NEW YORK METROPOLITAN TRANSPORTATION COUNCIL

DRAFT TRANSPORTATION CONFORMITY DETERMINATION

For

Federal Fiscal Years 2008-2012 TRANSPORTATION IMPROVEMENT PROGRAM

(As Amended)

And

Federal Fiscal Years 2010-2035 REGIONAL TRANSPORTATION PLAN

July 8, 2010
Draft

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PREFACE

This document was developed by the New York Metropolitan Transportation Council (NYMTC) to demonstrate that Conformity for its Regional Transportation Plan (RTP) and Transportation Improvement Program (TIP) complies with the motor vehicle emission milestones set forth in the New York State Implementation Plan for air quality. This Conformity Determination was necessitated by 23 CFR 450.322(l) which requires a conformity determination on all updated or amended transportation plans and programs and was done to reflect the update of the Poughkeepsie Dutchess County Transportation Council and the Orange County Transportation Improvement Programs .

II. ACRONYMS

ACRONYM	MEANING
CAA	Clean Air Act
CAAA	Clean Air Act Amendments of 1990
CMAQ	Congestion Mitigation/Air Quality
GIS	Geographic Information Systems
HAJ	Household, Auto-Ownership and Journey-Frequency
ICG	Interagency Consultation Group
I/M	Inspection and Maintenance
MDSC	Mode, Destination and Stop Choice
MOU	Memorandum of Understanding
MPO	Metropolitan Planning Organization
NAAQS	National Ambient Air Quality Standards
NOx	Nitrogen Oxides
NYBPM	New York Best Practice Model
NYMTC	New York Metropolitan Transportation Council
NYSDEC	New York State Department of Environmental Conservation
OCTC	Orange County Transportation Council
PDCTC	Poughkeepsie-Dutchess County Transportation Council
PM	Particulate Matter
PONA	Poughkeepsie Ozone Non-Attainment Area
RTP	Regional Transportation Plan
SIP	State Implementation Plan
TIP	Transportation Improvement Program
TransCAD	Transportation Computer Aided Data
USDOT	United States Department of Transportation
USEPA	United States Environmental Protection Agency
VHT	Vehicle hours traveled
VMT	Vehicle miles traveled
VOC	Volatile Organic Compound

III. OVERVIEW

Every urban area in the United States of more than 50,000 persons, as recognized by the US Bureau of the Census, must have a designated Metropolitan Planning Organization (MPO) in order to qualify for Federal highway and transit funding. NYMTC was formed in June, 1982 when the member agencies of the three affected New York State Transportation Coordinating Committees entered into a Memorandum of Understanding (MOU) to form a Council of Transportation Coordinating Committees. This Council as per its MOU was subsequently designated as the new MPO by Governor Carey on July 1, 1982 in chapter 451 of the laws of 1982. On September 20, 1982 the Governor reaffirmed the designation and noted that the council would be known as the New York Metropolitan Transportation Council (NYMTC). The Planning boundary of NYMTC includes the five counties of New York City (Bronx, Manhattan, Queens, Kings, and Richmond); Westchester, Rockland, Putnam, Nassau, and Suffolk Counties.

The Clean Air Act (CAAA) requires United States Environmental Protection Agency (USEPA) to establish the national ambient air quality standards (NAAQS) for various pollutants. Areas where air quality monitoring shows a violation of the NAAQS are designated "non-attainment." By law the NYSDEC is required to produce a plan, known as the *State Implementation Plan (SIP) that* details how sufficient emission reductions, including reductions in the mobile source sector, will be achieved to meet the NAAQS. In addition, non-attainment areas are subject to a provision in CAA §176(c) known as *transportation conformity*.

The intent of the transportation conformity process is to fully coordinate transportation and air quality planning to ensure that Plans, TIPs, and transportation projects will not 1) cause or contribute to any new violation of the NAAQS, 2) increase the frequency or severity of any existing NAAQS violations, or 3) delay timely attainment of the NAAQS or any required interim emissions reductions or other milestones in any area. Conformity requires that the overall set of investments moves the region toward cleaner air. Therefore, NYMTC, as the Metropolitan Planning Organization (MPO) must consider the air quality impacts of its transportation investments.

This conformity determination addresses all non-attainment areas within the NYMTC planning boundary. The New York Metropolitan eight-hour ozone (VOC and NOx) moderate non-attainment area includes all NYMTC counties except Putnam. The carbon monoxide (CO) maintenance area consists of New York City (New York, Kings, Queens, Bronx and Richmond counties), Nassau County, and Westchester County. The particulate matter (PM10) non-attainment area is limited to the county of New York. The NY-NJ-CT PM2.5 non-attainment area includes all NYMTC counties except Putnam and also includes all or portions of eight other MPO boundaries in the tri-state area as described in the particulate matter 2.5 portion of this document.

Putnam County is also classified non-attainment for 8-hour ozone. Putnam County, although in the planning boundary of NYMTC, is included in the Poughkeepsie moderate 8-hour ozone non-attainment area (PONA) consisting of Putnam, Orange, and Dutchess Counties. The conformity determination for the Putnam County portion of the NYMTC 2008 – 2012 TIP and 2035 Regional Transportation Plan (RTP) as amended, is made in a coordinated effort by NYMTC, the Poughkeepsie-Dutchess County Transportation Council (PDCTC) and the Orange County Transportation Council (OCTC) and is contained in Appendix 5.

In addition, this conformity determination addresses regulatory requirements associated with DC Circuit Court decisions related to implementation of the 8-hour ozone standard and transportation conformity. On December 22, 2006, the U.S. Court of Appeals for the District of Columbia Circuit both upheld and rejected certain aspects of EPA's framework for implementing the State Implementation Plan (SIP) requirements under Clean Air Act (CAA) Title I Part D for 8-hour ozone non-attainment areas. A key result of the court decision involved the continued implementation of emission control strategies in areas that were previously designated non-attainment for the 1-hour ozone standard under CAA Part D Subpart II and are now designated non-attainment for the 8-hour ozone standard under CAA Part D Subpart I.

Generally speaking, SIP requirements under Subpart I are less stringent than those under Subpart II. The "anti-backsliding" provision, CAA Section 172(e), provides that in the event "[EPA] relaxes a [primary National Ambient Air Quality Standard] after November 15, 1990, [EPA] shall...provide for controls applicable to areas designated non-attainment before such relaxation."

In the subject court case, the DC Circuit Court specifically concluded that transportation conformity requirements for areas designated non-attainment for the 1-hour ozone standard under Subpart II constitute "controls" under Section 172(e). The DC Circuit Court decision states that "EPA is required by statute to keep in place measures intended to constrain ozone levels – even ones that apply to outdated standards – in order to prevent backsliding."

Therefore, this conformity determination and associated analyses address the transportation conformity requirements that apply to the New York Metropolitan 8-hour moderate ozone non-attainment area, the New York Metropolitan 1-hour severe ozone non-attainment area, and the Poughkeepsie 1-hour and 8-hour moderate ozone non-attainment areas (PONA).

IV. CORE PROCESS

The process components noted below are the core of every NYMTC conformity determination for all pollutants in the regional analysis.

1.0 The Modeling Process

1.1 Travel Demand Modeling

To determine the impact of future transportation projects, NYMTC uses the third generation of travel demand models which are commonly referred to as activity based models. This model, known as the New York Best Practice Model (NYBPM), attempts to predict and simulate detailed travel patterns for every individual residing inside the study area over a 24-hour period. The model uses journeys (travel between two primary locations including stops) as a unit of travel rather than just home-to-work trips. The model also looks at the daily activity agenda of each household member and intra-household interactions between them, and other constraints that affect the choice of travel with respect to time and space. The model requires replicating the existing and proposed transportation networks through spatially accurate digital mapping - Geographic Information Systems (GIS). The model uses the digitizes networks and demographic data, along with journey generation, destination and mode choice, time of day travel, and trip assignment data to simulate travel patterns.

1.2 Networks

1.2.1 Roadway Network

The NYBPM highway network is maintained and applied with TransCAD, which features a Geographic Information Systems (GIS) framework that provides a realistic representation of highway route system. The highway network has more than 53,000 links and includes most minor arterial and above roadway facilities. The database includes information on number of lanes, functional class, speed, parking restriction, and truck usage. Centerline and total lane miles are noted in Table 1.

TABLE 1

ROADWAY CENTERLINE MILES & LANE MILES FOR BASE YEAR 2002

FUNCTIONAL CLASS	AREA	AREA	CENTERLINE MILES	TOTAL LANE MILES
1	Rural Interstate	(Rural)	491	2318
2	Rural Principal Arterial	(Rural)	2560	6364
6	Rural Minor Arterial	(Rural)	2158	4478
7	Rural Major Collector	(Rural)	825	1653
8	Rural Minor Collector	(Rural)	472	951
9	Rural Local	(Rural)	552	1113
11	Interstate	(Urban)	960	3506
12	Principal Arterial Expressway	(Urban)	1280	4011
14	Principal Arterial Streets	(Urban)	2511	6963
16	Minor Arterial	(Urban)	3821	8551
17	Collector	(Urban)	974	2042
19	Local	(Urban)	357	714
20	Ramp	(All)	422	556
TOTAL			17383	43219

1.2.2 Transit Network

The transit route system and networks are developed by combining various existing transit service representations and manually adding or editing other services. Transportation Computer Aided Data (TransCAD) network settings and coding protocols are established and customized programs are created to calculate the skims needed for travel demand model development.

The transit route system representation integrates the many diverse transit services in New York City, Long Island, northern New Jersey, and five upstate New York counties into a single TransCAD (version 4.5) route system. The services include:

- commuter rail lines (Long Island Rail Road, Metro-North Commuter Railroad, and NJ Transit rail),
- subway lines (New York City Transit, PATH, and Newark City Subway),
- express bus and local bus routes (more than 20 operators), and
- ferry operations and an aerial tramway.

1.3 Trip Generation

The NYBPM generates trips by applying a set of models called the Household, Auto-Ownership and Journey-Frequency (HAJ) Model that simulates total journeys for every household for all travel purposes over a 24-hour period. A journey is defined as travel between two primary locations, where one end is always home and the other end is work, school or other primary location. Market segmentation is used to group households by income, auto availability, household-size, and type of person (children, workers, and non working adults). A multinomial logit model, combined with Monte Carlo technique is used to generate discrete journeys for individual member of the households after evaluating interaction between household members in combination with time and space constraints that each person experiences in view of multiple-journey and daily activity pattern.

This HAJ model comprises of a set of sub-models applied in sequence: 1) household-synthesizing model, 2) auto-ownership model, and 3) journey production (frequency) model.

a. Household Synthesizing Model

This model forecasts the number and distribution of households in each zone. Using Census data, the model calculates probability for each possible combination of the household characteristics, including income, size, number of workers, non-working adults, and number of children. These probabilities are then used in combination with the aggregate demographic forecasts in order to produce number of households in each category, for each zone, and for all target years.

b. Auto-Ownership Model

This model determines the number of automobiles available in each household. The model considers the influence of household income and composition, vehicle-maintenance cost, parking availability, transit and highway accessibility and density as well as residential area type.

c. Journey-Frequency Model

This model determines the daily number of paired journeys (outbound and inbound) each person makes in every household by travel purpose. Each person is categorized as a worker, non-working adult, or a child. This model evaluates intra-household interrelationships among different household members, transit accessibility, and auto availability to come up with journey frequency for each person. Linkage of journey-frequency models across different household members allows for forecasting a realistic set of journeys made by each household.

1.4 Trip Attraction

The journey attraction model for NYBPM uses linear regression equations with contributing land use variables such as population, households, total employment, retail employment, office employment, school enrollment, and university enrollment. The attraction model is segmented by land use type for six travel purposes resulting in a set of journey attraction rates that are used for destination choice model.

1.5 Trip Distribution

In NYBPM, the Mode, Destination and Stop Choice (MDSC) model replaces the traditional trip distribution and mode choice model. The two steps are combined together as most choices regarding destination and mode are co-dependent. The travel purposes forecasted are work (low, medium, high income), school, university, maintenance, discretionary, and at work journeys.

This model comprises pre-mode choice, destination and mode choice, intermediate stop frequency and location choices modeled in sequence. In addition to combining the destination and the mode choice model this step also introduces the concept of intermediate stops in a journey. Explicitly modeling the number and location of the stops on a journey enables for a realistic representation of the interrelated decisions made by the traveler regarding all destinations (primary and secondary) and modes.

a. Pre-Mode Choice Model

This model distinguishes between motorized and non-motorized travel based on the person and household characteristics and land-use densities around the journey origin.

b. Destination Choice Model

Different destination-choice models are applied to motorized and non-motorized subsets of journeys. They take into account available attractions for each zone in retail, office and other employment categories along with school and university enrollments and then distribute journeys to the destination zones.

c. Motorized Mode Choice Model

The motorized mode-choice model predicts traveler decisions based on various time and cost factors as well as person and household characteristics. This model includes nine modes: drive alone; shared ride - 2 (driver and passenger); shared ride - 3 (driver and two passengers); shared ride - 4+ (driver and three or more passengers); walk to transit (including bus, subway and ferry); drive to transit; walk to commuter rail; drive to commuter rail; and taxi.

d. Stop-Frequency Choice Model

The stop-frequency model considers four combinations: direct journeys without stops, stop on the inbound journey only, stop on the outbound journey only, and stops on both inbound and outbound journeys.

e. Stop-Location Choice Model

The stop-location choice model predicts a location zone for each modeled stop based on the density of potential attractions along the journey route from origin to destination and the deviation (relative additional impedance) from the base journey route that is associated with visiting the stop zone.

The choice models are either multinomial or nested logit constructs. Multinomial logit models are applied for journey frequency, pre-mode, and destination choices. They are based on the assumption that all choice alternatives are equally similar and thus choice can be made according to their utility functions. Nested logit models are applied for mode and car-ownership choice where choice alternatives have a differential degree of similarity and should be grouped by characteristics in the choice modeling procedure (for example transit modes are grouped together while drive alone and shared ride choices form a separate group).

1.6 Other Models

In addition to the main model some auxiliary models are also used.

Time of day Model
Time of day models are used to convert the daily journeys into traditional trips by four time periods for traffic assignments process. These are AM (6 am -10 am), PM (4 pm-8 pm), Midday (10 am – 4 pm), and Night (8 pm – 6 am)

Truck and Commercial Vehicle Trip tables
Trucks and commercial vehicle trip tables are estimated outside the main model using the traditional gravity model and creating forecasts for future years.

External Model
To account for autos coming into the study area, leaving the study area or passing through the study area, external trip tables are forecasted based on data collected at cordon line.

1.7 Assignment

The trip tables from the time of day model are combined with truck and commercial trip tables, and external trip tables to create the highway and transit trip tables by time period. These are assigned to the highway and transit networks to forecast vehicular traffic flows on roadway segments and transit ridership by routes respectively.

1.8. Post Processing for Mobile 6.2 with PPSUITE

To produce the emission analysis, the output from NYBPM is fed into a post processor PPSuite. PPSuite processes the trip assignment files from NYBPM to reconcile Vehicle miles traveled (VMT) with HPMS data and seasonal factors, followed by speed estimates for intersection approaches. After these adjustments, the data is converted into appropriate format to run Mobile 6.2 to produce the emission rates. The following are the major steps of post processing before running Mobile 6.2:

1) Expand assigned 24 hour volumes (daily volume, minus transit buses) from the NYBPM output to 24 one-hour volumes. PPSuite applies VMT hourly distribution data (NY_HourPat_03A.dat) to the daily and peak period volumes from the BPM .

2) Adjust the 24 one-hour volumes to match Assigned Peak Volumes and to account for the impacts of off-peak Spreading.

3) Disaggregate to Vehicle Types – The vehicle pattern files were created using the NYSDOT 'Vehicle Mix 2002D.xls' file to breakdown the one hour traffic volume into five vehicle classes.

4) Apply VMT Adjustments to Hourly Link Volumes - The assigned traffic volumes input from the network are adjusted to account for a variety of factors, such as accounting for daily/seasonal variation, reconciling VMT totals with totals reported by the Highway Performance Monitoring System (HPMS), and accounting for off-model projects (including TDM) which change VMT.

5) Calculate Link and Approach Capacities - Link (mid-block) carrying capacities are calculated off-line by the user, reflecting the facility type, area type, and number of lanes, and then a lookup table is built.

6) Calculate Link (mid-block) Delay - Using the above capacity and hourly volumes as input, link speeds are calculated.

7) Calculate Approach Delay - On those links where control devices (signals, stop signs) are either coded or implied by defaults, intersection approach delay is calculated.

8) Calculate VMT, Aggregate Link Speed - Once mid-block and intersection approach V/C ratios and speeds are finalized, the delays that result on both the link and the intersection approach, are summed. The average link speed is calculated from the combination of link and intersection delay.

9) Accumulate VMT, VHT, Average Speed - Vehicle miles traveled (VMT) and vehicle hours traveled (VHT) are accumulated by area type, facility type, and time period.

10) Apply Post-Speed VMT Adjustments - Similar to the VMT adjustments performed before speed calculations (Step 5 above), additional VMT adjustments are applied after the speed calculations (to account for such items as local street VMT not in the model).

11) MOBILE Input Vehicle Types – Calculated in step 3, five vehicle type classes are expanded to 16 classes using the 16-Vehicle Composite which is based on 2002 Vehicle Mix file. In the MOBILE module of the PPSuite, these 16 classes (after the appropriate number of express and local buses are added to represent the HDBT class), are further expanded to 28 classes by using the Diesel Fractions provided by NYSDOT.

12) Prepare and Run MOBILE6.2 to calculate emission rates. PPSuite assembles VMT, speed, vehicle type fractions, meteorological, I/M, and other related data into a MOBILE input file. This file contains several run scenarios for each area (county) and facility group. Input data also varies for the downstate and upstate counties.

13) Emission Estimates. PPSuite applies emission rates to the VMT by county and facility group to calculate area and regional emissions.

AP-42 Road Dust Calculations for PM10 Emissions Estimates

PM10 emissions (required for Manhattan only) are estimated in accordance with EPA's "Compilation of Air Pollutant Emission Factors," better known as AP-42. The AP-42 PM10 road dust equation below includes each of the factors required to estimate the emissions caused by re-entrained road dust.

$$E = k\left(\frac{sL}{2}\right)^{0.65}\left(\frac{W}{3}\right)^{1.5} - C \qquad (1)$$

Factor for road dust

Factor for total PM emissions

Factor for exhaust, brake wear and tire wear

Where:
E: Emission factor for road dust (grams/VMT)
k: Particle size multiplier (grams/VMT)
sL: Average silt loading of the road (grams/m^2)
W: Average weight of the vehicle fleet (tons)
C: Emission factor for 1980's vehicle fleet exhaust, brake wear and tire wear

The particle size multiplier, k, varies with aerodynamic size range. Different values for k are given in Table 13.2.1-1 of AP-42. Accordingly, the appropriate value of k for PM10 is 7.3 grams/VMT. The silt loading factors used in the PM10 analysis are 0.03 for freeways and arterials, and 0.6 for local roads. To calculate the emission factor, C, for exhaust, brake wear and tire wear, NYMTC uses MOBILE 6.2, with input files and parameters as described in Section 1.9 below.

It is important to note that the AP-42 road dust equation requires the average weight of all vehicles traveling the affected roadways. For example, if 99 percent of traffic on the road is 2-ton cars/trucks while the remaining 1 percent consists of 20-ton trucks, then the mean weight "W" is 2.2 tons. More specifically, the road dust equation is not intended to be used to calculate a separate emission factor for each vehicle weight class. Instead, only one emission factor is calculated to represent the "fleet" average weight of all vehicles traveling the road.

Table 2 below states the vehicle weights used in the AP-42 calculation for roadways in Manhattan. In June 2009, the ICG concurred that these weights are appropriate for the regional analysis of PM10 emissions in Manhattan.

TABLE 2

Average Vehicle Weight (tons)		
Abbreviation	***Description***	***Weight***
LDGV	Light-Duty Gasoline Vehicles (Passenger Cars)	1.54
LDGT1	Light-Duty Gasoline Trucks 1 (0-6,000 lbs. GVWR, 0-3,750 lbs. LVW)	3.00
LDGT2	Light-Duty Gasoline Trucks 2 (0-6,000 lbs. GVWR, 3,751-5,750 lbs. LVW)	3.00
LDGT3	Light-Duty Gasoline Trucks 3 (6,001-8,500 lbs. GVWR, 0-5,750 lbs. ALVW)	3.50
LDGT4	Light-Duty Gasoline Trucks 4 (6,001-8,500 lbs. GVWR, greater than 5,751 lbs. ALVW)	3.50
HDGV2b	Class 2b Heavy-Duty Gasoline Vehicles (8,501-10,000 lbs. GVWR)	5.00
HDGV3	Class 3 Heavy-Duty Gasoline Vehicles (10,001-14,000 lbs. GVWR)	7.00
HDGV4	Class 4 Heavy-Duty Gasoline Vehicles (14,001-16,000 lbs. GVWR)	8.00
HDGV5	Class 5 Heavy-Duty Gasoline Vehicles (16,001-19,500 lbs. GVWR)	9.75
HDGV6	Class 6 Heavy-Duty Gasoline Vehicles (19,501-26,000 lbs. GVWR)	13.00
HDGV7	Class 7 Heavy-Duty Gasoline Vehicles (26,001-33,000 lbs. GVWR)	16.50
HDGV8a	Class 8a Heavy-Duty Gasoline Vehicles (33,001-60,000 lbs. GVWR)	30.00
HDGV8b	Class 8b Heavy-Duty Gasoline Vehicles (>60,000 lbs. GVWR)	40.00
LDDV	Light-Duty Diesel Vehicles (Passenger Cars)	1.85
LDDT12	Light-Duty Diesel Trucks 1and 2 (0-6,000 lbs. GVWR)	3.00
LDDT34	Light-Duty Diesel Trucks 3 and 4 (6,001-8,500 lbs. GVWR)	4.25
HDDV2b	Class 2b Heavy-Duty Diesel Vehicles (8,501-10,000 lbs. GVWR)	5.00
HDDV3	Class 3 Heavy-Duty Diesel Vehicles (10,001-14,000 lbs. GVWR)	7.00
HDDV4	Class 4 Heavy-Duty Diesel Vehicles (14,001-16,000 lbs. GVWR)	8.00
HDDV5	Class 5 Heavy-Duty Diesel Vehicles (16,001-19,500 lbs. GVWR)	9.75
HDDV6	Class 6 Heavy-Duty Diesel Vehicles (19,501-26,000 lbs. GVWR)	13.00
HDDV7	Class 7 Heavy-Duty Diesel Vehicles (26,001-33,000 lbs. GVWR)	16.50
HDDV8a	Class 8a Heavy-Duty Diesel Vehicles (33,001-60,000 lbs. GVWR)	30.00
HDDV8b	Class 8b Heavy-Duty Diesel Vehicles (>60,000 lbs. GVWR)	40.00
MC	Motorcycles (Gasoline)	0.28
HDGB	Gasoline Buses (School, Transit and Urban)	24.5
HDDBT	Diesel Transit and Urban Buses	24.5
HDDBS	Diesel School Buses	10.6

1.9 Mobile 6.2 Inputs and Parameters

In order to conduct the required regional emissions analyses, NYMTC generated emission factors using the EPA motor vehicle emissions model, MOBILE6.2.

The modeling inputs and parameters used to develop the emission factors are the most recent inputs for each of the 10 NYMTC counties and were established in consultation with the New York State Department of Environmental Conservation (NYSDEC) and the New York State Air Quality Conformity Interagency Consultation Group (ICG). In August 2005, the ICG concurred that the PPSUITE process is an appropriate method to estimate emission for use in NYMTC conformity determinations. The MOBILE6.2 modeling parameters and input files used for this regional emissions analysis are the most recent inputs that were available for use at the time the modeling process began on December 02, 2009. Specific modeling inputs and parameters used to develop the emission factors are described below:

Evaluation Month - The month of July (i.e., summertime conditions) was specified in the VOC and NOx emission factor input files for all emissions analyses for ozone precursors. The month of January (i.e. wintertime conditions) was specified in the PM10 and CO emission factor input files for the PM10 and CO emissions analyses. For the purposes of calculating annual emissions of PM2.5 and NOX, a two-season approach was used. Emission factors for direct PM2.5 emissions and NOx precursor emissions are calculated for both winter (January) and summer (July) conditions and apportioned equally for the entire year to estimate annual PM2.5 and NOx in the PM2.5 emissions analysis.

Vehicle Registration Distribution - Year 2002 registration data by county were used to model the 2002 base year. Year 2007 registration data by county were used to model all future analysis years.

Vehicle Mileage Accumulation Rate – MOBILE6.2 default vehicle mileage accumulation rate data were used in the emissions modeling process.

I/M Programs - NYSDEC inspection and maintenance (I/M) program data were used in the emission modeling. The NYSDEC file, NYVIPup.d, contain data for the Upstate NY I/M program. This file was used for modeling all future analysis years in Putnam County. No I/M program was in place in Putnam County in the 2002 base year. The NYSDEC file NYVIP.d was used for all future years in the remaining nine NYMTC counties.

Anti-Tampering Program – Various sets of anti-tampering program data as verified by NYSDEC in May 2009 was used to model downstate and upstate counties in different analysis years.

Anti-Tampering Program

The following anti-tampering program data was used in the modeling:

Table 3 – ANTI-TAMPERING PROGRAM DATA			
Parameter	**Putnam Co. Years 2002 – 2035**	**Nine "Downstate" NYMTC Counties**	
		Years 2002 - 2010	**Years 2011 - 2035**
Beginning calendar year	1984	1984	1984
Earliest model year	(Current yr – 25 yrs)	(Current yr – 25 yrs)	(Current yr – 25 yrs)
Final model year	(Current yr – 2 yrs)	(Current yr – 2 yrs)	(Current yr – 2 yrs)
Light-duty vehicles subject to inspection	LDGV, LDGT1, LDGT2, LDGT3, LDGT4	LDGV, LDGT1, LDGT2, LDGT3, LDGT4	LDGV, LDGT1, LDGT2, LDGT3, LDGT4
Heavy-duty vehicles subject to inspection	HDGV2B, HDGV3, HDGV4	HDGV2B, HDGV3, HDGV4, HDGV5, HDGV6, HDGV7, HDGV8A, HDGV8B, HDGB	HDGV2B, HDGV3, HDGV4
Annual or biennial	Annual	Annual	Annual
Compliance rate	98%	98%	98%
Component inspections (see MOBILE6.2 User's Guide)	All except tailpipe lead deposit test	All except tailpipe lead deposit test	All except tailpipe lead deposit test

Fuel Program and Fuel RVP- Average and maximum fuel sulfur levels and fuel Reid Vapor Pressure (RVP) levels as verified by NYSDEC in May 2009 were specified in the input files (as listed in Table 4).

Table 4

FUEL SULFUR AND RVP LEVELS				
All NYMTC Counties				
Year(s)	Season	Fuel Sulfur Levels (ppm)		RVP (psi)
		Average	Maximum	
2002 – 2003	Summer	85.0	1000.0	6.8
	Winter	137.0	1000.0	12.5
2004	Summer	85.0	303.0	6.8
	Winter	120.0	303.0	12.5

2005	Summer	90.0	303.0	6.8
	Winter	90.0	303.0	12.5
2006 – 2007	Summer	30.0	87.0	6.8
	Winter	30.0	87.0	12.5
2008 – 2009	Summer	30.0	80.0	6.8
	Winter	30.0	87.0	12.5
2010 – 2035	Summer	30.0	80.0	6.8
	Winter	30.0	80.0	12.5
	Winter	30.0	80.0	12.5

Table 5

Gasoline fuel oxygenate data were also specified in the input files (as listed in the Table 5).

GASOLINE FUEL OXYGENATE DATA				
All NYMTC Counties (Reformulated Gasoline Program)				
Year(s)	Season	Oxygenate Type	Oxygenate Content (% by volume)	Market Share Fraction of Oxygenate
2002 – 2003	Summer	MTBE	10.4%	0.98
		TAME	1.01%	0.02
	Winter	MTBE	8.7%	0.96
		TAME	0.3%	0.04
2004 – 2035	Summer/Winter	Ethanol	10%	1.00

Temperature and Humidity - For the summer season, county-specific hourly temperatures and relative humidity levels as verified by NYSDEC in May 2009 were used in the modeling.

Diesel Sale Fractions - Diesel sale fractions for NYSDOT Regions 8, 10, and 11 as appropriate were used in the modeling. Year 2002 diesel fractions were used to model the 2002 base year. Year 2007 diesel sale fractions were used to model all future analysis years.

Vehicle Start Distribution - County-specific vehicle start distribution data as received from NYSDEC in spring of 2007 and verified in November 2009 were used in the modeling.

VMT by Hour - County-specific VMT data (allocated by hour of day) as verified by NYSDEC in November 2009 were used in the modeling.

Low-Emission Vehicle (LEV) Standards - The following files were used to model the effects of implementing California's LEV me /LEV II programs in New York State:

- L2CERT.d – Specifies the LEV II 50,000-mile certification standards
- L2EVAP.d – Specifies the phase-in schedule for the LEV II evaporative emission standards
- L2EXH.d – Specifies the phase-in schedule for the LEV II exhaust emission standards
- LEV2.d – Provides fleet penetration fractions for light-duty gasoline vehicles under the LEV I/LEV II programs

These model inputs include the latest existing and future emissions control programs included in NYSDEC's statewide mobile source emission inventory, and the latest MOBILE6.2 input assumptions for the existing and future vehicle fleets traveling on roadways within the NYMTC planning boundary. The MOBILE6.2 input and external data files are available by contacting the NYSDOT Environmental Science Bureau.

Appendices 1A-1F displays the results from the BPM/PPSuite analysis.

1.10.2 Ozone Action Days

For Ozone Action Days: 1.39% reduction in VMT in the AM, PM, MD and NT, which are all time periods, across the NYMTC region was assumed. This VMT reduction is done as part of post processing and then the resulting VMTs are applied to Mobile 6.2 within the PPSuite.

This approach has been reviewed by the ICG and their concurrence was transmitted to NYMTC from ESB dated 5/27/09.

1.10.3 Line Item Emission Credits

Some projects could not be analyzed by any of the above tools. In those cases an off line method was used to analyze them. For each of these projects the change in VMT was calculated and multiplied with emission factors for the average speed of that segment to get the resulting change in emissions.

For project level benefits Using Commuter Model and Line Items see Appendix 2.

2.0 Planning Assumptions

The fifteen socioeconomic and demographic (SED) forecast variables that are input to the model were disaggregated to Transportation Analysis Zones for the 2005 - 2035 SED years. The New York BPM TAZ system is further explained in section 2.4 Land

Use Patterns. The model was run with corresponding socioeconomic forecasts and modified networks for each future no build and build year. Based on consultation with the Interagency Consultation Group (ICG) and as per 40 CFR Part 93.110(a), December 2, 2009 is the date the conformity analysis began for the 2035 RTP and 2008 thru 2012 amended TIP conformity determination. The regional analysis is based on the planning assumptions in place on that date. Federal and State regulations require that a conformity determination be based on the latest planning assumptions available at the time. Specifically, information on five general areas must be provided: demographic data, transit operating policies, transit service levels, transportation control measures, and key assumptions. To facilitate this connection, NYMTC created 3,586 TAZs and then obtained the required SED data for the 2005-2035 forecast years. To model action years NYMTC developed the SED forecasts from available sources for the action years being modeled. The SED data applicable to this determination is presented in table 6. The MOBILE6.2 inputs and parameters are established by NYSDEC and provided to NYMTC by the NYSDOT ESB. The most recent set of updates to these inputs and parameters were verified by NYSDEC on November, 2009 and were used in the modeling process as detailed in Section 1.9 of this document.

With the exception of SED, Travel, and Land Use data, NYMTC's planning assumptions and other data are updated annually. NYMTC's 2005-2035 SED data (including Land Use and travel data) update was completed and approved by *Program Finance and Administration Committee (PFAC)* on February 2009.

2.1 Population

Source: Census 2005 Population Estimates.
Population data from the 2005 Census Population Estimates along with SED forecasts from the *NYMTC 2035 Forecasts adopted by NYMTC's Program Finance and Administration Committee(PFAC) on February, 2009* were used in the NYMTC *Best Practice Model*. Group Quarters Population was also derived from Census 2005 Population Estimates. *Population in households was derived by subtracting the group quarter population estimate from the total population estimate for all areas.*

2.2 Employment

Source: 1. Census Transportation Planning Package 2000 (CTPP 2000), Part 2: Data by Place of Work.
2. Department of Labor's ES-202 data 2000-2005.

2000 CTPP Employment estimates were used as the basis for 2005 employment estimates by applying yearly growth rates from the Department of Labor's ES-202 data for year 2000-2005. Employment estimates for 2005 along with the SED forecasts from

the *NYMTC 2035 Forecasts adopted by NYMTC's Program Finance and Administration Committee (February, 2009)* were used in the NYMTC *Best Practice Model*.

2.3 Households

Source: 2005 American Community Survey
New York's census tract households were distributed from the 2005 American Community Survey county totals using the 2000 decennial census tract to county proportion of total households. Connecticut's total number of households by county subdivision was gathered from 2005 town profiles prepared by the State of Connecticut. In view of the fact that no such data were available for New Jersey, that state's total number of households was determined by dividing population in households by the average household size.

Table 6
Employment, Population, & Households for NYMTC Counties

(in thousands)

Bronx	2002	2011	2012	2020	2030	2035
Employment	274.3	347.2	352.3	388.9	425.8	442.3
Population	1358.4	1374.3	1376.3	1414.9	1488.7	1528.0
Households	468.6	476.1	477.6	503.8	544.8	562.4

Kings	2002	2011	2012	2020	2030	2035
Employment	588.2	718.2	728.8	809.3	896.1	936.7
Population	2475.7	2527.0	2528.8	2609.5	2777.8	2860.3
Households	888.1	895.4	897.7	944.6	1021.3	1047.2

New York	2002	2011	2012	2020	2030	2035
Employment	2548.8	2836.4	2848.6	2948.0	3171.5	3288.7
Population	1555.4	1668.4	1674.0	1742.6	1820.0	1884.7
Households	748.5	745.0	744.1	759.0	806.0	842.6

Queens	2002	2011	2012	2020	2030	2035
Employment	617.5	729.8	735.1	776.7	831.5	858.2
Population	2227.2	2282.5	2286.1	2370.1	2585.3	2752.3
Households	788.3	779.9	779.4	800.6	860.2	911.5

Richmond	2002	2011	2012	2020	2030	2035
Employment	116.3	152.4	155.4	177.8	205.1	218.4
Population	455.4	482.4	483.7	508.9	545.9	560.5
Households	160.4	165.8	166.6	179.1	192.8	197.3

Nassau	2002	2011	2012	2020	2030	2035
Employment	742.6	803.4	806.0	823.5	849.9	869.9
Population	1339.3	1341.7	1343.6	1358.0	1446.7	1485.4
Households	448.7	442.1	442.6	444.5	463.0	464.6

Suffolk	2002	2011	2012	2020	2030	2035
Employment	721.5	843.7	851.3	904.3	984.3	1026.7
Population	1455.7	1536.7	1543.0	1604.4	1710.5	1778.7
Households	479.5	506.2	509.2	533.8	561.4	573.6

Westchester	2002	2011	2012	2020	2030	2035
Employment	512.7	594.8	601.3	650.3	712.7	743.0
Population	937.9	966.6	971.7	1019.4	1065.3	1083.2
Households	342.1	336.6	338.2	354.4	361.6	359.4

Rockland	2002	2011	2012	2020	2030	2035
Employment	137.7	159.3	161.3	175.9	191.9	199.4
Population	291.2	300.9	302.7	317.2	333.5	340.0
Households	93.9	96.9	99.3	101.4	105.4	104.9

2.4 Land Use Patterns

The NYBPM Transportation Analysis Zone (TAZs) system is the underlying data structure for the socioeconomic and demographic inputs to the BPM zonal files for its transportation networks and trip tables, and for the framework of reporting model results on a geographic basis. Supporting a fully multi-modal integrated regional modeling system, the BPM system of TAZs is common to both the Highway and Transit networks.

The total number of zones used for regional modeling should not be excessive, given the many large matrices used in the model and the computational resources needed to run it (disk storage and processing time) increases exponentially with the number of zones. For the 28-county modeling area 3,586 zones were created based on land use and socio economic data collected in 1996. These zones were based on Census tracts and varied from one tract per zone to several tracts per zone.

The table on the following page shows the BPM zone system and the household and employment densities for the 2002 NYBPM.

Table 7 - BPM Zone System – Base Year 2002 Household and Employment Densities

ID-County	# of Census Tracts 2000	Best Practice Model Zones: # of BPZ TAZ's	Best Practice Model Zones: Tracts per BPM-TAZ	Average Density - Households: BPM Households: 1996	Average Density - Households: HH'S per BPM(3) TAZ	Average Density - Households: Index to Regional Avg.	Average Density - Jobs: BPM Employment: 1996	Average Density - Jobs: Jobs per BPM TAZ	Average Density - Jobs: Index to Regional Avg.
1-New York	296	**318**	0.93	708,359	2,228	1.11	1,868,071	839	0.19
2-Queens	672	**434**	1.55	717,534	1,653	0.82	563,026	341	0.08
3-Bronx	355	**273**	1.30	406,574	1,489	0.74	295,367	198	0.05
4-Kings	783	**513**	1.53	808,550	1,576	0.79	682,737	433	0.10
5-Richmond	110	**84**	1.31	134,155	1,597	0.80	105,765	66	0.02
6-Nassau	274	**238**	1.15	433,016	1,819	0.91	531,521	292	0.07
7-Suffolk	314	**236**	1.33	444,537	1,884	0.94	552,850	294	0.07
8-Westchester	221	**169**	1.31	323,551	1,915	0.95	390,854	204	0.05
9-Rockland	58	**38**	1.53	88,886	2,339	1.17	97,547	42	0.01
10-Putnam	19	**14**	1.36	29,692	2,121	1.06	20,552	10	0.00
11-Orange	67	**66**	1.02	107,759	1,633	0.81	117,939	72	0.02
12-Dutchess	66	**66**	1.00	93,651	1,419	0.71	105,375	74	0.02
13-Fairfield, CT	209	**213**	0.98	310,524	1,458	0.73	417,905	287	0.07
14-Bergen,NJ	163	**70**	2.33	314,220	4,489	2.24	433,640	97	0.02
15-Passaic,NJ	85	**16**	5.31	159,039	9,940	4.96	176,723	18	0.00
16-Hudson,NJ	158	**158**	1.00	204,124	1,292	0.64	232,406	180	0.04
17-Essex,NJ	212	**218**	0.97	264,031	1,211	0.60	355,313	293	0.07
18-Union,NJ	106	**21**	5.05	178,874	8,518	4.25	215,685	25	0.01
19-Morris,NJ	99	**39**	2.54	160,412	4,113	2.05	263,603	64	0.01
20-Somerset,NJ	62	**21**	2.95	99,884	4,756	2.37	160,508	34	0.01
21-Middlesex,NJ	177	**25**	7.08	249,384	9,975	4.97	367,767	37	0.01
22-Monmouth	141	**53**	2.66	212,395	4,007	2.00	227,411	57	0.01
23-Ocean,NJ	116	**33**	3.52	187,966	5,696	2.84	138,373	24	0.01
24-Hunterdon	26	**26**	1.00	42,423	1,632	0.81	49,010	30	0.01
25-Warren,NJ	23	**23**	1.00	36,294	1,578	0.79	33,412	21	0.00
26-Sussex,NJ	40	**24**	1.67	48,796	2,033	1.01	38,302	19	0.00
27-New Haven, CT	185	**184**	1.01	309,654	1,683	0.84	344,238	205	0.05
28-Mercer,NJ	73	**13**	5.62	118,373	9,106	4.54	212,060	23	0.01
New York / 12 Cos.	3,235	**2,449**	1.32	4,296,264	21,672	10.81	5,549,808	256	0.06
Connecticut / 2 Cos.	209	**213**	0.98	310,524	1,458	0.73	431,242	296	0.07
New Jersey / 14 Cos.	1,666	**924**	1.80	2,585,869	70,029	34.91	2,727,668	39	0.01
Total NYTMC Modeled Area - 28 Counties	**5,110**	**3,586**	**1.42**	**7,192,657**	**2,006**	**1.00**	**8,708,718**	**4,342**	**1.00**
New York Counties	**3,235**	**2449**	**1.32**	**4,296,264**	**1,754**	**0.87**	**5,331,604**	**3,039**	**0.70**

2.5 Changes to Transit Service and Operations

NYMTC staff collected transit data from various sources to update the transit network for the BPM runs. The changes incorporated are as follows:

Transit Fares: The transit fares were updated for the baseline condition for the conformity analysis to reflect the 2009 fare increases proposed by MTA. These include:

- New York City Transit Local-Bus and Subway – $2.25 (up from $2 or a 12.5% increase in fare)
- New York City Transit Express Bus – $5.50 (up from $5 or 10% increase in fare)
- MTA Long Island Rail Road – Monthly zone based fares increase between 5% - 11.6% depending on the fare zones.
- MTA Metro-North Railroad – Monthly zone based fares increase between 7.1%-20% for New York State fare zones. Connecticut fare zones are unchanged.

2.6 Other Key Assumptions

Highway data was collected to update the highway module of the NYBPM to reflect the baseline condition.

These changes included:

Revised Bridges and Tunnels Tolls

The charges for auto vehicles on major crossings increased from $5.00 to $5.50 which is an increase of 10%. The minor crossings increased from $2.50 to $2.75 which is an increase of 10%. Verrazarro-Narrows Bridge increased from $10.00 to $11.00 which is an increase of 10%. Henry Hudson Bridge went from $2.75 to $3.00 an increase of 9%. The E-Z pass across all the bridges and went up by 10%.

Revised Truck Tolls

The trucks charges on all the Bridges and Tunnels went up from about 10% – 13% depending on the number of axles.

Updated Highway Network

The network was updated to reflect the current Broadway Pilot Program that went into effect on Memorial Day Weekend - May 25, 2009. These projects enhance pedestrian space and facilitate traffic flow in the Times Square Bow-Tie and Herald Square. The targeted traffic improvements maximize throughput, reduce congestion and improve safety in the heart of Midtown.

3.0 Long Range Plan Consistency

The projects proposed in the 2008-2012 TIP update are consistent with the goals and objectives of the 2005-2035 NYMTC RTP, which was recently updated. The regional analysis herein considers and evaluates all required projects within the RTP horizon year. The NYMTC RTP was approved on September 24, 2009 by the NYMTC Council.

4.0 Interagency Consultation

The NYMTC conformity determination is based on continuous coordination with the New York Interagency Consultation Group (ICG). The ICG members are representatives from United States Environmental Protection Agency (USEPA), Federal Highway (FHWA), Federal Transit Administration (FTA), New York State Department of Conservation (NYSDEC), and New York State Department of Transportation's Environmental Science Bureau (ESB). All non-exempt and regionally significant projects and the air quality coding of the 2008-2012 NYMTC TIP were reviewed by the ICG. Many subsequent meetings were held to finalize coding; discuss and determine the analysis methodology; and other compliance issues to be addressed as part on the regional emission analysis and its documentation.

5.0 Public Participation

The NYMTC Public Participation Procedures require the TIP and the conformity determination be publically reviewed and adopted. As appropriate, NYMTC will seek public commentary thru notification to all known interested parties and media outlets to review and comment on the draft conformity determination to the 2008-2012 TIP and 2005-2035 RTP conformity determination to reflect the update of the Poughkeepsie Dutchess County Transportation Council and the Orange county Transportation Council Transportation Improvement Programs during the public comment period which will commence on July 8, 2010 and end on August 06, 2010. In addition, NYMTC will post the document on its web site www.nymtc.org.

6.0 Transportation Control Measures

TCMs are strategies that are specifically identified and committed to in SIPs; and are either listed in Section 108 of the CAAA, or will reduce transportation-related emissions by reducing vehicle use or improving traffic flow. Measures which reduce emissions by improving vehicle technologies, fuels, or maintenance practices are not TCMs.

The State and federal conformity regulations require all TIPs and RTPs to provide for the timely implementation of any TCMs from the applicable SIP and to ensure that no project in the program interferes with the implementation of any TCM.

There are no active TCMs in the NYMTC area. All TCMs previously included in the SIP have been completed in a timely manner or, in a few special cases, removed from the SIP. For example, on April 19, 2002 USEPA approved a request from the State of New York to remove several TCMs from the CO SIP that were demonstrated to no longer be necessary. Therefore, as described in Appendix 3, Program Status of Committed Projects in the SIP, there are a number of completed TCMs and several TCMs in the Downtown Brooklyn Master Plan that are no longer required.

In addition, no project in the 2008-2012 TIP or 2035 RTP would interfere with the timely implementation of TCMs in other areas.

7.0 Projects Evaluated

All proposed projects in the NYMTC 2008- 2012 proposed TIP amendments and administrative actions were evaluated along with the applicable 2005-2035 RTP projects for their need to be a part of the regional emission analysis update as per 40 CFR part 93. All projects in the RTP and the TIP as amended show the designated air quality code. All assigned codes are based on Table 2 - Exempt Projects from 40 CFR 93.126 and 93.127. All AQ codes were reviewed and approved by NYSICG during the fall of 2009. All non exempt projects have been further evaluated for the ability to be modeled and the modeling approach. Those evaluations have all been conducted in consultation with the NYSICG. The results of this evaluation are noted in Table 8 on the following pages. Projects which necessitated this update are noted.

8.0 Regionally Significant Projects

There are two regionally significant projects in the NYMTC Non-Attainment area: 8TRIDGE - Ridge Village Access Road and 8TMETROBEE - Metrocard Implementation on Westchester County Bee Line. Ridge Village Access Road is included in this conformity starting with the 2009 analysis year and 8TMETROBEE is included in this conformity as part of the no-build for all analysis years.

9.0 Statement of Conformity

The NYMTC 2008-2012 TIP and the 2005-2035 RTP as amended to date, support and comply with the applicable NYS SIPs (Ozone, CO, PM2.5 and PM-10) for the NYMTC Non-Attainment areas. This update of NYMTC 2008-2012 TIP and 2005-2035 RTP conformity determination demonstrates the correlation of these programs with the intent of the Clean Air Act and Transportation Conformity Regulations.

This update directly addresses 93.104 which requires a conformity determination to be done whenever the TIP and/or Plan is amended or updated. In addition, this determination is made in accordance with the criteria and procedures of 93.106 and parts 109 through 119.

TABLE 8 - PROJECTS EVALUATED

LOWER HUDSON VALLEY - PUTNAM COUNTY

PIN	Project Name	Completion Date	1st Year Modeled	Scenario	Status	Analysis Tool
802137	ROUTE 52 @ FARMERS MILL RD. TOWN OF KENT	6/16/2006	2007	PRIOR	EXEMPT	BPM Highway
813064	ROUTE 22: 1-84 - CR 65	6/30/2017	2020	TIP	NON	BPM Highway
875689	STONELEIGH AVE. @ DREWVULLE RD IMPROVEMENT	11/30/2015	2020	TIP	EXEMPT	BPM Highway
875691	BREWSTER NORTH RR PARKING	12/31/1998	2007	PRIOR	NON	BPM Transit
880546	VARIABLE MESSAGE SIGNS I-684	12/31/2012	2020	TIP	NON	PPSUITE/ITS
880697	PUTNAM COUNTY PARKING LOTS (5 LOTS)	8/31/2009	2011	TIP	NON	BPM Transit
882264	HART SHUTTLES (DANBURY-BREWSTER & RIDGEFIELD-KATONAH	1/26/2004	2007	TIP	EXEMPT	BPM Transit
882514	BREWSTER NORTH PARKING EXPANSION	12/31/2004	2007	PRIOR	NON	BPM Transit
M402-02-12	SOUTH-EAST PARKING EXPANSION	12/31/2014	2020	PRIOR	NON	BPM Transit
M402-03-14	BREWSTER PARKING EXPANSION	12/31/2007	2011	PRIOR	NON	BPM Transit
MPATT	PATTERSON PARKING EXPANSION	8/31/2003	2007	PLAN	PLAN	BPM Transit

LOWER HUDSON VALLEY - ROCKLAND COUNTY

PIN	Project Name	Completion Date	1st Year Modeled	Scenario	Status	Analysis Tool
803042	ROUTE 59 AT AIRMONT ROAD	12/31/2016	2020	TIP	EXEMPT	BPM Highway
850207	ROUTE 303 AND NJ LINE ROUTE 59	12/31/2016	2020	TIP	EXEMPT	BPM Highway
850210	ROUTE 59 FROM ROUTE 303 TO BROOME BLVD (was 803041)	12/31/2016	2020	TIP	EXEMPT	BPM Highway
850220	ROUTE 303 AT LAKE ROAD, VALLEY COTTAGE	12/31/2016	2020	TIP	EXEMPT	BPM Highway
875460	NORTH MAIN STREET RECONSTRUCTION	11/30/2001	2007	PRIOR	EXEMPT	BPM Highway
875523	NEW HEMPSTEAD ROAD EXTENSION	12/31/2011	2012	TIP	EXEMPT	BPM Highway
875685	SUFFERN RR PARKING	12/31/2015	2020	TIP	NON	BPM Transit
875788	SINGLE LANE TUNNEL REPLACEMENT, VILLAGE OF HAVERSTRAW	DELETED				DELETED
875898	SUFFERN LANE AT HAMMOND RD	12/31/2014	2020	TIP	EXEMPT	BPM Highway
875903	PASCACK ROAD RECONSTRUCTION	12/31/2017	2020	TIP	EXEMPT	BPM Highway
875907	PASCACK ROAD AT LAWRENCE STREET	12/31/2016	2020	TIP	EXEMPT	BPM Highway
880689	ROCKLAND TRAVEL DEMAND MANAGEMENT PROGRAM	10/31/2007	2011	TIP	EXEMPT	PPSUITE/ITS
882300	TAPPAN ZEE EXPRESS	7/31/2001	2007	TIP	EXEMPT	BPM Transit
882305	COMMUNITY & NEIGHBORHOOD SHUTTLE BUSES	9/30/2015	2020	TIP	EXEMPT	BPM Transit
882306	RAIL & FERRY FEEDER BUSES	10/31/2013	2020	TIP	EXEMPT	BPM Transit
8T-LOT 14	EXIT 14 PARK AND RIDE LOT	12/31/2002	2007	PLAN	PLAN	BPM Transit
8T-LOT J	PALISADES CENTER LOT J PARK AND RIDE	4/30/1999	2007	PLAN	PLAN	BPM Transit
8TRM85	ROCKLAND COUNTY DIESEL RETROFIT PROJECT	10/31/2011	2012	TIP	NON	Off-Model
8TRM86	TOWN OF ORANGETOWN DIESEL RETROFIT PROJECT	10/31/2011	2012	TIP	NON	Off-Model
8TROUTE59	ROUTE 59 SIGNAL OPTIMIZATION	12/31/2010	2011	PLAN	PLAN	PPSUITE/Sig
8T-TOR91	TOR #91 EXPRESS	3/31/2002	2007	PLAN	PLAN	BPM Transit
M402-03-06B	NANUET PARKING FACILITY	9/30/2004	2007	PRIOR	NON	BPM Transit
M402-03-08A	PEARL RIVER A - PARKING FACILITY	2/28/2004	2007	PRIOR	NON	BPM Transit
M402-03-08B	PEARL RIVER A - PARKING FACILITY	10/31/2005	2007	PRIOR	NON	BPM Transit

LOWER HUDSON VALLEY - WESTCHESTER COUNTY

PIN	Project Name	Completion Date	1st Year Modeled	Scenario	Status	Analysis Tool
800320	TACONIC STATE PARKWAY STAGE 5	5/13/2008	2011	PRIOR	NON	BPM Highway
800404	BEAR MOUNTAIN PKWY EXTN (RT35/202-TSP)	6/30/2018	2020	PLAN	NON	BPM Highway
803210	OLD MAMARONECK RD SIGNALS (HAZELTON TO MAMARONECK)	5/31/2010	2011	TIP	NON	PPSUITE/Sig
804094	ROUTE 9 RECONSTRUCTION	3/31/2009	2011	TIP	EXEMPT	BPM Highway
804406	GOLDEN'S BRIDGE PARKING PH I	10/31/2002	2007	PRIOR	NON	BPM Transit

804407	GOLDEN'S BRIDGE PARKING PH II	10/31/2002	2007	PRIOR	NON	BPM Transit
809941	ATMS / ATIS CROSS RIVER PRKY	12/31/2010	2011	TIP	NON	PPSUITE/ITS
810141	ATMS / ATIS HUTCHINSON RIVER PRKY	12/31/2012	2020	TIP	NON	PPSUITE/ITS
810142	RELOCATE HUTCHINSON NB RAMP TO EB CROSS COUNTY PKWY	4/29/2011	2011	TIP	EXEMPT	BPM Highway
810322	RT 9A TRAFFIC IMPROVEMENTS (RT 119-RT 100C)	7/31/2016	2020	TIP	NON	BPM Highway
810622	ATMS/ATIS SPRAIN BROOK PKWY BRP TO I-287	12/31/2012	2020	TIP	NON	PPSUITE/ITS
810623	ATMS/ATIS SPRAIN BROOK PKWY I-287 TO TSP	12/31/2012	2020	TIP	NON	PPSUITE/ITS
811902	GROVE STREET EXTENSION	DELETED				DELETED
812733	ATMS/ATIS ON TACONIC STATE PARKWAY(SPRAIN-RT6)	7/31/2017	2020	TIP	NON	PPSUITE/ITS
813075	RT. 120: RT. 22-1684	DELETED				DELETED
821669	ATMS / ATIS SAW MILL RIVER PKWY (I-287 TO CROSS COUNTY PKY)	12/31/2010	2011	TIP	NON	PPSUITE/ITS
821670	ATMS / ATIS SAW MILL RIVER PKWY (I-287 TO I-684)	12/31/2012	2020	TIP	NON	PPSUITE/ITS
821671	ATMS / ATIS SAW MILL RIVER PKWY FIBER OPTIC	12/31/2012	2020	TIP	NON	PPSUITE/ITS
856116	RT. 35/202; PEEKSKILL-TSP	7/31/2016	2020	TIP	NON	BPM Highway
856134	ROUTE 35/202 PINE GROVE COURT/STONEY STREET	4/30/2012	2012	TIP	EXEMPT	BPM Highway
872930	I-287 I-87-RT. 120 STAGE 1	7/31/2006	2007	PRIOR	NON	BPM Highway
872951	I287 I87-CWE STAGE 2 SMRP-BPR	6/11/2008	2011	PRIOR	NON	BPM Highway
872952	I287 STAGE III - BRONX RIVER PKWY TO WHITE PLAIN AVE.	11/30/2009	2011	PRIOR	NON	BPM Highway
872957	I287 I87-CWESTAGE 1 TZ-INTER8	7/31/2006	2007	PRIOR	NON	BPM Highway
872967	ATMS/ATIS: I-287; BLOOMINGDALE ROAD TO I-95	7/31/2016	2020	TIP	NON	PPSUITE/ITS
875480	KIMBAL & MCLEAN TRAFFIC SIGNALS	5/31/2016	2020	TIP	NON	PPSUITE/ITS
875488	WILMOT ROAD RECONSTRUCTION	12/30/2005	2007	PRIOR	EXEMPT	BPM Highway
875608	NORTH AVENUE TRAFFIC SIGNALS	12/31/2005	2007	PRIOR	NON	PPSUITE/ITS
875678	CROTON STATION PARKING	11/30/1999	2007	PRIOR	NON	BPM Transit
875686	WESTCHESTER CITY SIGNALS	11/1/2003	2007	PRIOR	NON	PPSUITE/ITS
875758	BRONX RIVER PARKWAY TO YONKERS AVENUE EXIT RAMP	9/30/2009	2011	TIP	NON	BPM Highway
875899	PELHAM REAL TRAFFIC SIGNAL REPLACEMENT	7/31/2017	2020	TIP	NON	PPSUITE
875900	PELHAM RD TRAFFIC SIGNALS (PELHAM MNR - MAIN ST)	7/31/2017	2020	TIP	NON	PPSUITE/Sig
875901	NORTH AVENUE TRAFFIC SIGNALS REPLACEMENT	7/31/2017	2020	TIP	NON	PPSUITE/Sig
875902	WEBSTER AVENUE TRAFFIC SIGNALS	7/31/2017	2020	TIP	NON	PPSUITE/Sig
880834	WHITE PLAINS IRREVERSIBLE COORDINATED SIGNAL SYSTEM	9/30/2006	2007	PRIOR	EXEMPT	PPSUITE/ITS
881049	HELP SYSTEM EXPANSION	9/30/2009	2011	TIP	EXEMPT	PPSUITE/ITS
882185	STAMFORD-WHITE PLAINS EXP. BUS (I-BUS)	6/30/2007	2007	TIP	EXEMPT	BPM Transit
882212	NEW ROCHELE INTERMODAL CENTER	12/31/2004	2007	PRIOR	NON	BPM Transit
882279	TACONIC EXPRESS BUS SERVICE	12/31/2001	2007	PRIOR	NON	BPM Transit
882282	YONKERS INTERMODAL CENTER	10/31/2002	2007	PRIOR	NON	BPM Transit
882307	BEE-LINE PURCHASE OF CLEAN FUEL BUSES	12/31/2008	2011	TIP	NON	BPM Base
894004	ADVANCED TRAVELERS INFORMATION SYSTEM (ATIS)	9/30/2009	2011	PRIOR	NON	PPSUITE/ITS
895005	WESTCHESTER COUNTY SHUTTLE NETWORK	9/30/2007	2011	TIP	EXEMPT	BPM Transit
8TFDR	FDR PARK & RIDE LOT	6/30/2004	2007	PLAN	PLAN	BPM Transit
8TMETROBEE	METROCARD IMPLEMENTATION ON WESTCHESTER COUNTY BEE LINE	6/30/2007	2007	REGL'SIG	REGL'SIG	BPM Transit
8TRIDGE	RIDGE HILL VILLAGE ACCESS ROADS	11/30/2009	2011	REGL'SIG	REGL'SIG	BPM Highway
8TRM49	PELHAM INTERMODAL FACILITY	6/30/2009	2011	TIP	NON	BPM Transit
8TRM94	BEE-LINE ORION BUS RETROFIT AND FILTERS	10/31/2009	2011	TIP	NON	Off-Model
H1007	THRUWAY NEW ROCHELLE TOLL EZPASS	11/30/2016	2020	TIP	NON	BPM Highway
H2070	THRUWAY YONKERS TOLL EZPASS	11/30/2016	2020	TIP	NON	BPM Highway
M302-09-22	GOLDENS BRIDGE PARKING	10/31/2002	2007	PRIOR	NON	BPM Transit
M502-03-03	CORTLANDT PARKING EXPANSION	12/30/2011	2012	TIP	NON	BPM Transit
M502-03-NW	NORTH WHITE PLAINS PARKING EXPANSION	12/30/2012	2020	TIP	NON	BPM Transit
MTPCHEST	PORT CHESTER PARKING GARAGE	12/31/2004	2007	PLAN	PLAN	BPM Transit

LOWER HUDSON VALLEY - MULTI-COUNTY

PIN	Project Name	Completion Date	1st Year Modeled	Scenario	Status	Analysis Tool
808804	INTEGRATED 511 NEW YORK / REGIONAL BRANDING & MARKETING	11/29/2008	2007	2010	TIP	NON

811356	ATMS/ATIS: I684; EXIT 2 TO I84	3/31/2017	2020	2020	TIP	NON
880598	HUDSON VALLEY TRANSPORTATION MANAGEMENT CENTER	12/31/2004	2007	2007	PRIOR	EXEMPT
881029	SIGNAL RETIMING TO REDUCE EMISSIONS	10/1/2008	2011	2010	PRIOR	NON
881030	OZONE ACTION DAYS - EPISODIC EMISSIONS CONTROLS PROGRAM	12/31/2004	2007	2007	TIP	NON
881075	NYSDOT TRAFFIC SIGNAL RETIMING & UPGRADE	12/31/2010	2011	2011	TIP	NON
882038	METROPOOL RIDESHARE PROGRAM	1/31/2008	2011	2010	TIP	NON
882157	DUTCHESS-PUTNAM-WHITE PLAINS EXP BUS (LEP)	6/30/2007	2007	2007	TIP	EXEMPT
882161	ORANGE TO WESTCHESTER LINK (OWL)	6/30/2007	2007	2007	TIP	EXEMPT
882218	HAVERSTRAW-OSSINNING FERRY	11/30/2006	2007	2007	TIP	EXEMPT
882244	CROTON FALLS SHUTTLE - INCLUDES PIN 882243 (PRIOR YEAR)	12/31/2007	2011	2010	TIP	EXEMPT
882322	HAVERSTRAW/YONKERS TO LOWER MANHATTAN FERRY	DELETED				
882384	TRIPS 123	5/1/2008	2011	2010	TIP	NON
894002	VARIABLE MESSAGE SIGNS IN I-87/I-287 CORRIDOR	DELETED				
I001	NYS THRUWAY ITS UPGRADE-2003	9/30/2005	2007	2007	PRIOR	NON
I0096	NYS THRUWAY ITS	11/30/2016	2020	2020	TIP	NON
M402-02-16	MNRR YANKEE STADIUM STATION	4/1/2009	2011	2010	TIP	NON
M404-01-18	MNR: UPPER HARLEM SIGNALIZATION	12/31/2004	2007	2007	PRIOR	EXEMPT
M502-03	PARKING PROJECTS -BLOCK FUNDING			b	TIP	NON

LOWER HUDSON VALLEY - OUTSIDE NYMTC

PIN	Project Name	Completion Date	1st Year Modeled	Scenario	Status	Analysis Tool
8ATS06	ATMS / ATIS AT ROUTE 17	12/31/2019	2020		Not NYMTC	PPSUITE/ITS
M302-14-01	SECAUCUS TRANSFER PROJECT	12/31/2003	2007		Not NYMTC	BPM Transit
M307-01-01	MNR: HARLEM LINE EXTENSION TO WASSAIC	7/31/2000	2007		Not NYMTC	BPM Transit
M402-03-06A	HARRIMAN PARKING FACILITY	7/31/2003	2007		Not NYMTC	BPM Transit
M402-03-12	SALISBURG MILLS PARKING PROJECT	10/31/2005	2007		Not NYMTC	BPM Transit
M502-03-01	WASSAIC PARKING IMPROVEMENTS	4/1/2013	2020		Not NYMTC	BPM Transit
M502-03-BC	BEACON PARKING EXPANSION	6/30/2012	2012		Not NYMTC	BPM Transit
MBEACON	BEACON PARKING EXPANSION	7/31/2006	2007		Not NYMTC	BPM Transit
MBEACON-380	BEACON PARKING EXPANSION	7/31/2006	2007		Not NYMTC	BPM Transit
MBEACON-401	BEACON PARKING EXPANSION	6/30/2012	2012		Not NYMTC	BPM Transit
MTUXEDO	TUXEDO PARKING EXPANSION	5/31/2003	2007		Not NYMTC	BPM Transit

LONG ISLAND - NASSAU COUNTY

PIN	Project Name	Completion Date	1st Year Modeled	Scenario	Status	Analysis Tool
005028	SEAFORD OYSTER BAY EXPRESSWAY ITS (NY25-MERRICK)	3/13/2018	2020	TIP	NON	PPSUITE/ITS
005895	NY 27 SUNRISE HIGHWAY SAFETY (CARTWRIGHT-LOUDEN)	3/1/2008	2011	TIP	EXEMPT	BPM Highway
022896	LIE HOV - I-495 4TH LANE REC EXITS 32-37	8/12/2005	2007	PRIOR	NON	BPM Highway
022935	LIE HOV EXITS 37-38	7/11/2011	2012	TIP	NON	BPM Highway
051731	ITS FOR WANTAGH STATE PARKWAY	7/29/2010	2011	TIP	EX-SCOPE	PPSUITE/ITS
052323	MSP/SSP INTERCHANGE REC	6/8/2011	2011	TIP	EXEMPT	BPM Highway
052326	ITS FOR MEADOWBROOK STATE PARKWAY	10/31/2008	2011	PRIOR	NON	PPSUITE/ITS
075682	NASSAU TRAFFIC SIGNAL COMPUTER EXPANSION	12/31/1999	2007	PRIOR	NON	PPSUITE/Sig
075727	NASSAU TRAFFIC SIGNAL COMPUTER EXPANSION	12/31/2002	2007	PRIOR	NON	PPSUITE/Sig
075734	NASSAU TRAFFIC SIGNAL COMPUTER EXPANSION	12/31/2002	2007	PRIOR	NON	PPSUITE/Sig
075745	MILL POND CONNECTOR ROAD	12/31/2007	2011	TIP	NON	BPM Highway
075751	NASSAU TRAFFIC SIGNAL COMPUTER EXPANSION	12/31/2006	2007	PRIOR	NON	PPSUITE/Sig
075753	NASSAU TRAFFIC SIGNAL COMPUTER EXPANSION	11/19/2008	2011	PRIOR	NON	PPSUITE/Sig
075778	TRAFFIC SIGNAL EXPANSION	3/30/2010	2011	TIP	EXEMPT	PPSUITE/Sig
075806	MARCUS AVE/DENTON AVE. INTERSECTION IMPROVEMENTS	12/31/2005	2007	PRIOR	EXEMPT	BPM Highway
075813	TRANSIT BLOCK - LI BUS	6/30/2003	2007	PRIOR	EXEMPT	BPM Transit
075822	OLD COUNTY ROAD, GARDEN CITY AND MINEOLA	4/30/2010	2011	PRIOR	EXEMPT	BPM Highway

075824	OLD COUNTY ROAD ICM	6/15/2010	2011	TIP	NON	PPSUITE/ITS
075837	NASSAU COUNTY TRAFFIC SIGNAL SYSTEM UPDATE (0T1526)	4/15/2010	2011	TIP	NON	Part 93 Signal Exemption
075846	PROSPECT AVENUE TRAFFIC CALMING, NORTH HEMPSTEAD	7/30/2010	2011	TIP	NON	BPM Highway
075934	HERB HILL/GARVIES POINT ROAD (0T1947)	2/15/2011	2011	TIP	NON	BPM Highway
075935	TRAFFIC SIGNAL EXPANSION PH 2 (Was 0T1941)	11/15/2011	2012	TIP	EXEMPT	PPSUITE/Sig
075937	TRAFFIC SIGNAL EXPANSION PHASE 4 (Was 0T1943	11/15/2011	2012	TIP	EXEMPT	PPSUITE/Sig
075958	TRAFFIC SIGNAL EXPANSION PH 3 (Was 0T1942)	6/7/2012	2012	TIP	EXEMPT	PPSUITE/Sig
080433	RECONSTRUCTION OF ROUTE 25 AND HILLSIDE AVE.	3/4/2005	2007	PRIOR	NON	BPM Highway
080726	TRANSIT BLOCK - MERRICK SHUTTLE	12/31/2002	2007	PRIOR	EXEMPT	BPM Transit
0L3200	HEMPSTEAD TRANSIT CENTER INTERMODAL FACILITY UPGRADE	4/1/2009	2011	PRIOR	EXEMPT	BPM Transit
0T1091	2000 TRAFFIC SIGNAL COMPUTER EXPANSION	DELETED				DELETED
0T1526	COMPUTERIZED TRAFFIC SIGNAL SYSTEM UPDATE	4/15/2009	2011	PRIOR	NON	PPSUITE/Sig
0T2260	NASSAU COUNTY SIGNAL EXPANSION PHASE 6	9/30/2012	2020	TIP	NON	PPSUITE/Sig
0T2265	NASSAU COUNTY SIGNAL EXPANSION PHASE 7	6/8/2011	2011	TIP	NON	PPSUITE/Sig
0T2316	LIE HOV ACCESS IMPROVEMENTS, EXITS 37-38	(See 022935)				(See 022935)
L/02/5K	FARMINGDALE PARKING	10/1/2000	2007	PRIOR	NON	BPM Transit
L/02/5L	NASSAU COUNTY PARKING	7/1/2000	2007	PRIOR	NON	BPM Transit
L302/05/5E	MERRICK PARKERS	10/1/1998	2007	PRIOR	NON	BPM Transit
L302/05/5H	BELLMORE PARKING	2/1/2002	2007	PRIOR	NON	BPM Transit
L402/05/J2	MINEOLA INTERMODAL CENTER (MIC)	9/30/2006	2007	PRIOR	NON	BPM Transit
L409/05/DG	LONG BEACH PARKING DECK	4/1/2004	2007	PRIOR	NON	BPM Transit

LONG ISLAND - SUFFOLK COUNTY

PIN	Project Name	Completion Date	1st Year Modeled	Scenario	Status	Analysis Tool
001141	NY 112 INTERSECTION IMPROVEMENTS (Now in 001621 & 001626)	11/25/2009	2011	TIP	EXEMPT	BPM Highway
001620	NY112 RECONSTRUCTION (I-495-GRANNY RD)	4/7/2015	2020	TIP	NON	BPM Highway
001621	NY112 RECONSTRUCTION (OLD TOWN ROAD - PINE ROAD)	10/12/2011	2012	TIP	NON	BPM Highway
001625	NY112 RECONSTRUCTION (GRANNY RD-NY25)	9/16/2016	2020	TIP	NON	BPM Highway
001626	NY112 RECONSTRUCTION (PINE RD-NY347)	11/11/2011	2012	TIP	NON	BPM Highway
003016	NY454 & NY27 ITS	7/19/2018	2020	TIP	NON	PPSUITE/ITS
004196	NY25 RECONSTRUCTION (NY111-MONTCLAIR)	4/25/2019	2020	TIP	NON	BPM Highway
004197	NY25, COUNTY RD 83 TO CORAM MT. SINIA RD	4/25/2019	2020	TIP	EXEMPT	BPM Highway
004202	NY25 RECONSTRUCTION NY347-S HOWELL	12/15/2010	2011	TIP	EXEMPT	BPM Highway
004217	NY25 RECONSTRUCTION WINFIELD-CR21	5/20/2021	2030	PRIOR	NON	BPM Highway
004218	NY25/NY110 INTERSECTION IMPROVEMENTS	4/4/2012	2012	TIP	EXEMPT	BPM Highway
005408	NY347 RECONSTRUCTION (NY454 SPLIT TO NY111)	3/19/2012	2012	TIP	NON	BPM Highway
005409	NY347 RECONSTRUCTION (CR97-HALLOCK RD)	2/22/2016	2020	TIP	NON	BPM Highway
005410	NY347 RECONSTRUCTION (CR97 TO OLD TOWN RD)	4/12/2019	2020	TIP	NON	BPM Highway
005411	NY347 RECONSTRUCTION (OLD WILLETS TO NY 454 SPLIT)	2/15/2022	2030	TIP	NON	BPM Highway
005412	NY347 RECONSTRUCTION (NY347 OVER NY97 INTERCHANGE)	2/13/2018	2020	TIP	NON	BPM Highway
005418	NY347 C/M (NY25-TERRY RD)	2/19/2018	2020	TIP	NON	BPM Highway
005420	NY347 C/M (TERRY RD-NY111)	3/18/2014	2020	TIP	NON	BPM Highway
007708	NY111 REC (TOWNLINE RD-NY347)	6/1/2020	2020	TIP	NON	BPM Highway
011253	LIE/NY110 INTERCHANGE & BRIDGE REHAB	11/9/2011	2012	TIP	EXEMPT	BPM Highway
011256	NY110 RECON (OLD COUNTY RD-ARROWOOD RD)	8/14/2013	2020	TIP	NON	BPM Highway
011330	NY27A 3R WELLWOOD-NY109	11/1/2006	2007	PRIOR	NON	BPM Highway
022865	LIE HOV - SERVICE ROAD CONST EX 65-67	8/1/2003	2007	PRIOR	NON	BPM Highway
022908	LIE HOV - I-495 BRIDGE WIDENING EXITS 49-57	5/19/2021	2030	PRIOR	EXEMPT	BPM Highway
033912	LONG ISLAND TRAIN INTERMODAL - HIGHWAY	1/30/2013	2020	TIP	NON	BPM Highway
033913	LONG ISLAND TRAIN INTERMODAL - RAIL	1/15/2014	2020	TIP	NON	Off-Model
051641	NSP/NY110 INTERCHANGE RECON (LIE-NSP)	12/31/2013	2020	TIP	NON	BPM Highway
053464	ITS MONITORING FOR THE SOUTHERN STATE PARKWAY	11/30/2006	2007	TIP	EXEMPT	PPSUITE/ITS
075598	RECON CR16 PORTION ROAD (RONKONKOMA AVE - NICHOLLS)	4/29/2011	2011	TIP	NON	BPM Highway
075614	RECON CR 67 MOTOR PARKWAY BRIDGE OVER LIE	6/1/2010	2011	TIP	EXEMPT	BPM Highway

075656	CR3 PINELAWN ROAD FROM THE VICINITY OF RULAND RD TO I49	2/1/2012	2012	TIP	EXEMPT	BPM Highway
075668	RECON CR80 MONTAUK HIGHWAY (CR46 - MASTIC RD)	4/13/2011	2011	TIP	NON	BPM Highway
075669	RECONSTRUCTION OF CR 57 BAYSHORE ROAD (NY27 - NY231)	3/1/2011	2011	TIP	NON	BPM Highway
075670	CR67 REC I495 EX55-CR17	DELETED				DELETED
075671	CR3/SSP BRIDGE WIDENING	7/1/2008	2011	PRIOR	EXEMPT	BPM Highway
075672(A)	SUFFOLK COUNTY CLOSED LOOP SIGNAL SYSTEM	12/31/2006	2007	2007	TIP	EX-PART 93
075672(B)	SUFFOLK COUNTY CLOSED LOOP SIGNAL SYSTEM	4/5/2010	2011	2010	TIP	EX-PART 93
075674	CR16 RECONSTRUCTION I495-CR21	DELETED				DELETED
075681	CR83 OVER I-495 BRIDGE WIDENING	6/30/2008	2011	TIP	NON	BPM Highway
075684	RONKONKOMA STATION PARK & RIDE	12/31/2002	2007	PRIOR	NON	BPM Transit
075736	CR 39 RECONSTRUCTION (N SEA RD WEST TO NY27)	6/27/2008	2011	TIP	NON	BPM Highway
075736(B)	CR 39 RECONSTRUCTION (N SEA RD-MONTAUK HWY)	3/1/2011	2011	TIP	NON	BPM Highway
075747	SMITHTOWN CBD - HIGH PRIORITY PROJECT (NO 1408)	12/31/2003	2007	PRIOR	NON	BPM Highway
075814	SC INNOVATIVE TRANSIT	7/31/2001	2007	PRIOR	EXEMPT	BPM Transit
075818	INTERSECTION IMPROVEMENTS AT CR 11, PULASKI RD AND CR35	6/30/2011	2011	PRIOR	EXEMPT	BPM Highway
075823	HUNTINGTON STATION COMMUNITY DEVLOPMENT	10/31/2006	2007	PRIOR	NON	PPSUITE/Sig
075885	CR58, OLD COUNTY ROAD, I495 TO CR105	(See SC5529)				(See SC5529)
075894	LARKFIELD SIGNAL RECONSTRUCTION	12/13/2010	2011	TIP	EXEMPT	PPSUITE/Sig
080659	SUFFOLK COUNTY EXPRESS (THE CLIPPER)	3/30/2000	2007	TIP	EXEMPT	BPM Transit
082614	WYANDANCH INTERMODAL CENTER	10/9/2013	2020	TIP	EXEMPT-PH4	BPM Transit
093561	CALVERTON RAIL SPUR ARRA PROJECT	2/17/2012	2012	TIP	NON	Off-Model
0T1849	0T1849-NY 347 SHORT TERM IMPROVEMENTS	10/21/2006	2007	PRIOR	EXEMPT	BPM Highway
0T1967	NY25 RECONSTRUCTION (MONTCLAIR-NY347)	6/22/2022	2030	TIP	EXEMPT	BPM Highway
0T2155	NY347 C/M OLD TOWN ROAD TO NY25A	2/21/2020	2020	TIP	EXEMPT	BPM Highway
0T2156	NY25 OVER NY347 RECON & NY347 (NY25-HALLOCK)	2/18/2020	2020	TIP	NON	BPM Highway
0T2233	I495 HOV ACCESS IMPROVEMENTS, EXITS 52-60	1/31/2010	2011	TIP	NON	BPM Highway
0T2305	NY347 C/M (NSP-OLD WILLETS)	2/22/2021	2030	TIP	NON	BPM Highway
0T2306	NY347 RECONSTRUCTION (STONY BROOK RD TO CR97)	2/12/2019	2020	TIP	NON	BPM Highway
0TBROOKHAV	BROOKHAVEN WALK	6/15/2011	2011	TIP	NON	BPM Highway
L/02/5Z	BABYLON STATION REHAB & INTERMODAL CENTER	9/1/2004	2007	PRIOR	NON	BPM Transit
L302/05/4N	SPEONK COMMUTER PARKING EXPANSION	6/1/2001	2007	PRIOR	NON	BPM Transit
L302/05/5X	PORT JEFFERSON PARKING	7/1/2001	2007	PRIOR	NON	BPM Transit
L302/09/CD	DEER PARK COMMUTER PARKING EXPANSION	12/1/2001	2007	PRIOR	NON	BPM Transit
SC5515	CR46 WILLIAM FLOYD PKWY RECON (MORICHES-LIE)	5/3/2010	2011	PRIOR	EXEMPT	BPM Highway
SC5521	TURN LANES WELLWOOD AVE:CENTRAL & SMITH	8/16/2010	2011	PRIOR	EXEMPT	BPM Highway
SC5529	CR58, OLD COUNTY RD EIP, (I495 TO ROANOKE AVE)	6/15/2010	2011	TIP	NON	BPM Highway
SC5534	IMPROVEMENTS TO CR80 MONTAUK HIGHWAY (NY112-CR101)	4/20/2010	2011	PRIOR	EXEMPT	BPM Highway
SC5539	CR7 WICKS ROAD CORRIDOR IMPROVEMENTS (CR67 - 3 AVE)	5/11/2011	2011	TIP	EXEMPT	BPM Highway

LONG ISLAND - MULTI-COUNTY

PIN	Project Name	Completion Date	1st Year Modeled	Scenario	Status	Analysis Tool
051650	NORTHERN STATE PARKWAY INFORM UPGRADE	8/1/2007	2011	PRIOR	EXEMPT	PPSUITE/ITS
053459	SOUTHERN STATE PKY ITS SYSTEM	12/31/2002	2007	PRIOR	NON	PPSUITE/ITS
080395	LI COMMUTER CHOICE PROGAM	12/31/2004	2007	TIP	NON	CommChoice
080556	HIGHWAY EMERGENCY LOCAL PATROL (HELP)	12/31/2005	2007	TIP	EXEMPT	PPSUITE/ITS
080567	INTERSECTION IMPROVEMENTS	2/4/2009	2011	PRIOR	EXEMPT	BPM Highway
080676	OPERATION OF INFORM TRAFFIC MANAGEMENT SYSTEM	12/31/2005	2007	TIP	EXEMPT	PPSUITE/ITS
080716	OZONE ACTION DAYS - EPISODIC EMISSIONS CONTROLS	6/30/2007	2007	TIP	NON (SOAD)	PPSUITE
G409/01/G4	EAST SIDE ACCESS-FINAL DESIGN	4/15/2015	2020	PRIOR	NON	BPM Transit
G409/01/G5	EAST SIDE ACCESS-CONST	4/15/2015	2020	TIP	NON	BPM Transit
G409/01/G6	EAST SIDE ACCESS-OWNER CONTROL INSURANCE POLICY	4/15/2015	2020	PRIOR	NON	BPM Transit
G409/01/G7	EAST SIDE ACCESS-PROGRAM/CONST MGT	4/15/2015	2020	TIP	NON	BPM Transit
G409/01/G8	EAST SIDE ACCESS-REAL ESTATE	4/15/2015	2020	TIP	NON	BPM Transit
G409/01/G9	EAST SIDE ACCESS-ROLLING STOCK	4/15/2015	2020	TIP	NON	BPM Transit

L/09/2W	LIRR: EAST SIDE ACCESS	4/15/2015	2020	PRIOR	NON	BPM Transit
L03A-04-27	LIRR: TRACK CONNECTION, WEST SIDE TO PSNY TRACK 14 AND BELOW	6/30/2003	2007	PRIOR	NON	BPM Transit
L301-02-1K	LIRR: REGULAR AND DUAL MODE LOCOMOTIVES	3/31/2000	2007	PRIOR	NON	BPM Transit
L502/05/21	PARKING REHABILITATION - COMMUTER PARKING			TIP	NON	NC - b (Block)

NEW YORK CITY - BRONX COUNTY

PIN	Project Name	Completion Date	1st Year Modeled	Scenario	Status	Analysis Tool
X101.07	SAFETY IMPROVEMENTS ON HUTCHINSON RIVER PARKWAY	4/18/2017	2020	TIP	EXEMPT	BPM Highway
X501.63	IMPLEMENTATION OF ITS ALONG THE NEW ENGLAND THRUWAY	9/30/2013	2020	TIP	NON	PPSUITE/ITS
X720.37	MAJOR DEEGAN EXPWY: WEST FORDHAM RD SAFETY IMPROVEMENT	8/16/2006	2007	PRIOR	NON	BPM Highway
X727.03	I-95 NEW ENGLAND THRUWAY INTERCHANGE 11	12/31/2012	2020	TIP	EXEMPT	BPM Highway
X731.27	BRUCKNER EXPWY FOURTH LANE IMPLEMENTATION	4/7/2017	2020	TIP	NON	BPM Highway
X760.55	MANHATTAN COLLEGE: VAN CORTLANDT PARKING	2/1/2010	2011	TIP	NON	NC
X770.05	HUNTS POINT/PORT MORRIS DIESEL EMISSIONS REDUCTION	9/1/2011	2012	TIP	NON	Off-Model
X770.18	GRAND CONCOURSE MULTIMODAL CORRIDOR	12/31/2013	2020	TIP	NON	BPM Highway
X804.08	BRUCKNER EXPRESSWAY ITS	6/30/2006	2007	PRIOR	NON	ITS/PPSUITE
X804.10	SEE X804.08	12/31/2004	2007	PRIOR	NON	ITS/PPSUITE
X153ST	EAST 153RD STREET BRIDGE	1/3/2016	2020	PLAN	PLAN	BPM Highway
XNERAMP	I-95 NEW ENGLAND THRUWAY INTERCHANGE 11	(See X727.03)				

NEW YORK CITY - KINGS COUNTY

PIN	Project Name	Completion Date	1st Year Modeled	Scenario	Status	Analysis Tool
X021.52	BELT PARKWAY OVER MILL BASIN	8/19/2014	2020	TIP	EXEMPT	BPM Highway
X021.53	SHORE (BELT) PARKWAY OVER FRESH CREEK BASIN	6/30/2014	2020	TIP	EXEMPT	BPM Highway
X021.54	BELT PARKWAY OVER GERRITSEN INLET	6/30/2014	2020	TIP	EXEMPT	BPM Highway
X021.62	REPLACEMENT OF BELT PARKWAY BRIDGE OVER PAERDEGAT BASIN	6/30/2014	2020	TIP	EXEMPT	BPM Highway
X021.68	LEIF ERICSON DRIVE (BELT PARKWAY) OVER NOSTRAND AVE.	5/15/2015	2020	TIP	EXEMPT	BPM Highway
X021.71	SHORE (BELT) PARKWAY OVER ROCKAWAY PARKWAY	4/30/2014	2020	TIP	EXEMPT	BPM Highway
X501.55	TRANSPORTATION OF NEW YORK RECYCLABLES	12/31/2012	2020	TIP	NON	Off-Model
X501.74	SOUTH BROOKLYN MARINE TERMINAL RAIL EXTENSION (GM-01-09)	10/29/2010	2011	TIP	NON	Off-Model
X730.57	REHAB OF THE BQE (I-278) FROM FLUSHING AVE TO SANDS ST	5/26/2010	2011	TIP	EXEMPT	BPM Highway
X730.88	I-278 GOWANUS EXPRESSWAY RECON	2/28/2003	2007	PRIOR	NON	BPM Highway
X731.19	GOWANUS DECK REPLACEMENT	11/15/2010	2011	TIP	EXEMPT	BPM Highway
X757.64	BELT PKWY AND OCEAN PKWY INTERCHANGE	6/15/2006	2007	PRIOR	EXEMPT	BPM Highway
X803.18	SHORE (BELT) PARKWAY OVER ROCKAWAY PARKWAY	(See X021.71)				(See X021.71)
X804.52	GOWANUS EXPRESSWAY ITS PROJECT	DELETED				DELETED
X806.10	CONSTRUCTION OF JOINT TRAFFIC OPERATION CENTER- VIDEO	6/30/2010	2011	PRIOR	NON	PPSUITE/ITS
X806.22	GOWANUS EXPRESSWAY ITS IMPROVEMENTS	6/7/2011	2011	TIP	NON	PPSUITE/ITS
X806.51	TRAVEL TIME IN BROOKLYN (VZB-BBT)	7/8/2013	2020	TIP	NON	PPSUITE/ITS
XHWK700A	HWK700A_COLUMBIA STREET	6/30/2009	2011	PLAN	PLAN	BPM Highway
ERSKINE	ERSKINE STREET INTERCHANGE	12/31/2002	2007	BASE	BASE	BPM Highway
ST09-5560	CONSTRUCT NEW PASSENGER TRANSFER: JAY - LAWRENCE ST STN	3/26/2011	2011	PRIOR	EXEMPT	BPM Transit
STILLWELL	STILLWELL AVE. STATION RECONSTRUCTION	3/31/2005	2007	PLAN	PLAN	BPM Transit

NEW YORK CITY - NEW YORK COUNTY

PIN	Project Name	Completion Date	1st Year Modeled	Scenario	Status	Analysis Tool
X024.39	ROUTE 9A ITS	4/30/2007	2007	PRIOR	NON	PPSUITE/ITS
X500.92	ADVANCED TRAVELER INFORMATION SERVICE	6/10/2010	2011	PRIOR	NON	PPSUITE/ITS
X500.93	DEPLOYMENT OF REAL-TIME TRAFFIC ADAPTIVE SYSTEM CITYWIDE	6/1/2010	2011	PRIOR	NON	PPSUITE/Sig
X500.94	LOCAL STREET NETWORK MANAGEMENT	9/30/2010	2011	PRIOR	NON	PPSUITE/ITS

X760.21	HARLEM HOSPITAL CENTER PARKING GARAGE	9/1/2010	2011	TIP	NON	NC
X760.22	ADVANCED SOLID-STATE TRAFFIC CONTROLLERS (ZONE 2)	12/30/2011	2012	TIP	NON	PPSUITE/Sig
X760.41	WEST HARLEM WATERFRONT PROJECT	2/1/2010	2011	TIP	NON	NC
X770.09	ADVANCED SOLID-STATE TRAFFIC CONTROLLERS, MANHATTAN ZONE 1	12/30/2011	2012	TIP	NON	NC
X770.10	ADVANCED SOLID-STATE TRAFFIC CONTROLLERS, MANHATTAN ZONE 3	12/30/2011	2012	TIP	NON	NC
X770.11	ADVANCED SOLID-STATE TRAFFIC CONTROLLERS, MANHATTAN ZONE 4	12/30/2011	2012	TIP	NON	NC
X770.12	ADVANCED SOLID-STATE TRAFFIC CONTROLLERS, MANHATTAN ZONE 5	12/30/2011	2012	TIP	NON	NC
X802.42	TOPICS IV COMPUTERIZED TRAFFIC SIGNAL PROGRAM	9/29/2011	2012	PRIOR	NON	PPSUITE/Sig
X802.43	TOPICS IV SIGNAL COMPUTER	9/29/2011	2012	PRIOR	NON	PPSUITE/Sig
X802.48	TOPICS IV SIGNALS	9/30/2011	2012	PRIOR	NON	PPSUITE/Sig
X802.69	COMPUTER PROCUREMENT FOR VTCS-WS AREA COMPUTE	12/31/2004	2007	PRIOR	NON	PPSUITE/Sig
X802.72	SIGNAL MODERNIZATION -1	9/30/2009	2011	PRIOR	NON	PPSUITE/Sig
X802.73	SIGNAL MODERNIZATION -2	9/30/2011	2012	PRIOR	NON	PPSUITE/Sig
X804.13	INTEGRATED INCIDENT MANAGEMENT SYSTEM -NEW YORK	12/31/2005	2007	PRIOR	EXEMPT	ITS/PPSUITE
X805.79	HIGHWAY EMERGENCY LOCAL PATROL (HELP) - NEW YORK	12/31/2006	2007	PRIOR	EXEMPT	PPSUITE
X805.80	HIGHWAY EMERGENCY LOCAL PATROL (HELP) PROJECT - NEW YORK	2/26/2010	2011	TIP	EXEMPT	PPSUITE
X806.15	FDR DRIVE & HHP ITS	4/2/2013	2020	PRIOR	NON	ITS/PPSUITE
X822.66A	MOYNIHAN STATION DEVELOPMENT PROJECT	12/31/2018	2020	TIP	NON	*NC
XHWM738	HWM738 EAST AND WEST HOUSTON STREET	7/1/2009	2011	PLAN	PLAN	BPM Highway
XTHRU	THRU STREETS PROGRAM	12/31/2002	2007	PLAN	PLAN	BPM Highway
G4090203	SECOND AVENUE SUBWAY	6/30/2020	2020	PRIOR	NON	BPM Transit
G412-0101	FULTON STREET TRANSIT CENTER	6/30/2012	2012	TIP	EXEMPT	BPM Transit
G412-0202	SOUTH FERRY TERMINAL STATION	3/16/2009	2011	PRIOR	EXEMPT	BPM Transit
G510-01-72	SECOND AVENUE SUBWAY: 72ND STR. STATION	6/15/2015	2020	TIP	NON	BPM Transit
G510-01-86	SECOND AVENUE SUBWAY: 86TH STR. STATION	6/15/2015	2020	TIP	NON	BPM Transit
G510-01-96	SECOND AVENUE SUBWAY: 96TH STR. STATION	6/15/2015	2020	TIP	NON	BPM Transit
G511-0101	EXTENSION OF THE #7 LINE	12/31/2013	2020	PRIOR	NON	BPM Transit
ST09-5250	BROADWAY-LAFAYETTE TRANSFER	11/30/2011	2012	TIP	NON	BPM Transit

NEW YORK CITY - QUEENS COUNTY

PIN	Project Name	Completion Date	1st Year Modeled	Scenario	Status	Analysis Tool
X034.05	LONG ISLAND EXPWY/CLEARVIEW EXPWY INTERCHANGE IMPROVEME	9/23/2003	2007	PRIOR	NON	BPM Highway
X051.60	KEW GARDENS INTERCHANGE 3 (OPERATIONAL IMPRVMNTS)	12/1/2017	2020	TIP	NON	BPM Highway
X228.65	I-495 LONG ISLAND EXPWY ITS	4/5/2010	2011	PRIOR	NON	PPSUITE/ITS
X228.66	BELL BLVD BRIDGE OVER LIE (AUX LANE)	2/23/2012	2012	TIP	NON	BPM Highway
X228.67	I-495 LONG ISLAND EXPWY BR'S & HWY REHAB (EXIT 29-32)	12/29/2006	2007	PRIOR	NON	BPM Highway
X501.61	ITS ON CROSS ISLAND EXPRESSWAY	9/30/2013	2020	TIP	NON	PPSUITE/ITS
X730.53	BQE RECONSTRUCTION (B'WAY - QNS BLVD)	12/16/2009	2011	PRIOR	NON	BPM Highway
X735.39A	WHITESTONE EXPWY/FLUSHING RVR BRIDGE REPLACEMENT	5/16/2010	2011	PRIOR	NON	BPM Highway
X735.45	VAN WYCK EXPWY ITS IMPROVEMENTS (KEW - JFK)	3/30/2007	2007	PRIOR	NON	BPM Highway
X735.47	VAN WYCK SYSTEM REHABILITATION	12/31/2002	2007	PRIOR	NON	PPSUITE/ITS
X735.48	VWE/WESTERN QUEENS ITS	12/31/2004	2007	PRIOR	NON	PPSUITE/ITS
X735.56	KEW GARDENS INTERCHANGE 1 (OPERATIONAL IMPRVMNTS)	12/31/2012	2020	TIP	NON	BPM Highway
X735.67	VAN WYCK EXPRESSWAY (I-678) RECONSTRUCTION AND BRIDGE R	12/31/2005	2007	PRIOR	EXEMPT	BPM Highway
X735.71	GRAND CENTRAL PKWY CORRIDOR ITS	2/28/2007	2007	PRIOR	NON	PPSUITE/ITS
X735.73	ATLANTIC AVENUE EXTENSION	10/31/2012	2020	TIP	NON	BPM Highway
X735.74	VWE CORRIDOR ITS IMPROVEMENT	12/31/2009	2011	TIP	NON	PPSUITE/ITS
X735.75	KEW GARDENS INTERCHANGE 2 (OPERATIONAL IMPRVMNTS)	4/9/2014	2020	TIP	NON	BPM Highway
X770.35	CROSS ISLAND PARKWAY BRIDGE OVER 212 STREET	7/15/2018	2020	TIP	NON	BPM Highway
X770.44	WILLETS POINT DEVELOPMENT (VAN WYCK)	12/31/2013	2020	TIP	NON	BPM Highway
X806.20	LONG ISLAND EXPWY ITS (MAIN ST-CITY LINE)	10/5/2010	2011	TIP	NON	PPSUITE/ITS
X806.21	GRAND CENTRAL PARKWAY & CROSS ISLAND PARKWAY ITS	10/5/2012	2020	TIP	NON	PPSUITE/ITS
X806.49	TRAVEL TIME ALONG I 495 (QMT-I287)	12/11/2012	2020	TIP	NON	PPSUITE/ITS
X823.29	LAGUARDIA AIRPORT FERRY	3/31/2010	2011	TIP	NON	BPM Transit

XGCPTRUCK	TRUCKS ON GCP TO BQE	12/31/2004	2007	BASE	BASE	BPM Highway
PANYNJ JFK	PANYNJ JFK AIRTRAIN	12/31/2003	2007	PRIOR	NON	BPM Transit
EN12-4743	63RD STREET CONNECTION	12/31/2002	2007	PRIOR	NON	BPM Transit

NEW YORK CITY - RICHMOND COUNTY

PIN	Project Name	Completion Date	1st Year Modeled	Scenario	Status	Analysis Tool
X096.18	WEST SHORE EXRESSWAY ACCESS AND SAFTY IMPROVEMENT	9/1/2020	2030	TIP	NON	BPM Highway
X349.13	KOREAN WAR VETERANS PKWY RAMP TERMINUS PROJECT (X34919)	5/4/2017	2020	TIP	EXEMPT	BPM Highway
X501.25	STATEN ISLAND RAILROAD REACTIVATION OF ARLINGTON YARD	12/31/2005	2007	PRIOR	EXEMPT	PPSUITE
X501.65	CONST OF F/O CABLE ALONG KOREAN WAR VETS PKY	12/30/2011	2012	TIP	NON	PPSUITE/ITS
X730.93	SIE TSM IMPROVEMENTS (BUS LANE)	6/30/2005	2007	TIP	NON	BPM Highway
X731.05	ARTHUR KILL ROAD PARK&RIDE	12/5/2012	2020	TIP	NON	Off-Model
X731.09	STATEN ISLAND ITS (VMS)	7/15/2004	2007	PRIOR	NON	PPSUITE/ITS
X731.17	STATEN ISLAND ITS (CCTV & VMS)	6/6/2006	2007	PRIOR	NON	PPSUITE/ITS
X731.22	STATEN ISLAND EXPRESSWAY BUS LANE EXTEN (SLOSSON-VICTORY)	7/11/2017	2020	TIP	NON	BPM Transit
X731.23	SI ITS/ATMS UPGRADE (GOETHALS & OUTERBRIDGE TO BAYONNE & VZB)	8/31/2011	2012	TIP	NON	PPSUITE/ITS
X731.30	SIE ACCESS IMPROVEMENTS, NEW RAMPS (VZB-RENWICK)	12/7/2011	2012	TIP	NON	BPM Highway
X804.18	STATEN ISLAND ADVANCED TRAVELERS INFORMATION SYSTEM (ATIS)	5/29/2009	2011	PRIOR	NON	PPSUITE/ITS
X804.45	ARTHUR KILL PARK&RIDE LOT	12/31/2000	2007	TIP	NON	Off-Model
X806.38	HUGUENOT AVENUE PARK & RIDE	3/11/2010	2011	TIP	NON	Off-Model
X806.39	ELTINGVILLE TRANSIT CENTER	5/12/2010	2011	TIP	NON	Off-Model
X806.50	TRAVEL TIME ALONG SIE/WSE	12/5/2014	2020	TIP	NON	PPSUITE/ITS
XHWRP054	HYLAN BOULEVARD RECON	12/31/2013	2020	PLAN	PLAN	BPM Highway
SI01-5220	SIRTOA: NEW ARTHUR KILL STATION	10/30/2011	2012	TIP	NON	BPM Transit

NEW YORK CITY - MULTI-COUNTY

PIN	Project Name	Completion Date	1st Year Modeled	Scenario	Status	Analysis Tool
X500.09	QUEENSBORO BRIDGE FIBER CABLE AND SURVEILLANCE	10/20/2006	2007	PRIOR	NON	PPSUITE/ITS
X501.27	CONSTRUCTION OF FIBER OPTICS IN OUTER BOROUGHS	6/10/2010	2011	PRIOR	NON	PPSUITE/Sig
X501.29	OZONE ACTION DAYS - EPISODIC EMISSIONS CONTROLS	6/30/2008	2011	PRIOR	NON	PPSUITE
X501.39	PRIVATE FLEET ALTERNATE FUEL PROGRAM	12/31/2011	2012	TIP	NON	Off-Model
X501.40	NYC MUNICIPAL FLEET ALT FUELS PROGRAM	6/30/2010	2011	TIP	NON	Off-Model
X501.53	RAIL FREIGHT IMPROVEMENTS (BR CLEARANCES)	12/31/2010	2011	TIP	NON	NC
X501.56	TRANSIT ADVISOR / COMMUTER CHOICE INTEGRATION	(See X806.35)				(See X806.35)
X501.59	HELP PROGRAM ON BELT SYSTEM	DELETED				DELETED
X501.60	CONSTRUCTION OF FIBRE OPTICS ON JACKIE ROBINSON PKY	1/31/2010	2011	TIP	NON	PPSUITE/ITS
X501.62	CONSTRUCTION OF FIBRE OPTICS LINKS ON BELT PKWY	9/28/2012	2020	TIP	NON	PPSUITE/ITS
X501.64	CONSTRUCTION OF FIBRE OPTICS LINKS ALONG HENRY HUDON PKY	9/30/2013	2020	TIP	NON	PPSUITE/ITS
X501.66	UPDATE TRIPS 123	9/30/2009	2011	TIP	NON	CommChoice
X501.72	ITS - PURCHASE & INSTALL ELECTRONIC TOLL COLLECTION (ETC)	DELETED				DELETED
X726.81	I95 CORRIDOR, ALEXANDER HAMILTON BRIDGE	6/30/2011	2011	TIP	EXEMPT	BPM Highway
X726.84	TRAFFIC MANAGEMENT SYSTEM ALONG I-95 CORRIDOR	12/31/2001	2007	PRIOR	NON	PPSUITE/ITS
X729.77	KOSCIUSZKO BRIDGE RECONSTRUCTION-CONT4	11/10/2021	2030	TIP	NON	BPM Highway
X731.24	KOSCIUSZKO BRIDGE RECONSTRUCTION-CONT1	11/10/2021	2030	TIP	NON	BPM Highway
X731.25	KOSCIUSZKO BRIDGE RECONSTRUCTION-CONT2	11/10/2021	2030	TIP	NON	BPM Highway
X731.26	KOSCIUSZKO BRIDGE RECONSTRUCTION-CONT3	11/10/2021	2030	TIP	NON	BPM Highway
X735.72	BQE CORRIDOR ITS IMPROVEMENT PROJECT (BBT-GCP)	3/30/2007	2007	PRIOR	NON	PPSUITE/ITS
X757.00	REPLACEMENT OF WILLIS AVE. BRIDGE	12/28/2012	2020	TIP	EXEMPT	BPM Highway
X757.49	REPLACEMENT OF THE THIRD AVE. BRIDGE	1/15/2010	2011	PRIOR	EXEMPT	BPM Highway
X757.59	RECONSTRUCTION OF 145TH STREET BRIDGE OVER HARLEM RIVER	3/31/2010	2011	PRIOR	EXEMPT	BPM Highway
X757.90	INTEGRATED TRANSPORTATION MANAGEMENT SYS (CENTER TO CTR)	12/1/2010	2011	PRIOR	NON	PPSUITE/ITS
X760.16	TRAFFIC SIGNAL RETIMING	12/31/2010	2011	TIP	NON	PPSUITE/Sig

X760.46	PRIVATE DIESEL RETROFIT EMISSION REDUCTION	1/8/2014	2020	TIP	NON	Off-Model
X770.04	PROGRAM TO RETROFIT HEAVY-DUTY NON ROAD FLEET VEHICLES	9/3/2012	2020	TIP	N/A	N/A
X770.06	MUNICIPAL ON-ROAD FLEET EMISSION REDUCTION	5/1/2013	2020	TIP	NON	NC
X770.07	PRIVATE FLEETS CONVERT TO ALTERNATE FUELS OR RETROFITS	3/31/2014	2020	TIP	NON	Off-Model
X770.08	EXPANSION OF CROSS HARBOR RAIL FLOAT SERVICE	10/28/2011	2012	TIP	N/A	Off-Model
X770.28	NYC BUS RAPID TRANSIT DEMONSTRATION PROJECT (BRT)	12/30/2012	2020	TIP	NON	BPM Transit
X770.29	NYC TAXICAB & BLACK CAR LIMOUSINE	8/31/2012	2020	TIP	NON	NC
X770.32	BROOKLYN BRIDGE ITS	8/31/2011	2012	TIP	NON	PPSUITE/ITS
X770.37	BLOCK FUNDING FOR TRAFFIC SIGNAL PRIORITY & ADV CONTROLLERS	12/31/2013	2020	TIP	NON	PPSUITE/Sig
X770.45	SCHOOL BUS DIESEL EMISSIONS REDUCTION PROJECT (AF-01-09)	6/1/2011	2011	TIP	NON	Off-Model
X770.47	GOETHALS BRIDGE MODERNIZATION PROGRAM	6/15/2015	2020	TIP	NON	BPM Highway
X802.79	EXPANDING VIDEO SURVEILLANCE AT NEW YORK TMC	12/1/2008	2011	PRIOR	NON	PPSUITE/ITS
X803.28	AUTOMATED TRAFFIC CONTROL SIGNALS	6/30/2010	2011	PRIOR	NON	PPSUITE/ITS
X804.09	TRAFFIC MANAGEMENT SYSTEM ALONG I-95 CORRIDOR	12/31/2001	2007	PRIOR	NON	PPSUITE/ITS
X804.16	INTERIM TRAFFIC OPERATING CENTER	6/29/2007	2007	PRIOR	NON	PPSUITE/ITS
X805.34	INTERIM TRAFFIC OPERATION CENTER ELECTRICAL	12/31/1999	2007	PRIOR	NON	PPSUITE/ITS
X805.35	INTERIM TRAFFIC OPERTION CENTER -HVAC, PLUMBING	12/31/1999	2007	PRIOR	NON	PPSUITE/ITS
X805.69	MAJOR DEEGAN AND HARLEM RIVER DR. CORRIDORS ITS	1/31/2007	2007	PRIOR	NON	PPSUITE/ITS
X805.70	CROSS BRONX EXPWY & HUTCHINSON RIVER PKWY ITS	1/31/2007	2007	PRIOR	NON	ITS/PPSUITE
X805.81	HIGHWAY EMERGENCY LOCAL PATROL	2/7/2011	2011	TIP	EXEMPT	PPSUITE/ITS
X805.82	HIGHWAY EMERGENCY LOCAL PATROL	12/30/2011	2012	TIP	EXEMPT	PPSUITE/ITS
X805.83	BRONX AND NORTHERN MANHATTAN PARKWAY ITS	8/27/2010	2011	PRIOR	NON	PPSUITE/ITS
X806.02	INTEGRATED INCIDENT MANAGEMENT SYSTEM	9/30/2009	2011	PRIOR	EXEMPT	PPSUITE/ITS
X806.16	HIGHWAY EMERGENCY LOCAL PATROL	12/31/2014	2020	TIP	NON	PPSUITE/ITS
X806.28	HIGHWAY EMERGENCY LOCAL PATROL	12/31/2016	2020	PLAN	PLAN	PPSUITE/ITS
X806.35	NEXT GENERATION REG'L TRANSIT INFO PORTAL (was X501.56)	10/31/2009	2011	TIP	NON	PPSUITE/ITS
X806.37	511 TRAVEL INFORMATION PROGRAM	9/30/2009	2011	TIP	NON	PPSUITE/ITS
XONEWAY	ONE WAY STREET CONVERSION	12/31/2005	2007	BASE	BASE	BPM Highway
XT-ARC	ACCESS TO REGIONS CORE (ARC)	8/30/2015	2020	PLAN	PLAN	BPM Transit
XT-Holland	HOLLAND TUNNEL ITS	12/30/2006	2007	PRIOR	NON	PPSUITE/ITS
XT-Lincoln	LINCOLN TUNNEL ITS	3/30/2007	2007	PRIOR	NON	PPSUITE/ITS
GOETHALS	GOETHALS BRIDGE MODERNIZATION	(See X770.47)				
MHTN BRDG	FULL MANHATTAN BRIDGE RECONSTRUCTION	2/22/2004	2007	BASE	BASE	BPM Transit
T4120403	NEW YORK BUS RAPID TRANSIT (BRT) DEMONSTRATION PROGRAM	7/26/2009	2011	TIP	EXEMPT	BPM Transit
TR01-6630	OPERATIONS: INCREASE SERVICE ON #4 AND #5 LINES	2/26/2010	2011	TIP	EXEMPT	BPM Transit

V. ANALYSIS BY POLLUTANT

Eight-hour Ozone
Existing Budget Test for New York Portion of the NY-NJ-CT 8-hour Moderate Non-Attainment Area (Ozone Precursor in tons/day)

USEPA classified Westchester, Rockland, Bronx, New York, Richmond, Kings, Queens, Nassau and Suffolk Counties as a moderate non-attainment area for the eight-hour ozone standard on June 15, 2004. For the last several conformity determinations, NYMTC demonstrated conformity to the eight-hour ozone standard using a budget test previously established for the older one-hour standard as allowed by federal regulations. This conformity determination will use the one-hour budget test again. The Federal regulations allow use of the one-hour budget test until a new Motor Vehicle Emissions Budget (MVEB) for the 8-hour NYMA moderate ozone non-attainment area is found adequate by USEPA.

Analysis Years – The years 2011, 2012, 2020, 2030 and 2035 were analyzed for consistency with the MVEB for the existing one-hour ozone standard. These analysis years meet the requirements of the federal transportation conformity regulations as follows: Analysis year 2011 meets the requirement that the first analysis year be no more than five years from the year that the conformity determination is being made. Analysis year 2035 is the horizon year of NYMTC's Regional Transportation Plan. Analysis years 2020 and 2030 were analyzed to meet the requirement that consecutive analysis years be no more than ten years apart. In addition, years 2011 and 2012 are milestone years in the proposed MVEB for the 8-hour ozone standard. Since these two years were analyzed as a contingency to demonstrate compliance with the proposed new MVEB as described in the next section of this document, emissions results for years 2011 and 2012 are also reported to demonstrate consistency with the existing one-hour budget tests. It should also be noted that 2009 is the calendar year of the ozone season preceding the maximum attainment date for moderate eight-hour ozone non-attainment areas. The maximum attainment date is usually a required analysis year in an emissions budget test. However, since the year 2009 has elapsed it is not included in this analysis.

NOx Emissions (tons per day)

	Scenario Year					
Year	**2002 Base year**	**2011D**	**2012D**	**2020D**	**2030D**	**2035D**
BPM/PPSuite 9 Counties	**286.0**	**123.45**	**109.13**	**51.27**	**35.38**	**33.03**
Off model emissions		**-0.43**	**-0.93**	**-0.68**	**-0.60**	**-0.59**
Total emissions	**286.0**	**123.02**	**108.20**	**50.59**	**34.78**	**32.44**
SIP budget		**227.80**	**227.80**	**227.80**	**227.80**	**227.80**
Conclusion		***Pass***	***Pass***	***Pass***	***Pass***	***Pass***

VOC Emissions (tons per day)

	Scenario Year					
Year	**2002 Base Year**	**2011D**	**2012D**	**2020D**	**2030D**	**2035D**
BPM/PPSuite 9 Counties	**224.2**	**96.09**	**86.82**	**53.34**	**49.75**	**50.89**
Off model emissions		**-0.07**	**-0.07**	**-0.02**	**-0.02**	**-0.02**
Total emissions	**224.2**	**96.02**	**86.75**	**53.32**	**49.73**	**50.87**
SIP budget		**176.30**	**176.30**	**176.30**	**176.30**	**176.30**
Conclusion		***Pass***	***Pass***	***Pass***	***Pass***	***Pass***

Proposed Budget Test for Motor Vehicle Emission for New York Portion of the NY-NJ-CT 8 -Hour Moderate Non-Attainment Area (Ozone Precursor in tons/day)

On June 19, 2008, the USEPA posted the proposed Motor Vehicle Emissions Budget (MVEB) for the New York portion of the New York-New Jersey-Connecticut 8-hour ozone non-attainment area for public review and comment. Although the 30 day public comment period has closed, USEPA has not deemed the proposed MVEB adequate for use in future NYMTC transportation conformity determinations. When this process is completed, the emissions tests to demonstrate conformity to the previous 1-hour ozone MVEB will no longer be required. Furthermore, if USEPA issues the MVEB adequacy determination prior to FHWA/FTA approval of this conformity determination, a demonstration that the area passes the new budget test will be required. To plan for this contingency, the table below demonstrates that the nine-county NYMTC portion of the New York-New Jersey-Connecticut 8-hour ozone non-attainment area passes the budget test for the proposed MVEB that is currently undergoing USEPA and public review.

Analysis Years – The years 2011, 2012, 2020, 2030 and 2035 were analyzed for consistency with the proposed MVEB for the New York State portion of the NY-NJ-CT eight-hour ozone non-attainment area. These analysis years meet the requirements of the federal transportation conformity regulation as follows: 2011 meets the requirement that the first analysis year be no more than five years from the year that the conformity determination is being made. In addition, years 2011 and 2012 are “SIP budget” milestone years in the proposed SIP. Analysis year 2035 is the horizon year of NYMTC’s long range Metropolitan Transportation Plan. Analysis years 2020 and 2030 were analyzed to meet the requirement that consecutive analysis years be no more than ten years apart.

NOX Emissions

	Scenario Years					
Year	**2002 Base year**	**2011D**	**2012D**	**2020D**	**2030D**	**2035D**
BPM/PPSuite 9 Counties	**286.0**	**123.45**	**109.13**	**51.27**	**35.38**	**33.03**
Off model emissions		**-0.43**	**-0.93**	**-0.68**	**-0.60**	**-0.59**
Total emissions	**286.0**	**123.02**	**108.20**	**50.59**	**34.78**	**32.44**
SIP budget		**227.80**	**227.80**	**227.80**	**227.80**	**227.80**
Conclusion		***Pass***	***Pass***	***Pass***	***Pass***	***Pass***

VOC Emissions

	Scenario Years					
Year	**2002 Base Year**	**2011D**	**2012D**	**2020D**	**2030D**	**2035D**
BPM/PPSuite 9 Counties	**224.2**	**96.09**	**86.82**	**53.34**	**49.75**	**50.89**
Off model emissions		**-0.07**	**-0.07**	**-0.02**	**-0.02**	**-0.02**
Total emissions	**224.2**	**96.02**	**86.75**	**53.32**	**49.73**	**50.87**
SIP budget		**176.30**	**176.30**	**176.30**	**176.30**	**176.30**
Conclusion		***Pass***	***Pass***	***Pass***	***Pass***	***Pass***

Budget Test for NY Metro Area for 1-Hour Severe Ozone Non-Attainment Area in Tons/Day (f*or Information Only*)

As noted in the overview, conformity requirements under the one hour ozone standard may remain applicable requirements until USEPA finds a new budget under the eight-hour standard to be adequate.

Analysis Years – Consistency with the 2007 one hour ozone attainment year MVEB has been demonstrated for all applicable analysis years. This comparison demonstrates that all applicable requirements under the Clear Air Act continue to be met for the former severe one hour ozone non-attainment area which includes the Lower Orange County Metropolitan Area (LOCMA) and all NYMTC counties except Putnam. Please note that due to the inclusion of LOCMA, the MVEB for this area is 3.0 tons per day VOC and 5.6 tons per day NOx higher than the “existing” MVEB for the New York State portion of the NY-NJ-CT eight-hour ozone non-attainment area as shown in the

preceding tables. In addition, the 2035 analysis year is included to cover the OCTC Metropolitan Transportation Plan and the NYMTC RTP horizon year.

Budget Test for NYMA for 1 – Hour Severe Ozone Non-Attainment Area in Tons/Day

OCTC (LOCMA) + NYMTC	**Future Analysis Years**					
Ozone Precursor	**Budget**		**2012D**	**2020D**	**2030D**	**2035D**
			Build	**Build**	**Build**	**Build**
VOC	**179.3**		**88.44**	**54.45**	**50.71**	**51.92**
NOx	**233.4**		**112.52**	**52.82**	**36.30**	**33.03**
Conclusion			***Pass***	***Pass***	***Pass***	***Pass***

***Note: Putnam County emissions are not included in the tables above. Putnam County is part of the Poughkeepsie Moderate eight-hour ozone non-attainment area (PONA). Appendix 5 contains the conformity determination for the PONA.**

Carbon Monoxide

On November 6, 1991 the counties of Westchester, Bronx, New York, Richmond, Kings, Queens and Nassau were classified as a moderate non-attainment area under the eight-hour CO standard. By 1999, air quality monitoring demonstrated the CO standard had been attained in this area. Before an area can be permanently redesignated to attainment, it must first be reclassified as a *Maintenance Area.* The designation of *maintenance* means the monitored air quality has attained the CO standards, but the ambient CO standard must be attained for a period of at least ten years. On April 19, 2002 EPA officially redesignated these seven counties as a CO Maintenance Area and approved New York State's proposed CO Maintenance Plan for the New York Metropolitan Area. This Maintenance Plan included an emissions budget for CO and is expected to be in effect for two ten-year periods. Consistent with 40 CFR Part 93.109(f) and 93.118, NYMTC is demonstrating conformity using the budget test for CO.

Analysis Years – The years 2012, 2020, 2030 and 2035 were analyzed for consistency with the MVEB for the New York State portion of the NY-NJ-CT CO Maintenance Area. These analysis years meet the requirements of the federal transportation conformity regulation as follows: Year 2012 is the final milestone year in the applicable CO Maintenance SIP; 2012 also meets the requirement that the first analysis year be no more than five years from the year that the conformity determination is being made. Analysis year 2035 is the horizon year of NYMTC's Regional Transportation Plan. Analysis years 2020 and 2030 were analyzed to meet the requirement that consecutive analysis years be no more than ten years apart.

CO Emissions Analysis in Tons/Day

	Scenario Years				
Year	**2002 base year**	**2012 D**	**2020 D**	**2030D**	**2035 D**
BPM / PPSuite 7 Counties	**1964.9**	**1042.25**	**913.21**	**953.91**	**972.42**
Off model emissions		**-0.77**	**-0.30**	**-0.25**	**-0.25**
Total emissions	**1964.9**	**1041.48**	**912.91**	**953.65**	**972.17**
SIP budget		**2381.0**	**2381.0**	**2431.0**	**2431.0**
Conclusion		***Pass***	***Pass***	***Pass***	***Pass***

Particulate Matter 10 Microns (PM-10)

New York County was classified as a moderate non-attainment area for PM_{10} on January 20, 1994. *There is no applicable motor vehicle emissions budget for PM10, therefore,* consistent with 40 CFR Part 93.109(g) and 93.119 the regional emissions analysis includes a comparison of the TIP and RTP *build* scenario emissions to the *no build* scenario in each conformity analysis year.

The years 2012, 2020, 2030 and 2035 were analyzed to demonstrate conformity to the PM_{10} standard. These analysis years meet the requirements of the federal transportation conformity regulation for PM_{10} non-attainment areas without motor vehicle emissions budgets as follows: Year 2012 is final milestone year in the applicable CO Maintenance SIP; 2012 also meets the requirement that the first analysis year be no more than five years from the year that the conformity determination is being made. Analysis year 2030 is the horizon year of NYMTC's Regional Transportation Plan. Analysis years 2020 and 2030 were analyzed to meet the requirement that consecutive analysis years be no more than ten years apart.

PM 10 Emissions Analysis for New York County (Manhattan) for Winter

Year	2002	2012N	2012D	2020N	2020D	2030N	2030D	2035N	2035D
Manhattan County	13.64	15.04	14.34	15.60	14.75	16.50	15.59	16.75	15.73
Off- Model			-0.04		-0.03		-0.02		-0.02
Total		15.04	14.30	15.60	14.72	16.50	15.57	16.75	15.71
Conclusion		*Pass*		*Pass*		*Pass*		*Pass*	

D = build scenario (TIP & RTP)
N = no build scenario

Fine Particulate Matter ($PM_{2.5}$)

In July 1997, EPA issued National Ambient Air Quality Standards (NAAQS) for fine particulate matter ($PM_{2.5}$), designed to protect the public from exposure to $PM_{2.5}$ at levels that may cause health problems. The standards included an annual standard set at 15 micrograms per cubic meter, based on the 3-year average of annual mean $PM_{2.5}$ concentrations and a 24-hour standard of 65 micrograms per cubic meter, based on the 3-year average of the 98th percentile of 24-hour concentrations. The New York-New Jersey-Connecticut metropolitan area is classified non-attainment for the 1997 annual $PM_{2.5}$ standard and is classified attainment for the 1997 24-hour $PM_{2.5}$ standard.

In September 2006, the USEPA revised the 1997 fine particle standards. The 2006 standards strengthened the 24-hour $PM_{2.5}$ standard from 65 micrograms per cubic meter (µg/m3) to 35 µg/m3, and retained the current annual $PM_{2.5}$ standard at 15 µg/m3. On December 14, 2009, the NY-NJ-CT metropolitan area was classified non-attainment for the new 2006 24-hour $PM_{2.5}$ standard. Transportation conformity will apply for those areas designated as non-attainment under the new standard one year after the effective date of the designations (i.e. December 14, 2010). Thus, the conformity requirements for the new standard do not yet apply. NYMTC and OCTC plan to demonstrate conformity to the 2006 24-hour $PM_{2.5}$ standard in fall 2010.

The NY-NJ-CT $PM_{2.5}$ non-attainment area encompasses all or portions of nine MPOs, as follows:

Connecticut:	Council of Governments of the Central Naugatuck Valley (COGCNV)
	Greater Bridgeport and Valley Regional Planning Organizations (GB&V MPO) Housatonic Valley Council of Elected Officials (HVCEO)
	South Central Regional Council of Governments (SCRCOG)
	South Western Regional Planning Agency (SWRPA)
New Jersey:	Delaware Valley Regional Planning Commission (DVRPC)
	North Jersey Transportation Planning Authority (NJTPA)
New York:	New York Metropolitan Transportation Council (NYMTC)
	Orange County Transportation Council (OCTC)

The Connecticut and New Jersey $PM_{2.5}$ motor vehicle emissions budgets for the 1997 annual $PM_{2.5}$ standard were found to be adequate by USEPA on June 20, 2007 and June 26, 2006, respectively. Thus, the NYMTC $PM_{2.5}$ regional emissions analysis is no longer part of a Multi-state analysis.

Until a motor vehicle emissions budget for the New York State portion of the NY-NJ-CT $PM_{2.5}$ non-attainment area is found to be adequate by USEPA, the transportation conformity regulations require that one of two interim emission tests be used to demonstrate $PM_{2.5}$ conformity, either the baseline year test, or the build/no-build test. The baseline year test requires that emissions projected for each future analysis year is no greater than emissions in 2002 (the baseline year). The build/no-build test requires

that, for each future analysis year, emissions from the "build" scenario be no greater than emissions from the "no-build" scenario. The selected interim emissions test must be used for the entire portion of the non-attainment area that does not have an adequate or approved motor vehicle emissions budget.

Within the New York State portion of the NY-NJ-CT $PM_{2.5}$ non-attainment area, the build/no-build test has been selected, through the interagency consultation process, as the interim emissions test.

Noted below are the analysis tables for NYMTC, and the combined OCTC/NYMTC tables. For details on the OCTC conformity process and procedures the OCTC document has been included in Appendix 4.

The years 2012, 2020, 2030 and 2035 were analyzed to demonstrate conformity to the $PM_{2.5}$ standard. These analysis years meet the requirements of the federal transportation conformity regulation for $PM_{2.5}$ non-attainment areas without motor vehicle emissions budgets as follows: Year 2012 meets the requirement that the first analysis year be no more than five years from the year that the conformity determination is being made. Analysis year 2035 is the horizon year of NYMTC and OCTC's Regional Transportation Plans. Analysis years 2020 and 2030 were analyzed to meet the requirement that consecutive analysis years be no more than ten years apart.

At the time of this filing NYSDEC has produced an annual $PM_{2.5}$ SIP including a new MVEB which is under EPA review. Until the new MVEB is deemed adequate by EPA, NYMTC's analysis approach remains the same.

Annual PM2.5 Emissions in Tons/Year – No Build Versus Build

Year	2012N	2012D	2020N	2020D	2030N	2030D	2035N	2035D
BPM/PPSuite 9 Counties	1,219.77	1,181.63	996.24	961.55	1,047.94	1,006.29	1,079.74	1,013.29
Off-Model		-9.63		-5.87		-5.34		-5.33
Total (Tons / year)	1,219.77	1,172.00	996.24	955.68	1,047.94	1,000.95	1,079.74	1,007.96
Conclusion	*pass*		*Pass*		*pass*		*pass*	

D = build scenario (TIP & RTP)
N = no build scenario

Annual NOx Emissions in Tons/Year – No Build Versus Build (NYMTC)

Year	2012N	2012D	2020N	2020D	2030N	2030D	2035N	2035D
BPM/PPSuite 9 Counties	45,944.90	44,571.07	20,983.26	20,355.57	14,566.50	14,026.24	13,876.71	13,130.40
Off-Model		-239.63		-199.11		-177.22		-175.11
Total	45,944.90	44,331.44	20,983.26	20,156.46	14,566.50	13,849.02	13,876.71	12,955.29
Conclusion	***pass***		***Pass***		***pass***		***pass***	

D = build scenario (TIP & RTP)
N = no build scenario

Annual PM2.5 & NOx Emissions in Tons/Year – No Build Versus Build (Combined NYMTC & OCTC)

PM2.5	Future Analysis Years - Results in Tons per year							
MPO	**2012**		**2020**		**2030**		**2035**	
	Build	**No-Build**	**Build**	**No-Build**	**Build**	**No-Build**	**Build**	**No-Build**
OCTC	91.79	94.01	74.65	74.65	80.87	82.70	85.12	86.69
NYMTC	**1,172.00**	**1,219.77**	**955.68**	**996.24**	**1,000.95**	**1,047.94**	**1,007.96**	**1,079.74**
TOTALS:	1,263.79	1,313.78	1,030.33	1,072.65	1,081.82	1,130.64	1,093.08	1,166.43
Conclusion	***pass***		***pass***		***pass***		***pass***	

NOx	Future Analysis Years – Results in Tons per year							
MPO	**2012**		**2020**		**2030**		**2035**	
	Build	**No-Build**	**Build**	**No-Build**	**Build**	**No-Build**	**Build**	**No-Build**
OCTC	3,819.84	3,909.90	1,812.06	1,850.34	1,159.81	1,184.42	1,147.48	1,164.87
NYMTC	**44,331.44**	**45,944.90**	**20,156.46**	**20,983.26**	**13,849.22**	**14,566.50**	**12,955.29**	**13,876.71**
TOTALS:	48,151.28	49,854.80	21,968.52	22,833.60	15,009.03	15,750.92	14,102.77	15,041.58
Conclusion	***pass***		***pass***		***pass***		***pass***	

VI. APPENDICES

Appendix 1A Build Summer Emissions by County

Appendix 1B Build Winter Emissions by County

Appendix 1C Build & No Build Annual PM2.5 Emissions by County

Appendix 1D No Build Summer Emissions by County

Appendix 1E No Build Winter Emissions by County

Appendix 1F Build and No Build Annual NOX Emissions by County

Appendix 2 Off Model Projects and Analysis

Appendix 3 OCTC Draft Conformity Determination

Appendix 4 PDCTC Draft Conformity Determination

Appendix 5 Public Comments and Responses *(When Finalized)*

Appendix 6 Resolutions *(When Finalized)*

Appendix 1A

2011 Summer Build Emissions Report

COUNTY	FACILITY	DAILY VMT	VHT	SPEED	VOC	NOx
		Vehicle miles traveled	Vehicle hours traveled	Miles per hour	Tons per day	Tons per day
1) New York	1) Freeways	3,349,884	141,345	23.7	1.63	1.57
	2) Arterials	5,394,092	657,816	8.2	4.04	7.76
	3) Locals	2,521,063	763,958	3.3	2.99	2.20
	County Total	**11,265,039**	**1,563,120**	**7.2**	**8.67**	**11.53**
2) Queens	1) Freeways	9,371,865	361,848	25.9	4.19	5.09
	2) Arterials	8,020,139	662,821	12.1	5.00	7.90
	3) Locals	4,164,205	671,646	6.2	3.14	3.05
	County Total	**21,556,209**	**1,696,315**	**12.7**	**12.33**	**16.03**
3) Bronx	1) Freeways	5,230,053	192,991	27.1	2.41	4.09
	2) Arterials	2,720,278	221,161	12.3	1.72	3.17
	3) Locals	2,231,336	223,134	10.0	1.50	1.61
	County Total	**10,181,667**	**637,285**	**16.0**	**5.64**	**8.87**
4) Kings	1) Freeways	3,449,433	124,080	27.8	1.57	1.71
	2) Arterials	7,913,406	824,313	9.6	5.53	7.04
	3) Locals	2,273,371	454,674	5.0	1.70	1.65
	County Total	**13,636,210**	**1,403,068**	**9.7**	**8.81**	**10.39**
5) Richmond	1) Freeways	2,312,219	73,171	31.6	1.06	1.60
	2) Arterials	2,792,677	192,598	14.5	1.61	2.27
	3) Locals	1,559,671	95,102	16.4	0.89	0.77
	County Total	**6,664,567**	**360,872**	**18.5**	**3.57**	**4.63**
6) Nassau	1) Freeways	10,779,895	253,645	42.5	4.45	5.64
	2) Arterials	13,449,977	1,372,447	9.8	8.04	7.83
	3) Locals	6,708,332	545,393	12.3	3.96	3.50
	County Total	**30,938,204**	**2,171,484**	**14.2**	**16.45**	**16.96**
7) Suffolk	1) Freeways	13,629,389	323,738	42.1	5.64	7.66
	2) Arterials	21,918,242	1,048,720	20.9	10.75	11.10
	3) Locals	14,438,256	633,257	22.8	6.92	6.44
	County Total	**49,985,887**	**2,005,715**	**24.9**	**23.30**	**25.19**
8) Westchester	1) Freeways	15,236,816	400,969	38.0	6.85	15.49
	2) Arterials	6,469,647	331,777	19.5	3.43	4.42
	3) Locals	4,907,929	177,182	27.7	2.47	2.58
	County Total	**26,614,392**	**909,927**	**29.2**	**12.75**	**22.48**
9) Rockland	1) Freeways	4,189,592	76,313	54.9	1.81	4.21
	2) Arterials	3,179,896	116,055	27.4	1.54	2.07
	3) Locals	1,764,858	145,856	12.1	1.22	1.08
	County Total	**9,134,346**	**338,224**	**27.0**	**4.57**	**7.36**
Grand Total (9 Counties)		**179,976,521**	**11,086,010**	**16.2**	**96.09**	**123.44**
10) Putnam	1) Freeways	2,509,772	44,342	56.6	1.16	5.15
	2) Arterials	1,653,473	77,265	21.4	0.92	1.46
	3) Locals	1,972,831	52,609	37.5	1.00	1.11
	County Total	**6,136,076**	**174,216**	**35.2**	**3.08**	**7.72**

Appendix 1A

2012 Summer Build Emissions Report

COUNTY	FACILITY	DAILY VMT	VHT	SPEED	VOC	NOx
		Vehicle miles traveled	Vehicle hours traveled	Miles per hour	Tons per day	Tons per day
1) New York	1) Freeways	3,345,828	141,772	23.6	1.47	1.40
	2) Arterials	5,360,122	645,798	8.3	3.59	7.04
	3) Locals	2,500,469	735,432	3.4	2.63	1.94
	County Total	**11,206,419**	**1,523,002**	**7.4**	**7.68**	**10.38**
2) Queens	1) Freeways	9,352,020	359,693	26.0	3.76	4.48
	2) Arterials	7,981,963	665,164	12.0	4.46	7.11
	3) Locals	4,147,511	658,335	6.3	2.79	2.68
	County Total	**21,481,494**	**1,683,192**	**12.8**	**11.01**	**14.26**
3) Bronx	1) Freeways	5,239,940	193,356	27.1	2.18	3.55
	2) Arterials	2,719,475	221,096	12.3	1.54	2.85
	3) Locals	2,228,954	222,895	10.0	1.34	1.42
	County Total	**10,188,369**	**637,347**	**16.0**	**5.06**	**7.82**
4) Kings	1) Freeways	3,434,376	123,539	27.8	1.40	1.52
	2) Arterials	7,869,385	811,277	9.7	4.91	6.30
	3) Locals	2,267,482	453,496	5.0	1.54	1.46
	County Total	**13,571,243**	**1,388,312**	**9.8**	**7.86**	**9.27**
5) Richmond	1) Freeways	2,328,281	73,914	31.5	0.96	1.41
	2) Arterials	2,796,039	191,510	14.6	1.45	2.05
	3) Locals	1,545,314	94,226	16.4	0.79	0.67
	County Total	**6,669,634**	**359,650**	**18.5**	**3.20**	**4.12**
6) Nassau	1) Freeways	10,764,003	254,468	42.3	4.00	4.95
	2) Arterials	13,415,877	1,636,083	8.2	7.53	7.00
	3) Locals	6,688,077	566,786	11.8	3.65	3.09
	County Total	**30,867,957**	**2,457,337**	**12.6**	**15.18**	**15.05**
7) Suffolk	1) Freeways	13,657,785	323,644	42.2	5.10	6.76
	2) Arterials	22,014,358	1,058,383	20.8	9.73	9.90
	3) Locals	14,537,299	637,601	22.8	6.27	5.73
	County Total	**50,209,442**	**2,019,628**	**24.9**	**21.09**	**22.39**
8) Westchester	1) Freeways	15,270,811	402,924	37.9	6.22	13.22
	2) Arterials	6,537,694	336,995	19.4	3.12	3.94
	3) Locals	4,975,971	180,289	27.6	2.26	2.29
	County Total	**26,784,476**	**920,207**	**29.1**	**11.60**	**19.45**
9) Rockland	1) Freeways	4,198,248	76,471	54.9	1.65	3.60
	2) Arterials	3,220,482	118,400	27.2	1.40	1.86
	3) Locals	1,741,270	146,325	11.9	1.09	0.95
	County Total	**9,160,000**	**341,196**	**26.8**	**4.14**	**6.40**
Grand Total (9 Counties)		**180,139,034**	**11,329,870**	**15.9**	**86.82**	**109.13**
10) Putnam	1) Freeways	2,512,162	44,228	56.8	1.07	4.37
	2) Arterials	1,680,342	79,637	21.1	0.85	1.30
	3) Locals	1,997,177	53,400	37.4	0.92	0.99
	County Total	**6,189,681**	**177,266**	**34.9**	**2.83**	**6.66**

Appendix 1A

2020 Summer Build Emissions Report

COUNTY	FACILITY	DAILY VMT	VHT	SPEED	VOC	NOx
		Vehicle miles traveled	Vehicle hours traveled	Miles per hour	Tons per day	Tons per day
1) New York	1) Freeways	3,410,232	147,629	23.1	0.86	0.66
	2) Arterials	5,409,198	651,711	8.3	2.20	3.38
	3) Locals	2,558,844	752,601	3.4	1.72	0.90
	County Total	**11,378,274**	**1,551,941**	**7.3**	**4.78**	**4.94**
2) Queens	1) Freeways	9,588,663	367,382	26.1	2.19	2.08
	2) Arterials	8,093,652	658,020	12.3	2.68	3.35
	3) Locals	4,206,928	657,333	6.4	1.74	1.24
	County Total	**21,889,243**	**1,682,735**	**13.0**	**6.61**	**6.67**
3) Bronx	1) Freeways	5,473,170	200,482	27.3	1.32	1.62
	2) Arterials	2,815,279	232,668	12.1	0.97	1.37
	3) Locals	2,291,584	226,890	10.1	0.84	0.66
	County Total	**10,580,033**	**660,040**	**16.0**	**3.13**	**3.65**
4) Kings	1) Freeways	3,593,969	126,548	28.4	0.83	0.72
	2) Arterials	8,024,346	844,668	9.5	3.04	2.95
	3) Locals	2,324,356	474,358	4.9	0.98	0.67
	County Total	**13,942,671**	**1,445,575**	**9.6**	**4.85**	**4.34**
5) Richmond	1) Freeways	2,514,567	84,381	29.8	0.61	0.64
	2) Arterials	3,033,478	228,081	13.3	0.96	1.02
	3) Locals	1,770,264	129,216	13.7	0.56	0.36
	County Total	**7,318,309**	**441,679**	**16.6**	**2.13**	**2.01**
6) Nassau	1) Freeways	10,943,294	246,471	44.4	2.35	2.25
	2) Arterials	13,490,716	1,070,692	12.6	4.05	3.15
	3) Locals	6,667,573	497,580	13.4	2.01	1.37
	County Total	**31,101,583**	**1,814,742**	**17.1**	**8.41**	**6.76**
7) Suffolk	1) Freeways	14,219,750	342,645	41.5	3.07	3.05
	2) Arterials	22,897,167	1,085,174	21.1	5.95	4.66
	3) Locals	15,193,247	678,270	22.4	3.88	2.71
	County Total	**52,310,164**	**2,106,088**	**24.8**	**12.90**	**10.41**
8) Westchester	1) Freeways	16,791,769	466,438	36.0	4.16	6.20
	2) Arterials	7,237,778	387,047	18.7	2.10	1.94
	3) Locals	5,714,534	217,283	26.3	1.57	1.17
	County Total	**29,744,081**	**1,070,768**	**27.8**	**7.83**	**9.30**
9) Rockland	1) Freeways	4,640,833	86,261	53.8	1.10	1.84
	2) Arterials	3,522,553	130,465	27.0	0.91	0.89
	3) Locals	1,918,778	168,314	11.4	0.71	0.46
	County Total	**10,082,164**	**385,040**	**26.2**	**2.71**	**3.19**
Grand Total (9 Counties)		**188,346,522**	**11,158,607**	**16.9**	**53.34**	**51.27**
10) Putnam	1) Freeways	2,962,451	53,863	55.0	0.79	2.12
	2) Arterials	1,899,882	94,521	20.1	0.61	0.67
	3) Locals	2,324,548	62,826	37.0	0.65	0.53
	County Total	**7,186,881**	**211,210**	**34.0**	**2.04**	**3.32**

Appendix 1A

2030 Summer Build Emissions Report

COUNTY	FACILITY	DAILY VMT	VHT	SPEED	VOC	NOx
		Vehicle miles traveled	Vehicle hours traveled	Miles per hour	Tons per day	Tons per day
1) New York	1) Freeways	3,490,191	155,120	22.5	0.74	0.49
	2) Arterials	5,456,202	673,605	8.1	1.98	1.82
	3) Locals	2,640,322	825,101	3.2	1.67	0.67
	County Total	**11,586,715**	**1,653,825**	**7.0**	**4.38**	**2.97**
2) Queens	1) Freeways	10,147,440	396,384	25.6	1.90	1.49
	2) Arterials	8,576,343	720,701	11.9	2.48	2.02
	3) Locals	4,532,792	731,095	6.2	1.69	0.90
	County Total	**23,256,575**	**1,848,181**	**12.6**	**6.07**	**4.41**
3) Bronx	1) Freeways	5,692,798	213,213	26.7	1.14	0.99
	2) Arterials	2,903,376	248,152	11.7	0.87	0.77
	3) Locals	2,361,861	241,006	9.8	0.75	0.46
	County Total	**10,958,035**	**702,371**	**15.6**	**2.76**	**2.22**
4) Kings	1) Freeways	3,779,592	134,505	28.1	0.72	0.54
	2) Arterials	8,300,527	922,281	9.0	2.82	1.86
	3) Locals	2,468,038	560,918	4.4	0.94	0.50
	County Total	**14,548,157**	**1,617,704**	**9.0**	**4.48**	**2.91**
5) Richmond	1) Freeways	2,721,765	97,554	27.9	0.55	0.44
	2) Arterials	3,271,606	268,164	12.2	0.92	0.68
	3) Locals	1,983,117	165,260	12.0	0.55	0.31
	County Total	**7,976,488**	**530,978**	**15.0**	**2.02**	**1.42**
6) Nassau	1) Freeways	11,546,219	266,042	43.4	2.03	1.64
	2) Arterials	14,515,472	1,837,402	7.9	4.41	2.42
	3) Locals	7,045,311	597,060	11.8	1.89	1.09
	County Total	**33,107,002**	**2,700,504**	**12.3**	**8.34**	**5.14**
7) Suffolk	1) Freeways	15,272,918	375,256	40.7	2.72	2.23
	2) Arterials	24,421,963	1,227,234	19.9	5.45	3.63
	3) Locals	16,317,414	758,949	21.5	3.55	2.20
	County Total	**56,012,295**	**2,361,440**	**23.7**	**11.72**	**8.05**
8) Westchester	1) Freeways	18,015,550	536,177	33.6	3.72	3.64
	2) Arterials	8,234,541	473,249	17.4	2.08	1.46
	3) Locals	6,539,107	262,615	24.9	1.54	0.98
	County Total	**32,789,198**	**1,272,041**	**25.8**	**7.34**	**6.08**
9) Rockland	1) Freeways	5,183,768	106,662	48.6	1.02	1.17
	2) Arterials	3,901,046	154,803	25.2	0.86	0.65
	3) Locals	2,086,507	210,758	9.9	0.78	0.37
	County Total	**11,171,321**	**472,224**	**23.7**	**2.65**	**2.18**
Grand Total (9 Counties)		**201,405,786**	**13,159,268**	**15.3**	**49.76**	**35.38**
10) Putnam	1) Freeways	3,419,363	68,115	50.2	0.72	0.97
	2) Arterials	2,431,247	139,727	17.4	0.69	0.54
	3) Locals	2,920,426	83,920	34.8	0.68	0.49
	County Total	**8,771,036**	**291,762**	**30.1**	**2.08**	**1.99**

Appendix 1A

2035 Summer Build Emissions Report

COUNTY	FACILITY	DAILY VMT	VHT	SPEED	VOC	NOx
		Vehicle miles traveled	Vehicle hours traveled	Miles per hour	Tons per day	Tons per day
1) New York	1) Freeways	3,505,339	156,488	22.4	0.74	0.47
	2) Arterials	5,435,708	671,075	8.1	1.97	1.34
	3) Locals	2,643,741	826,169	3.2	1.70	0.64
	County Total	**11,584,788**	**1,653,732**	**7.0**	**4.41**	**2.44**
2) Queens	1) Freeways	10,317,996	407,826	25.3	1.93	1.43
	2) Arterials	8,775,685	750,059	11.7	2.55	1.69
	3) Locals	4,689,815	768,822	6.1	1.75	0.87
	County Total	**23,783,496**	**1,926,707**	**12.3**	**6.24**	**3.99**
3) Bronx	1) Freeways	5,736,905	214,064	26.8	1.14	0.91
	2) Arterials	2,901,350	245,877	11.8	0.87	0.61
	3) Locals	2,364,131	238,801	9.9	0.75	0.43
	County Total	**11,002,386**	**698,742**	**15.7**	**2.76**	**1.94**
4) Kings	1) Freeways	3,817,924	135,387	28.2	0.72	0.52
	2) Arterials	8,381,413	952,433	8.8	2.87	1.62
	3) Locals	2,509,138	583,520	4.3	0.96	0.48
	County Total	**14,708,475**	**1,671,341**	**8.8**	**4.56**	**2.62**
5) Richmond	1) Freeways	2,811,563	102,988	27.3	0.57	0.42
	2) Arterials	3,358,008	284,577	11.8	0.96	0.60
	3) Locals	2,072,854	185,076	11.2	0.57	0.31
	County Total	**8,242,425**	**572,641**	**14.4**	**2.11**	**1.33**
6) Nassau	1) Freeways	11,706,956	273,527	42.8	2.05	1.59
	2) Arterials	14,729,121	1,864,446	7.9	4.45	2.29
	3) Locals	7,124,201	603,746	11.8	1.90	1.06
	County Total	**33,560,278**	**2,741,719**	**12.2**	**8.41**	**4.94**
7) Suffolk	1) Freeways	15,642,661	388,155	40.3	2.77	2.19
	2) Arterials	25,111,281	1,287,758	19.5	5.62	3.57
	3) Locals	16,949,381	807,113	21.0	3.70	2.23
	County Total	**57,703,323**	**2,483,027**	**23.2**	**12.09**	**7.99**
8) Westchester	1) Freeways	18,311,908	556,593	32.9	3.76	3.33
	2) Arterials	8,638,130	511,132	16.9	2.20	1.41
	3) Locals	6,844,517	280,513	24.4	1.61	0.99
	County Total	**33,794,555**	**1,348,238**	**25.1**	**7.58**	**5.73**
9) Rockland	1) Freeways	5,305,826	111,467	47.6	1.03	1.06
	2) Arterials	4,033,756	163,974	24.6	0.89	0.62
	3) Locals	2,156,493	229,414	9.4	0.83	0.37
	County Total	**11,496,075**	**504,855**	**22.8**	**2.75**	**2.05**
Grand Total (9 Counties)		**205,875,801**	**13,601,001**	**15.1**	**50.89**	**33.03**
10) Putnam	1) Freeways	3,562,294	72,404	49.2	0.74	0.82
	2) Arterials	2,654,228	167,989	15.8	0.78	0.53
	3) Locals	3,159,076	93,741	33.7	0.73	0.49
	County Total	**9,375,598**	**334,135**	**28.1**	**2.25**	**1.84**

Appendix 1B

2011 Winter Build Emissions Report

COUNTY	FACILITY	DAILY VMT	VHT	SPEED	CO
		Vehicle miles traveled	Vehicle hours traveled	Miles per hour	Tons per day
1) New York	1) Freeways	2,992,287	110,825	27.0	29.73
	2) Arterials	4,836,346	493,505	9.8	49.20
	3) Locals	2,251,757	549,209	4.1	28.07
	County Total	**10,080,390**	**1,153,539**	**8.7**	**107.00**
2) Queens	1) Freeways	8,368,944	290,588	28.8	85.92
	2) Arterials	7,175,547	512,539	14.0	67.68
	3) Locals	3,719,682	509,545	7.3	36.11
	County Total	**19,264,173**	**1,312,673**	**14.7**	**189.71**
3) Bronx	1) Freeways	4,670,594	150,180	31.1	48.19
	2) Arterials	2,435,004	172,695	14.1	23.60
	3) Locals	1,992,951	171,806	11.6	19.83
	County Total	**9,098,549**	**494,681**	**18.4**	**91.62**
4) Kings	1) Freeways	3,080,914	102,017	30.2	30.91
	2) Arterials	7,075,425	620,651	11.4	68.73
	3) Locals	2,030,422	338,404	6.0	19.97
	County Total	**12,186,761**	**1,061,072**	**11.5**	**119.62**
5) Richmond	1) Freeways	2,064,884	57,358	36.0	21.43
	2) Arterials	2,497,155	149,530	16.7	24.44
	3) Locals	1,392,077	72,504	19.2	12.87
	County Total	**5,954,116**	**279,392**	**21.3**	**58.73**
6) Nassau	1) Freeways	9,624,832	207,432	46.4	107.25
	2) Arterials	12,013,358	1,102,143	10.9	126.38
	3) Locals	5,989,668	413,081	14.5	61.78
	County Total	**27,627,858**	**1,722,655**	**16.0**	**295.41**
7) Westchester	1) Freeways	13,604,469	323,916	42.0	138.86
	2) Arterials	5,779,187	261,502	22.1	55.68
	3) Locals	4,383,117	151,142	29.0	41.21
	County Total	**23,766,773**	**736,560**	**32.3**	**235.75**
Grand Total (7 Counties)		**107,978,620**	**6,760,572**	**16.0**	**1097.84**

Appendix 1B

2012 Winter Build Emissions Report

COUNTY	FACILITY	DAILY VMT	VHT	SPEED	CO
		Vehicle miles traveled	Vehicle hours traveled	Miles per hour	Tons per day
1) New York	1) Freeways	2,988,686	111,104	26.9	28.18
	2) Arterials	4,806,029	490,411	9.8	45.87
	3) Locals	2,233,392	544,730	4.1	26.07
	County Total	**10,028,107**	**1,146,244**	**8.7**	**100.12**
2) Queens	1) Freeways	8,351,198	288,969	28.9	81.45
	2) Arterials	7,141,472	517,498	13.8	63.52
	3) Locals	3,704,459	493,928	7.5	33.90
	County Total	**19,197,129**	**1,300,395**	**14.8**	**178.86**
3) Bronx	1) Freeways	4,679,427	150,464	31.1	45.92
	2) Arterials	2,434,366	172,650	14.1	22.24
	3) Locals	1,990,677	171,610	11.6	18.71
	County Total	**9,104,470**	**494,724**	**18.4**	**86.87**
4) Kings	1) Freeways	3,067,481	101,237	30.3	29.17
	2) Arterials	7,036,153	611,839	11.5	64.29
	3) Locals	2,024,956	337,493	6.0	18.83
	County Total	**12,128,590**	**1,050,569**	**11.5**	**112.29**
5) Richmond	1) Freeways	2,079,215	57,437	36.2	20.53
	2) Arterials	2,500,230	148,823	16.8	23.12
	3) Locals	1,380,203	71,886	19.2	12.13
	County Total	**5,959,648**	**278,146**	**21.4**	**55.78**
6) Nassau	1) Freeways	9,610,708	208,475	46.1	102.12
	2) Arterials	11,982,841	1,346,387	8.9	121.24
	3) Locals	5,971,578	429,610	13.9	59.12
	County Total	**27,565,127**	**1,984,472**	**13.9**	**282.48**
7) Westchester	1) Freeways	13,634,816	325,413	41.9	132.59
	2) Arterials	5,840,024	264,254	22.1	53.48
	3) Locals	4,443,338	153,749	28.9	39.79
	County Total	**23,918,178**	**743,416**	**32.2**	**225.86**
Grand Total (7 Counties)		**107,901,249**	**6,997,966**	**15.4**	**1042.25**

Appendix 1B

2020 Winter Build Emissions Report

COUNTY	FACILITY	DAILY VMT	VHT	SPEED	CO
		Vehicle miles traveled	Vehicle hours traveled	Miles per hour	Tons per day
1) New York	1) Freeways	3,046,086	115,382	26.4	24.28
	2) Arterials	4,849,834	489,882	9.9	38.75
	3) Locals	2,285,538	557,448	4.1	22.32
	County Total	**10,181,458**	**1,162,713**	**8.8**	**85.35**
2) Queens	1) Freeways	8,562,508	295,259	29.0	70.23
	2) Arterials	7,241,119	506,372	14.3	54.08
	3) Locals	3,756,895	487,908	7.7	29.23
	County Total	**19,560,522**	**1,289,539**	**15.2**	**153.54**
3) Bronx	1) Freeways	4,887,635	155,163	31.5	40.11
	2) Arterials	2,519,853	182,598	13.8	19.37
	3) Locals	2,046,607	173,441	11.8	16.24
	County Total	**9,454,095**	**511,202**	**18.5**	**75.73**
4) Kings	1) Freeways	3,209,962	103,882	30.9	25.79
	2) Arterials	7,174,524	634,914	11.3	54.97
	3) Locals	2,075,848	351,839	5.9	16.34
	County Total	**12,460,334**	**1,090,635**	**11.4**	**97.09**
5) Richmond	1) Freeways	2,245,550	65,088	34.5	18.70
	2) Arterials	2,712,187	173,858	15.6	21.41
	3) Locals	1,580,587	98,173	16.1	12.01
	County Total	**6,538,324**	**337,120**	**19.4**	**52.12**
6) Nassau	1) Freeways	9,770,761	201,875	48.4	88.37
	2) Arterials	12,049,707	842,637	14.3	100.52
	3) Locals	5,953,481	369,781	16.1	49.06
	County Total	**27,773,949**	**1,414,294**	**19.6**	**237.95**
7) Westchester	1) Freeways	14,992,877	370,194	40.5	121.69
	2) Arterials	6,464,915	303,517	21.3	50.44
	3) Locals	5,101,272	182,188	28.0	39.31
	County Total	**26,559,064**	**855,900**	**31.0**	**211.43**
Grand Total (7 Counties)		**112,527,746**	**6,661,402**	**16.9**	**913.21**

Appendix 1B

2030 Winter Build Emissions Report

COUNTY	FACILITY	DAILY VMT	VHT	SPEED	CO
		Vehicle miles traveled	Vehicle hours traveled	Miles per hour	Tons per day
1) New York	1) Freeways	3,117,550	120,369	25.9	24.27
	2) Arterials	4,891,835	509,566	9.6	38.32
	3) Locals	2,358,289	604,689	3.9	22.85
	County Total	**10,367,674**	**1,234,624**	**8.4**	**85.44**
2) Queens	1) Freeways	9,061,440	315,730	28.7	72.31
	2) Arterials	7,672,157	551,954	13.9	56.28
	3) Locals	4,048,957	547,156	7.4	31.20
	County Total	**20,782,554**	**1,414,840**	**14.7**	**159.79**
3) Bronx	1) Freeways	5,083,772	162,421	31.3	40.30
	2) Arterials	2,598,502	193,918	13.4	19.51
	3) Locals	2,109,453	183,431	11.5	16.41
	County Total	**9,791,727**	**539,770**	**18.1**	**76.22**
4) Kings	1) Freeways	3,375,616	109,243	30.9	26.40
	2) Arterials	7,421,059	687,135	10.8	56.03
	3) Locals	2,204,221	408,189	5.4	17.21
	County Total	**13,000,896**	**1,204,567**	**10.8**	**99.63**
5) Richmond	1) Freeways	2,430,527	74,328	32.7	19.65
	2) Arterials	2,924,792	201,710	14.5	22.78
	3) Locals	1,770,396	123,804	14.3	13.29
	County Total	**7,125,715**	**399,842**	**17.8**	**55.72**
6) Nassau	1) Freeways	10,309,135	215,222	47.9	90.89
	2) Arterials	12,964,536	1,507,504	8.6	109.72
	3) Locals	6,290,327	449,309	14.0	51.25
	County Total	**29,563,998**	**2,172,035**	**13.6**	**251.86**
7) Westchester	1) Freeways	16,085,457	416,722	38.6	125.56
	2) Arterials	7,355,012	365,921	20.1	55.90
	3) Locals	5,838,016	218,652	26.7	43.79
	County Total	**29,278,485**	**1,001,295**	**29.2**	**225.25**
Grand Total (7 Counties)		**119,911,049**	**7,966,973**	**15.1**	**953.91**

Appendix 1B

2035 Winter Build Emissions Report

COUNTY	FACILITY	DAILY VMT	VHT	SPEED	CO
		Vehicle miles traveled	Vehicle hours traveled	Miles per hour	Tons per day
1) New York	1) Freeways	3,131,070	121,832	25.7	24.38
	2) Arterials	4,873,525	507,659	9.6	38.11
	3) Locals	2,361,320	605,467	3.9	22.93
	County Total	**10,365,915**	**1,234,957**	**8.4**	**85.42**
2) Queens	1) Freeways	9,213,739	323,289	28.5	73.61
	2) Arterials	7,850,172	573,005	13.7	57.70
	3) Locals	4,187,830	573,675	7.3	32.36
	County Total	**21,251,741**	**1,469,970**	**14.5**	**163.66**
3) Bronx	1) Freeways	5,123,116	162,639	31.5	40.75
	2) Arterials	2,596,696	192,348	13.5	19.46
	3) Locals	2,111,487	183,608	11.5	16.42
	County Total	**9,831,299**	**538,594**	**18.3**	**76.64**
4) Kings	1) Freeways	3,409,948	109,998	31.0	26.64
	2) Arterials	7,493,223	706,908	10.6	56.65
	3) Locals	2,240,761	430,916	5.2	17.52
	County Total	**13,143,932**	**1,247,822**	**10.5**	**100.80**
5) Richmond	1) Freeways	2,510,712	77,972	32.2	20.28
	2) Arterials	3,001,916	214,423	14.0	23.46
	3) Locals	1,851,082	137,117	13.5	13.93
	County Total	**7,363,710**	**429,512**	**17.1**	**57.67**
6) Nassau	1) Freeways	10,452,553	219,131	47.7	92.18
	2) Arterials	13,155,419	1,529,700	8.6	111.33
	3) Locals	6,361,063	457,630	13.9	51.83
	County Total	**29,969,035**	**2,206,461**	**13.6**	**255.35**
7) Westchester	1) Freeways	16,350,049	429,135	38.1	128.24
	2) Arterials	7,715,476	395,665	19.5	58.72
	3) Locals	6,112,311	232,407	26.3	45.91
	County Total	**30,177,836**	**1,057,208**	**28.5**	**232.88**
Grand Total (7 Counties)		**122,103,468**	**8,184,524**	**14.9**	**972.42**

Appendix 1C

2011 Annual PM 2.5 Emissions Report

COUNTY	No Build Scenario	Build Scenario
	Tons	Tons
1) New York	119.08	117.33
2) Queens	171.61	168.32
3) Bronx	92.81	90.22
4) Kings	109.09	106.58
5) Richmond	49.49	48.53
6) Nassau	185.56	179.03
7) Suffolk	283.94	273.75
8) Westchester	217.18	210.67
9) Rockland	70.02	67.43
Grand Total	**1,298.77**	**1,261.85**
10) Putnam	66.05	64.11

Appendix 1C

2012 Annual PM 2.5 Emissions Report

COUNTY	No Build Scenario	Build Scenario
	Tons	Tons
1) New York	106.83	104.70
2) Queens	158.69	155.00
3) Bronx	85.00	82.44
4) Kings	101.07	98.30
5) Richmond	46.44	45.17
6) Nassau	178.04	171.34
7) Suffolk	276.80	266.36
8) Westchester	201.50	195.39
9) Rockland	65.41	62.93
Grand Total	**1,219.77**	**1,181.63**
10) Putnam	59.94	58.19

Appendix 1C

2020 Annual PM 2.5 Emissions Report

COUNTY	No Build Scenario	Build Scenario
	Tons	Tons
1) New York	65.65	62.28
2) Queens	116.80	113.38
3) Bronx	61.92	59.95
4) Kings	74.43	71.50
5) Richmond	37.89	36.60
6) Nassau	155.38	148.80
7) Suffolk	256.16	245.43
8) Westchester	171.49	168.19
9) Rockland	56.53	55.42
Grand Total	**996.24**	**961.55**
10) Putnam	48.02	46.55

Appendix 1C

2030 Annual PM 2.5 Emissions Report

COUNTY	No Build Scenario	Build Scenario
	Tons	Tons
1) New York	65.19	61.24
2) Queens	120.69	116.69
3) Bronx	63.15	60.74
4) Kings	76.31	72.50
5) Richmond	40.82	39.04
6) Nassau	162.97	155.28
7) Suffolk	270.56	258.27
8) Westchester	186.19	181.59
9) Rockland	62.06	60.95
Grand Total	**1,047.94**	**1,006.29**
10) Putnam	56.44	54.56

Appendix 1C

2035 Annual PM 2.5 Emissions Report

COUNTY	No Build Scenario	Build Scenario
	Tons	Tons
1) New York	63.84	59.71
2) Queens	122.50	117.19
3) Bronx	66.76	59.51
4) Kings	74.18	72.36
5) Richmond	41.12	39.91
6) Nassau	165.49	156.19
7) Suffolk	275.54	264.63
8) Westchester	202.99	182.46
9) Rockland	67.31	61.33
Grand Total	**1,079.74**	**1,013.29**
10) Putnam	64.15	55.93

Appendix 1D

2011 Summer No Build Emissions Report

COUNTY	FACILITY	DAILY VMT	VHT	SPEED	VOC	NOx
		Vehicle miles traveled	Vehicle hours traveled	Miles per hour	Tons per day	Tons per day
1) New York	1) Freeways	3,492,779	151,860	23.0	1.71	1.63
	2) Arterials	5,676,293	709,537	8.0	4.31	7.82
	3) Locals	2,664,503	807,425	3.3	3.22	2.31
	County Total	**11,833,575**	**1,668,822**	**7.1**	**9.25**	**11.77**
2) Queens	1) Freeways	9,689,532	378,497	25.6	4.33	5.24
	2) Arterials	8,423,640	690,462	12.2	5.23	8.16
	3) Locals	3,902,034	696,792	5.6	2.92	2.96
	County Total	**22,015,206**	**1,765,751**	**12.5**	**12.49**	**16.36**
3) Bronx	1) Freeways	5,410,305	202,633	26.7	2.50	4.22
	2) Arterials	2,817,849	229,093	12.3	1.79	3.23
	3) Locals	2,320,197	241,687	9.6	1.57	1.68
	County Total	**10,548,351**	**673,414**	**15.7**	**5.86**	**9.13**
4) Kings	1) Freeways	3,441,937	126,078	27.3	1.56	1.69
	2) Arterials	8,343,084	897,106	9.3	5.91	7.27
	3) Locals	2,389,444	508,392	4.7	1.84	1.73
	County Total	**14,174,465**	**1,531,576**	**9.3**	**9.31**	**10.70**
5) Richmond	1) Freeways	2,402,434	76,268	31.5	1.11	1.64
	2) Arterials	2,892,160	203,673	14.2	1.68	2.29
	3) Locals	1,640,946	101,922	16.1	0.94	0.81
	County Total	**6,935,540**	**381,863**	**18.2**	**3.73**	**4.74**
6) Nassau	1) Freeways	11,164,741	257,252	43.4	4.61	5.80
	2) Arterials	13,994,726	939,243	14.9	7.59	8.00
	3) Locals	6,965,939	535,841	13.0	3.92	3.59
	County Total	**32,125,406**	**1,732,337**	**18.5**	**16.12**	**17.39**
7) Suffolk	1) Freeways	14,082,763	340,163	41.4	5.83	7.89
	2) Arterials	22,608,841	1,102,870	20.5	11.16	11.46
	3) Locals	15,208,982	667,061	22.8	7.44	6.80
	County Total	**51,900,586**	**2,110,094**	**24.6**	**24.43**	**26.15**
8) Westchester	1) Freeways	15,653,078	419,654	37.3	7.05	15.89
	2) Arterials	6,758,110	348,356	19.4	3.58	4.63
	3) Locals	5,071,242	185,082	27.4	2.54	2.64
	County Total	**27,482,430**	**953,092**	**28.8**	**13.17**	**23.16**
9) Rockland	1) Freeways	4,351,323	79,841	54.5	1.89	4.40
	2) Arterials	3,289,156	120,482	27.3	1.59	2.14
	3) Locals	1,823,338	149,454	12.2	1.26	1.12
	County Total	**9,463,817**	**349,777**	**27.1**	**4.74**	**7.65**
Grand Total (9 Counties)		**186,479,376**	**11,166,726**	**16.7**	**99.09**	**127.05**
10) Putnam	1) Freeways	2,591,504	45,786	56.6	1.20	5.31
	2) Arterials	1,700,029	79,814	21.3	0.98	1.52
	3) Locals	2,044,852	54,822	37.3	1.18	1.18
	County Total	**6,336,385**	**180,422**	**35.1**	**3.35**	**8.00**

Appendix 1D

2012 Summer No Build Emissions Report

COUNTY	FACILITY	DAILY VMT	VHT	SPEED	VOC	NOx
		Vehicle miles traveled	Vehicle hours traveled	Miles per hour	Tons per day	Tons per day
1) New York	1) Freeways	3,492,126	150,523	23.2	1.53	1.45
	2) Arterials	5,680,554	701,303	8.1	3.85	7.11
	3) Locals	2,659,261	805,837	3.3	2.84	2.04
	County Total	**11,831,941**	**1,657,662**	**7.1**	**8.23**	**10.61**
2) Queens	1) Freeways	9,703,408	377,565	25.7	3.90	4.61
	2) Arterials	8,406,720	683,473	12.3	4.68	7.36
	3) Locals	3,912,730	711,405	5.5	2.71	2.66
	County Total	**22,022,858**	**1,772,443**	**12.4**	**11.30**	**14.63**
3) Bronx	1) Freeways	5,426,887	203,254	26.7	2.26	3.65
	2) Arterials	2,833,723	232,272	12.2	1.62	2.91
	3) Locals	2,334,195	240,639	9.7	1.41	1.49
	County Total	**10,594,805**	**676,165**	**15.7**	**5.29**	**8.06**
4) Kings	1) Freeways	3,441,161	126,513	27.2	1.40	1.50
	2) Arterials	8,348,854	897,726	9.3	5.31	6.54
	3) Locals	2,381,947	496,239	4.8	1.64	1.53
	County Total	**14,171,962**	**1,520,478**	**9.3**	**8.36**	**9.58**
5) Richmond	1) Freeways	2,412,482	77,076	31.3	1.00	1.46
	2) Arterials	2,907,547	204,757	14.2	1.52	2.07
	3) Locals	1,652,212	103,913	15.9	0.86	0.72
	County Total	**6,972,241**	**385,746**	**18.1**	**3.38**	**4.24**
6) Nassau	1) Freeways	11,191,286	258,459	43.3	4.17	5.11
	2) Arterials	13,987,232	938,740	14.9	6.83	7.11
	3) Locals	6,958,484	531,182	13.1	3.52	3.17
	County Total	**32,137,002**	**1,728,382**	**18.6**	**14.51**	**15.39**
7) Suffolk	1) Freeways	14,169,605	342,261	41.4	5.29	6.99
	2) Arterials	22,765,039	1,115,933	20.4	10.08	10.23
	3) Locals	15,306,421	674,292	22.7	6.60	6.02
	County Total	**52,241,065**	**2,132,486**	**24.5**	**21.97**	**23.24**
8) Westchester	1) Freeways	15,660,599	419,855	37.3	6.40	13.58
	2) Arterials	6,805,433	352,613	19.3	3.25	4.12
	3) Locals	5,146,820	187,840	27.4	2.32	2.35
	County Total	**27,612,852**	**960,308**	**28.8**	**11.97**	**20.05**
9) Rockland	1) Freeways	4,352,534	79,863	54.5	1.71	3.74
	2) Arterials	3,317,134	121,953	27.2	1.45	1.91
	3) Locals	1,845,494	153,791	12.0	1.17	1.00
	County Total	**9,515,162**	**355,608**	**26.8**	**4.33**	**6.65**
Grand Total (9 Counties)		**187,099,888**	**11,189,278**	**16.7**	**89.32**	**112.44**
10) Putnam	1) Freeways	2,594,471	45,758	56.7	1.10	4.52
	2) Arterials	1,724,329	81,722	21.1	0.87	1.33
	3) Locals	2,057,650	55,165	37.3	0.94	1.02
	County Total	**6,376,450**	**182,644**	**34.9**	**2.91**	**6.87**

Appendix 1D

2020 Summer No Build Emissions Report

COUNTY	FACILITY	DAILY VMT	VHT	SPEED	VOC	NOx
		Vehicle miles traveled	Vehicle hours traveled	Miles per hour	Tons per day	Tons per day
1) New York	1) Freeways	3,575,626	158,214	22.6	0.90	0.73
	2) Arterials	5,782,040	731,904	7.9	2.40	3.43
	3) Locals	2,729,778	853,056	3.2	1.90	0.96
	County Total	**12,087,444**	**1,743,173**	**6.9**	**5.20**	**5.12**
2) Queens	1) Freeways	9,975,234	392,726	25.4	2.28	2.15
	2) Arterials	8,647,360	720,613	12.0	2.89	3.50
	3) Locals	3,979,875	723,614	5.5	1.70	1.22
	County Total	**22,602,469**	**1,836,953**	**12.3**	**6.87**	**6.88**
3) Bronx	1) Freeways	5,639,396	215,244	26.2	1.37	1.67
	2) Arterials	2,922,280	245,570	11.9	1.02	1.39
	3) Locals	2,397,215	249,710	9.6	0.89	0.69
	County Total	**10,958,891**	**710,524**	**15.4**	**3.27**	**3.74**
4) Kings	1) Freeways	3,517,529	130,763	26.9	0.81	0.70
	2) Arterials	8,578,126	963,834	8.9	3.37	3.09
	3) Locals	2,475,406	550,090	4.5	1.08	0.72
	County Total	**14,571,061**	**1,644,688**	**8.9**	**5.26**	**4.50**
5) Richmond	1) Freeways	2,555,385	85,751	29.8	0.61	0.65
	2) Arterials	3,137,994	243,255	12.9	1.01	1.03
	3) Locals	1,875,078	137,873	13.6	0.59	0.38
	County Total	**7,568,457**	**466,880**	**16.2**	**2.22**	**2.06**
6) Nassau	1) Freeways	11,373,480	260,860	43.6	2.44	2.32
	2) Arterials	14,163,759	950,588	14.9	4.15	3.29
	3) Locals	6,976,162	536,628	13.0	2.14	1.44
	County Total	**32,513,401**	**1,748,075**	**18.6**	**8.73**	**7.04**
7) Suffolk	1) Freeways	14,804,229	361,962	40.9	3.21	3.14
	2) Arterials	23,682,091	1,208,270	19.6	6.30	4.84
	3) Locals	16,147,263	737,318	21.9	4.15	2.88
	County Total	**54,633,583**	**2,307,549**	**23.7**	**13.65**	**10.86**
8) Westchester	1) Freeways	16,900,656	481,500	35.1	4.20	6.26
	2) Arterials	7,604,692	413,298	18.4	2.22	2.04
	3) Locals	5,816,165	227,194	25.6	1.59	1.18
	County Total	**30,321,513**	**1,121,993**	**27.0**	**8.01**	**9.48**
9) Rockland	1) Freeways	4,786,912	91,879	52.1	1.13	1.86
	2) Arterials	3,574,031	137,993	25.9	0.93	0.90
	3) Locals	1,955,677	168,593	11.6	0.76	0.47
	County Total	**10,316,620**	**398,466**	**25.9**	**2.82**	**3.23**
Grand Total (9 Counties)		**195,573,439**	**11,978,300**	**16.3**	**56.04**	**52.91**
10) Putnam	1) Freeways	3,028,458	56,291	53.8	0.81	2.16
	2) Arterials	1,995,509	102,334	19.5	0.65	0.71
	3) Locals	2,381,507	64,891	36.7	0.67	0.54
	County Total	**7,405,474**	**223,516**	**33.1**	**2.12**	**3.40**

Appendix 1D

2030 Summer No Build Emissions Report

COUNTY	FACILITY	DAILY VMT	VHT	SPEED	VOC	NOx
		Vehicle miles traveled	Vehicle hours traveled	Miles per hour	Tons per day	Tons per day
1) New York	1) Freeways	3,689,181	171,590	21.5	0.79	0.52
	2) Arterials	5,930,876	790,783	7.5	2.24	1.90
	3) Locals	2,879,025	959,675	3.0	1.92	0.73
	County Total	**12,499,082**	**1,922,048**	**6.5**	**4.94**	**3.14**
2) Queens	1) Freeways	10,556,231	430,867	24.5	1.99	1.54
	2) Arterials	9,245,879	811,042	11.4	2.73	2.15
	3) Locals	4,319,307	830,636	5.2	1.68	0.90
	County Total	**24,121,417**	**2,072,545**	**11.6**	**6.41**	**4.59**
3) Bronx	1) Freeways	5,870,143	228,410	25.7	1.18	1.02
	2) Arterials	3,024,702	263,018	11.5	0.92	0.79
	3) Locals	2,501,294	263,294	9.5	0.81	0.48
	County Total	**11,396,139**	**754,722**	**15.1**	**2.91**	**2.30**
4) Kings	1) Freeways	3,713,409	142,823	26.0	0.71	0.53
	2) Arterials	9,011,321	1,098,942	8.2	3.23	2.01
	3) Locals	2,673,916	668,479	4.0	1.08	0.55
	County Total	**15,398,646**	**1,910,244**	**8.1**	**5.02**	**3.09**
5) Richmond	1) Freeways	2,786,787	102,080	27.3	0.56	0.45
	2) Arterials	3,439,702	307,116	11.2	1.02	0.70
	3) Locals	2,137,566	184,273	11.6	0.60	0.33
	County Total	**8,364,055**	**593,469**	**14.1**	**2.18**	**1.48**
6) Nassau	1) Freeways	12,066,640	287,301	42.0	2.13	1.70
	2) Arterials	15,284,157	1,091,726	14.0	3.91	2.47
	3) Locals	7,435,269	594,822	12.5	1.98	1.14
	County Total	**34,786,066**	**1,973,848**	**17.6**	**8.02**	**5.31**
7) Suffolk	1) Freeways	15,954,722	402,897	39.6	2.84	2.31
	2) Arterials	25,330,500	1,384,180	18.3	5.82	3.80
	3) Locals	17,436,178	834,267	20.9	3.83	2.36
	County Total	**58,721,400**	**2,621,344**	**22.4**	**12.49**	**8.47**
8) Westchester	1) Freeways	18,134,233	551,192	32.9	3.76	3.69
	2) Arterials	8,656,522	503,286	17.2	2.21	1.54
	3) Locals	6,729,936	276,952	24.3	1.58	1.01
	County Total	**33,520,691**	**1,331,431**	**25.2**	**7.55**	**6.24**
9) Rockland	1) Freeways	5,322,065	112,995	47.1	1.05	1.18
	2) Arterials	3,972,388	162,138	24.5	0.88	0.66
	3) Locals	2,120,557	212,056	10.0	0.78	0.37
	County Total	**11,415,010**	**487,189**	**23.4**	**2.70**	**2.21**
Grand Total (9 Counties)		**210,222,506**	**13,666,840**	**15.4**	**52.20**	**36.82**
10) Putnam	1) Freeways	3,511,291	73,458	47.8	0.74	1.00
	2) Arterials	2,529,735	153,317	16.5	0.73	0.56
	3) Locals	2,998,086	87,408	34.3	0.70	0.50
	County Total	**9,039,112**	**314,183**	**28.8**	**2.17**	**2.06**

Appendix 1D

2035 Summer No Build Emissions Report

COUNTY	FACILITY	DAILY VMT	VHT	SPEED	VOC	NOx
		Vehicle miles traveled	Vehicle hours traveled	Miles per hour	Tons per day	Tons per day
1) New York	1) Freeways	3,710,020	173,365	21.4	0.79	0.50
	2) Arterials	5,888,866	774,851	7.6	2.20	1.42
	3) Locals	2,882,948	960,983	3.0	1.89	0.69
	County Total	**12,481,834**	**1,909,199**	**6.5**	**4.88**	**2.61**
2) Queens	1) Freeways	10,728,987	445,186	24.1	2.03	1.52
	2) Arterials	9,372,025	807,933	11.6	2.74	1.80
	3) Locals	4,358,907	807,205	5.4	1.67	0.84
	County Total	**24,459,919**	**2,060,324**	**11.9**	**6.44**	**4.16**
3) Bronx	1) Freeways	6,070,318	242,813	25.0	1.24	1.01
	2) Arterials	3,171,830	288,348	11.0	0.99	0.66
	3) Locals	2,653,763	285,351	9.3	0.86	0.49
	County Total	**11,895,911**	**816,512**	**14.6**	**3.08**	**2.16**
4) Kings	1) Freeways	3,682,411	139,485	26.4	0.70	0.50
	2) Arterials	8,864,688	1,030,778	8.6	3.08	1.70
	3) Locals	2,643,500	644,756	4.1	1.04	0.51
	County Total	**15,190,599**	**1,815,019**	**8.4**	**4.82**	**2.71**
5) Richmond	1) Freeways	2,850,010	107,955	26.4	0.58	0.43
	2) Arterials	3,492,218	311,805	11.2	1.03	0.62
	3) Locals	2,192,856	194,058	11.3	0.61	0.33
	County Total	**8,535,084**	**613,818**	**13.9**	**2.22**	**1.38**
6) Nassau	1) Freeways	12,185,834	290,139	42.0	2.15	1.69
	2) Arterials	15,501,992	1,099,432	14.1	3.94	2.34
	3) Locals	7,451,775	586,754	12.7	1.96	1.11
	County Total	**35,139,601**	**1,976,325**	**17.8**	**8.05**	**5.14**
7) Suffolk	1) Freeways	16,140,095	401,495	40.2	2.87	2.29
	2) Arterials	25,647,801	1,393,902	18.4	5.86	3.68
	3) Locals	17,938,884	862,446	20.8	3.93	2.37
	County Total	**59,726,780**	**2,657,843**	**22.5**	**12.66**	**8.34**
8) Westchester	1) Freeways	19,149,823	615,750	31.1	4.02	3.65
	2) Arterials	9,525,324	595,333	16.0	2.51	1.61
	3) Locals	7,340,376	317,765	23.1	1.75	1.09
	County Total	**36,015,523**	**1,528,848**	**23.6**	**8.29**	**6.35**
9) Rockland	1) Freeways	5,604,640	124,271	45.1	1.11	1.19
	2) Arterials	4,207,723	178,293	23.6	0.95	0.67
	3) Locals	2,223,526	236,545	9.4	0.87	0.38
	County Total	**12,035,889**	**539,110**	**22.3**	**2.93**	**2.23**
Grand Total (9 Counties)		**215,481,140**	**13,916,999**	**15.5**	**53.37**	**35.08**
10) Putnam	1) Freeways	3,773,125	84,599	44.6	0.82	0.91
	2) Arterials	2,919,640	207,067	14.1	0.91	0.62
	3) Locals	3,483,296	107,509	32.4	0.82	0.56
	County Total	**10,176,061**	**399,175**	**25.5**	**2.55**	**2.10**

Appendix 1E

2011 Winter No Build Emissions Report

COUNTY	FACILITY	DAILY VMT	VHT	SPEED	CO
		Vehicle miles traveled	Vehicle hours traveled	Miles per hour	Tons per day
1) New York	1) Freeways	3,119,899	118,178	26.4	31.02
	2) Arterials	5,087,779	529,977	9.6	52.01
	3) Locals	2,379,833	594,958	4.0	29.69
	County Total	**10,587,511**	**1,243,113**	**8.5**	**112.72**
2) Queens	1) Freeways	8,652,603	304,669	28.4	88.86
	2) Arterials	7,536,045	530,707	14.2	70.95
	3) Locals	3,485,502	520,224	6.7	34.29
	County Total	**19,674,150**	**1,355,601**	**14.5**	**194.10**
3) Bronx	1) Freeways	4,831,542	157,379	30.7	49.89
	2) Arterials	2,522,060	180,147	14.0	24.48
	3) Locals	2,072,246	185,022	11.2	20.67
	County Total	**9,425,848**	**522,548**	**18.0**	**95.04**
4) Kings	1) Freeways	3,074,200	103,508	29.7	30.95
	2) Arterials	7,458,882	671,971	11.1	72.81
	3) Locals	2,133,868	374,363	5.7	21.18
	County Total	**12,666,950**	**1,149,843**	**11.0**	**124.94**
5) Richmond	1) Freeways	2,145,387	58,939	36.4	22.28
	2) Arterials	2,585,849	157,674	16.4	25.35
	3) Locals	1,465,695	77,550	18.9	13.54
	County Total	**6,196,931**	**294,163**	**21.1**	**61.18**
6) Nassau	1) Freeways	9,968,521	208,984	47.7	111.09
	2) Arterials	12,499,809	710,216	17.6	127.68
	3) Locals	6,219,612	396,154	15.7	63.18
	County Total	**28,687,942**	**1,315,354**	**21.8**	**301.94**
7) Westchester	1) Freeways	13,976,089	337,587	41.4	142.55
	2) Arterials	6,036,790	274,400	22.0	58.17
	3) Locals	4,527,895	157,219	28.8	42.64
	County Total	**24,540,774**	**769,205**	**31.9**	**243.36**
Grand Total (7 Counties)		**111,780,106**	**6,649,826**	**16.8**	**1133.28**

Appendix 1E

2012 Winter No Build Emissions Report

COUNTY	FACILITY	DAILY VMT	VHT	SPEED	CO
		Vehicle miles traveled	Vehicle hours traveled	Miles per hour	Tons per day
1) New York	1) Freeways	3,119,299	117,709	26.5	29.44
	2) Arterials	5,091,597	530,375	9.6	48.89
	3) Locals	2,375,127	593,782	4.0	27.90
	County Total	**10,586,023**	**1,241,866**	**8.5**	**106.22**
2) Queens	1) Freeways	8,664,995	302,972	28.6	84.49
	2) Arterials	7,520,968	529,646	14.2	66.79
	3) Locals	3,495,157	529,569	6.6	32.62
	County Total	**19,681,120**	**1,362,187**	**14.4**	**183.90**
3) Bronx	1) Freeways	4,846,340	158,377	30.6	47.59
	2) Arterials	2,536,270	181,162	14.0	23.23
	3) Locals	2,084,688	182,867	11.4	19.64
	County Total	**9,467,298**	**522,407**	**18.1**	**90.46**
4) Kings	1) Freeways	3,073,513	103,485	29.7	29.32
	2) Arterials	7,464,031	672,435	11.1	68.68
	3) Locals	2,127,164	366,752	5.8	19.93
	County Total	**12,664,708**	**1,142,673**	**11.1**	**117.93**
5) Richmond	1) Freeways	2,154,380	59,513	36.2	21.25
	2) Arterials	2,599,510	158,507	16.4	24.14
	3) Locals	1,474,513	78,851	18.7	12.95
	County Total	**6,228,403**	**296,871**	**21.0**	**58.34**
6) Nassau	1) Freeways	9,992,258	209,921	47.6	106.14
	2) Arterials	12,493,157	709,838	17.6	121.37
	3) Locals	6,212,852	395,723	15.7	60.07
	County Total	**28,698,267**	**1,315,483**	**21.8**	**287.58**
7) Westchester	1) Freeways	13,982,994	337,753	41.4	135.87
	2) Arterials	6,079,139	277,586	21.9	55.68
	3) Locals	4,595,815	159,577	28.8	41.20
	County Total	**24,657,948**	**774,917**	**31.8**	**232.75**
Grand Total (7 Counties)		**111,983,767**	**6,656,403**	**16.8**	**1077.18**

Appendix 1E

2020 Winter No Build Emissions Report

COUNTY	FACILITY	DAILY VMT	VHT	SPEED	CO
		Vehicle miles traveled	Vehicle hours traveled	Miles per hour	Tons per day
1) New York	1) Freeways	3,194,694	122,873	26.0	25.38
	2) Arterials	5,182,219	545,497	9.5	41.76
	3) Locals	2,438,168	625,171	3.9	23.93
	County Total	**10,815,081**	**1,293,541**	**8.4**	**91.07**
2) Queens	1) Freeways	8,907,726	313,652	28.4	73.05
	2) Arterials	7,735,824	552,559	14.0	57.92
	3) Locals	3,554,791	538,605	6.6	28.18
	County Total	**20,198,341**	**1,404,816**	**14.4**	**159.14**
3) Bronx	1) Freeways	5,036,085	165,661	30.4	41.34
	2) Arterials	2,615,314	192,303	13.6	20.18
	3) Locals	2,140,994	191,160	11.2	17.07
	County Total	**9,792,393**	**549,123**	**17.8**	**78.59**
4) Kings	1) Freeways	3,141,707	106,499	29.5	25.22
	2) Arterials	7,668,756	716,706	10.7	59.35
	3) Locals	2,210,745	409,397	5.4	17.58
	County Total	**13,021,208**	**1,232,602**	**10.6**	**102.16**
5) Richmond	1) Freeways	2,281,961	66,144	34.5	19.00
	2) Arterials	2,805,305	185,782	15.1	22.22
	3) Locals	1,673,718	103,316	16.2	12.72
	County Total	**6,760,984**	**355,242**	**19.0**	**53.94**
6) Nassau	1) Freeways	10,154,772	212,443	47.8	91.72
	2) Arterials	12,650,821	718,797	17.6	104.80
	3) Locals	6,228,674	396,731	15.7	51.42
	County Total	**29,034,267**	**1,327,970**	**21.9**	**247.94**
7) Westchester	1) Freeways	15,090,224	379,151	39.8	122.21
	2) Arterials	6,792,648	323,459	21.0	52.91
	3) Locals	5,193,357	188,849	27.5	39.92
	County Total	**27,076,229**	**891,460**	**30.4**	**215.03**
Grand Total (7 Counties)		**116,698,503**	**7,054,754**	**16.5**	**947.86**

Appendix 1E

2030 Winter No Build Emissions Report

COUNTY	FACILITY	DAILY VMT	VHT	SPEED	CO
		Vehicle miles traveled	Vehicle hours traveled	Miles per hour	Tons per day
1) New York	1) Freeways	3,295,300	132,341	24.9	25.65
	2) Arterials	5,315,117	590,569	9.0	42.24
	3) Locals	2,571,405	694,974	3.7	25.34
	County Total	**11,181,822**	**1,417,884**	**7.9**	**93.22**
2) Queens	1) Freeways	9,426,477	341,539	27.6	75.23
	2) Arterials	8,270,231	617,181	13.4	60.96
	3) Locals	3,857,318	612,273	6.3	30.48
	County Total	**21,554,026**	**1,570,993**	**13.7**	**166.67**
3) Bronx	1) Freeways	5,242,121	173,580	30.2	41.50
	2) Arterials	2,706,777	203,517	13.3	20.39
	3) Locals	2,233,825	199,449	11.2	17.40
	County Total	**10,182,723**	**576,546**	**17.7**	**79.28**
4) Kings	1) Freeways	3,316,623	115,562	28.7	25.98
	2) Arterials	8,055,528	805,553	10.0	61.70
	3) Locals	2,387,827	497,464	4.8	18.98
	County Total	**13,759,978**	**1,418,579**	**9.7**	**106.66**
5) Richmond	1) Freeways	2,488,554	76,571	32.5	20.13
	2) Arterials	3,074,640	229,451	13.4	24.17
	3) Locals	1,908,699	137,316	13.9	14.36
	County Total	**7,471,893**	**443,338**	**16.9**	**58.66**
6) Nassau	1) Freeways	10,773,738	229,717	46.9	94.84
	2) Arterials	13,651,076	817,430	16.7	111.05
	3) Locals	6,638,872	439,660	15.1	53.85
	County Total	**31,063,686**	**1,486,807**	**20.9**	**259.73**
7) Westchester	1) Freeways	16,191,580	426,094	38.0	125.93
	2) Arterials	7,731,946	388,540	19.9	58.74
	3) Locals	6,008,324	227,588	26.4	45.14
	County Total	**29,931,850**	**1,042,222**	**28.7**	**229.81**
Grand Total (7 Counties)		**125,145,978**	**7,956,369**	**15.7**	**994.04**

Appendix 1E

2035 Winter No Build Emissions Report

COUNTY	FACILITY	DAILY VMT	VHT	SPEED	CO
		Vehicle miles traveled	Vehicle hours traveled	Miles per hour	Tons per day
1) New York	1) Freeways	3,313,878	133,624	24.8	25.73
	2) Arterials	5,277,612	579,957	9.1	41.78
	3) Locals	2,574,911	695,922	3.7	25.27
	County Total	**11,166,401**	**1,409,503**	**7.9**	**92.78**
2) Queens	1) Freeways	9,580,674	350,940	27.3	75.88
	2) Arterials	8,382,867	616,387	13.6	61.50
	3) Locals	3,893,483	608,357	6.4	30.68
	County Total	**21,857,024**	**1,575,684**	**13.9**	**168.06**
3) Bronx	1) Freeways	5,420,824	182,519	29.7	42.13
	2) Arterials	2,838,124	223,474	12.7	21.37
	3) Locals	2,369,964	217,428	10.9	18.41
	County Total	**10,628,912**	**623,422**	**17.0**	**81.91**
4) Kings	1) Freeways	3,288,932	113,022	29.1	25.78
	2) Arterials	7,924,642	761,985	10.4	60.22
	3) Locals	2,360,854	472,171	5.0	18.64
	County Total	**13,574,428**	**1,347,177**	**10.1**	**104.63**
5) Richmond	1) Freeways	2,545,024	79,781	31.9	20.60
	2) Arterials	3,121,606	232,956	13.4	24.55
	3) Locals	1,958,140	142,930	13.7	14.72
	County Total	**7,624,770**	**455,667**	**16.7**	**59.88**
6) Nassau	1) Freeways	10,880,249	231,988	46.9	95.21
	2) Arterials	13,845,548	819,263	16.9	112.20
	3) Locals	6,653,680	434,881	15.3	53.82
	County Total	**31,379,477**	**1,486,132**	**21.1**	**261.22**
7) Westchester	1) Freeways	17,098,220	467,164	36.6	130.75
	2) Arterials	8,507,579	454,951	18.7	64.35
	3) Locals	6,554,065	259,054	25.3	49.13
	County Total	**32,159,864**	**1,181,169**	**27.2**	**244.23**
Grand Total (7 Counties)		**128,390,876**	**8,078,755**	**15.9**	**1012.69**

Appendix 1F

2011 Annual NOx Emissions Report

COUNTY	No- Build Scenario	Build Scenario
	Tons / Year	Tons /Year
1) New York	4,532.71	4,440.73
2) Queens	6,489.93	6,359.08
3) Bronx	3,582.27	3,478.42
4) Kings	4,099.60	3,985.58
5) Richmond	1,897.13	1,852.77
6) Nassau	7,548.30	7,343.12
7) Suffolk	11,509.10	11,091.47
8) Westchester	9,245.68	8,974.91
9) Rockland	3,066.95	2,951.46
Grand Total	**51,971.68**	**50,477.53**
10) Putnam	3,151.24	3,042.34

Appendix 1F

2012 Annual NOx Emissions Report

COUNTY	No- Build Scenario	Build Scenario
	Tons / Year	Tons /Year
1) New York	4,075.66	3,986.74
2) Queens	5,789.34	5,645.49
3) Bronx	3,160.89	3,065.81
4) Kings	3,659.99	3,548.39
5) Richmond	1,694.56	1,647.73
6) Nassau	6,664.23	6,494.48
7) Suffolk	10,213.26	9,837.55
8) Westchester	8,017.30	7,776.29
9) Rockland	2,669.67	2,568.60
Grand Total	**45,944.90**	**44,571.07**
10) Putnam	2,712.49	2,628.80

Appendix 1F

2020 Annual NOx Emissions Report

COUNTY	No- Build Scenario	Build Scenario
	Tons / Year	Tons /Year
1) New York	1,902.58	1,840.18
2) Queens	2,635.52	2,558.71
3) Bronx	1,428.91	1,392.38
4) Kings	1,656.58	1,602.50
5) Richmond	794.17	775.59
6) Nassau	2,953.66	2,838.34
7) Suffolk	4,630.13	4,446.58
8) Westchester	3,714.17	3,648.53
9) Rockland	1,267.54	1,252.76
Grand Total	**20,983.26**	**20,355.57**
10) Putnam	1,328.98	1,295.55

Appendix 1F

2030 Annual NOx Emissions Report

COUNTY	No- Build Scenario	Build Scenario
	Tons / Year	Tons /Year
1) New York	1,138.42	1,081.86
2) Queens	1,736.19	1,671.46
3) Bronx	871.68	841.86
4) Kings	1,104.38	1,047.14
5) Richmond	562.36	539.53
6) Nassau	2,222.95	2,145.39
7) Suffolk	3,592.97	3,433.02
8) Westchester	2,464.25	2,404.95
9) Rockland	873.31	861.03
Grand Total	**14,566.50**	**14,026.24**
10) Putnam	814.49	790.00

Appendix 1F

2035 Annual NOx Emissions Report

COUNTY	No- Build Scenario	Build Scenario
	Tons / Year	Tons /Year
1) New York	936.53	877.47
2) Queens	1,573.12	1,509.57
3) Bronx	816.45	739.24
4) Kings	966.86	937.53
5) Richmond	522.35	505.97
6) Nassau	2,153.21	2,066.93
7) Suffolk	3,536.47	3,404.95
8) Westchester	2,494.71	2,276.87
9) Rockland	877.00	811.88
Grand Total	**13,876.71**	**13,130.40**
10) Putnam	824.06	735.31

Appendix 2 - OFF-MODEL PROJECTS & ANALYSIS

Off Model Projects				
PIN	**PROJECT NAME**	**COUNTY**	**COMP. YEAR**	**Proposed Tool**
X501.39	Private Fleet Alternative Fuel Program	NYC-Multi	12/31/2011	Emission Table
X501.40	NYC Municipal Fleet alt. Fuel Program	NYC-Multi	6/30/2010	Emission Table
8TRM 85	Diesel Retrofit Project	Rockland	10/31/2011	Emission Table
8TRM 86	Orange Town Diesel Retrofit Project	Rockland	10/31/2011	Emission Table
X760.46	Private Diesel Retrofit Emission Reduction	NYC-Multi	8/1/2014	Emission Table
X770.05	Diesel Emission Reduction in Hunts Point	NYC-Multi	9/1/2011	Emission Table
X770.07	Private Fleet Reimbursement for Retrofit	NYC-Multi	3/31/2014	Emission Table
X770.08	Expansion of Cross Harbor Float Service	NYC Multi	6-31-09	Emission Table
033913	Long Island Truck Rail Intermodal Facility	NS Multi	1/30/2013	Emission Table
X501.55	Transportation New York Recycables	NYC Multi	12/31/2012	Emission Table
8TRM94	Retrofit of 104 Orion Buses and Install Particulate Filters	Westchester	10/31/2009	Emission Table
X731.05	Arthur Kill Road Park and Ride	Richmond	11/15/2012	Emission Table
X806.38	Huguenot Park & Ride Upgrade	Richmond	3/31/2010	Emission Table
X806.39	Eltingville Transit Center	Richmond	5/31/2010	Emission Table
X501.74	Southern Brooklyn Marine Terminal Rail Extension	Kings	10/29/2010	Emission Table
X770.45	School Bus Diesel Emissions Reduction Project	NYC Multi	6/1/2011	Emission Table
093561	Calverton Rail Spur ARRA Project	Suffolk	2/17/2012	Emission Table

Commuter Choice Projects				
TCC	**PROJECT NAME**	**COUNTY**		
NYCTCC	Commuter Choice in NYC	NYC		Commuter Choice
MHSTCC	Commuter Choice in MHS	MHS		Commuter Choice
NSTCC	Commuter Choice in NS	NS		Commuter Choice

APPENDIX 3 – OCTC Conformity Determination

The Air Quality Conformity Determination for the Orange County Portion of the NY-NJ-CT PM2.5 Non-Attainment Area is available on the NYMTC web as a separate file

APPENDIX 4 – PDCTC Conformity Determination

The Air Quality Conformity Determination for the Poughkeepsie Ozone Non-attainment Area is available on the NYMTC web as a separate file