



9. IMPLEMENTING THE PLAN

This chapter discusses how the recommendations in the draft transportation plan become reality. The goals, objectives, and recommendations included in this plan should serve as the backdrop for individual project and service decisions as the ECTC moves forward. The first step in implementing the plan will be in the development of the Transportation Improvement Program (TIP) by late spring, 2005.

9.1 TIP Development

The ECTC must develop a Transportation Improvement Plan (TIP) at least every two years. The TIP includes a listing of all of the projects the region intends to implement over the next three years. The FHWA/FTA requires that the TIP show which sources of funds will be used for each project and that the TIP is fiscally constrained. This means that project costs cannot exceed revenue estimates.

The FHWA/FTA also require that NYSDOT and the MPOs in New York, including the ECTC, work collaboratively to develop estimates of revenues that will be available over the life of the transportation plan and the TIP. Once these estimates are known, the ECTC can work with the implementing agencies (e.g., NYSDOT, Chemung County) to identify priorities for the funding of projects based in part, on which projects are ready to proceed. The TIP must be approved by the ECTC and submitted to NYSDOT. NYSDOT in turn, accumulates all the TIPs throughout the state and submits them to the FHWA/FTA for specific project funding.

9.1.1 GUIDELINES FOR PRIORITIZATION AND SELECTION OF PROJECTS

The next TIP will be developed for the ECTC region by late spring of 2005. The ECTC plans to initiate a new process for TIP development with this next TIP cycle. The process will include the establishment of guidelines for project prioritization and the selection of

projects. This will include setting criteria for project selection using the goals and objectives adopted in this plan. In addition, criteria will include project readiness, how projects address deficiencies identified throughout this planning process, and whether projects address other goals and objectives of this plan.

9.1.2 USE OF PERFORMANCE MEASURES/MANAGEMENT

One way to monitor progress over the life of the transportation plan is to establish performance measures. These can help assess progress over time, highlight when revisions to projects, programs or services may be needed, and help the ECTC to know whether the goals and objectives that have been incorporated into the plan are being addressed in a systematic way. Progress toward implementing a plan is made incrementally, and performance measurement and monitoring can help to keep the plan on track.



Another helpful way to use performance measures is to monitor the management and operation of the transportation system in order to achieve maximum efficiency with existing infrastructure, prior to investing in new infrastructure. The importance of operations and management to transportation services has become a focal point of many MPOs planning efforts throughout the



past several years. MPOs are promoting ways to improve system efficiencies, integrate transportation services for seamless connections, and better serve the needs of transit passengers through enhanced operations, dispatching and management techniques.

9.2 Financial Issues

As with all long term planning, especially looking forward twenty years, there will be uncertainty about funds to implement the plan and whether they will be available. The NYSDOT is currently developing a Statewide Master Plan and is expected to complete that process this calendar year. As part of this process, the state will address how to ensure adequate funding for the transportation needs throughout the state and in each of the thirteen metropolitan planning areas.

9.3 Energy Plan

As noted in the introduction of the Plan (Chapter 1), the New York State Energy Plan requires the ECTC to assess the energy impacts of the projects proposed in this LRP. Since the ECTC does not have a travel demand model, it is not possible to conduct a comprehensive quantitative analysis on energy impacts of the Long Range Plan using the NYSDOT procedures. Also, the only regionally significant project in the LRP is the conversion of Route 17 to I-86 and associated improvements, which are well underway; there are no other projects that would have other than marginal impacts on energy consumption.

Nevertheless, the ECTC has made significant accomplishments in implementing projects that address Energy Plan goals. Specific projects that promote energy efficiency, reduction in energy consumption, and encourage use of energy-efficient transportation alternatives include the following: Catherine Valley and Lackawanna Trails, the transit system evaluation study, and new transit vehicle purchase. These examples in particular, are saving energy and facilitating biking, walking and transit alternatives.

In addition, the signal project discussed earlier includes the replacement of all existing traffic and pedestrian signals with LED's. The New York State Energy and Research Authority (NYSERDA) indicates that traffic and pedestrian signals using LED's use up to 90 percent less energy than those using incandescent lamps. In addition to the LED's, a new traffic management system will be installed during this project. This system will allow the City to optimize traffic flow throughout the project area, thereby reducing the vehicle acceleration and braking improving overall fuel economy, thereby reducing overall energy consumption.

The ECTC's 2000 Long Range Plan identified, as a goal, the conversion of Route 17 to I-86. Several projects have been completed, resulting in the February, 2004 extension of I-86 from Route 352 (Exit 48) to Route 14 (Exit 52). Two regionally significant projects remain to complete the Interstate conversion through Chemung County.

The Route 17 Horseheads Project will eliminate five at-grade intersections along a 2.2 mile section of Route 17 by constructing a grade-separated expressway with parallel service roads. This project is currently under construction. Air quality and energy analyses were conducted during the design phases of the project and included in the Final Design Report/ Environmental Impact Statement approved in September, 2002.

Emissions burdens for Carbon Monoxide (CO), Nitrogen Oxides (NOx) and Volatile Organic Compounds (VOC) were calculated for the no build Alternative and the selected build alternative. The analysis indicates that the air quality, in terms of CO and VOC will improve as a result of the project, while the NOx emissions burden is projected to increase by no more than 10% over the no- build alternative.

The energy analysis conducted for the Horseheads project indicated no change in VMT, increase in vehicle trips, change in land use, or shifts in travel patterns. An



increase in vehicle operating speed for approximately 50% of the NYS Route 17 traffic (through traffic) is projected because at-grade intersections between NYS Route 17 and the local side streets will be eliminated. Vehicle operating speeds will remain unchanged, or will be slightly reduced for motorists using the new access road system, including new side street intersections.



To determine what long-term impact the project would have on energy, vehicle operating speeds and highway efficiency were compared for the existing and proposed conditions. The average vehicle operating speed on NYS Route 17 is approximately 40 mph under the existing conditions. This speed is the result of regulatory speed reductions and the stop-and-go effects of the signalized intersections. The project will eliminate mainline intersections thus increasing mainline vehicle operating speeds to an anticipated rate of approximately 65 mph. Since delay and congestion will be reduced, the amount of fuel consumed by motorists will also be reduced.

An analysis of the direct energy impacts of the Project indicates a reduction in energy consumption under the Build Alternative. Comparison of the no build and build alternatives for the Long Range Plan Horizon Year (2025) indicate a savings of 11% in Btu's consumed by traffic along this section of Route 17. Horizon year greenhouse gas (CO₂) emissions,

measured in Tons of carbon, are estimated to be 3% lower under the project build alternative. The indirect energy associated with construction of this \$60M project will increase the energy consumption an estimated 4% annually over the 3-year construction period.

The second Route 17/186 conversion project will provide full access control along a 6.5 mile section of the Southern Tier Expressway by eliminating at grade intersections and driveway entrances from Elmira to Chemung. The project is currently in the preliminary design phase. The Pre-Draft Design Report estimates no significant change in VMT and vehicle trips, change in land use, or significant shifts in travel patterns for any of the build alternatives. The average vehicle operating speed on NYS Route 17 is estimated at approximately 55 mph under existing conditions. The project eliminates the many at-grade connections to the mainline, thus increasing mainline operating speeds to an anticipated rate of 65 mph. All build alternatives improve overall highway efficiency through the elimination of mainline at-grade access. Since delay and congestion will be reduced, the amount of fuel consumed by motorists will also be reduced.

The alternatives under review for this project span a wide range of options, including the construction of up to three new interchanges and varying degrees of interconnection of the local highway system. Estimated construction cost estimates range from \$34 to 44 million. The Pre-Draft Design Report contains air quality and energy impact analyses for eight build Alternatives as well as fifteen combined alternative scenarios¹.

Emissions calculations for 2005 indicate that all scenarios result in increased CO and VOC burdens. Both of these pollutants increase at speeds higher than 55mph. Year 2005 CO emissions are from 65 to 73% higher than the null alternative, while 2005 VOC emissions range from 4 to 9% higher

¹ Pre-Draft Design Report / Draft Environmental Impact Statement NYS Route 17 – Elmira to Chemung PIN 6066.58, February, 2002



than the null. Estimated 2005 NO_x emissions for the alternatives studied are from 2% less than the null to 3% higher than the null.

The Report concludes that the overall air quality improves from 2005 to 2025 for all build alternatives. The 23 scenarios analyzed indicate a 2025 horizon year reduction in VOC emissions of up to 15% and potential NO_x emissions reductions of as much as 37% when compared to the 2025 no build alternative. Because of the relationship between vehicle speed and CO emissions at speeds greater than 55 mph, CO emissions are projected to increase by as much as 73%.

The table below summarizes the year 2025 impacts for the Route 17/ 186 conversion projects. The calculations for the Elmira – Chemung Project are based on a combined alternative scenario that is representative of the range of proposed alternatives. A Public Hearing is scheduled for December, 2004, with selection of the preferred alternative and Design Approval anticipated in the Spring of 2005. The preferred alternative will provide the basis for further project level energy analysis to be included in development of the 2005 TIP.

Air Quality / Energy Impacts
Route 17/ 186 Conversion Projects

	Horseheads		Elmira Chemung		Combined Projects	
	Null	Build	Null	Build	Null	Build
CO (grams)	61,422	56,886	105,212	178,864	166,634	235,750
NO _x (grams)	1,980	2,185	15,132	10,938	17,112	13,123
VOC (grams)	3,605	3,207	9,529	8,191	13,134	11,398
CO ₂ (T Carbon)	11,811	10,486	19,070	16,783	30,881	27,269
Energy (Billion Btu)	560	497	904	795	1,464	1,292

9.4 Updates

The ECTC is required to update the plan every five years. During this period annual work programs will be developed for the ECTC to ensure that the necessary resources are available to the ECTC and its partner agencies to advance projects, programs and transportation services as recommended in the plan.

9.5 MPO Operations

The ECTC will be developing a staffing and operations plan within the next year to help

guide its future efforts. As has been illustrated in this plan, the demands on MPOs to address a multitude of requirements have grown tremendously since the early 1990s. At the same time, MPOs are being asked to enhance responsiveness to community concerns and consumers needs so that they, as representatives of local officials, can ensure the public interests are being well served in the identification and implementation of transportation projects.