/ Econ Need	Dedicated Funds	Private Funds	Notes
TIP Commitments							
A198. Route 7 over I-87	19.652	15.652	4.000				CMS aspect estimated.
A235. Route 9/ Livingston	1.081		1.081				
A237. Everett Road	6.700	5.000	1.700				CMS aspect estimated
A240. Exit 3 to Airport	31.900		31.900				
A242. Slingerlands Bypass	18.100		18.100				
A289. Lincoln/Amtrak, Walker-Rapp	3.770			3.770			
A295. New Karner Road	17.275	10.365	6.910				Infrastructure @ 60%. Scale reduced to 2-lanes.
A290. Selkirk Bypass	7.915			7.915			
A296, A392, Maxwell/ASR	5.419		5.419			2.800	Private funds from mitigation fees
A345. Elm Street Bypass	5.300			5.300			
A372. Watervliet Shaker Road	12.169	4.868	7.301			2.335	Infrastructure @40%/; private funds from mitigation fees
Wade Road Extension	4.000	0	4.000			4.000	Mitigation fee funded
R111, Route 7 Troy-Brunswick	9.000	6.000	3.000				CMS aspect estimated
R173, I-90 Exit 8 Connector Phase 2	36.523			36.523	36.523		
SA108, Balltown Road (Sara. portion)	11.580	4.632	6.948				Infrastructure @ 40%
SA109, Glenridge Road (Sara. portion)	3.830	2.830	1.000				CMS aspect estimated
S93, Five Corners	4.000		4.000				Full cost estimated
S94, Route 7/146	4.000		4.000				Full cost estimated
S96, Balltown Road (Sch. portion)	11.580	4.632	6.948				Infrastructure @ 40%
S97, Route 50/ Freeman's	15.800	6.320	9.480				Infrastructure @ 40%
S120, Glenridge Road (Sch. portion)	7.653	3.061	4.592				Infrastructure @ 40%
Additional Actions							
Other economic development/ community highway actions	60.000			60.000			Balance from New Visions 2021 list
Other CMS-based actions	60.000		60.000				Balance from New Visions 2021 list
TOTAL	357.247	63.360	180.379	113.508	36.523	9.135	
SUBTOTAL ON TIP	237.247	63.360	120.379	53.508	36.523	9.135	
SUBTOTAL NOT ON TIP	120.000		60.000	60.000			
Total, per year over 21 years (2004-2025)			8.589	5.405	1.739	0.435	

CMS stands for Congestion Management System. CMS actions are consistent with CDTC Congestion Management Principles -- including addressing critical levels of congestion, integration with demand management strategies, compatibility with the community character and plans and expectation of proper land use management. Some CMS actions are incorporated into other projects not listed here, such as pavement reconstruction and bridge replacements. CMS elements (such as turn lanes, etc.) of such projects draw from the balance of CMS funds shown above.

“Comm/Econ” refers to projects that specifically address economic development and community development purposes. Community compatibility and economic development are also among the objectives of projects in other categories, beyond those on this list. Projects with a primary emphasis on infrastructure renewal that have a community component are not listed above or counted against the community compatibility / economic development budget.

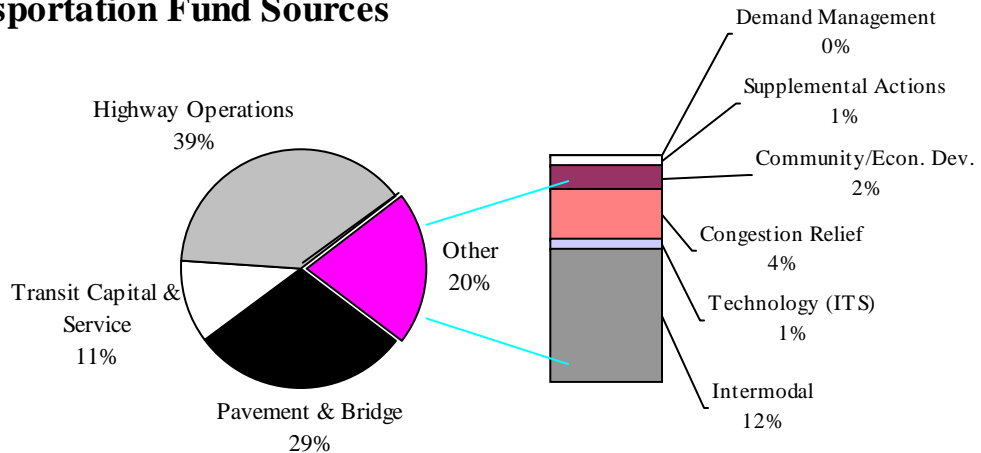
APPENDIX F NEW VISIONS AND 2003-08 TIP BUDGET COMPARISON

***New Visions* Full Implementation Budget, Including All Public Fund Sources**



Total funding is \$502M annually (21-year average). Budget elements include maintenance and operations as well as capital. The *New Visions* plan calls for total transportation spending to grow over time. (Demand Management is 0.3%.)

2003-08 TIP Plus All Other Transportation Fund Sources



Total funding is \$437 M annually (5-year average from 2003 to 2008). The *New Visions* plan calls for total transportation spending to grow over time. The scale of the 2003-08 program is consistent with the larger scale of the *New Visions* plan, assuming budgets grow over the planning period. Other capital, operations and maintenance activities are shown in the chart, in addition to projects identified in the TIP. (Demand Management is 0.1%.)

APPENDIX G

AIR QUALITY CONFORMITY STATEMENT

Plan Conformity Findings

Support for SIP

The CDTC New Visions Plan and the 2003-2006 TIP conform to the existing State Implementation Plan (SIP) by supporting the SIP's intentions of achieving and maintaining the National Ambient Air Quality Standards (NAAQS). CDTC's transportation planning process historically has ensured that air quality issues are fully considered and given adequate priority. In this regard, CDTC's *Continuing Operations Plan* defines air quality planning and implementation responsibilities required ensuring maintenance of air quality standards in the Capital District. In addition, air quality is one factor considered in corridor and subarea studies, and in the identification and prioritization of projects for inclusion in CDTC's TIP.

The impacts of the *New Visions* plan and the 2003-08 TIP on air quality were evaluated. Air quality effects, as measured by volatile organic compound (VOC) emissions and nitrogen oxide (NOx) emissions, are core performance measures for *New Visions*. Improving environmental quality is included in the CDTC Long Range Transportation System Goals. The air quality impacts of recommended projects, programs and strategies were evaluated in development of the *New Visions* plan. Evaluation of projects for inclusion in the Transportation Improvement Program will continue to include an assessment of air quality impacts.

Actions to Improve Air Quality

There are no applicable transportation requirements or commitments in the SIP for the four-county Capital District region. Therefore, no goals, directives, or recommendations of the plan conflict with SIP or interfere with implementation of transportation control measures (TCMs). In fact, the Capital District is voluntarily implementing actions to improve air quality. These actions are summarized below.

1. **Programs for improved public transit-** The primary public transit provider in the Capital District is CDTA. There are also numerous private providers of transit services, such as Upstate Transit. CDTC has demonstrated a commitment to public transit in a number of ways. CDTC has advocated full allocation of authorized levels of Federal Transit Act funding and the use of the SDF for transit projects. All FTA-provided funding to CDTA for capital and operating funds is programmed in the CDTC TIP. CMAQ funds for transit projects have been programmed and allocated where they are warranted. CDTA and other transit projects have garnered a significant portion of the available CMAQ funds. Essentially every transit project proposed for consideration in the CMAQ program was fully funded.

New Visions explored alternative transit futures for the region. The last time that these options were studied was in 1980. A major effort to ascertain public support for expanded transit services of various types was undertaken. Recommendations to restructure existing transit service and

pursue a "Best Bus" strategy, particularly in the Route 5 corridor, while continuing to study fixed guideway opportunities are included in this plan.

CDTA has a Special Events program that adds service to accommodate increased transit demand during the holiday shopping season to the malls, to the First Night celebration on New Year's Eve, and to summer cultural events.

CDTA is actively involved with NYSDOT in mitigation activities surrounding major construction projects. The provision of new or supplemental transit services where a major bridge or highway is under construction is a good way to introduce people to transit services. It can be expected to attract long term riders. In the past, transit in construction work zones has been negotiated on a project-by-project basis. There is now an acceptance that this practice has merit. It should be used for every major construction project. CDTA has been granted CMAQ program funds to allow the provision of these services on an ongoing basis. This will reduce the administrative start-up time for the provision of such services, thus facilitating implementation.

CDTA has "partnered" with the private operators serving commuters in the Capital District. Commuters using the private bus service from outlying areas to downtown Albany are provided free transfers to the CDTA system. CMAQ program funds finance this project; the project is successful and has increased ridership.

CDTC has established a project merit evaluation framework for the consideration of new capital projects for flexible funds that allows transit projects to compete on a level playing field with other project types for flexible funding opportunities. CDTC's experience has been that improved public transit services are able to demonstrate mobility benefits and can be competitive with highway projects in this regard. The CDTC TIP project selection methodology has also been modified to encourage arterial projects to consider the accommodation of transit (and non-motorized modes) in their design and scope. This will have the long-term effect of making the transportation system as a whole work better.

2. **Transportation Demand Management**- *New Visions* includes Transportation Demand Management (TDM) strategies as a major focus for its efforts to maintain and improve mobility in the Capital District. Implementation is at the preliminary stages at the regional level. However, the Statement of Findings for the Albany County Airport Area GEIS strongly recommends the implementation of employer-based transportation management plans in the Airport/Wolf Road area. This area is one of the most congested in the region and the program has a high likelihood of success. CDTC will continue to work to establish employer-based programs where opportunities arise.

In addition, CDTC has established a planning program with STP funds that will allow local governments to update and improve their transportation and land use planning efforts. Such efforts may point to the need for trip reduction ordinances in some instances. The Statement of Findings for the Albany County Airport Area GEIS strongly recommends the implementation of employer-based transportation management plans, which would include flexible work schedules in the Airport/Wolf Road area. This area is one of the most congested in the region and the program has

a high likelihood of success. CDTC will continue to work to establish employer-based programs of all kinds where opportunities arise.

3. **Traffic flow improvement programs that achieve emission reductions-** Mobility projects considered for funding the CDTC TIP are analyzed for hydrocarbon emissions reductions, reductions in travel time, and the excess vehicle hours of delay reduced by project implementation. This evaluation of project merit leads to the programming of the best mobility projects in both the CMAQ program and the STP.

A notable example of CDTC's leadership role in promoting projects to improve traffic flow is the Intelligent Transportation System (ITS) project in the TIP. This project will use a combination of radio broadcasts, signal timing improvements, incident detection technology, new transit technologies, and incident management techniques and will significantly reduce emissions and relieve congestion in the Capital District.

4. **Park and Ride Lots-** CDTA has sponsored an aggressive program to establish a network of Park-and-Ride facilities in the Capital District. This program, which is ongoing, is focused on critical corridors and the provision of transit service to the parking facilities.

There is a long-standing program for state workers that buses them from the State Office Campus area to downtown, thus eliminating a number of vehicle trips to downtown Albany during the peak period. Peripheral park and ride lots also exist in Menands and at McCarty Avenue (Exit 23).

5. **Commuter Register-** CDTC is the publisher of the *Commuter Register*, a bimonthly website newsletter. This publication provides shared-ride-matching services to interested parties. This effort includes periodic checks with carpoolers to confirm their participation and advice as to how to start and maintain a carpooling arrangement. This effort is ongoing and will continue.
6. **Guaranteed Ride Home-** A Guaranteed Ride Home Program (GRH) was established for monthly transit pass holders in 1993 to remove one of the main obstacles to sharing a ride: fear of being stranded, especially in an emergency. The GRH program was expanded in 1996 to provide a "safety" net to carpoolers, persons who bike to work, and to users of the non-CDTA private commuter services. This program strengthens the shared ride services already provided.
7. **Bicycle and Pedestrian Access-** CDTC expended a major effort to incorporate bicycle and pedestrian considerations into *New Visions*. This work included the establishment of an advisory committee of interested parties, the documentation of available fund sources for bicycle and pedestrian projects, and the establishment of a regional bicycling network. This effort will continue.

In addition, CDTC has considered bicycle and pedestrian projects in its programming of both CMAQ and STP Flexible funds. The practice with TIP projects has been to increasingly include separated bike paths and sidewalks or bike lanes in addition to road surface for vehicles. CDTA recently instituted buses equipped with bicycle racks to allow cyclists to store their bicycles while riding the bus.

8. **Congestion Management System-** The CDTC Congestion Management System encourages actions, plans and investments to improve air quality by managing single occupant vehicle demand, supporting cost-effective operational actions, supporting alternative modes including walking, bicycling and transit, and by encouraging integration of land use planning and transportation planning.

CDTC initiated a program, funded with STP funds to encourage local government planning processes to better integrate transportation and land use. This program incorporates methods of facilitating non-automobile travel as an essential component.

CDTC's TIP project selection criteria includes a basic screening requirement for all capacity-increasing projects to be linked to local land use management. Because the Capital District must maximize the effectiveness of existing facilities, a plan or commitment to access management, construction of new local streets, or provision of supplemental transit services was required to be in place prior to commitment to major capacity work. CDTA, the regional transit operator, has a program for Special Event service. In addition, as part of a CMAQ-funded project, CDTA will prepare a manual to guide policy officials on how to amend local ordinances so that transit options are incorporated into the project review process.

Marginal Non-Attainment Status of the Capital District

In accordance with the Clean Air Act Amendments of 1990, the U.S. Environmental Protection Agency (EPA) designated the Capital District area as a marginal non-attainment area for ozone pollution in 1991. This designation was based on the fact that national ambient air quality standards were exceeded at all three Capital District monitoring sites at some time during the three-year period 1988-90. The Capital District has not been in violation of the National Ambient Air Quality Standards (NAAQS) for the one hour ozone standard since 1989. CDTC continues its nonattainment status for ozone based on the new 8 hour standards.

As part of a continuing federal-state effort to make the nation's air healthier to breathe, the Environmental Protection Agency (EPA) promulgated a new 8-hr standard for ozone. EPA classifies ozone nonattainment areas based on the severity of their ozone problem. Classified areas fall into five categories: marginal, moderate, serious, severe, or extreme.

On April 15, 2004 EPA designated the counties of Albany, Schenectady, Saratoga, Rensselaer, Schoharie and Greene as a "basic" non-attainment area for the new 8-hour ozone. Basic non-attainment areas are required to comply with the more general nonattainment requirements of the Clean Air Act, including transportation conformity.

As a marginal 1-hour ozone non-attainment area, or as a basic 8-hour ozone non-attainment area, the Capital District must show conformity of the Regional Transportation Plan with the Clean Air Act Amendments of 1990, and must abide by actions set forth in an approved State Implementation Plan. Until a new SIP can be prepared and approved, conformity of transportation plans and programs must be based on analysis of the potential impacts of plans, programs, and projects on air quality. CDTC used the methodology developed cooperatively by the New York State Department of Transportation and the U.S. Environmental Protection Agency. CDTC's regional transportation plan, *New Visions for*

the Capital District, was found to meet the requirements established by the 1990 amendments to the Clean Air Act regarding the conformity of transportation plans. As demonstrated in the following narrative, emission levels of volatile organic compounds (VOCs) and nitrogen oxides (NOx)-- the precursors to ozone formation-- are less for the plan build scenario than for the 1990 base year. In addition, emission levels of volatile organic compounds (VOCs) and nitrogen oxides (NOx) are less for the TIP and Plan build scenario than for the TIP and Plan no-build scenario.

Methodology Used to Model the Emission Impacts of the Plan

In accordance with New York State Department of Transportation guidelines, regional emissions estimates were generated by using EPA's Mobile Model 6 software for 1990, 1996, and "no-build" and plan "build" scenarios for years 2008, 2015, 2021 and 2025. These regional emissions rates were updated by the New York State Department of Environmental Conservation using EPA's Mobile Model 6 software in year 2004. The estimates of emissions were based upon the most recent population, employment, travel, and congestion information developed by the CDTC staff for the four counties.

The calculation of base year (2000) travel and congestion data (VMT and speed) for the four county Capital District regional highway network was derived from CDTC's Systematic Traffic Evaluation and Planning (STEP) model. Using TMODEL2 software, the regional STEP model directly generated PM peak hour VMT and speed data attendant to existing land use, traffic, and highway network conditions. Twenty four-hour estimates were generated by factoring the PM peak hour trip set in accordance with NYSDOT's guidelines. For this exercise, the factor used to adjust the trip set was derived from hourly traffic distributions at more than 100 locations in the Capital District.

In order to evaluate the impact of the TIP on emissions, the impacts of a "no-build" scenario were evaluated. The no-build scenario is a hypothetical scenario that would result if the TIP were not implemented. The networks used for the 2008, 2015, 2021 and 2025 "no-build" scenarios assume projects in the TIP would not be implemented.

Travel demand for the year 2008, 2015, 2021 and 2025 "no-build" scenarios was simulated using Capital District Regional Planning Commission (CDRPC) official forecasts of households and employment, and CDTC forecasts of vehicle ownership.

The year 2008 TIP/Financially Constrained Plan network includes projects from the 2003-2006 three year TIP and Plan projects scheduled in the fourth and fifth years of the TIP; the 2015, 2021 and 2025 TIP/Financially Constrained Plan networks include all TIP projects, including those scheduled in the post 5 year period of the TIP. For build conditions for 2008, 2015, 2021 and 2025, travel demand forecasts were prepared that were consistent with achievements expected from implementation of the *New Visions* plan. With full implementation of the *New Visions* plan, increases in daily vehicle travel will be dampened from the trend forecast of 30% (1996-2015) to approximately one-third to one-half that level. This will occur through a combination of substitution of communication for travel, increased carpooling, increased bus, bike, and/or walk travel, and shorter trip lengths (due to proximity of activities). This dampening of daily vehicle travel was represented in the CDTC STEP model as a 10% reduction in vehicle trips in 2008 with respect to trend growth forecasts, and as a 15% reduction in vehicle trips in 2015, 2021 and 2025. The full *New Visions* Plan network for 2015, 2021 and 2025

includes TIP projects plus additional economic development and congestion management projects; hypothetical, representative projects were selected which do not have status in the New Visions Plan. The New Visions Plan intentionally does not designate the additional \$60 million for Congestion Management projects and the additional \$60 million economic development projects to any specific projects at this time.

The financially constrained plan is based on "steady-state funding". Steady state funding is the currently expected state, federal and local funds would continue at current levels (adjusted for inflation) through the 21-year period, and all federal demo project funds would be received. This scenario makes comparable progress across all plan improvement initiatives. The financially constrained plan is assumed to achieve comparable progress -- 71 percent -- in the reduction in travel that would be achieved by full plan implementation.

The TIP network used in the analysis assumes that all TIP projects are implemented. All non-exempt projects were modeled, as well as a number of exempt projects that will affect intersection capacities. Projects programmed in the post five year network were not included in the year 2008 TIP network, but were included in the 2015, 2021 and 2025 build networks. In addition, the for the years 2015, 2021 and 2025 the full plan scenario was modeled that includes TIP projects plus additional economic development and congestion management projects, as well as VMT reduction that would result from the full implementation of the *New Visions Plan*.

EPA's Mobile Model 6 emission rates for volatile organic compounds and NOx were applied on a link by link basis using speed and VMT estimates developed in the STEP model for each scenario. VMT was increased by ten percent in all scenarios to reflect summer traffic volumes, since the highest levels of ozone are usually detected in the summer months. The Mobile Model 6 emission rates reflect the most current New York State SIP proposals for upstate non-attainment.

Air Quality Impacts of the TIP and the *New Visions Plan*

Supplementary Table C-1 presents the results of the emission modeling of the 2003-06 TIP and the *New Visions Plan* impacts. Supplementary Table C-1 indicates that although vehicle miles of travel are forecast to increase in the Capital District between 2002 and the year 2025, volatile organic compounds (VOC) and nitrogen oxide (NOx) emissions will be reduced under all scenarios. Reduced vehicle emission rates are the primary cause. Compared to the "no-build" scenario, VOC and NOx emissions will be reduced by the 2003-06 TIP by 2008, and further reduced by the Full Plan Implementation. The analysis demonstrated that full implementation of the *New Visions Plan* would result in the lowest emissions of any scenario tested.

Conformity Finding

The analysis described above indicates that the CDTC 2003-06 TIP and the CDTC *New Visions Plan* satisfactorily meets the requirements established by the 1990 Clean Air Act Amendments regarding the conformity of transportation programs. The analysis demonstrates that emission levels of volatile organic compounds and nitrogen oxides -- the precursors to ozone formation -- are less for the TIP and plan implementation scenarios in 2008, 2015, 2021 and 2025 relative to the "no-build" condition. These levels are also dramatically lower than 1990 or 2002 emission levels.

Table G1: Air Quality Impact of the CDTC 2003-06 TIP and the *New Visions* Plan

Scenario	Volatile Organic Compounds (VOCs) Emissions in Kilograms Per Day	Nitrogen Oxides (NO_x) Emissions in Kilograms Per Day	Daily Vehicle Miles Traveled (Thousands)
1990	59,685	57,686	17,740
2002	38,649	46,5112	23,070
Year 2008 No-build	22,395	26,991	24,779
Year 2008 with 2003-06 TIP and Financially Constrained New Visions Plan	20,477	25,468	23,167
Year 2015 No-build	12,817	13,439	26,530
Year 2015 with 2003-06 TIP and Financially Constrained New Visions Plan	11,006	12,245	23,780
Year 2015 with full <i>New Visions</i> Plan²	10,384	11,781	22,734
Year 2021 No-build	9,864	8,152	27,760
Year 2021 with 2003-06 TIP and Financially Constrained New Visions Plan	8,328	7,415	24,942
Year 2021 with full <i>New Visions</i> Plan²	7,807	7,118	23,796
Year 2025 No-build	9,007	6,438	28,539
Year 2025 with 2003-06 TIP and Financially Constrained New Visions Plan	7,511	5,849	25,651
Year 2025 with full <i>New Visions</i> Plan²	7,034	5,614	24,502

1. The “Financially Constrained New Visions Plan” for 2008, 2015, 2021 and 2025 includes the TIP network as well as the VMT reduction that would result from the implementation of the financially constrained *New Visions* Plan. The year 2008 network includes projects scheduled in the three year TIP period and Plan projects scheduled in the fourth and fifth years; the 2015, 2021 and 2025 networks include all TIP projects, including those scheduled in the post 5 year period of the TIP. It is assumed that 71% of the VMT reduction of the full implementation of the plan would be achieved by the financially constrained plan.
2. Years 2015, 2021 and 2025 “with full *New Visions* Plan” includes TIP projects plus additional economic development and congestion management projects, as well as VMT reduction that would result from the full implementation of the *New Visions* Plan.
3. The build and no-build emissions for non-exempt project corridors in Montgomery County have been added to the total emissions for the four county CDTC area. These emissions were calculated separately from the CDTC STEP Model. Montgomery County is included in the Capital District non-attainment area.
4. The average daily emission reductions that will result from the Capital Region Traffic Management Center Operations (PIN 1806.60, CDTC TIP Project RG37A), HELP (PIN 1806.61, CDTC TIP Project RG28), and the I-90 Part 2 Project (PIN 1528.55, CDTC TIP Project A319; includes new CCTV, VMS, the TRANSMIT Program) were calculated separately using the CDTC STEP Model for 2008, 2015, 2021 and 2025. The resulting benefits were then subtracted from the build alternatives’ emissions in Table G1. CDTC Project 319 is being designated as a “non-exempt” project.