

**APPENDIX A**

**PROJECT MANAGEMENT  
SELECTION AND AMENDMENT PROCESS**

# **TIP PROJECT MANAGEMENT**

## **Selection Process**

### **And**

## **Amendment Process**

**(Approved by SMTC Policy Committee 7-31-00)**

Project Selection is a federal term, which is applicable in conjunction with the management of an approved Transportation Improvement Program (TIP) and the Statewide Transportation Improvement Program (STIP). It is not used to identify projects that would be added to the TIP and/or STIP.

Under federal legislation and the associated Metropolitan and Statewide Planning Rules and Regulations, the term "Project Selection" refers to the process or mechanism used to manage project schedule implementation from an approved and fiscally constrained TIP and/or STIP, for advancement to the FHWA or FTA for authorization.

TIP Project Management is a general term used by the SMTC to identify the flexible guidelines the MPO utilizes for the Selection Process, as well as the Amendment Process.

Development of a flexible procedure to manage various aspects of project implementation reduces the administrative workload by eliminating the need to process a TIP and/or STIP amendment each time it is determined that an already approved project contained in year 2 or 3 of the approved TIP/STIP may be advanced for implementation in the first year, or when a fund source revision is required, to ensure quick delivery of "ready highway and transit projects." It should be noted that the addition of a new project to or the deletion of an approved project from an approved TIP would still require a formal TIP amendment under SMTC's TIP Project Management – Amendment Process. The Federal rules [Section 450.216(m) and Section 450.324] require that the TIP and STIP be fiscally constrained by Federal Fiscal Year (FFY) and by fund category. This constraint is defined as the amount of funds (in each category) that is available for obligation in a given FFY.

The approved transportation program is very dynamic. Revised estimates of the value of programmed projects and/or delays in the schedule of a project caused by unforeseen events (e.g., need for minor ROW takings) create a situation where the value of the list of projects shown in the first year of the TIP/STIP may not equal the value of the resources available as the year progresses. Based upon recent history, the value of the first year's program will decrease from the initial cost. Since each year is now required to be fiscally constrained, it is essential to identify an easy mechanism to advance approved projects from subsequent years of the TIP/STIP to ensure that the federal funds available to New York in a given FFY are fully utilized and not returned to Washington for redistribution to another state.

It's imperative to understand that, in a tightly constrained TIP, all projects, of all modes, in all fiscally constrained years, represent hard commitments and all will be delivered unless withdrawn by the sponsor.

The following narrative describes the TIP Project Management procedures adopted by the SMTC:

1. Projects identified in the first year of the TIP/STIP have first right to the funds available. To the extent that all the projects are ready to be authorized and the actual costs match the programmed costs, no Selection Process or Amendment Process is required.
2. If the value of a project in the first year of a TIP/STIP increases from the programmed cost when it is ready for authorization, it will be necessary to maintain the fiscal integrity of the fund category in that FFY in order to obtain federal authorization. Generally, this will require that savings in other first year programs be identified. If that cannot be demonstrated, other first year projects or the subject project (phase) would need to be deferred to later years. If they are deferred to later years, it is important to remember that fiscal balance in years 2 and 3 of the TIP/STIP must also be maintained. This may necessitate advancement or deletion of scheduled projects in years 2 or 3. Even though this sounds onerous, it often entails only minor schedule change of a project (e.g., September 2001 to October 2002).
3. It is sometimes necessary to revise the fund category in order to ensure timely authorization of an approved project. This action is permitted under the Selection Process for fund sources, other than STP-Urban and CMAQ, if the fiscal integrity of each affected fund category is maintained, and the changes do not result in the delay of any other project (phase). If it is necessary to revise either the STP-Urban or CMAQ fund categories, the Amendment Process must be followed.
4. The most likely situations that would require use of the Selection Process are indicated below:
  - Savings are incurred at authorization (or bid) or;
  - The schedule of a project slips due to production problems, causing the authorization to be deferred to a subsequent FFY.

In these instances, it will be necessary to select the highest ranked project, which is ready for authorization on the MPO's adopted priority listing in the TIP from the second or third year of the TIP/STIP for authorization to avoid lapsing funds in the current FFY.

5. Notification to affected MPO member agencies shall be made as indicated on the Selection Process Matrix.

**The TIP Project Management Amendment and Selection Process Matrix provides specific information concerning the use of the Processes under a variety of circumstances.**

To the extent that projects ready to go exceed the funds available in a given FFY, the NYSDOT, with Division of Budget approval, may advance funds to construction projects late in the FFY. After new funds and/or Obligation Authority are authorized in October, these advance-funded projects are then converted from advanced funding to regular federal funding. Thus, the timely advancement of all Title I funded projects that are ready and in the approved TIP/STIP can be achieved. All projects ready to be advanced can be delivered.

The SMTC recognizes that, as part of prudently managing the Obligation Authority, the Department can select Title I (FHWA) funded projects from years 2 and 3 of the TIP/STIP and/or revise the fund category if it becomes necessary because of savings or schedule slippage in other Title I projects. The basis for selecting projects from years 2 and 3 or revising fund categories will be, to the extent possible, to select the highest ranked project from the MPO's adopted priority listing in the TIP that is ready to be authorized from the same geographic area (MPO or non-metropolitan area), then from the same NYSDOT Region, and finally, from anywhere within the state. Each sponsor should be assured that their project(s) will be authorized when ready (even if the project schedule slips), as is now the case.

Similarly, for Title III (FTA) funded projects in the TIP/STIP, there may be occasions when projects included in the first year of the TIP/STIP will not be ready for authorization at the time the grantee prepares and submits the grant application to FTA or could be authorized with another Title III fund source. To the extent that the value of the projects in the first year of the TIP/STIP does not equal the funds available, project selection may be utilized to advance projects from years 2 and/or 3 of the TIP/STIP. The grantee can select project(s) from years 2 and/or 3 if they are ready to be implemented. The value of the project(s) selected must equal those in the first year that are not ready and the fund category must be the same. If the grantee does not have projects in years 2 and/or 3 of the TIP/STIP, the grantee will consult with the MPO (in metropolitan areas) or with the NYSDOT Regions (in non-metropolitan areas) to identify other Title III projects in the TIP/STIP that can be authorized in the first year.

For the Title I and Title III funded projects, the NYSDOT or the project sponsor shall notify the MPO as indicated on the TIP Project Management Amendment and Selection Process matrix.

# TIP PROJECT MANAGEMENT AMENDMENT & SELECTION PROCESS

Revised March 2005

DESCRIPTION	AMENDMENT PROCESS	SELECTION PROCESS	
	TIP Amendment Required	PRIOR Notification to MPO	POST Notification to MPO
<b>ADDING / DELETING PROJECT</b>			
Project Deleted in Entirety	Planning/Policy		
New Project Added Over \$250,000 Utilizing Traditional Competitive Fund Sources	Planning/Policy		
New Project Added Under \$250,000 Utilizing Traditional Competitive Fund Sources	Executive		
New Project Added Utilizing Non-Competitive Earmarked Fund Sources	Executive		
<b>CHANGES TO SCOPE</b>			
Project Type/Function Is Changed	Executive		
Projects Are Combined			X
Project Phase Is Added (i.e.: New ROW Phase)		X	
Project Phase Deleted		X	
Project Limits Increase			X
Project Limits Decrease			X
<b>CHANGES TO SCHEDULE</b>			
Phase Is Delayed 1 Or More Fiscal Years	Executive		
Phase Is Advanced 1 Or More Fiscal Years From Year 4 Or 5	Executive		
Phase Is Advanced 1 Or More Fiscal Years From Year 2 Or 3			X
<b>CHANGES IN COSTS</b>			
Cumulative Cost Of A Phase Increases (Less Than 20% Of Original Total Project Cost And/Or Less Than An Increase Of \$250,000)			X
Cost Of A Phase Decreases			X
Cumulative Cost Of A Phase Increases (Greater Than 20% Of Original Total Project Cost And Minimum Cost Increase Of \$250,000)	Executive		
<b>CHANGES IN FUNDING CATEGORY</b>			
Changes Made to CMAQ or STP-Urban Fund Sources	Executive		
Funding For A Phase Changes In Part Or Completely (To 1 Or More Different Categories)			X
Changes To Fund Sources Other Than CMAQ Or STP-Urban			X

*Funding thresholds are in federal dollars, not total project cost.*

## **APPENDIX B**

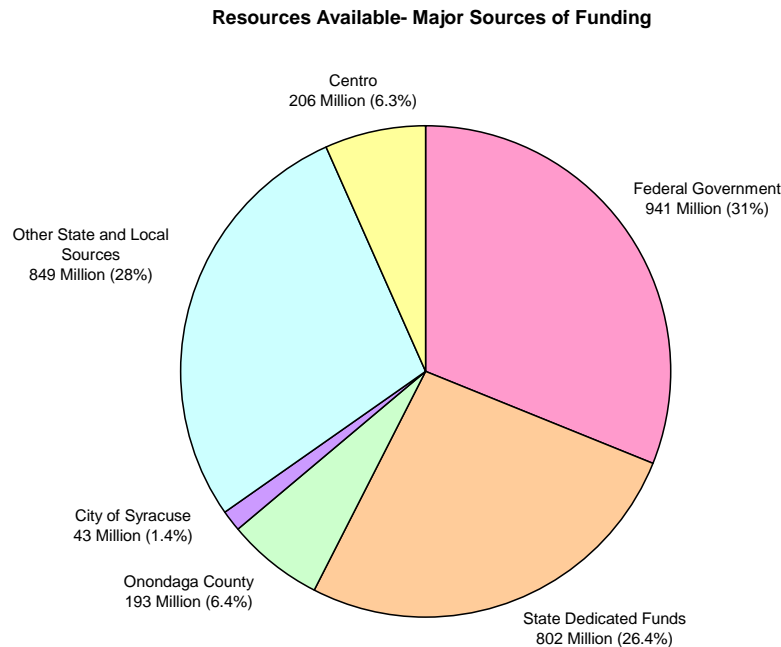
### **FINANCIAL PLAN**

As noted in the previous sections of this document, SAFETEA-LU requires that a Financial Plan be incorporated within a TIP that demonstrates how the approved TIP can be implemented. The following narrative is from the LRTP 2007 Update Chapter 8: Long Term Outlook and the Financial Plan.

**1. Resources Available**

The 2020 LRTP, when published in 1995, anticipated a total of \$3.050 billion in funding over the 25-year planning period. This LRTP 2007 Update anticipates a total of \$3.034 billion in funding over the remaining term of the planning period. The major sources of funding, shown in Table 8-1 and 8-3, include the federal government at 31.0% (\$941 million) of the total, the State Dedicated Fund at 26.4% (\$802 million), Onondaga County at 6.4% (\$193 million) and the City of Syracuse at 1.4% (\$43 million). The balance is comprised of other State and local sources at 24.3% (\$679 million)<sup>4</sup> and Centro operating revenue at 6.8% (\$206 million). It is anticipated that all traditional funding mechanisms will be exhausted with the implementation of this LRTP 2007 Update.

**Table 8-1**



<sup>4</sup> The number does not match the number for “Other State and Local Funds” on Table 8-1 because it includes some non-transit funding that cannot be broken out from that number.

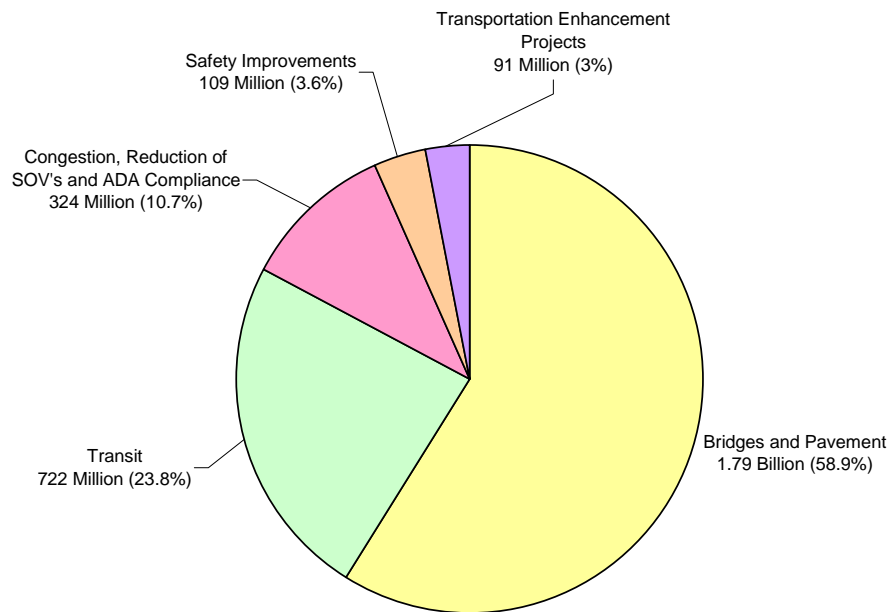
## **2. Costs**

The largest share of the total resources available will be expended to maintain the existing transportation system. The percentage allocation of anticipated resources through 2020 has not been changed from the original LRTP of 1995. Although the transit portion of Table 8-2 and 8-3 shows fewer total dollar resources under the 2001-2020 column, the annual amount is greater now for the Update period than was the case when the LRTP was originally published. The 2007-2027 column for highway funding corrects previous misrepresentations that were not based on the assumption that all of the allocations would be spent in a 25-year period.

For this 2007 Update, the 2001 cost of each objective has been pro-rated using the new 20-year resource base of \$3.034 billion. The results show that maintenance of existing bridges and pavement (Facilities 1-3 in Table 8-4, as well as Table 8-2) will absorb 59% of the budget (\$1.79 billion). An additional 23.8% (\$722 million) will be allocated to support the area transit system; 10.7% (\$324 million) will be used to improve congested locations, reduce single occupancy vehicles (SOVs) and the Americans with Disabilities Act (ADA) compliance; and 3.6% (\$110 million) will be spent for efforts to increase safety at high incident locations. The remaining 3.0% (\$90 million) of the budget will support transportation projects that enhance economic development, environmental quality and efforts to coordinate land use and transportation planning decisions in the study area. The 2007 Update also supports a number of innovative initiatives new to this area. Examples of the latter include funds which have been allocated to encourage the application of ITS technology in the Syracuse region and an effort to devise a cost/benefit methodology for application to future TIPs.

**Table 8-2**

**Resources Available to Maintain Existing Transportation System**



**3. Evaluation of the Project Financial Tracking Process**

A review of the LRTP section on Goals, Objectives and Action Plans for this Update indicates that there is an opportunity to strengthen the current system for tracking and evaluating projects in relation to LRTP goals. Specifically, it is sometimes difficult to link a project to one or more goals. Consequently, it is difficult to document what has been accomplished toward reaching a goal or to demonstrate how far along the SMTC is toward attainment of any given goal.

In order to strengthen the existing process, the SMTC intends over the short term (the next three years) to restructure the current project tracking system in order to make documentation of goal progress more effective. Essentially, this will occur by linking each project with one or more specific goals. Additional information could be provided, such as project sponsor, or forecasted versus actual cost. This will permit a more systematic documentation and evaluation of progress achieved toward goal attainment.

The resources on Table 8-1 are based on adjustments to the original allocations from the original 1995 LRTP. It can be assumed that total allocations will be spent down because of the fact that the need for transportation projects far outweighs the resources to implement them. Therefore, by proportionally spending down the total allocation from the beginning in 1995, the Federal

Highway Administration (FHWA) allocation percentages by funding category have not been changed. It is because of this lack of resources to fund all of the needs that projects have been prioritized and thus, the Project Financial Tracking System. The \$3.034 billion in federal funding was established based on an extrapolation of historical trends. There was a need to extrapolate this number because the planning period was extended by three years.

Table 8-3

**Established Resources Available for Transit Operations Capital Funding and Highway Capital Funding**

	1995-2020 (Millions of Dollars)	1998-2020 (Millions of Dollars)	2001-2020 (Millions of Dollars)	2004-2025 (Millions of Dollars)	2007-2027 (Millions of Dollars)
<i>The estimates below were calculated as planning estimates for the corresponding planning periods and are not to be interpreted as actual budgets.</i>					
<b>Transit Funding Sources</b>					
Federal-FTA	\$180 M	\$99 M	\$91 M	\$105 M	\$216.6 M
State Dedicated Funds	\$30 M	\$16 M	\$15 M	\$17 M	\$20 M
Other State and Local Funds	\$290 M	\$327 M	\$301 M	\$557 M	\$611.6 M
Operating Revenue	\$170 M	\$167 M	\$154 M	\$177 M	\$205.6 M
<b>Total Transit Funding</b>	<b>\$670 Million</b>	<b>\$609 Million</b>	<b>\$561 Million</b>	<b>\$856 Million</b>	<b>\$1053.8 Million</b>
<b>Highway Funding Sources</b>					
Federal-FHWA	\$1095 M	\$1087 M	\$1000 M	\$920 M	\$941.4 M* (see note)
State Dedicated Funds	\$1010 M	\$801 M	\$738 M	\$784 M	\$802.2 M
Onondaga County-Capital Program	\$225 M	\$242 M	\$233 M	\$189 M	\$193.4 M
City of Syracuse- Capital Program	\$50 M	\$70 M	\$64 M	\$42 M	\$43.0 M
Other Municipalities in the SMTC Area	Not Included	Not Included	Not Included	Not Included	Not Included
Private Funding	Not Included	Not Included	Not Included	Not Included	\$7.5 M (to be used for Bear Sreet Extension and Frontage Road)
<b>Total Highway Funding</b>	<b>\$2.380 Billion</b>	<b>\$2.200 Billion</b>	<b>\$2.025 Billion</b>	<b>\$1.935 Billion</b>	<b>\$1.98 Billion</b>
<b>Total Highway and Transit Capital Funding</b>	<b>\$3.050 Billion</b>	<b>\$2.809 Billion</b>	<b>\$2.586 Billion</b>	<b>\$2.791 Billion</b>	<b>\$3.034 Billion</b>

Source: NYSDOT and CNYTRA

Notes and Assumptions: The 2007-2027 column for highway funding corrects previous misrepresentations that were not based on the assumption that all of the allocations would be spent in a 25-year period.

**2004-2020 (16 years) Estimated Resources-Transit Operations and Capital Funding**

**Federal-FTA-** Assume continuation of current 5307 program at approximate level of \$5 million per year. This program is subject to reauthorization approximately every six years, as well as to specific annual appropriation levels that can be less than the authorization.

**State Dedicated Funds-** This capital program is subject to renewal by New York State approximately every five years. Specific funding is determined by NYSDOT annually based on relative need. CNYRTA estimates it will receive and average of about \$800,000 per year over this 16-year period.

**Other State and Local Funds-** Components include: local mortgage recording fees, Statewide Transit Operating Assistance (STOA), local match for portions of the STOA amount, and state 10% match. Mortgage recording fees are expected to be nominally higher over this period compared to previous estimates.

The STOA program was substantially increased in the fiscal year beginning April 1, 2002 and was continued at a slightly lower level in the fiscal year beginning April 1, 2003. For purposes of estimation, we anticipate the April 1, 2003 level of \$19.7 million to be the base amount going forward. This is the primary reason for the substantial increase in this resource category.

Local match for STOA, plus some small non-required subsidies, is expected to hold at about \$2.7 million per year.

With federal capital programs estimated at \$5 million per year (representing 80% of project costs) results in a total capital program of up to \$6.25 million per year. The NYS share of a \$6.25 million annual capital program is 10% or \$625,000.

**FHWA-** The total FTA and FHWA funding is based on an extrapolation of historical trends due to the planning period three year extension.

Operating Revenue-Projected at approximately current levels, with nominal increases.

**\*The two Federally funded projects (Additional Travel Lane on NY 31 and North Salina Street Lane Reduction) listed in Chapter 8, Section 2 (Specific Identified Improvements) total Approximately \$4.8 Million. Details of FHWA fund source will not be completed until Capital Projects Committee meeting.**

**Table 8-4**

Allocation of Resources by Long-Range Transportation Plan Objective					
OBJECTIVE	1995 – 2020	1998 – 2020	2001-2020	2004-2025	2007-2027
Mobility 1 – Transit service	\$520 M	\$479 M	\$441 M	\$664 M	\$721.8 M
Mobility 2 – Improve LOS at congested locations	\$300 M	\$276 M	\$254 M	\$252 M	\$273.9 M
Mobility 3 – Decrease the number of SOVs	\$25 M	\$23 M	\$21 M	\$21 M	\$22.8 M
Mobility 4 – Comply with ADA	\$30 M	\$28 M	\$26 M	\$25 M	\$27.2 M
Mobility 5 – Greater utilization of electronic communication	\$0	\$0	\$0	\$0	0
Land Use 1-4 – Assist local communities in planning	\$1 M	\$0.9 M	\$0.8 M	\$0.8 M	\$0.87 M
Environment 1 – Implement programs that improve air quality	\$15 M	\$14 M	\$13 M	\$13 M	\$14.1 M
Environment 2 – Implement carbon monoxide SIP	\$14 M	\$13 M	\$12 M	\$12 M	\$13.0 M
Environment 3 – Decrease use of road salt	\$5 M	\$5 M	\$4 M	\$4 M	\$4.3 M
Economy 1 – Support access to economic development	\$50 M	\$46 M	\$42 M	\$42 M	\$45.7 M
Economy 2 – Maintain operation/condition standard on principal arterials	\$0	\$0	\$0	\$0	\$0
Economy 3 – Employer coordination of employee travel	\$12 M	\$11 M	\$10 M	\$11 M	\$12.0 M
Facilities 1 – Bridge maintenance	\$776 M	\$715 M	\$659 M	\$652 M	\$708.8 M
Facilities 2 – Pavement maintenance	\$1172 M	\$1079 M	\$994 M	\$984 M	\$1069.7 M
Facilities 3 – Maintain sidewalks & other pedestrian/bike facilities	\$10 M	\$9 M	\$8 M	\$8 M	\$8.7 M
Safety 1 – Reduce accident rates at highest accident locations	\$95 M	\$87 M	\$80 M	\$80 M	\$87 M
Safety 2 – Reduce the highest intermodal accident locations	\$25 M	\$23 M	\$21 M	\$21 M	\$22.9 M
Safety 3 – Assist planning officials and developers in accommodating travel in new developments	\$0	\$0	\$0	\$0	\$0
<b>Total</b>	\$3.050 Billion	\$2.809 Billion	\$2.586 Billion	\$2.791 Billion	\$3.034 Billion
Source: New York State Department of Transportation					

## **APPENDIX C**

### **ANNUAL OBLIGATION LIST**

**2007-2012 TIP  
 FEDERAL HIGHWAY ADMINISTRATION - ANNUAL OBLIGATION PROJECT LISTING  
 (sorted by Project Type, Sponsor and PIN)**

Funds  
 Obligated in:

PIN:	Sponsor:	Project Description:	Air Quality Status:	Phase:	Funding Source:	FFY 06/07:	
303494	NYS DOT	REHABILITATION OF BIN 1002070- ERIE BLVD OVER WEST ST ARTERIAL ProjectType: Bridge	Exempt				
					ROW Acquisition	HBRR	\$40,000
					ROW Acquisition	Match	\$10,000
				<b>Total Federal Funds:</b>		<b>\$40,000</b>	
				<b>Total:</b>		<b>\$50,000</b>	
303756	NYS DOT	RT 31/SENECA RT AT BELGIUM ProjectType: Bridge	Exempt				
					Construction	NHS	\$650,000
					Construction	Match	\$181,000
					Construction	STP-Flex	\$73,000
				<b>Total Federal Funds:</b>		<b>\$723,000</b>	
<b>Total:</b>		<b>\$904,000</b>					
308222	NYS DOT	REHABILITATION OF RT 290 (JAMES ST) & RT 695 (THOMPSON RD) OVER CSX RR ProjectType: Bridge	Exempt				
					Construction	HBRR	\$958,000
					Construction	Match	\$239,000
					Construction Force	HBRR	\$140,000
					Construction Force	Match	\$35,000
					Inspection	HBRR	\$96,000
					Inspection	Match	\$24,000
				<b>Total Federal Funds:</b>		<b>\$1,194,000</b>	
				<b>Total:</b>		<b>\$1,492,000</b>	
				311117	NYS DOT	RT 20/SKANEATELES CREEK ProjectType: Bridge	Exempt
	Detailed Design	NHS	\$1,000				
	Construction	HBRR	\$120,000				
	Construction	Match	\$29,000				
	Construction	NHS	(\$4,000)				
<b>Total Federal Funds:</b>		<b>\$117,000</b>					
<b>Total:</b>		<b>\$146,000</b>					
350150	NYS DOT	I81 OSWEGO COUNTY BRIDGES ProjectType: Bridge	Exempt				
					Construction	NHS	\$1,170,000
					Construction	Match	\$130,000
					Inspection	NHS	\$117,000
					Inspection	Match	\$13,000
<b>Total Federal Funds:</b>		<b>\$1,287,000</b>					
<b>Total:</b>		<b>\$1,430,000</b>					

**2007-2012 TIP  
 FEDERAL HIGHWAY ADMINISTRATION - ANNUAL OBLIGATION PROJECT LISTING  
 (sorted by Project Type, Sponsor and PIN)**

Funds  
 Obligated in:

<b>PIN:</b>	<b>Sponsor:</b>	<b>Project Description:</b>	<b>Air Quality Status:</b>	<b>Phase:</b>	<b>Funding Source:</b>	<b>FFY 06/07:</b>					
350635	NYS DOT	1690 OVER CSX RAILROAD ProjectType: Bridge	Exempt		Construction	NHS	\$3,813,000				
					Construction	Match	\$424,000				
					Construction Force	NHS	\$268,000				
					Construction Force	Match	\$30,000				
					Inspection	NHS	\$5,000				
					Inspection	Match	\$1,000				
					Construction Utility	NHS	\$23,000				
					Construction Utility	Match	\$3,000				
					<b>Total Federal Funds:</b>						<b>\$4,109,000</b>
					<b>Total:</b>						<b>\$4,567,000</b>
375216	NYS DOT	BUTTERNUT ST, SPENCER ST, COURT ST & BEAR ST (RT 298) OVER I81 ProjectType: Bridge	Exempt		Detailed Design	IM	\$194,000				
					Detailed Design	Match	\$22,000				
					ROW Acquisition	IM	\$90,000				
					ROW Acquisition	Match	\$10,000				
					<b>Total Federal Funds:</b>						<b>\$284,000</b>
<b>Total:</b>						<b>\$316,000</b>					
375376	NYS DOT	NORTH BURDICK ST OVER ERIE CANAL ProjectType: Bridge	Exempt		Preliminary Design	HBRR	\$48,000				
					Preliminary Design	Match	\$12,000				
					Detailed Design	HBRR	\$32,000				
					Detailed Design	Match	\$8,000				
					ROW Incidentals	HBRR	\$8,000				
					ROW Incidentals	Match	\$2,000				
					<b>Total Federal Funds:</b>						<b>\$88,000</b>
<b>Total:</b>						<b>\$110,000</b>					
380466	NYS DOT	INTERSTATE BRIDGE REPAIR PHASE II ProjectType: Bridge	Exempt		Detailed Design	IM	(\$41,000)				
					Detailed Design	Match	(\$5,000)				
					Construction	IM	\$3,276,000				
					Construction	Match	\$368,000				
					<b>Total Federal Funds:</b>						<b>\$3,235,000</b>
<b>Total:</b>						<b>\$3,598,000</b>					

**2007-2012 TIP  
 FEDERAL HIGHWAY ADMINISTRATION - ANNUAL OBLIGATION PROJECT LISTING  
 (sorted by Project Type, Sponsor and PIN)**

Funds  
 Obligated in:

<b>PIN:</b>	<b>Sponsor:</b>	<b>Project Description:</b>	<b>Air Quality Status:</b>	<b>Phase:</b>	<b>Funding Source:</b>	<b>FFY 06/07:</b>						
380498	NYS DOT	2006 BRIDGE REHABILITATION PROJECT ProjectType: Bridge	Exempt		Construction	HBRR	\$561,000					
					Construction	Match	\$140,000					
					Construction Support	HBRR	\$7,000					
					Construction Support	Match	\$2,000					
					Inspection	HBRR	\$57,000					
					Inspection	Match	\$14,000					
					<b>Total Federal Funds:</b>						<b>\$625,000</b>	
					<b>Total:</b>						<b>\$781,000</b>	
					380499	NYS DOT	I81 OVER RT 11, BEARINGS & PEDESTALS ProjectType: Bridge	Exempt		Scoping	HBRR	\$48,000
										Scoping	Match	\$12,000
Preliminary Design	HBRR	\$61,000										
Preliminary Design	Match	\$15,000										
Detailed Design	HBRR	\$40,000										
Detailed Design	Match	\$10,000										
<b>Total Federal Funds:</b>										<b>\$149,000</b>		
<b>Total:</b>										<b>\$186,000</b>		
380500	NYS DOT	2008 BRIDGE REHABILITATION PROJECT ProjectType: Bridge	Exempt							Scoping	HBRR	\$14,000
										Scoping	Match	\$4,000
					Preliminary Design	HBRR	\$12,000					
					Preliminary Design	Match	\$3,000					
					<b>Total Federal Funds:</b>						<b>\$26,000</b>	
					<b>Total:</b>						<b>\$33,000</b>	
380522	NYS DOT	MULTIPLE LARGE CULVERT REPLACEMENT PROJECT ProjectType: Bridge	Exempt		Detailed Design	STP-Flex	\$40,000					
					Detailed Design	Match	\$9,000					
					ROW Acquisition	STP-Flex	\$2,000					
					ROW Acquisition	Match	\$1,000					
					<b>Total Federal Funds:</b>						<b>\$42,000</b>	
					<b>Total:</b>						<b>\$52,000</b>	

**2007-2012 TIP  
 FEDERAL HIGHWAY ADMINISTRATION - ANNUAL OBLIGATION PROJECT LISTING  
 (sorted by Project Type, Sponsor and PIN)**

Funds  
 Obligated in:

<b>PIN:</b>	<b>Sponsor:</b>	<b>Project Description:</b>	<b>Air Quality Status:</b>	<b>Phase:</b>	<b>Funding Source:</b>	<b>FFY 06/07:</b>					
375333	OCDOT	CR 7 (ORVILLE-JAMESVILLE RD) OVER BUTTERNUT CREEK ProjectType: Bridge	Exempt		Construction	HBRR	\$2,064,000				
					Construction	Match	\$479,000				
					Construction	STP-Urban	\$488,000				
					Construction	Match	\$160,000				
					Inspection	HBRR	\$240,000				
					Inspection	Match	\$60,000				
					Inspection	STP-Urban	\$80,000				
					Inspection	Match	\$20,000				
					<b>Total Federal Funds:</b>						<b>\$2,872,000</b>
					<b>Total:</b>						<b>\$3,591,000</b>
375377	OCDOT	PLAINVILLE RD OVER SENECA RIVER ProjectType: Bridge	Exempt		Construction	HBRR	\$1,310,000				
					Construction	Match	\$327,000				
					Inspection	HBRR	\$235,000				
					Inspection	Match	\$59,000				
					<b>Total Federal Funds:</b>						<b>\$1,545,000</b>
<b>Total:</b>						<b>\$1,931,000</b>					
375424	OCDOT	WARNERS RD (RT 173) BRIDGE OVER FINGER LAKES RAILWAY ProjectType: Bridge	Exempt		Scoping	STP-Flex	\$40,000				
					Scoping	Match	\$11,000				
					Preliminary Design	STP-Flex	\$38,000				
					Preliminary Design	Match	\$11,000				
					Detailed Design	STP-Flex	\$38,000				
					Detailed Design	Match	\$11,000				
					ROW Incidentals	STP-Flex	\$32,000				
					ROW Incidentals	Match	\$8,000				
					ROW Acquisition	STP-Flex	\$8,000				
					ROW Acquisition	Match	\$3,000				
<b>Total Federal Funds:</b>						<b>\$156,000</b>					
<b>Total:</b>						<b>\$200,000</b>					

**2007-2012 TIP  
FEDERAL HIGHWAY ADMINISTRATION - ANNUAL OBLIGATION PROJECT LISTING  
(sorted by Project Type, Sponsor and PIN)**

Funds  
Obligated in:

<b>PIN:</b>	<b>Sponsor:</b>	<b>Project Description:</b>	<b>Air Quality Status:</b>	<b>Phase:</b>	<b>Funding Source:</b>	<b>FFY 06/07:</b>
301916	SYRACUSE	SENECA TURNPIKE (NY 173) BRIDGE OVER ONONDAGA CREEK ProjectType: Bridge	Exempt			
				Preliminary Design	HBRR	\$74,000
				Preliminary Design	Match	\$18,000
				Detailed Design	HBRR	\$57,000
				Detailed Design	Match	\$14,000
				Detailed Design	STP-Urban	\$66,000
				Detailed Design	Match	\$17,000
				ROW Acquisition	HBRR	\$8,000
				ROW Acquisition	Match	\$3,000
				<b>Total Federal Funds:</b>		
<b>Total:</b>					<b>\$257,000</b>	
303484	SYRACUSE	ERIE BLVD OVER ONONDAGA CREEK ProjectType: Bridge	Exempt			
				Detailed Design	STP-Urban	\$569,000
				Detailed Design	Match	\$143,000
				<b>Total Federal Funds:</b>		
<b>Total:</b>					<b>\$712,000</b>	
375288	SYRACUSE	FINEVIEW BRIDGE OVER RENWICK AVE ProjectType: Bridge	Exempt			
				Detailed Design	HBRR	\$24,000
				Detailed Design	Match	\$7,000
				<b>Total Federal Funds:</b>		
<b>Total:</b>					<b>\$31,000</b>	
375289	SYRACUSE	DORWIN AVE BRIDGE OVER ONONDAGA CREEK ProjectType: Bridge	Exempt			
				Detailed Design	HBRR	\$187,000
				Detailed Design	Match	\$46,800
				<b>Total Federal Funds:</b>		
<b>Total:</b>					<b>\$233,800</b>	
375292	SYRACUSE	MIDLAND AVE BRIDGE OVER ONONDAGA CREEK ProjectType: Bridge	Exempt			
				Scoping	STP-Urban	\$31,000
				Scoping	Match	\$9,000
				Preliminary Design	STP-Urban	\$57,000
				Preliminary Design	Match	\$13,000
				Detailed Design	STP-Urban	\$57,000
				Detailed Design	Match	\$13,000
<b>Total Federal Funds:</b>					<b>\$145,000</b>	
<b>Total:</b>					<b>\$180,000</b>	

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 FEDERAL HIGHWAY ADMINISTRATION - ANNUAL OBLIGATION PROJECT LISTING  
 (sorted by Project Type, Sponsor and PIN)**

Funds  
 Obligated in:

<b>PIN:</b>	<b>Sponsor:</b>	<b>Project Description:</b>	<b>Air Quality Status:</b>	<b>Phase:</b>	<b>Funding Source:</b>	<b>FFY 06/07:</b>					
375313	SYRACUSE	TEMPLE ST BRIDGE OVER ONONDAGA CREEK ProjectType: Bridge	Exempt		Construction	HBRR	\$1,089,000				
					Construction	Match	\$272,000				
					Inspection	HBRR	\$164,000				
					Inspection	Match	\$41,000				
					<b>Total Federal Funds:</b>						<b>\$1,253,000</b>
					<b>Total:</b>						<b>\$1,566,000</b>
375434	SYRACUSE	WEST FAYETTE ST BRIDGE OVER ONONDAGA CREEK ProjectType: Bridge	Exempt		Detailed Design	STP-Urban	\$165,200				
					Detailed Design	Match	\$41,800				
					<b>Total Federal Funds:</b>						<b>\$165,200</b>
					<b>Total:</b>						<b>\$207,000</b>
375383	Town of DeWitt	KINNE ROAD OVER BUTTERNUT CREEK ProjectType: Bridge	Exempt		Scoping	HBRR	\$4,000				
					Scoping	Match	\$1,000				
					Preliminary Design	HBRR	\$7,000				
					Preliminary Design	Match	\$3,000				
					Detailed Design	HBRR	\$8,000				
					Detailed Design	Match	\$3,000				
					Construction	HBRR	\$112,000				
					Construction	Match	\$28,000				
					Inspection	HBRR	\$12,000				
					Inspection	Match	\$3,000				
					<b>Total Federal Funds:</b>						<b>\$143,000</b>
					<b>Total:</b>						<b>\$181,000</b>
					301307	NYSDOT	RT 174, MARCELLUS CBD TO NORTH VILLAGE LINE ProjectType: Highway	Exempt		Detailed Design	STP-Flex
Detailed Design	Match	\$104,000									
ROW Acquisition	STP-Rural	\$168,000									
ROW Acquisition	Match	\$42,000									
Construction	STP-Flex	\$3,887,000									
Construction	Match	\$972,000									
Inspection	STP-Flex	\$389,000									
Inspection	Match	\$97,000									
<b>Total Federal Funds:</b>										<b>\$4,860,000</b>	
<b>Total:</b>										<b>\$6,075,000</b>	

**2007-2012 TIP  
FEDERAL HIGHWAY ADMINISTRATION - ANNUAL OBLIGATION PROJECT LISTING  
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Funds  
Obligated in:

<b>PIN:</b>	<b>Sponsor:</b>	<b>Project Description:</b>	<b>Air Quality Status:</b>	<b>Phase:</b>	<b>Funding Source:</b>	<b>FFY 06/07:</b>		
304361	NYS DOT	RT 11 & 80, TULLY ProjectType: Highway	Exempt					
						Detailed Design	STP-Rural	\$406,000
						Detailed Design	Match	\$101,000
						Construction	STP-Flex	\$2,145,000
						Construction	Match	\$536,000
						Inspection	STP-Flex	\$218,000
						Inspection	Match	\$54,000
						<b>Total Federal Funds:</b>		<b>\$2,769,000</b>
						<b>Total:</b>		<b>\$3,460,000</b>
						304362	NYS DOT	ROUTE 11 AT CIRCLE DRIVE (ROUTE 931H) ProjectType: Highway
Scoping	STP-Safety	\$48,000						
Scoping	Match	\$5,000						
Preliminary Design	STP-Safety	\$18,000						
Preliminary Design	Match	\$2,000						
Final Design	STP-Safety	\$18,000						
Final Design	Match	\$2,000						
<b>Total Federal Funds:</b>		<b>\$84,000</b>						
<b>Total:</b>		<b>\$93,000</b>						
305616	NYS DOT	RT I481, I690 TO I81 ProjectType: Highway	Exempt					
						Construction	IM	\$221,000
						Construction	Match	\$25,000
						<b>Total Federal Funds:</b>		<b>\$221,000</b>
						<b>Total:</b>		<b>\$246,000</b>
350138	NYS DOT	I81, ITS DOWNTOWN ProjectType: Highway	Exempt					
						Construction	IM	\$15,000
						Construction	Match	\$2,000
						<b>Total Federal Funds:</b>		<b>\$15,000</b>
						<b>Total:</b>		<b>\$17,000</b>
350144	NYS DOT	I81, I690 TO RT 11 MATTYDALE ProjectType: Highway	Exempt					
						Construction	IM	\$1,320,000
						Construction	Match	\$147,000
						Inspection	IM	\$405,000
						Inspection	Match	\$45,000
						<b>Total Federal Funds:</b>		<b>\$1,725,000</b>
						<b>Total:</b>		<b>\$1,917,000</b>

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FEDERAL HIGHWAY ADMINISTRATION - ANNUAL OBLIGATION PROJECT LISTING  
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Funds  
Obligated in:

PIN:	Sponsor:	Project Description:	Air Quality Status:	Phase:	Funding Source:	FFY 06/07:		
350160	NYSDOT	181/1690 NEEDS EVALUATION STUDY ProjectType: Highway	Exempt		Other	SAFETEA-LU Earmark	\$4,000,000	
					Other	Match	\$1,000,000	
					<b>Total Federal Funds:</b>			<b>\$4,000,000</b>
					<b>Total:</b>			<b>\$5,000,000</b>
350633	NYSDOT	SYRACUSE FREEWAY INCIDENT MANAGEMENT SYSTEM- PHASE II ProjectType: Highway	Exempt		Construction	IM	\$32,000	
					Construction	Match	\$4,000	
					<b>Total Federal Funds:</b>			<b>\$32,000</b>
					<b>Total:</b>			<b>\$36,000</b>
350634	NYSDOT	INTERSTATE 690 RESURFACING PROJECT ProjectType: Highway	Exempt		Detailed Design	IM	\$30,000	
					Detailed Design	Match	\$5,000	
					<b>Total Federal Funds:</b>			<b>\$30,000</b>
					<b>Total:</b>			<b>\$35,000</b>
360169	NYSDOT	ROUTE 41 RESURFACING PROJECT ProjectType: Highway	Exempt		Scoping	STP-Flex	\$12,000	
					Scoping	Match	\$3,000	
					Preliminary Design	STP-Flex	\$12,000	
					Preliminary Design	Match	\$3,000	
					Construction	STP-Flex	\$1,920,000	
					Construction	Match	\$480,000	
					Inspection	STP-Flex	\$192,000	
					Inspection	Match	\$48,000	
					<b>Total Federal Funds:</b>			<b>\$2,136,000</b>
					<b>Total:</b>			<b>\$2,670,000</b>
360174	NYSDOT	ROUTES 11 & 49: VILLAGE OF CENTRAL SQUARE ProjectType: Highway	Exempt		Scoping	STP-Flex	\$12,000	
					Scoping	Match	\$3,000	
					Preliminary Design	STP-Flex	\$12,000	
					Preliminary Design	Match	\$3,000	
					Construction	STP-Flex	\$864,000	
					Construction	Match	\$216,000	
					Inspection	STP-Flex	\$88,000	
					Inspection	Match	\$22,000	
					<b>Total Federal Funds:</b>			<b>\$976,000</b>
					<b>Total:</b>			<b>\$1,220,000</b>

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FEDERAL HIGHWAY ADMINISTRATION - ANNUAL OBLIGATION PROJECT LISTING  
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Funds  
Obligated in:

<b>PIN:</b>	<b>Sponsor:</b>	<b>Project Description:</b>	<b>Air Quality Status:</b>	<b>Phase:</b>	<b>Funding Source:</b>	<b>FFY 06/07:</b>				
380510	NYS DOT	REGIONAL GUIDERAIL REPLACEMENT CONTRACT 2007 ProjectType: Highway	Exempt		Construction	STP-Flex	\$1,000,000			
					Construction	Match	\$250,000			
					Inspection	STP-Flex	\$100,000			
					Inspection	Match	\$25,000			
					<b>Total Federal Funds:</b>					<b>\$1,100,000</b>
					<b>Total:</b>					<b>\$1,375,000</b>
					380519	NYS DOT	BRIDGE STREET (ROUTE 930P) AT I690 WB RAMP ProjectType: Highway	Exempt		ROW Incidentals
ROW Incidentals	Match	\$1,000								
<b>Total Federal Funds:</b>										<b>\$9,000</b>
<b>Total:</b>										<b>\$10,000</b>
380523	NYS DOT	TMC/ITS OPERATIONS AND MAINTENANCE 2005-2010 ProjectType: Highway	Exempt		Other	CMAQ	\$400,000			
					Other	Match	\$100,000			
					<b>Total Federal Funds:</b>					<b>\$400,000</b>
					<b>Total:</b>					<b>\$500,000</b>
375298	OCDOT	TAFT RD, SOUTH BAY RD TO NORTHERN BLVD ProjectType: Highway	Exempt		ROW Acquisition	STP-Safety	\$504,000			
					ROW Acquisition	Match	\$56,000			
					Construction	STP-Flex	\$3,116,000			
					Construction	Match	\$811,000			
					Construction	STP-Safety	\$1,212,000			
					Construction	Match	\$271,000			
					Inspection	STP-Flex	\$309,000			
					Inspection	Match	\$71,000			
					Inspection	STP-Safety	\$157,000			
					Inspection	Match	\$23,000			
					<b>Total Federal Funds:</b>					<b>\$5,298,000</b>
					<b>Total:</b>					<b>\$6,530,000</b>
375330	OCDOT	HOSMAN RD, TOWNLINE TO NORTHERN BLVD ProjectType: Highway	Exempt		ROW Acquisition	STP-Flex	\$8,000			
					ROW Acquisition	Match	\$3,000			
					Construction	STP-Flex	\$1,641,000			
					Construction	Match	\$411,000			
					Inspection	STP-Flex	\$220,000			
					Inspection	Match	\$55,000			
					<b>Total Federal Funds:</b>					<b>\$1,869,000</b>
<b>Total:</b>					<b>\$2,338,000</b>					

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FEDERAL HIGHWAY ADMINISTRATION - ANNUAL OBLIGATION PROJECT LISTING  
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Funds  
Obligated in:

<b>PIN:</b>	<b>Sponsor:</b>	<b>Project Description:</b>	<b>Air Quality Status:</b>	<b>Phase:</b>	<b>Funding Source:</b>	<b>FFY 06/07:</b>				
375388	OCDOT	FACTORY AVE & LEMOYNE AVE INTERSECTION ProjectType: Highway	Exempt		ROW Acquisition	STP-Safety	\$32,000			
					ROW Acquisition	Match	\$8,000			
					<b>Total Federal Funds:</b>					<b>\$32,000</b>
					<b>Total:</b>					<b>\$40,000</b>
375416	OCDOT	MORGAN RD PAVING (CR 47) COMMERCE BLVD TO BUCKLEY RD ProjectType: Highway	Exempt		Scoping	STP-Flex	\$32,000			
					Scoping	Match	\$8,000			
					Preliminary Design	STP-Flex	\$60,000			
					Preliminary Design	Match	\$15,000			
					Detailed Design	STP-Flex	\$60,000			
					Detailed Design	Match	\$15,000			
					ROW Acquisition	STP-Flex	\$4,000			
					ROW Acquisition	Match	\$1,000			
					<b>Total Federal Funds:</b>					<b>\$156,000</b>
					<b>Total:</b>					<b>\$195,000</b>
375307	SYRACUSE	HIAWATHA BLVD IMP STATE FAIR BLVD TO PARK ProjectType: Highway	Exempt		ROW Acquisition	TEA-21 Demo	\$40,000			
					ROW Acquisition	Match	\$11,000			
					<b>Total Federal Funds:</b>					<b>\$40,000</b>
					<b>Total:</b>					<b>\$51,000</b>
375396	SYRACUSE	SYRACUSE BRIDGE IMPROVEMENTS ON AUTO ROW ProjectType: Highway	Exempt		Preliminary Design	FA Special	\$330,000			
					Detailed Design	FA Special	\$330,000			
					<b>Total Federal Funds:</b>					<b>\$660,000</b>
					<b>Total:</b>					<b>\$660,000</b>
375407	SYRACUSE	STREETSCAPE IMPROVEMENTS TO NORTH SALINA STREET ProjectType: Highway	Exempt		Construction	STP-Urban	\$144,000			
					Construction	Match	\$36,000			
					Construction	TEA-21 Demo	\$565,000			
					Inspection	TEA-21 Demo	\$50,000			
					<b>Total Federal Funds:</b>					<b>\$759,000</b>
<b>Total:</b>					<b>\$795,000</b>					

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Funds  
Obligated in:

PIN:	Sponsor:	Project Description:	Air Quality Status:	Phase:	Funding Source:	FFY 06/07:		
382207	CNYRTA	RIDES FOR WORK 05/06 - 07/08 ProjectType: Transit	Exempt		Other	CMAQ	\$50,000	
					Other	Match	\$13,000	
					<b>Total Federal Funds:</b>			<b>\$50,000</b>
					<b>Total:</b>			<b>\$63,000</b>
382210	CNYRTA	MARKETING OUTREACH CNYRTA ProjectType: Transit	Exempt		Other	CMAQ	\$200,000	
					Other	Match	\$50,000	
					<b>Total Federal Funds:</b>			<b>\$200,000</b>
					<b>Total:</b>			<b>\$250,000</b>
375355	OCDOT	ONONDAGA LAKE CANALWAYS TRAIL ProjectType: Bike/Pedestrian	Exempt		Construction	CMAQ	\$1,440,000	
					Construction	Match	\$360,000	
					Inspection	CMAQ	\$160,000	
					Inspection	Match	\$40,000	
					<b>Total Federal Funds:</b>			<b>\$1,600,000</b>
<b>Total:</b>			<b>\$2,000,000</b>					
375299	SYRACUSE	CREEKWALK, PH 1, ARMORY TO CAROUSEL ProjectType: Bike/Pedestrian	Exempt		Detailed Design	CMAQ	\$167,200	
					Detailed Design	Match	\$41,800	
					ROW Acquisition	CMAQ	\$1,186,000	
					ROW Acquisition	Match	\$356,000	
					Construction	CMAQ	\$3,360,000	
					Construction	Match	\$840,000	
					Construction	SAFETEA-LU Earmark	\$1,043,000	
					Construction	Match	\$261,000	
					Inspection	CMAQ	\$505,600	
					Inspection	Match	\$126,400	
					Inspection	SAFETEA-LU Earmark	\$40,000	
					Inspection	Match	\$10,000	
					<b>Total Federal Funds:</b>			<b>\$6,301,800</b>
					<b>Total:</b>			<b>\$7,937,000</b>
375489	Town of DeWitt	RECREATIONAL TRAILS PROJECT ProjectType: Bike/Pedestrian	Exempt		Other	Misc Federal Aid	\$96,000	
					Other	Match	\$24,000	
					<b>Total Federal Funds:</b>			<b>\$96,000</b>
					<b>Total:</b>			<b>\$120,000</b>

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393254	NYS DOT	STATE ROUTE 49 AT CSXT MONTREAL SECONDARY ProjectType: Freight	Exempt		Construction	STP-Rail	\$360,000			
					Construction	Match	\$40,000			
					<b>Total Federal Funds:</b>					<b>\$360,000</b>
					<b>Total:</b>					<b>\$400,000</b>
305617	NYS DOT	ROUTE I481 FREEWAY INCIDENT MANAGEMENT SYSTEM PHASE III ProjectType: Air Quality	Exempt		Detailed Design	CMAQ	\$59,000			
					Detailed Design	Match	\$7,000			
					Construction	CMAQ	\$1,834,000			
					Construction	Match	\$204,000			
					Construction Support	CMAQ	\$40,000			
					Construction Support	Match	\$4,000			
					Inspection	CMAQ	\$220,000			
					Inspection	Match	\$24,000			
					<b>Total Federal Funds:</b>					<b>\$2,153,000</b>
<b>Total:</b>					<b>\$2,392,000</b>					
305618	NYS DOT	ROUTE I481 FREEWAY INCIDENT MANAGEMENT SYSTEM PHASE IV ProjectType: Air Quality	Exempt		Detailed Design	CMAQ	\$168,000			
					Detailed Design	Match	\$42,000			
					Construction	CMAQ	\$1,200,000			
					Construction	Match	\$300,000			
					Inspection	CMAQ	\$120,000			
					Inspection	Match	\$30,000			
					<b>Total Federal Funds:</b>					<b>\$1,488,000</b>
					<b>Total:</b>					<b>\$1,860,000</b>
380516	NYS DOT	2006 TRAFFIC SIGNAL REQUIREMENTS CONTRACT ProjectType: Air Quality	Exempt		Construction	STP-Flex	\$331,000			
					Construction	Match	\$83,000			
					Inspection	STP-Flex	\$33,000			
					Inspection	Match	\$8,000			
					<b>Total Federal Funds:</b>					<b>\$364,000</b>
<b>Total:</b>					<b>\$455,000</b>					
375272	SYRACUSE	LODI ST/N. SALINA SIGNAL IMPROVEMENTS ProjectType: Air Quality	Non-Exempt		Detailed Design	CMAQ	\$270,000			
					Detailed Design	Match	\$68,000			
					<b>Total Federal Funds:</b>					<b>\$270,000</b>
					<b>Total:</b>					<b>\$338,000</b>

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Funds  
Obligated in:

PIN:	Sponsor:	Project Description:	Air Quality Status:	Phase:	Funding Source:	FFY 06/07:					
375285	SYRACUSE	GEDDES ST/GENESEE ST SIGNAL INTERCONNECT ProjectType: Air Quality	Non-Exempt		Preliminary Design	CMAQ	\$72,000				
					Preliminary Design	Match	\$18,000				
					<b>Total Federal Funds:</b>					<b>\$72,000</b>	
					<b>Total:</b>					<b>\$90,000</b>	
380471	SYRACUSE	TRAFFIC CONTROL CENTER OPERATIONS (TCC) ProjectType: Air Quality	Exempt		Other	STP-Flex	\$400,000				
					Other	Match	\$100,000				
					<b>Total Federal Funds:</b>					<b>\$400,000</b>	
					<b>Total:</b>					<b>\$500,000</b>	
375455	OCDOT	History of the Erie Canal- Erie Canal Museum 1st Floor Exhibit Gallery Redesign ProjectType: Enhancement	Exempt		Preliminary Design	SAFETEA-LU Earmark	\$68,000				
					Preliminary Design	Match	\$17,000				
					Detailed Design	SAFETEA-LU Earmark	\$27,000				
					Detailed Design	Match	\$7,000				
					Construction	SAFETEA-LU Earmark	\$305,000				
					Construction	Match	\$76,000				
					<b>Total Federal Funds:</b>					<b>\$400,000</b>	
					<b>Total:</b>					<b>\$500,000</b>	
					395039	OCDOT	ERIE CANAL MUSEUM INTERPRETIVE CENTER ProjectType: Enhancement	Exempt		Other	STP-Enhancements
Other	Match	\$300,000									
<b>Total Federal Funds:</b>										<b>\$1,200,000</b>	
<b>Total:</b>										<b>\$1,500,000</b>	
395034	Town of Camillus	NINE MILE CREEK AQUEDUCT RESTORATION ProjectType: Enhancement	Exempt		Other	STP-Enhancements	\$1,000,000				
					Other	Match	\$250,000				
					<b>Total Federal Funds:</b>					<b>\$1,000,000</b>	
					<b>Total:</b>					<b>\$1,250,000</b>	
395037	Town of Hastings	ONEIDA RIVER LIGHTHOUSE PARK ProjectType: Enhancement	Exempt		Other	STP-Enhancements	\$188,000				
					Other	Match	\$47,000				
					<b>Total Federal Funds:</b>					<b>\$188,000</b>	
					<b>Total:</b>					<b>\$235,000</b>	

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395016	Town of Skaneateles	SKANEATELES GATEWAY WEST PROJECT ProjectType: Enhancement	Exempt			
				Construction	STP-Enhancements	\$342,000
				Construction	Match	\$86,000
				<b>Total Federal Funds:</b>		<b>\$342,000</b>
				<b>Total:</b>		<b>\$428,000</b>
<b>Grand Total</b>						<b>\$76,335,800</b>

## **APPENDIX D**

### **2007-2012 TIP and LRTP 2007 Update CONFORMITY ANALYSIS**

# **SMTC LRTP 2007 Update 2007-2012 TIP Conformity Analysis April 2007**

## **Introduction**

This regional emissions analysis and supporting documentation were prepared to comply with the requirements of the Federal Clean Air Act Amendments of 1990 and the associated Federal and State Transportation conformity regulations. The regulations, both the Environmental Protection Agency's (EPA) transportation conformity rule (40 CFR Parts 51 and 93) and the New York State Department of Environmental Conservation's (NYSDEC) transportation conformity regulation (6 NYCRR Part 240) require that each time the SMTC adopts or approves a TIP or LRTP or an amendment to the TIP or LRTP, it be determined that the proposed action is in conformity with the applicable State Implementation Plan (SIP) for air quality prepared by NYSDEC.

The remainder of this Appendix presents the results and documentation of the regional emissions analysis and the air quality determination conducted for the SMTC's LRTP 2007 Update and the 2007-2012 TIP.

## **Status of Applicable SIP**

The 2003-2013 State Implementation Plan for air quality for Onondaga County contains estimated existing and future emissions of carbon monoxide (CO) as part of the Clean Air Act requirement to produce a "Maintenance Plan" when the NYSDEC demonstrated to the EPA that Syracuse and Onondaga County had attained the National Ambient Air Quality Standards (NAAQS). This Maintenance Plan establishes a comparison between existing "base year" emissions (per the Clean Air Act this year is 1990) and future estimated emissions. The Maintenance Plan must demonstrate that emissions of CO in future years will remain below the levels established in the base year when the standards are first attained, therefore assuring the continued maintenance of the standards, or NAAQS.

The Onondaga County SIP of 1992, which established the 1993-2003 Maintenance Plan, used a now outdated version of EPA's emissions model, "Mobile" version 4.1. In addition, the NYSDEC changed some of the proposed future emission control programs, most notably the vehicle inspection and maintenance program that was anticipated in the Maintenance Plan. It has now been changed to a "gas-cap integrity test" to check for emissions leaks, as part of the New York State annual vehicle safety and emissions inspection program. It includes testing of the vehicle's emissions control equipment for evidence of tampering, and will include testing of new vehicle on-board diagnostic systems related to the vehicle's emissions control system.

The conformity analysis must use the latest planning assumptions and the latest emissions model, both of which have changed significantly and are reflected in the Mobile 6 model and the 2003-2013 SIP. During the development of the 2003-2013 SIP, the SMTC worked closely with the Interagency Consultation Group (ICG) consisting of representatives of the Federal Highway Administration (FHWA), Federal Transit Administration (FTA), EPA, NYSDEC and the New York State Department of Transportation Environmental Analysis Bureau (EAB).

The involved Federal, State and local agencies have agreed that the updated regional emissions analysis that incorporates the latest planning assumptions, latest future emissions control programs estimated by NYSDEC, and the latest EPA emissions model must be used to demonstrate conformity of the SMTC TIP and LRTP with the SIP.

### **Use of Latest Planning Assumptions**

All conformity determinations must be based on the latest available planning assumptions in at the time of the conformity determination. Section 176(c)(1)(B)(iii) of the Clean Air Act (CAA) states that "...[t]he determination of conformity shall be based on the most recent estimates of emissions, and such estimates shall be determined from the most recent population, employment, travel, and congestion estimates as determined by the MPO or other agency authorized to make such estimates." The CAA requires that transportation investments be based on the most recent information that is available in order to protect the public health over the long-term. This conformity analysis commenced on April 9, 2007 and includes the utilization of emission factors NYSDOT provided on April 12, 2007.

The latest planning assumptions requirements apply to all assumptions used in demonstrating conformity, including assumptions that are used in transportation demand and emissions modeling. Examples of assumptions are land use, vehicle age and fleet mix, and the most recent information regarding implementation of control measures in approved SIPs (i.e., inspection and maintenance and fuels programs, transportation control measures).

Specific latest planning requirements are outlined in 40 CFR 93.110 (b)-(f):

"(b) Assumptions must be derived from the estimates of current and future population, employment, travel, and congestion most recently developed by the MPO or other agency authorized to make such estimates and approved by the MPO. The conformity determination must also be based on the latest assumptions about current and future background concentrations."

***SMTC Action:*** *The data forecasts used in the model are derived from several datasets. Current population estimates were initially obtained via the 2000 Census and estimates were calculated for 2003 (base year), along with future population estimates for the horizon year (2027) being forecasted by a working group of local professionals with*

*experience in demographic analysis. This working group included the Syracuse-Onondaga County Planning Agency (SOCPA), New York State Department of Transportation (NYSDOT), SMTC and others.*

*Land use data in the model (i.e., type of employers and number of employees) was similarly calculated for both the base and future scenarios utilizing the abovementioned working group with the addition of key economic development agencies and personnel, and local municipal officials.*

*Travel data for transit was included in the modeling, taking into account Central New York Regional Transportation Authority (CNYRTA) fixed route service, as well as bicycling and walking. CNYRTA's paratransit service (Call-a-Bus) is treated as shared ride trips.*

*The CO emissions estimates for Onondaga County were developed using the NYSDOT April 2007 emissions factors.<sup>1</sup> These emissions factors were applied to Vehicle Miles Traveled (VMT) and future forecasts of VMT produced by the SMTC's travel demand model.*

“(c) The conformity determination for each transportation plan and TIP [transportation improvement program] must discuss how transit operating policies (including fares and service levels) and assumed transit ridership have changed since the previous conformity determination.”

***SMTC Action:*** *The CNYRTA has not had a fare increase since 1995. In November 2002, service was added as part of a major restructuring of bus lines and service hours. As a result of the route restructuring, CNYRTA's ridership is up approximately 4% overall. Finally, CNYRTA will continue to pursue the service concepts proposed in the ReMAP Study completed in 1999 to the extent possible, given adequate funding. These concepts include small bus community circulators in suburban settings, express services between downtown and outlying locations and the development of key hubs. There has been limited success to date with some of those service concepts.*

“(d) The conformity determination must include reasonable assumptions about transit service and increases in transit fares and road and bridge tolls over time.”

***SMTC Action:*** *The CNYRTA has not had a fare increase since 1995. According to the CNYRTA, there would be no fare increase in the foreseeable future as fares are raised only as a last resort. CNYRTA ridership is up approximately 4% overall over the previous year. CNYRTA will continue to pursue the improved service concepts proposed*

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<sup>1</sup> All key modeling assumptions used to develop the emissions factors tables (vehicle registration distribution, inspection/maintenance program, diesel fractions, fuel parameters, temperature and humidity, vehicle emission standards) are described in detail in the NYSDOT's publication “MOBILE6.2 Emissions Factors for Regional, Mesoscale, and CMAQ Project Emissions Calculations Part A”. This file is available for download via the SMTC website: [www.smtcmpo.org](http://www.smtcmpo.org)

*in the ReMAP Study. A goal of the LRTP is for increase utilization of transit. To achieve that goal, SMTC will examine, as yet undefined projects, to implement that strategy.*

*For modeling purposes, the current tolls at each exit/entry plaza in and around the SMTC region were analyzed to calculate a per mile rate in terms of dollars/time. The average rate calculated is 3.3 cents/mile. This rate was then converted into travel time impedance at the rate of \$15/hour or 25 cents/minute. \$15/hour was consistently applied at all points in the model for value of time (VoT). This Cost per Link variable is essentially a detractor to using the Thruway. In 2006, Thruway tolls were increased. According to the New York State Thruway Authority, the last toll increase was in 1988 and no increases are planned in the foreseeable future. If costs were reduced, it's anticipated that the attractiveness of using the Thruway would improve for local commuting traffic.*

“(e) The conformity determination must use the latest existing information regarding the effectiveness of the transportation control measures (TCMs) and other implementation plan measures, which have already been implemented.”

***SMTC Action:*** *Table 4 presents the status of the official Transportation Control Measures contained in the original 1993-2003 SIP for Syracuse and Onondaga County. The referenced Federal and State air quality conformity regulations require that each time the SMTC adopts or approves a new TIP or LRTP, a determination that all required TCMs are being implemented in a timely fashion be made. As the TCM table shows, all of the required TCMs have been completed and are shown for informational purposes only. As required by law, the TCMs were included in the model network run and the emissions analysis shows a continued reduction in CO emissions.*

“(f) Key assumptions shall be specified and included in the draft documents and supporting materials used for the interagency and public consultation required by 93.105.”

***SMTC Action:*** *The SMTC utilizes the TransCAD travel demand modeling platform to generate VMT and speed data for a 24 hour period. The SMTC model operates in TransCAD software and incorporates the four-step modeling process (Trip Generation, Trip Distribution, Mode Choice and Assignment) and provides for future-year scenario modeling based on the horizon year roadway network characteristics as well as the previously mentioned land use and population projections that were developed for use in the modeling process. The 2003 population and employment data, along with the current road network conditions were used for the base year calibrations.*

*The future year (horizon year) of the modeling efforts are characterized by the inclusion of the following assumptions:*

- *Future household growth by TAZ as determined by working group of local demographic experts.*
- *Future employment growth by TAZ as determined by local economic development experts and municipal officials.*

- *Future road network changes as determined by the Transportation Improvement Program and the Capital Plans of appropriate SMTC member agencies as well as the SMTC's LRTP.*

### **Interagency Consultation Process**

The conformity process requires a high degree of coordination between Federal, State and local entities and therefore has rules for the establishment of formal procedure for Interagency Consultation to ensure that all groups are involved. Consultation also ensures that air quality concerns are addressed throughout the planning process so that the resulting conformity determinations meet federal criteria before presentation to FHWA/FTA for approval. Procedures for the ICG in the State of New York are contained in 6 NYCRR Part 240.6 As previously mentioned, the ICG consists of representatives of the FHWA, FTA, EPA, NYSDEC and the EAB.

The involved Federal, State and local agencies have agreed that the updated regional emissions analysis that incorporates the latest planning assumptions, latest future emissions control programs estimated by NYSDEC, and the latest EPA emissions model must be used to demonstrate conformity of the SMTC TIP and LRTP with the SIP. The latest planning assumption requirement must be met before USDOT can make a conformity determination. This conformity analysis was reviewed by ICG on May 30, 2007 and was found to be conforming to federal criteria on June 7, 2007.

### **Results of the Regional Emissions Analysis**

The following attached pages show the complete results of the regional emissions analysis of the SMTC's LRTP 2007 Update and the 2007-2012 TIP, using the latest emissions factors and the latest SMTC transportation demand model results. The existing and future estimated emissions are presented in Table 1 and Table 2, and the non-exempt transportation projects included in the analysis are presented in Table 3. This analysis demonstrates that with the adopted update to the LRTP and the 2007-12 TIP, CO emissions in future years will remain well below the levels established for each applicable milestone year in the SIP Motor Vehicle Emissions Budget. Therefore, continued maintenance of the CO NAAQS is assured, and the SMTC LRTP 2007 Update and the 2007-2012 TIP remain in conformity with the SIP.

### **Public Involvement Process**

In addition to the 30-day public comment period for the LRTP 2007 Update and the 2007-2012 TIP (of which the Conformity Analysis was included) that started on April 27, 2007 and ended May 25, 2007, these documents were posted on the SMTC website, legal notice was placed in the local newspaper and a public meeting was held on May 14, 2007 to discuss the LRTP 2007 Update, the 2007-2012 TIP and the April 2007 Conformity Analysis. No public comments were received relative to these documents.

## **Conclusions**

In conclusion, the SMTC LRTP 2007 Update and the 2007-2012 TIP have complied with the requirements of the Clean Air Act, and are in conformity with the New York State Implementation Plan for air quality. The following pages provide the documentation of the required regional emissions analysis conducted to determine air quality conformity. This analysis demonstrates that with the adopted SMTC LRTP and 2007-2012 TIP, CO emissions in future years will remain below the levels established for each applicable milestone year in the SIP Motor Vehicle Emissions Budget. Therefore, continued maintenance of the CO NAAQS is assured, and the SMTC LRTP 2007 Update and the 2007-2012 TIP remain in conformity with the SIP.

**Table 1**  
**SMTC LRTP 2027/2007-12 TIP Mobile 6 Regional Emissions**  
**Analysis Summary**  
**April 2007**  
**Note: MVEB = DEC 2003 Budget**  
**Note: Emissions with NYSDOT M6 Tables**

<b>2003 Base Year</b>	VMT	CO Sum (g/day)			
24 hour	10,978,715.19	371,932,311.25	=	409.99 tons per day	SIP N/A

<b>2009 Build</b>	VMT	CO Sum (g/day)			
24 hour	11,183,231.04	179,803,081.60	=	198.20 tons per day	MVEB = 372
					PASS

<b>2013 Build</b>	VMT	CO Sum (g/day)			
24 hour	11,383,785.16	147,731,124.89	=	162.85 tons per day	MVEB = 357
					PASS

<b>2020 Build</b>	VMT	CO Sum (g/day)			
24 hour	11,840,143.60	132,588,995.67	=	146.15 tons per day	MVEB = 357
					PASS

<b>2027 Build</b>	VMT	CO Sum (g/day)			
24 hour	12,820,275.94	139,294,623.59	=	153.55 tons per day	MVEB = 357
					PASS

**Table 2**  
**SMTC LRTP 2027 + 2007-2012 TIP with Mobile 6**  
**April 2007**

2003 24 Hour				
FC	Avg. Speed	VMT	CO (g/mi)	CO Sum
11/12	48.47	4,125,578.58	34.73	143,281,344.26
14	32.06	1,257,594.47	33.05	41,563,497.07
16	30.56	1,806,867.95	33.04	59,698,917.17
17	33.45	729,299.17	33.44	24,387,764.16
19	26.63	371,914.51	33.76	12,555,833.82
11/12*	33.28	273,042.80	32.31	8,822,012.87
14**	16.21	43,097.78	36.77	1,584,705.45
01	49.75	717,690.89	32.82	23,554,615.04
02	43.5	296,081.00	34.08	10,090,440.45
06	47.64	178,834.01	34.89	6,239,518.70
07	42.34	372,432.59	34.09	12,696,226.87
08	41.6	278,145.23	33.95	9,443,030.49
09	42.89	506,941.76	34.19	17,332,338.61
01*	36.26	16,056.97	30.71	493,109.44
02**	15.95	5,137.49	36.78	188,956.84
<b>TOTAL 24 HOUR</b>				<b>371,932,311.25</b>
			<b>tons/day</b>	<b>409.9851932</b>

2009 24 Hour				
FC	Avg. Speed	VMT	CO (g/mi)	CO Sum
11/12	48.23	4,202,423.51	16.47	69,213,915.29
14	31.97	1,279,421.97	15.7	20,086,924.86
16	30.46	1,839,421.53	15.7	28,878,917.99
17	33.27	743,836.39	15.89	11,819,560.21
19	26.67	377,920.33	16.03	6,058,062.87
11/12*	33.17	276,271.20	15.38	4,249,051.08
14**	15.64	44,375.30	17.5	776,567.69
01	49.56	729,265.42	15.59	11,369,247.92
02	43.41	303,692.58	16.15	4,904,635.14
06	47.41	182,231.13	16.52	3,010,458.33
07	42.10	383,291.72	16.13	6,182,495.44
08	41.48	285,877.43	16.08	4,596,909.00
09	42.90	513,562.74	16.21	8,324,852.00
01*	36.23	16,377.08	14.63	239,596.73
02**	15.63	5,262.72	17.46	91,887.05
<b>TOTAL 24 HOUR</b>				<b>179,803,081.60</b>
			<b>tons/day</b>	<b>198.1989704</b>

2013 24 Hour				
FC	Avg. Speed	VMT	CO (g/mi)	CO Sum
11/12	48.03	4,260,811.83	13.27	56,540,973.03
14	31.96	1,308,474.96	12.72	16,643,801.43
16	30.33	1,875,626.13	12.71	23,839,208.12
17	33.22	761,468.24	12.92	9,838,169.72
19	26.58	380,662.73	13	4,948,615.44
11/12*	32.97	281,626.97	12.38	3,486,541.88
14**	15.48	44,729.67	13.99	625,768.04
01	49.33	745,739.95	12.38	9,232,260.63
02	43.27	310,425.56	13.05	4,051,053.52
06	47.32	184,569.97	13.36	2,465,854.86
07	41.99	390,673.19	13.06	5,102,191.87
08	41.35	292,973.43	13.02	3,814,514.09
09	42.80	523,939.72	13.12	6,874,089.09
01*	36.11	16,705.55	11.59	193,617.33
02**	15.14	5,357.25	13.9	74,465.84
<b>TOTAL 24 HOUR</b>				<b>147,731,124.89</b>
			<b>tons/day</b>	<b>162.8456898</b>

2020 24 Hour				
FC	Avg. Speed	VMT	CO (g/mi)	CO Sum
11/12	47.48	4,426,345.25	11.43	50,593,126.15
14	31.82	1,344,667.82	11	14,791,346.06
16	30.11	1,942,690.43	10.99	21,350,167.87
17	32.99	795,164.87	11.17	8,881,991.61
19	26.69	393,862.97	11.23	4,423,081.11
11/12*	32.73	288,980.44	10.7	3,092,090.71
14**	14.97	45,887.91	12.08	554,325.95
01	48.59	790,047.32	10.65	8,414,003.93
02	42.99	325,930.43	11.27	3,673,235.96
06	46.98	191,728.96	11.52	2,208,717.63
07	41.53	414,403.07	11.25	4,662,034.52
08	41.30	306,097.73	11.31	3,461,965.36
09	42.55	551,329.70	11.32	6,241,052.23
01*	35.78	17,467.67	9.99	174,502.05
02**	14.13	5,539.02	12.16	67,354.54
<b>TOTAL 24 HOUR</b>				<b>132,588,995.67</b>
			<b>tons/day</b>	<b>146.1543495</b>

2027 24 Hour				
FC	Avg. Speed	VMT	CO (g/mi)	CO Sum
11/12	46.26	4,762,237.40	11.06	52,670,345.64
14	31.37	1,435,232.69	10.72	15,385,694.41
16	29.60	2,085,979.47	10.72	22,361,699.96
17	32.49	869,968.44	10.88	9,465,256.61
19	27.20	424,441.95	10.93	4,639,150.51
11/12*	32.02	305,760.73	10.42	3,186,026.81
14**	14.56	47,104.25	11.84	557,714.30
01	46.84	885,156.09	10.26	9,081,701.51
02	42.35	357,483.89	10.93	3,907,298.93
06	46.17	209,956.43	11.15	2,341,014.18
07	40.53	463,955.17	10.89	5,052,471.76
08	40.93	344,918.82	10.92	3,766,513.51
09	42.04	602,999.89	10.98	6,620,938.82
01*	34.99	19,136.81	9.7	185,627.09
02**	12.06	5,943.91	12.31	73,169.54
<b>TOTAL 24 HOUR</b>				<b>139,294,623.59</b>
			<b>tons/day</b>	<b>153.546039</b>

\*Urban or Rural High Capacity Ramp  
 \*\*Urban or Rural Low Capacity Ramp

**Table 3**

Non-Exempt Projects Included in the Analysis			
PIN	Project	General Scope	TCM?
375285	Geddes/Genesee Sts Signal Interconnection	Upgrading of signals and inclusion in existing interconnect system.	No
375272	Lodi St/North Salina St. Signal Improvements	Upgrading of signals and inclusion in existing interconnect system.	No
375479	N,S,E,W Interconnect Expansion	Upgrading of signals and inclusion in existing interconnect system.	No

Source: SMTC, 2007-2012 TIP. "PIN" stands for project identification number; "TCM" indicates whether or not the project is a Transportation Control Measure.

**Table 4**

<b>Transportation Control Measures (TCMs) Update</b>				
<b>PIN</b>	<b>Project</b>	<b>1994-1999</b>	<b>1999-2004</b>	<b>Comments</b>
303519	RT 57, phase IV, Gaskin to RT 31	Construction 11/96		Implemented
310412	RT 635, RT 5 to RT 298	Construction 11/94	Construction 6/98	Implemented
310413	RT 298, Syracuse to Carrier Circle	Construction 11/98	Construction 4/02	Implemented
375206	Harrison Street Traffic Signal	Construction 9/95		Implemented
375207	Buckley Road Improvements at Bear Road	Construction 11/95		Implemented
380272	Oncenter Signs	Construction 1/94		Implemented
380275	Downtown Syracuse Signal Interconnect System	Engineering 11/96	Construction 7/96	Implemented
380307	Connections Ride Sharing Program			Implemented
380312	AVL System	Construction 10/96		Implemented
382074	Fare Collection System	Construction 10/96		Implemented
382089	Shelter Schedule Panels	Construction 10/94		Implemented
Source: Syracuse Metropolitan Transportation Council, 1999-2004 Transportation Improvement Program.				

**Table 5**

**SMTC LRTP 2007 Update  
TransCAD Vehicle Miles Traveled (VMT) and Speed Outputs for Base  
and Future Years**

FC Code	Road Type		2003	2009	2013	2020	2027
			24 hour	24 hour	24 hour	24 hour	24 hour
11/12	Interstate/Freeway	VMT	4,125,578.58	4,202,423.51	4,260,811.83	4,426,345.25	4,762,237.40
		Avg. Speed	48.47	48.23	48.03	47.48	46.26
14	Principal Arterial	VMT	1,257,594.47	1,279,421.97	1,308,474.96	1,344,667.82	1,435,232.69
		Avg. Speed	32.06	31.97	31.96	31.82	31.37
16	Minor Arterial	VMT	1,806,867.95	1,839,421.53	1,875,626.13	1,942,690.43	2,085,979.47
		Avg. Speed	30.56	30.46	30.33	30.11	29.6
17	Urban Collector	VMT	729,299.17	743,836.39	761,468.24	795,164.87	869,968.44
		Avg. Speed	33.45	33.27	33.22	32.99	32.49
19	Local	VMT	371,914.51	377,920.33	380,662.73	393,862.97	424,441.95
		Avg. Speed	26.63	26.67	26.58	26.69	27.2
	Low Capacity Ramp	VMT	43,097.78	44,375.30	44,729.67	45,887.91	47,104.25
		Avg. Speed	16.21	15.64	15.48	14.97	14.56
	High Capacity Ramp	VMT	273,042.80	276,271.20	281,626.97	288,980.44	305,760.73
		Avg. Speed	33.28	33.17	32.97	32.73	32.02
01	Interstate	VMT	717,690.89	729,265.42	745,739.95	790,047.32	885,156.09
		Avg. Speed	49.75	49.56	49.33	48.59	46.84
02	Principal Arterial	VMT	296,081.00	303,692.58	310,425.56	325,930.43	357,483.89
		Avg. Speed	43.50	43.41	43.27	42.99	42.35
06	Minor Arterial	VMT	178,834.01	182,231.13	184,569.97	191,728.96	209,956.43
		Avg. Speed	47.64	47.41	47.32	46.98	46.17
07	Major Collector	VMT	372,432.59	383,291.72	390,673.19	414,403.07	463,955.17
		Avg. Speed	42.34	42.1	41.99	41.53	40.53
08	Minor Collector	VMT	278,145.23	285,877.43	292,973.43	306,097.73	344,918.82
		Avg. Speed	41.60	41.48	41.35	41.3	40.93
09	Local	VMT	506,941.76	513,562.74	523,939.72	551,329.70	602,999.89
		Avg. Speed	42.89	42.9	42.8	42.55	42.04
	Low Capacity Ramp	VMT	5,137.49	5,262.72	5,357.25	5,539.02	5,943.91
		Avg. Speed	15.95	15.63	15.14	14.13	12.06
	High Capacity Ramp	VMT	16,056.97	16,377.08	16,705.55	17,467.67	19,136.81
		Avg. Speed	36.26	36.23	36.11	35.78	34.99

## **APPENDIX E**

### **SMTC ENERGY and GREENHOUSE GAS ANALYSIS PROCESS**

## **SMTC ENERGY and GREENHOUSE GAS ANALYSIS PROCESS**

Detailed below are the steps that were taken in an effort to complete the energy and greenhouse gas analysis required for the Syracuse Metropolitan Transportation Council's (SMTC) Long-Range Transportation Plan (LRTP) 2007 Update and the 2007 – 2012 Transportation Improvement Program (TIP).

The detailed results of the analysis can be found in the following steps. The steps that were followed are consistent with the guidance documents listed below, as amended through consultation with the New York State Department of Transportation's Environmental Analysis Bureau (NYSDOT-EAB).

- *Air Quality Analysis of Transportation Improvement Programs, Regional Transportation Plans, and Capital Project programs – Technical Guidance to Assist Metropolitan Planning Organizations and Department of Transportation Regional Offices Meet the Objectives of the 2002 New York State Energy Plan* (January 21, 2003);
- *Development of Revised NYSDOT Energy Analysis Guidelines (Draft), Subtask 12a: Energy Analysis Guidelines for TIPs and Plans* (June 21, 2002); and
- *Development of Revised NYSDOT Energy Analysis Guidelines (Draft), Subtask 12b: Greenhouse Gases (CO<sub>2</sub>) Emissions Estimates for TIPs and Plans* (June 21, 2002)

### **Step #1 – Identification of all Non-Exempt and Regionally Significant Projects**

The first step in this process was determining which projects would be subject to analysis. All of the projects included in the 2007-2012 TIP and the LRTP 2007 Update were reviewed for their significance in affecting energy consumption as per the guidance provided in 6 NYCRR Part 240.6 (h)(2). In general, projects that maintain current levels of service or capacity, such as safety improvements, resurfacing, bridge repair, or bus replacements were considered exempt from the analysis. Similarly, projects that result in operations improvements, but without an increase in capacity (such as intersection widening) were also considered exempt and excluded from the analysis.

**A Regionally Significant** project is, according to 6 NYCRR Part 240.2 (38), “a transportation project (other than an exempt project) that is on a facility which serves regional transportation needs (such as access to and from an area outside the region, major activity centers in the region, major planned developments such as new retail malls, sports complexes, etc., or transportation terminals as well as most terminals themselves) and would normally be included in the modeling of a metropolitan area's transportation network, including, at a minimum, all principal arterial highways and all fixed guideway transit facilities that offer an alternative to regional highway travel.”

**Non-exempt** projects include highway and road projects that increase capacity by at least

one travel lane, and transit projects that change capacity on a fixed route system. The non-exempt determination was made if the project type is not found in the list of exempt projects derived from “Table 2- Exempt Projects” in 40 CFR Part 93.126, 93.127 and NYCRR Part 240.27.

As mentioned above, the project list for the SMTC’s energy and greenhouse gas analysis consisted of the projects included in the 2007-2012 TIP and the LRTP 2007 Update. Three projects from the 2007-2012 TIP, noted below, were categorized as non-exempt projects. However, these projects were unable to be analyzed utilizing the indirect energy lane-mile approach, consistent with *Subtask 12a: Energy Analysis Guidelines for Tips and Plans* because the projects entail signal improvements only, with no additional lane miles of construction.

- Geddes/Genesee Streets Signal Interconnection – Update signals and inclusion in existing traffic interconnect system.
- Lodi/North Salina Streets Signal Improvements – Update signals and inclusion in existing traffic interconnect system.
- N, S, E, W Signal Interconnect Expansion - Update signals and inclusion in existing traffic interconnect system.

The LRTP 2007 Update includes four projects that are considered essential to the region’s transportation system in order to service anticipated future development, although these projects are not programmed on the current TIP. One of these projects is a pavement rehabilitation and streetscaping project, one is a new construction project, and the remaining two are widening projects, as noted in the list below. All four of these projects were included in the energy and greenhouse gas analysis.

- North Salina Street Lane Reduction – Reduce North Salina Street between East Division Street and Isabella Street from two lanes in each direction to one lane in each direction with a center left turn lane. The project is expected to include new pavement overlay but maintain the current pavement width.
- Bear Street Extension – Extend Bear Street from the Interstate 81 bridge to Hiawatha Boulevard, intersecting Hiawatha Boulevard at its current intersection with North Salina Street. The extension will consist of four travel lanes.
- Third Lane of Frontage Road – Add a third travel lane to the Interstate 81 Frontage Road (SR 936F) from Exit 23B to Bear Street.
- Additional Travel Lane on NY 31 – Add a second travel lane in each direction plus a center left-turn lane on NY 31 from Morgan Road to Henry Clay Boulevard.

## **Step #2 – Travel Demand Modeling**

To determine the impact of future projects in the Syracuse Metropolitan Planning Area (MPA), the SMTC uses TransCAD travel simulation software. Like most other programs of this type, the model consists of a road network, land-use and employment data, trip generation, trip distribution, and trip assignment. The results generated by the program are then compared to known travel counts to calibrate the model. The SMTC travel demand model is calibrated based on 2003 base year traffic conditions and 2000 Census information that was forecasted for 2003 (base year) and 2027 (horizon year). Background documentation and technical information related to the SMTC Model are available at the SMTC.

The analysis includes a year 2027 No-Build scenario and a year 2027 Build scenario (as 2027 is the horizon year of the SMTC LRTP). The No-Build scenario includes the 2003 roadway network with 2027 land-use characteristics, while the Build scenario consists of the 2027 network and 2027 land-use characteristics.

## **Step #3 – Off-Line Model Analysis**

A quantitative analysis was also undertaken to account for the visions of the 2027 LRTP that could not be modeled in TransCAD. Inclusion of transit and bicycle/pedestrian transportation modes is beyond the capabilities of the software. Using information developed by the SMTC and its member agencies, the SMTC calculated the reduction of vehicle miles traveled (VMT) as a result of transit and bicycle and pedestrian system improvements envisioned in the LRTP. Additionally, the SMTC accounted for reductions of volatile organic compounds, carbon monoxide, and oxides of nitrogen as a result of converting Centro's existing compressed natural gas (CNG) buses to diesel-electric hybrid buses. These calculations incorporated emission factors provided by Cummins, Inc., the manufacturer of the hybrid propulsion systems.

These off-model VMT reductions were then factored into the TransCAD outputs to better demonstrate the Build scenario provided for in the LRTP. This process differed from that used in the Air Quality Conformity determination where only the results of VMT from TransCAD were utilized. VMT reductions were included to account for expected increases in bicycle and pedestrian trips (VMT reduction of 0.2% in 2027) and in transit ridership (increase of approximately 33,000 daily riders with an average trip length of 5 miles in 2027). The results can be found in Table 1.

## **Step #4 - Regional Emissions Modeling**

As stated earlier, TransCAD estimates the number of vehicle miles traveled (VMT) for various scenarios provided for in the planning process. To calculate the regional emissions that will result from the transportation system envisioned in the LRTP Build scenario, this VMT information is utilized in conjunction with the latest MOBILE6 emission factors. MOBILE6 was developed by the US Environmental Protection Agency (EPA).

Emission estimates were determined using the VMT data and MOBILE6 emission factors. This process involves the utilization of traffic volume and speed data provided by the SMTC, the most recent vehicle fleet characteristics, and other traffic and meteorological parameters established by NYSDOT in cooperation with the New York State Department of Environmental Conservation (NYSDEC). MOBILE6 incorporates these parameters to develop estimated emission factors.

For this analysis the SMTC utilized emissions factors by road type and speed for Volatile Organic Compounds (VOC), Nitrogen Oxides (NO<sub>x</sub>) and Carbon Monoxide (CO) for both the Build and No-Build scenarios. The SMTC then calculated the number of grams of pollutant produced for each scenario. An additional emissions reduction was included to account for the conversion of Centro's compressed natural gas (CNG) fleet to hybrid diesel-electric buses by 2027 (emissions data for CNG and hybrid buses were provided by Centro). These results can be found in Table 1.

### **Step #5 – Direct Energy Analysis**

Direct energy represents the energy consumed by vehicles using a transportation facility (for this analysis, "facility" is defined as the roadway segments in the SMTC's regional travel demand model). Direct vehicle energy was calculated using the VMT Fuel Consumption Method as described in *Subtask 12a: Energy Analysis Guidelines for TIPS and Plans*. The calculations were based on VMT (not seasonally-adjusted) reported by the 2027 No-Build and Build scenarios and a calculated vehicle type. Vehicle classification data were based on aggregating data obtained from NYSDOT's *Mobile 6 Region 3 1999 Summer Time Emissions Factors*. NYSDOT Region 3 includes the majority of the Syracuse MPA. Therefore, it was determined those factors would accurately reflect vehicle distribution for the model. The classification data in the MOBILE6 table is based on 28 vehicle classifications, determined by EPA, which is not directly comparable to the three vehicle types used in the direct energy analysis guidance. For this analysis, it was assumed that, taken together, vehicle classifications 1-5, 14-16, and 28 are equivalent to "light duty vehicles", classifications 6-9 and 17-20 are equivalent to "medium trucks", and classifications 10-13 and 21-27 represent "heavy trucks". Since the table lists percentages of type of vehicle by functional class, an average of all functional classes was calculated and then summarized to represent the percentage by the three vehicle types required for energy analysis. Each of the three vehicle types have a fuel economy rate per year based on the fuel type used.

For each scenario, the total VMT was multiplied by the percentage of each vehicle type to determine vehicle type VMT. That vehicle type VMT was then divided by the fuel economy rate to calculate the number of gallons of fuel used. These fuel consumption values were then converted to British Thermal Units (BTUs) by multiplying each gallon by 125,000. Finally, the total direct energy consumption (in BTUs) was summarized for all vehicles in each scenario. These results can be found in Table 2.

## **Step #6 – Indirect Energy Analysis**

Indirect energy represents the energy required to construct and maintain the transportation system. For this analysis, per EAB guidelines, only the energy used in construction activities for Regionally Significant or Non-Exempt projects, including new construction, reconstruction, rehabilitation, and widening was analyzed. Certain non-exempt projects, such as ridesharing, include no energy-consuming construction or maintenance activities, and therefore, an indirect energy calculation is not applicable. The intent of the indirect energy calculations is to measure the energy used in the construction of the projects included in the 2027 Build scenario. The indirect energy value of the 2027 No-Build scenario is zero; therefore, it is not possible to compute the percentage difference between the two scenarios.

Indirect vehicle energy was calculated using the Lane Mile Approach as described in *Subtask 12a: Energy Analysis Guidelines for TIPs and Plans*. As previously mentioned, the three non-exempt projects on the 2007-2012 TIP are signal interconnect projects that do not lend themselves to analysis using the lane mile approach. However, one rehabilitation project, two road widening projects, and one new construction project from the LRTP 2007 Update were included in the indirect energy analysis. The number of lane miles for each project was multiplied by a rate of Construction Energy Consumed per lane mile (from Table 4 of *Subtask 12a*) and the total Construction Energy Consumed, in BTU's, was calculated. Results of this analysis are shown in Table 3.

## **Step #7 – CO<sub>2</sub> Emissions Estimates from Direct Energy Consumption**

Carbon dioxide (CO<sub>2</sub>) is a product of fossil fuel combustion, as well as other processes. It is considered a greenhouse gas, as it traps heat radiated by the Earth into the atmosphere and thereby contributes to the potential for global warming. Carbon dioxide emissions were calculated as described in *Subtask 12b: Greenhouse Gases (CO<sub>2</sub>) Emissions Estimates Guidelines for TIPs and Plans*. The carbon dioxide emissions from direct energy consumption were based on the results calculated previously in Step 5.

*Subtask 12b, Table 1* lists Carbon Emission coefficients based on vehicle type. The Direct Energy consumed (by vehicle type) was multiplied by the Carbon Emission Coefficients for both gasoline and diesel engines and then by a factor representing the amount of carbon that is oxidized. This process created a value representing total tons of carbon dioxide emitted. The results can be found in Table 4.

## **Step #8 – CO<sub>2</sub> Emissions Estimates from Indirect Energy Consumption**

The indirect energy consumed as a result of the Build scenario was determined in Step 6 above. *Subtask 12b, Table 1* lists Carbon Emission coefficients based on vehicle type. Similar to Step 7 above, the indirect energy consumed was multiplied by the Carbon Emission Coefficients for diesel vehicles and then by a factor representing the amount of carbon that is oxidized, resulting in the total tons of Carbon emitted. The results can be found in Table 5.

## **Step #9 - Documentation**

A summary of the results of the quantitative analyses is presented in Table 6. These results indicate that the Build scenario of the LRTP 2007 Update and supporting TIP will result in a decrease in VMT and associated decreases in VOC, NO<sub>x</sub>, CO, CO<sub>2</sub>, and the amount of direct energy used by vehicles in the Syracuse MPA over the No-Build scenario.

**VMT Calculations**

**2027 No Build**

Functional Classification	Daily VMT	Avg speed	CO rate	CO Sum	VOC rate	VOC Sum	NOx rate	NOx Sum
		(mph)	(g/mi)	(g/day)	(g/mi)	(g/day)	(g/mi)	(g/day)
11/12 Interstate/ Freeway	4,768,316.12	46.25	11.06	52,713,955.68	0.21	989,418.23	0.23	1,108,640.86
14 Principal arterial	1,429,353.54	31.21	10.71	15,315,285.08	0.23	325,296.98	0.20	282,416.37
16 Minor arterial	2,081,040.01	29.58	10.72	22,308,777.24	0.23	482,112.33	0.20	416,208.00
17 Urban collector	871,021.20	32.42	10.88	9,480,673.49	0.23	196,110.52	0.18	156,783.82
19 Local roads	428,289.06	27.22	10.93	4,681,728.65	0.24	103,274.95	0.19	79,476.26
14 Low capacity ramp	47,102.81	14.47	11.86	558,452.23	0.38	18,024.25	0.25	11,553.09
11/12 High capacity ramp	304,846.39	32.03	10.42	3,176,499.40	0.24	71,924.88	0.22	67,066.21
1 Interstate	884,273.17	46.83	10.26	9,074,703.21	0.22	191,308.39	0.31	271,745.37
2 Principal arterial	357,747.90	42.36	10.93	3,909,079.79	0.21	73,438.10	0.21	76,816.02
6 Minor arterial	208,543.40	46.21	11.16	2,326,347.74	0.20	41,202.65	0.22	46,385.58
7 Major Collector	464,425.85	40.50	10.89	5,057,631.85	0.21	97,063.86	0.20	93,350.74
8 Minor collector	345,600.85	40.93	10.92	3,772,568.29	0.21	71,931.41	0.20	69,764.94
9 Local roads	604,428.52	41.98	10.98	6,636,049.31	0.21	124,531.47	0.20	123,284.22
2 Low capacity ramp	5,911.31	12.19	12.28	72,572.27	0.44	2,618.61	0.28	1,669.69
1 High capacity ramp	19,109.86	34.98	9.70	185,369.31	0.24	4,587.58	0.28	5,350.76
<b>TOTAL</b>	<b>12,820,010.01</b>			<b>139,269,693.53</b>	<b>g/day</b>	<b>2,792,844.20</b>	<b>g/day</b>	<b>2,810,511.93</b>
				<b>153.52</b>	<b>tons/day</b>	<b>3.08</b>	<b>tons/day</b>	<b>3.10</b>

**2027 Build**

Functional Classification	Daily VMT	Avg speed	CO rate	CO Sum	VOC rate	VOC Sum	NOx rate	NOx Sum
		(mph)	(g/mi)	(g/day)	(g/mi)	(g/day)	(g/mi)	(g/day)
11/12 Interstate/ Freeway	4,762,237.40	46.26	11.06	52,649,716.08	0.21	988,058.21	0.23	1,107,326.25
14 Principal arterial	1,435,232.69	31.37	10.72	15,379,181.66	0.23	326,183.73	0.20	283,126.75
16 Minor arterial	2,085,979.47	29.60	10.72	22,361,009.99	0.23	483,136.92	0.20	417,195.89
17 Urban collector	869,968.44	32.49	10.88	9,469,561.51	0.23	195,757.88	0.18	156,594.32
19 Local roads	424,441.95	27.20	10.93	4,639,815.05	0.24	102,372.75	0.19	78,775.10
14 Low capacity ramp	47,104.25	14.56	11.84	557,554.61	0.38	17,925.02	0.24	11,511.87
11/12 High capacity ramp	305,760.73	32.02	10.42	3,186,026.81	0.24	72,144.52	0.22	67,267.36
1 Interstate	885,156.09	46.84	10.26	9,084,556.43	0.22	191,471.11	0.31	272,073.29
2 Principal arterial	357,483.89	42.35	10.93	3,905,886.23	0.21	73,394.55	0.21	76,748.69
6 Minor arterial	209,956.43	46.17	11.15	2,341,552.29	0.20	41,499.83	0.22	46,681.87
7 Major Collector	463,955.17	40.53	10.89	5,053,413.55	0.21	96,935.24	0.20	93,286.38
8 Minor collector	344,918.82	40.93	10.92	3,765,121.32	0.21	71,789.52	0.20	69,627.20
9 Local roads	602,999.89	42.04	10.98	6,622,292.14	0.21	124,172.87	0.20	123,057.09
2 Low capacity ramp	5,943.91	12.06	12.31	73,161.82	0.45	2,654.09	0.28	1,685.37
1 High capacity ramp	19,136.81	34.99	9.70	185,629.72	0.24	4,593.71	0.28	5,358.31
<b>TOTAL</b>	<b>12,820,275.94</b>			<b>139,274,479.22</b>	<b>g/day</b>	<b>2,792,089.93</b>	<b>g/day</b>	<b>2,810,315.74</b>
				<b>153.52</b>	<b>tons/day</b>	<b>3.08</b>	<b>tons/day</b>	<b>3.10</b>

**2027 Build with off-model assumptions**

Functional Classification	(Model) Daily VMT	Avg speed (mph)	VMT reductions		Reduced VMT	CO rate (g/mi)	CO Sum (g/day)	VOC rate (g/mi)	VOC Sum (g/day)	NOx rate (g/mi)	NOx Sum (g/day)	
			Bike/ped*	Transit**								
11/12 Interstate/ Freeway	4,762,237.40	46.26	0.00	-61,016.25	4,701,221.15	11.06	51,975,140.71	0.21	975,398.69	0.23	1,093,138.61	
14 Principal arterial	1,435,232.69	31.37	0.00	-18,388.94	1,416,843.74	10.72	15,182,135.63	0.23	322,004.50	0.20	279,499.18	
16 Minor arterial	2,085,979.47	29.60	-15,822.34	-26,726.65	2,043,430.49	10.72	21,904,898.96	0.23	473,282.08	0.20	408,686.10	
17 Urban collector	869,968.44	32.49	-6,598.79	-11,146.49	852,223.17	10.88	9,276,405.15	0.23	191,764.89	0.18	153,400.17	
19 Local roads	424,441.95	27.20	-3,219.43	-5,438.17	415,784.35	10.93	4,545,173.94	0.24	100,284.59	0.19	77,168.28	
14 Low capacity ramp	47,104.25	14.56	0.00	-603.52	46,500.72	11.84	550,410.93	0.38	17,695.35	0.24	11,364.38	
11/12 High capacity ramp	305,760.73	32.02	0.00	-3,917.56	301,843.17	10.42	3,145,205.79	0.24	71,220.17	0.22	66,405.50	
1 Interstate	885,156.09	46.84	0.00	-11,341.08	873,815.02	10.26	8,968,160.40	0.22	189,017.88	0.31	268,587.35	
2 Principal arterial	357,483.89	42.35	0.00	-4,580.27	352,903.62	10.93	3,855,841.99	0.21	72,454.18	0.21	75,765.34	
6 Minor arterial	209,956.43	46.17	0.00	-2,690.07	207,266.36	11.15	2,311,551.11	0.20	40,968.11	0.22	46,083.76	
7 Major Collector	463,955.17	40.53	0.00	-5,944.43	458,010.73	10.89	4,988,666.60	0.21	95,693.25	0.20	92,091.15	
8 Minor collector	344,918.82	40.93	0.00	-4,419.28	340,499.54	10.92	3,716,880.64	0.21	70,869.72	0.20	68,735.10	
9 Local roads	602,999.89	42.04	0.00	-7,725.95	595,273.95	10.98	6,537,443.91	0.21	122,581.90	0.20	121,480.42	
2 Low capacity ramp	5,943.91	12.06	0.00	-76.16	5,867.75	12.31	72,224.43	0.45	2,620.08	0.28	1,663.77	
1 High capacity ramp	19,136.81	34.99	0.00	-245.19	18,891.62	9.70	183,251.33	0.24	4,534.86	0.28	5,289.65	
<b>TOTAL</b>	<b>12,820,275.94</b>		<b>-25,640.55</b>	<b>-164,260.00</b>	<b>12,630,375.39</b>		<b>137,213,391.56</b>	<b>g/day</b>	<b>2,750,390.25</b>	<b>g/day</b>	<b>2,769,358.76</b>	<b>g/day</b>
							Hybrid bus emission reductions***	<b>g/day</b>	<b>-75,090.00</b>	<b>g/day</b>	<b>-698,090.00</b>	<b>g/day</b>
							<b>Adjusted total</b>	<b>g/day</b>	<b>2,675,300.25</b>	<b>g/day</b>	<b>2,071,268.76</b>	<b>g/day</b>
							<b>150.98</b>	<b>tons/day</b>	<b>2.95</b>	<b>tons/day</b>	<b>2.28</b>	<b>tons/day</b>

**Emission Factors (rates) from:**

MOBILE6.2 Emission Factor Tables for Regional, Mesoscale, and CMAQ Project Emission Calculations - Part A (NYSDOT EAB)

\*bike/ped reduction assumes decrease of 0.2% VMT in 2027 build scenario =

-25,641 miles/day

\*\*transit reduction assumes 32,852 daily riders with 5 mile average trip length in 2027 build scenario =

-164,260 miles/day

\*\*\*Emission reductions resulting from Centro conversion from CNG to diesel-electric hybrid vehicles based on Centro data

**Table 1 - Emissions Analysis**  
**SMTC Long-Range Plan 2027 Energy Analysis**

<b>Scenario</b>	<b>Daily VMT</b>	<b>VOC (grams)</b>	<b>NO<sub>x</sub> (grams)</b>	<b>CO (grams)</b>
<b>2027 No-build</b>	12,820,010	2,792,844	2,810,512	139,269,694
<b>2027 Build</b>	12,820,276	2,792,090	2,810,316	139,274,479
<b>2027 Build with off-model transit and bike/ped assumptions</b>	12,630,375	2,675,300	2,071,269	136,965,362

**Table 2 - Direct Vehicle Energy  
SMTC Long-Range Plan 2027 Energy Analysis**

Scenario	Total VMT	Light Duty Vehicles					
		% of Total	VMT	Fuel Economy*	Fuel Used (gallons)	Direct Energy Consumption (btu)	% Change
2027 no-build	12,820,010	91.94%	11,786,076	21.25	554,639	69,329,859,996	-1.48
2027 build	12,630,375	91.94%	11,611,736	21.25	546,435	68,304,327,155	

Scenario	Total VMT	Medium Trucks					
		% of Total	VMT	Fuel Economy*	Fuel Used (gallons)	Direct Energy Consumption (btu)	% Change
2027 no-build	12,820,010	2.51%	321,355	8.61	37,323	4,665,431,439	-1.48
2027 build	12,630,375	2.51%	316,601	8.61	36,771	4,596,420,003	

Scenario	Total VMT	Heavy Trucks					
		% of Total	VMT	Fuel Economy*	Fuel Used (gallons)	Direct Energy Consumption (btu)	% Change
2027 no-build	12,820,010	5.56%	712,579	6.00	118,763	14,845,393,532	-1.48
2027 build	12,630,375	5.56%	702,038	6.00	117,006	14,625,799,282	

Scenario	Total VMT	All Vehicles					
		% of Total	VMT	Fuel Economy*	Fuel Used (gallons)	Direct Energy Consumption (btu)	% Change
2027 no-build	12,820,010	100.00%	12,820,010	n/a	710,725	88,840,684,966	-1.48
2027 build	12,630,375	100.00%	12,630,375	n/a	700,212	87,526,546,440	

Notes:

\*From Table 2 - Fuel Correction Factors NYSDOT Subtask 12a: Energy Analysis Guidelines for TIPs and Plans

2027 Build scenario includes off model transit and bike/ped assumptions.

%of total: Vehicle split was estimated based on aggregating the 27 vehicle types from the 1999 Summer Time Vehicle Distributions Region 3, April, 2004 NYSDOT and then averaging their percentages.

Vehicle Type VMT: Calculated by multiplying the percentage of each vehicle type by the total VMT.

Fuel Used: Calculated by dividing Vehicle VMT by the fuel economy.

Direct Energy Consumption: Calculated by multiplying the rate of 125,000 BTU per gallon by the fuel used .

**Table 3 - Indirect Energy  
SMTC Long-Range Plan 2027 Energy Analysis**

**Roadway Construction Energy Consumed**

Project Description*	Type of Improvement	Distance (miles)	Lanes	Lane Miles	Urban / Rural	Constr. Energy per Lane Mile (rate)	Constr. Energy Consumed (BTUs)
Bear Street Extension	New construction (4 lanes)	0.4	4	1.4	Urban	15.24	21,336,000,000
Third Lane of Frontage Road	Widen from 2 to 3 lanes	0.1	1	0.1	Urban	6	600,000,000
Additional Travel Lane on NY 31	Widen from 2 to 5 lanes	1.0	3	3.06	Urban	6	18,360,000,000
North Salina Street Lane Reduction	Restoration and rehabilitation	0.2	3	0.6	Urban	2.76	1,656,000,000
<b>TOTAL</b>							<b>41,952,000,000</b>

**Projects with no construction**

Project Description	Type of Improvement
NYSDOT Bridge Painting 2008	Maintenance
NYSDOT Bridge Painting 2009	Maintenance
NYSDOT Bridge Painting 2010	Maintenance

*Notes:*

*\*There are no non-exempt construction projects in the SMTC 2007-2012 TIP. The projects listed are included in SMTC's long-range planning and are considered essential transportation projects to service anticipated development, although they are not programmed on the current TIP.*

*Indirect vehicle energy was calculated using the Lane Mile Approach as described in Subtask 12a: Energy Analysis Guidelines for TIPs and Plans. Table 4 of Subtask 12a provides a table that associates a rate of Construction Energy Consumed per lane mile based on several types of improvements. The number of lane miles for each project was then multiplied by that rate, and a rate of Construction Energy Consumed in BTU's was calculated.*

**Table 4- CO<sub>2</sub> Emissions Estimates from Direct Energy Consumption  
SMTC Long-Range Plan 2027 Energy Analysis**

Scenario	Direct Energy (BTUs)			Carbon Emission Coefficients *			Metric Tons Carbon Emitted** (100% oxidation)			Total Metric Tons Carbon Emitted***			Total Tons Carbon Emitted****			
	Light Duty Vehicle	Medium Truck	Heavy Truck	Light Duty Vehicle	Medium Truck	Heavy Truck	Light Duty Vehicle	Medium Truck	Heavy Truck	Light Duty Vehicle	Medium Truck	Heavy Truck	Light Duty Vehicle	Medium Truck	Heavy Truck	All Vehicles
<b>2027 no-build</b>	69,329,859,996	4,665,431,439	14,845,393,532	19.34	19.95	19.95	1,341	93	296	1,327	92	293	1,463	102	323	<b>1,887</b>
<b>2027 build</b>	68,304,327,155	4,596,420,003	14,625,799,282	19.34	19.95	19.95	1,321	92	292	1,308	91	289	1,441	100	318	<b>1,860</b>

**Difference: 2027 no-build minus build -28**

2027 Build scenario includes off model transit and bike/ped assumptions.

\* For this analysis, all Light Duty Vehicles are assumed to use gasoline and all trucks are assumed to use diesel

As per NYSDOT Subtask 12b: Greenhouse Gases (CO<sub>2</sub>) Emissions Estimates Guidelines for TIPs and Plans:

\*\* Metric Tons C emitted (assuming 100% oxidation) = Total direct energy for roadway projects (BTUs) x Carbon emission coefficient (10<sup>6</sup> metric tons of Carbon/10<sup>15</sup> BTU)

\*\*\* a small portion (1%) of total carbon does not oxidize during combustion

\*\*\*\* 1 metric ton = 1.102 tons

**Table 5 - CO<sub>2</sub> Emissions Estimates from Indirect Energy Consumption  
 SMTC Long-Range Plan 2027 Energy Analysis**

<b>Scenario</b>	<b>Indirect Energy (BTUs)</b>	<b>Carbon Emission Coefficient</b>	<b>Metric Tons Carbon Emitted</b>	<b>Total Metric Tons Carbon Emitted</b>	<b>Total Tons Carbon Emitted</b>
<b>2027 build</b>	41,952,000,000.00	19.95	836.94	828.57	<b>913.09</b>

**Table 6 - Summary**  
**SMTC Long-Range Plan 2027 Energy Analysis**

Scenario	VMT	Air Pollution Emissions			Energy		Greenhouse Gas (CO <sub>2</sub> ) Emissions	
		VOC g/day	NO <sub>x</sub> g/day	CO g/day	Direct (BTUs)	Indirect* (BTUs)	Direct (tons)	Indirect (tons)
<b>2027 No-Build</b>	12,820,010	2,792,844	2,810,512	139,269,694	88,840,684,966	0	1,887	0
<b>2027 Build (with off-model assumptions)</b>	12,630,375	2,675,300	2,071,269	136,965,362	87,526,546,440	41,952,000,000	1,860	913
<b>Change (Build - No Build)</b>	-189,635	-117,544	-739,243	-2,304,332	-1,314,138,526	--	-28	--
<b>Percent Change (Build - No Build)</b>	-1.48%	-4.21%	-26.30%	-1.65%	-1.48%	--	-1.48%	--

*\* The intent of the indirect energy and greenhouse gas calculations was to measure the impact of the construction of the projects in the SMTC Long-Range Plan. The indirect energy used in the 2027 No-Build scenario is zero (as is the greenhouse gas emissions arising from the indirect energy used); therefore it is not possible to compute the percentage difference between the two scenarios.*

## **APPENDIX F**

### **PUBLIC INVOLVEMENT PROCESS**

## **Public Involvement Process**

Engaging the public early and often in the planning process is critical to the success of any transportation plan or program, and it is required by numerous State and Federal laws. Such legislation underscores the need for public involvement, calling on MPOs such as the SMTC to provide citizens, affected public agencies, representatives of transportation agencies, private providers of transportation and other interested parties with a reasonable opportunity to participate and comment on transportation plans and programs.

The SMTC recognizes that the active involvement of the entire community, in addition to the SMTC Policy, Planning and Study Advisory Committee (SAC) members, is paramount to good transportation planning. Public comments are valued because they can shape the direction of a particular transportation study or planning activity, and may help to identify new transportation projects that are important to citizens of the area.

As part of its public involvement efforts, the SMTC also recruits the necessary technical personnel and community representatives to serve on a project-specific SAC. Such a committee is created for most of the SMTC planning activities, but in the case of the development of the TIP, a standing subcommittee (known as the Capital Projects Committee (CPC)) assists in managing the project, as well as providing needed input and direction. In addition, for many of the SMTC activities, a project-specific Public Involvement Plan (PIP) sets the framework for the public involvement opportunities that will be available throughout the course of the project. Public input opportunities are also provided during meetings of the SMTC Executive, Planning and Policy Committees.

Other methods the SMTC uses to inform and invite the public to participate include: the use of press releases to announce various meetings, project updates, and available reports; the production of its newsletter, *DIRECTIONS*; the creation and ongoing development of the SMTC web site; distribution of various project-specific fact sheets and flyers; and the use of public comment cards and questionnaires. In addition, the SMTC invites the public to “**get involved in the transportation planning process**” and more specifically the TIP process in its MPO brochure, *A Citizen’s Guide to Transportation Planning*. This brochure includes a detailed and informative two-page section on the Transportation Improvement Program. It includes general information on the TIP, and also provides answers to the questions: *Who Participates in the TIP process? How are Projects Selected for the TIP?* Due to this information being present, the SMTC has used the brochure as an educational resource for the TIP, in addition to its primary purpose as a public relations tool for the MPO.

Insofar as the preparation of the *2007-2012 Transportation Improvement Program* is concerned, the public involvement process included announcing opportunities for review and comment on draft documents in the news media, extensive posting of the TIP and the TIP process on the SMTC web site [www.smtcmpo.org], as well as utilizing the public forums of the SMTC Executive, Planning and Policy Committee meetings. SMTC also worked closely with members of the ICG in preparation of this document.

In August 2002, the SMTC, in conjunction with the Ithaca Tompkins County Transportation Council (ITCTC) and the NYSDOT, published a **Transportation Improvement Program (TIP) Guidebook**. This publication served as a tool in assisting project applicants in completing a TIP application. The Guidebook provided general information on the TIP: What is the TIP? What types of projects should be included in the TIP? How are projects selected for the TIP? It also provided step-by-step information on the TIP and the Statewide Transportation Improvement Program (STIP) Development Process (e.g., soliciting project proposals, preparing and submitting project proposals, project evaluation, committee review and recommendations, and public involvement). This Guidebook was reviewed and updated in 2006 to reflect changes in procedures and to simplify the process for project sponsors. An electronic version was posted on the website and Initial Project Proposal (IPP) forms and Congestion Mitigation/Air Quality (CMAQ) forms were made available in several formats for electronic submissions to the MPO. A copy of the Guidebook may be found on the SMTC website ([www.smtcmpo.org](http://www.smtcmpo.org)).

As a follow-up to the availability of the TIP Guidebook, the SMTC sent out a “call letter” in October 2006 to all municipalities in Onondaga County, as well as its Policy and Planning Committee members, seeking public input for projects to be evaluated for consideration in the *2007-2012 Transportation Improvement Program*.

As mentioned previously in this section, the SMTC recruits the necessary technical personnel and community representatives to serve on the CPC. Assisting in managing the project, as well as providing input and direction, the CPC met several times throughout the process before recommending a Draft TIP to the public and SMTC Planning Committee.

Throughout the development of the *2007-2012 Transportation Improvement Program*, the SMTC announced (via legal notice and press release distribution) the commencement of a 30-day public comment period. The public was made aware that a draft document could be obtained at the SMTC offices; viewed online at [www.smtcmpo.org](http://www.smtcmpo.org), or individually mailed upon request. During this 30-day timeframe, a meeting was held to solicit additional comment from agencies and the general public. Any public comments received were accepted by the SMTC and considered for inclusion in the Final TIP.

As part of the review process, the SMTC scheduled Planning and Policy Committee meetings to review, approve and endorse the *2007-2012 Transportation Improvement Program*. Upon endorsement, a news release will be distributed, announcing the availability of the Final *2007-2012 Transportation Improvement Program*. The official document will be made available to the public in the same manner listed in the previous paragraph.

## **APPENDIX G**

### **GLOSSARY AND LIST OF ABBREVIATIONS**

## Glossary and List of Abbreviations

**ADA** - Americans with Disabilities Act - Significant civil rights legislation passed in 1990 that prohibits discrimination against all individuals with disabilities. With certain statutory exceptions, public and private entities providing fixed route or demand responsive transportation services must acquire accessible vehicles or provide equivalent service to individuals with disabilities.

**ADA Plan** - CNYTRA's plan to address the transit requirements of the Americans with Disabilities Act by defining participant eligibility for the Call-a-Bus program and providing wheelchair lifts for fixed route service.

**Appropriation** - Legislation that allocates budgeted funds from general revenues to programs that have been previously authorized by other legislation. The amount of money appropriated may be less than the amount authorized.

**Apportionment** - At the federal level, approval by the Office of Management and Budget for an agency to spend funds appropriated by Congress. The public reporting of the OMB approved apportionment, detailing the amount of transit formula funding available to each urbanized area or designated recipient, is done by the FTA and is commonly referred to as "the apportionment".

**Authorization** - Federal legislation that creates the policy and structure of a program including formulas and guidelines for awarding funds. Authorizing legislation may set an upper limit on program spending or may be open ended, as in "such sums as may be necessary". General revenue funds to be spent under an authorization must be appropriated by separate legislation.

**AVL** - Automatic Vehicle Locator - An automatic tracking system which employs advanced technology to locate transit vehicles.

**CAAA** - Clean Air Act Amendments of 1990. Landmark legislation passed by Congress that renews the Federal Clean Air Act and makes significant program changes. For the transportation sector, changes include a definition of conformity and requirement for the formulation by EPA and DOT of regulations regarding conformity, and requirements for the use and development of clean fuels and vehicles.

**Capital costs** - Non-recurring or infrequently recurring cost of long-term assets, such as land, guideways, stations, buildings, and vehicles. The costs often include related expenses; for example, depreciation and property taxes.

**CNYRTA** - Central New York Regional Transportation Authority- The regional public transit provider for Central New York.

**Conformity Analysis** - A determination made by the MPOs and the US DOT that transportation plans and programs in non-attainment or maintenance areas meet the "purpose" of the SIP (see definition below), which is to reduce pollutant emissions to meet air quality standards.

**CMS** - Congestion Management System - A systematic process which provides information regarding transportation system performance to decision-makers for selecting and implementing cost-effective strategies to manage new and existing facilities for the purpose of alleviating congestion and enhancing the mobility of persons and goods.

**CMAQ** - Congestion Mitigation and Air Quality Program - A funding program created in the ISTEA for projects and activities which reduce congestion and improve air quality in regions not yet attaining federal air quality standards-

**CHIPS** - Consolidated Highway Improvement Program - A state funding program for local road improvements.

**Consultation** - "One party confers with another identified party and, prior to taking action(s), considers that party's view."

**Cooperation** - "Actions taken are subject to the concurrence of the identified parties."

**Coordination** - "The comparison of the transportation plans, programs, and schedules of one agency with related plans, programs and schedules of other agencies or entities with legal standing, and the subsequent adjustment of plans, programs and schedules to maintain consistency and reduce or resolve possible omissions, duplications, or conflicts."

**Corridor** - Any major transportation route, which includes parallel limited access -highways, major arterials, rail or transit lines. With regard to traffic incident management, a corridor may include more distant transportation routes, which can serve as viable alternatives to each other in the event of accidents.

**Emissions Budget** - The part of the SIP (see definition below), which identifies the allowable emissions levels, mandated by the NAAQS for certain pollutants emitted from -mobile, stationary, and area sources. The emissions levels are used for meeting emission -reduction milestones, attainment, or maintenance demonstration.

**Emissions Inventory** - A complete list of sources and amounts of pollutant emissions within a specific area and time interval. Part of the SIP.

**Enhancements** - ISTEA defines transportation enhancement activities for the purpose of funding under the Surface Transportation Program as "the provision of facilities for pedestrians and bicycles, acquisition of scenic easements and scenic or historic sites, scenic or historic highway programs, landscaping and other scenic beautification, historic preservation, rehabilitation and operation of historic transportation buildings, structures, facilities and canals, preservation of abandoned railway corridors including the conversion and use thereof for pedestrian or bicycle trails, control and removal of outdoor advertising, archaeological planning and research, and mitigation of water pollution due to highway runoff."

**Exempt - Non-exempt Projects** - Transportation projects which will not change the operating characteristics of a roadway are exempt from the Transportation Improvement Plan conformity analysis. Conformity analysis must be completed on projects that affect the distance, speed, or capacity of a roadway.

**Federal Action** - "Any activity engaged in by a department, agency, or instrumentality of the federal government, or any activity that a department, agency, or instrumentality of the federal government supports in any way, provides financial assistance for, license, permits or approves."

**Federal-Aid Highways** - Those highways eligible for assistance under Title 23 of the United States Code, as amended, except those functionally classified as local or rural minor collectors.

**FHWA** - Federal Highway Administration - The federal agency responsible for the approval of transportation projects that affect the defined federal highway system. Administratively, it is under US DOT and is the sister agency of FTA.

**FTA** - Federal Transit Administration - The federal department of mass transportation, which is under US DOT (formerly called the Urban Mass Transit Administration or UMTA). The FTA is the sister agency of FHWA.

**FY** - Fiscal Year - New York State fiscal years, used in documents like the State Budget, run from April 1 to March 31. SMTC also operates on an April 1 to March 31 fiscal year.

**FFY** - Federal Fiscal Year - Federal fiscal years, used in federally mandated documents, operate from October 1 to September 31.

**Freeway** - A divided highway for through traffic that has full access control and grade separations at all intersections.

**Functional Classification** - The grouping of streets and highways into classes, or systems according to the character of service that they are intended to provide. Facilities are divided according to the degree they provide access to places vs. mobility between places. The recognition that individual roads do not serve travel independently and most travel involves movement through a network of roads is basic to functional classification.

**GOP** - Goal Oriented Program - NYSDOT's internal capital program for state facilities and fund sources. The program is based in the achievement of performance-based goals for the state transportation systems.

**HOV** - High Occupancy Vehicle - Also called a multiple-occupant vehicle (MOV). Any passenger vehicle that meets or exceeds a certain predetermined number of passengers. For designation of dedicated freeway lanes, a responsible jurisdiction may define an HOV as a vehicle containing two or more occupants, with federal approval. A definition of three or more occupants requires no additional federal approvals.

**HBRR** - Highway Bridge Repair and Replacement - A federal funding program for the repair, rehabilitation, and replacement of bridges. Administered by NYSDOT, both state-owned and local bridges are eligible for this capital program.

**HPMS** - Highway Performance Monitoring System - The system used by FHWA to provide information to Congress, the States, and the public on the extent and physical condition of the nation's highway system, its use, performance, and needs. The system includes an inventory of the nation's highways including traffic volumes

**Highway Safety** - The reduction of traffic accidents, and deaths, injuries, and property damage resulting there from, on public roads.

**(H)SMS** - Highway Safety Management System - Systematic processes to ensure that all opportunities to improve highway safety are identified, considered, implemented where appropriate, and evaluated.

**I & M** - Inspection and Maintenance Program - An emissions testing and inspection program, implemented by states in non-attainment areas, to ensure that the catalytic or other emissions control devices on in-use vehicles are properly maintained.

**IVHS** - Intelligent Vehicle and Highway System - ISTEA established the IVHS. Program to enhance the capacity, efficiency, and safety of the federal-aid highway system and to serve as an alternative to additional physical capacity. Automated highways and vehicles are one component of this approach. IVHS is defined to include the development of application of electronics, communications or information processing (including advanced traffic management systems, commercial vehicle control systems, advanced public transportation systems, satellite vehicle tracking systems, and advanced vehicle communications systems) used singly or in combination to improve the efficiency and safety of surface transportation systems.

**Intermodal facility** - A transportation element that accommodates and interconnects different modes of transportation. Intermodal facilities include, but are not limited to, highway elements, coastal, inland and Great Lakes ports, canals, pipeline farms, airports, marine and/or rail terminals, truck terminals, and intercity bus terminals. Intermodal transportation facilities serve intrastate, interstate, and international movement of goods and people.

**IMS** - Intermodal Management System - A systematic process that collects and analyzes Intermodal facilities, connections, choices, coordination, and cooperation. It provides information of decision-makers to select cost-effective strategies for the movement of both goods and people.

**ISTEA** - Intermodal Surface Transportation Efficiency Act of 1991 - Legislation passed by Congress in December 1991 that provides for a major restructuring of the highway program. Key components of the Act include a greatly increased flexibility in the programming of projects, a level playing field between highway and transit projects with a consistent 80/20 matching ratio, ties to the Federal Clean Air Act and Americans with Disabilities Acts, and an emphasis on maintenance of the existing system and operational improvements.

**Interstate Maintenance** - ISTEA establishes a funding category for maintenance of the Interstate system that specifically limits the use of these funds for capacity increasing projects that are not high occupancy vehicle lanes or auxiliary (merging) lanes. Eligible activities include reconstruction of bridges, interchanges and overcrossings along existing Interstate routes, including the acquisition of right-of-way where necessary and preventative maintenance. Projects are selected by NYSDOT and are included in SMTc TIP.

**Lifecycle Cost Analysis** - Procedure for evaluating the economic worth of one or more projects or investments by discounting future costs over the expected useful life of the project or investment.

**LOS** - Level of Service - A measure of congestion, which compares actual or projected traffic volume with the maximum capacity of the intersection or road in question. LOS can also be applied to other transportation services as an indication of the quality and quantity of transportation service provided

**LRTP** - Long-Range Transportation Plan - A comprehensive long-range (20-30 year) plan for the transportation system of the region, updated every three years by the MPO. The LRTP includes goals, objectives, and policies, and recommends transportation improvements. The financial scenarios are developed: one fiscally constrained to existing revenue sources only; the other reflects a funding plan for a "desired" set of transportation improvements.

**Maintenance** - Legally, maintenance activities are non-containment activities that preserve the function of the existing transportation system.

**Maintenance Area** - "Any geographical region of the United States that the EPA has designated (under Section 175A of the FCAA) for a transportation related pollutant(s) for which a national ambient air quality standard exists." This designation is used after non-attainment areas reach attainment.

**Major metropolitan transportation investment** - Proposed regulations put forward by USDOT would define a major metropolitan transportation investment as a "project that involves new construction or extension of a controlled access principle arterials, or the capacity expansion of a controlled access principal arterial by a least one lane (or an equivalent increase in capacity through access control or technological improvement) or construction or extension of a busway, high occupancy vehicle (HOV) facility, or fixed guideway transit facility, or adding lanes to a busway or adding tracks to fixed guideway transit facility, or a substantial increase in service on a fixed guideway." This definition is significant for projects subject to analysis by the MPO in its planning process.

**MAB** - Metropolitan Area Boundary - The boundary of the metropolitan planning and programming area.

**Metropolitan Planning Area** - The area, established by the MPO and the Governor in accordance with ISTEA regulations, in which the federally mandated metropolitan planning

process must be carried out. All of Onondaga County and small portions of Oswego County and Madison County comprise the planning area.

**MPO** - Metropolitan Planning Organization - A federally required transportation planning body responsible for the Long Range Transportation Plan (LRTP) and the Transportation Improvement Program (TIP) in its region. SMTC is the MPO for the Syracuse urbanized area.

**Mobile Sources** - Mobile sources of air pollutants include motor vehicles, aircraft, seagoing vessels, and other transportation modes. The mobile source related pollutants of greatest concern are carbon monoxide (CO), transportation hydrocarbons (HC), nitrogen oxides (NOx), and particulate matter (PM-10). Mobile sources are subject to a different set of regulations than are stationary and area sources of air pollutants.

**NAAQS** - National Ambient Air Quality Standards - The standards set by EPA for various pollutants known to cause health related problems, including ozone and its precursors (nitrous oxides and hydrocarbons), carbon monoxide, lead, sulfur dioxide, and particulate matter (PM-10).

**NHS** - National Highway System - ISTEA established a 155,000-mile NHS to provide an interconnected system of principal arterial routes to serve major travel destinations and population centers, international border crossings, as well as ports, airports, public transportation facilities, and other intermodal transportation facilities. The NHS must also meet national defense requirements and serve interstate and inter-regional travel. Designation of the actual routes in the system is a cooperative process whereby the states (NYSDOT) propose the NHS to the U.S. Secretary of Transportation. Congressional approval by November 1995 is required. Eligible projects of NHS funding include new construction, reconstruction, and rehabilitation of highways, operational improvements, mass transit projects in an NHS corridor, safety improvement, transportation planning, traffic management and control, parking facilities, carpool projects, and bicycle and pedestrian projects. In areas that do not meet federal clean air standards, up to 100% of NHS funding is transferable to the STP upon request of the state.

**Network Level Analysis** - An analysis pertaining to policy, system planning, programmatic, or budgeting issues for the whole inventory of facilities (usually bridge and pavement) or a subset thereof.

**NYSDEC** - New York State Department of Environmental Conservation - The state environmental protection agency responsible for air quality planning matters, particularly the adoption of the SIP (see definition below).

**NYSDOT** - New York State Department of Transportation - The state transportation agency that is the owner/operator and maintainer of the state highway system. NYSDOT is organized into a Central Office, which deals with statewide issues, and regional offices. SMTC is entirely within Region 3 of NYSDOT.

**NYSTA** - New York State Thruway Authority - The state agency responsible for the operations, maintenance, and improvement of the New York State Thruway. Authority was recently

expanded to encompass the canal system and economic development projects related to the Thruway and the canals.

**Non-attainment Area** - "Any geographic region of the United States that the EPA has designated as non-attainment for a transportation related pollutant(s) for which a national ambient air quality standard exists." Levels of non-attainment are: marginal, moderate, major, and severe.

**OA** - Obligation Authority - The authority granted by USDOT for the states to obligate appropriated federal funds. OA is generally less than appropriated amounts, with the difference used to finance the federal deficit.

**Paratransit** - Forms of transportation services that are more flexible and personalized than conventional fixed route, fixed schedule service, but not including such exclusive services as charter bus trips. The vehicles are usually low- or medium-capacity highway vehicles, and their service offered is adjustable in various degrees to individual user's desires. Its categories are public, which is available to any user who pays a predetermined fare (such as taxis), and semi-public, which is available only to people of a certain group, such as the elderly, employees of a company, or residents of a neighborhood.

**PMS** - Pavement Management System - A systematic process that collects and analyzes pavement information used as input in selecting cost-effective strategies for providing and maintaining pavements in a serviceable condition.

**PE** - Preliminary Engineering - The phase of project implementation that occurs after programming, but before right-of-way acquisition and construction. It includes environmental analysis and preliminary design.

**Principle Arterial** - The functional classification system at the federal level defines principal arterials for rural areas, urbanized area, and small urban areas. (Note: other definitions of principal arterials exist.) In urbanized areas, the principal arterial system carries the major portion of trips entering and leaving the urban area, as well as the majority of through movements desiring to bypass the central city. Significant intra-area travel, such as between major inner city communities, or between major suburban centers, as well and continuity for all rural arterials which intercept the urban boundary are also included. 40-65% of the VMT (see definition below) is accounted for on this system. Because of the nature of travel served by the principal arterials system, almost all fully and partially controlled access facilities will be part of this functional system, however; this system is not restricted to controlled access routes.

**Privatization** - The contracting of public services or selling public assets to private industry.

**Programming** - The inclusion of a candidate project in an officially endorsed TIP or STIP. The decision to program a project is based on an evaluation of its merits compared to other candidate actions. Programming is a commitment to the future implementation of the project, contingent upon the completion of required environmental analysis and available funding.

**PIN** - Project Identification Number - Unique number assigned by NYSDOT to identify projects in the capital program.

**Project Selection** - After the programming process is complete, projects are selected for the obligation of federal funds based on readiness, for inclusion in the annual element of the TIP/STIP.

**PTMS** - Public Transportation Management System - A systematic process that collects and analyzes transit facilities, equipment, and rolling stock information on an ongoing basis. It provides information for decision-makers to select cost-effective strategies for providing and maintaining transit facilities, equipment, and rolling stock in a serviceable condition.

**Regionally Significant** - The proposed rule from USDOT on metropolitan planning defines regionally significant to mean "any transportation facility with an arterial or higher functional classification, plus any other facility that serves regional travel needs (such as access to and from the area outside the region, to major activity centers in the region, or to transportation terminals) and would normally be included in the modeling for the transportation network." This definition is subject to change in the final regulations.

**Responsible Agency** - The agency that has agreed to be responsible for the state and local share of a federally funded project.

**SAFETEA-LU** – Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users – On August 10, 2005, President Bush signed into law PL 109-59, the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) authorizing highways, highway safety and transit surface transportation programs for a 5 year period 2005-2009.

**SOV** - Single Occupancy Vehicle - Vehicles that contain only one occupant.

**SDF** - State Dedicated Fund State funds that are dedicated for transportation purposes. The legislature establishes the split between transit and highway funding. Funding levels are part of the annual budget negotiation process, and project selection is conducted by NYSDOT.

**SEQR** - State Environmental Quality Review Act - State Law (6NYCRR 617) which requires the review and evaluation of the environmental impacts of state and local discretionary actions, including issuance of discretionary permits, licenses, and approvals, the undertaking of projects, and the adoption of resource management plans, rules, and policies that affect the environment.

**SFY** - State Fiscal Year - New York State fiscal years, used in documents like the State Budget, run from April 1 to March 31.

**SIP** - State Implementation Plan - An air quality plan mandated by the Federal Clean Air Act (FCAA), submitted by the New York State Department of Environmental Conservation, Air Resources Division. The SIP contains procedures to monitor, control, maintain, and enforce compliance with federal air quality standards.

**STIP** - Statewide Transportation Improvement Program - "A staged multiyear program of transportation projects that are capital and non-capital, highway and transit, metropolitan and non-metropolitan, federally funded and non-federally funded."

**STP**- Surface Transportation Program - One of the key capital programs created in the ISTEA, it provides flexibility in expenditures of funds for highways, transit, pedestrian, and bicycle facilities.

**SMTC** - Syracuse Metropolitan Transportation Council - The regional transportation planning and programming agency for the Syracuse Metropolitan Planning Area. SMTC was created in 1966 as the Metropolitan Planning Organization for the Syracuse urbanized area.

**3C** - "Three C" = continuing, comprehensive, and cooperative - This term refers to the requirements set forth in the Federal Highway Act of 1962 that transportation projects in urbanized areas be based on a "continuing, comprehensive transportation planning process carried out cooperatively by states and local communities." ISTEA's planning requirements broaden the framework for such a process to include consideration of important social, environmental and energy goals, and to involve the public in the process at several key decision-making points.

**TEA-21** – Transportation Equity Act for the 21<sup>st</sup> Century – On June 9, 1998, the President signed into law PL 105-178, the Transportation Equity Act for the 21st Century (TEA-21) authorizing highway, highway safety, transit and other surface transportation programs for the next 6 years. Subsequent technical corrections in the TEA 21 Restoration Act have been incorporated; thus, the material presented here reflects the combined effects of both Acts and the two are jointly referred to as TEA-21. This legislation builds on the initiatives established in the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA), which was the last major authorizing legislation for surface transportation. This new Act combines the continuation and improvement of current programs with new initiatives to meet the challenges of improving safety as traffic continues to increase at record levels, protecting and enhancing communities and the natural environment as we provide transportation, and advancing America's economic growth and competitiveness domestically and internationally through efficient and flexible transportation.

**TOA** - Transit Operating Assistance - State funding program for transit operating assistance. Administered by NYSDOT.

**TCM** - Transportation Control Measure - A measure intended to reduce pollutant emissions from motor vehicles. Examples of TCMs include programs to encourage ride sharing or public transit usage, and city or county trip reduction ordinances.

**TDM** - Transportation Demand Management - A set of strategies to reduce the demand for transportation including, but not limited to, employer trip reduction, ride sharing, incorporation of flexible work schedules, and land use strategies to cluster development.

**TIP** - Transportation Improvement Program - "A staged multiyear program of transportation projects for a metropolitan planning area, excluding planning and research activities." A spending plan for federal funding expected to flow to the region from all sources for transportation projects of all types. By federal law, SMTC prepares the TIP annually with the cooperation of local governments, transit operators, and the New York Department of Transportation. The TIP officially covers a five-year period.

**TMA** - Transportation Management Area - As defined by ISTEA; a TMA is designated by the Secretary of Transportation for all urbanized areas over 200,000 with boundaries contiguous to that of the MPO. TMA's must include a congestion management system (CMS) in their planning process and are responsible for project selection under the STP program.

**UPWP** - Unified Planning Work Program - A federally required document annually produced by all MPO's that describes all metropolitan transportation and transportation related planning activities anticipated within the area during the new 1 or 2-year period regardless of funding source. It is cooperatively developed with NYSDOT, NYSDEC, and local agencies.

**USDOT** - United States Department of Transportation - The department of the federal government, which includes the Federal Highway Administration (FHWA) and the Federal Transit Administration. USDOT is headed by the Secretary of Transportation, cabinet-level.

**Urbanized Area** - An area with a population of 50,000 or more designated by the U.S. Census Bureau, within boundaries to be fixed by responsible state and local officials in cooperation with each other, subject to approval by the Secretary of Transportation.

**VMT** - Vehicle Miles Traveled - The sum of distances traveled by all motor vehicles in a specified region. Travel demand forecasting (modeling) is used to generate the average trip lengths for a region. The average trip length measure can be used in estimating vehicle miles of travel, which in turn is used in estimating gasoline usage or mobile source emissions of air pollutants.